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SAFETY DATA SHEET

In accordance with Regulation (EC) 1907/2006 (REACH), Annex II

SECTION 1: IDENTIFICATION (COMPANY/UNDERTAKING	OF THE SUBSTANCE/	WILLURE AND OF	INC	
1.1 Product identifier				
Trade name	Ureaformaldehyde resin – I	KFS E2		
Synonyms	Urea glue			
REACH registration number:	KFS is exempted from Reg	istration (article 2(9),	REACH regulation)	
1.2 Relevant identified uses of the s	ubstance or mixture and us	ses advised against		
Uses: As an adhesive in wood and furniture industry after add		fter adding relevant hardeners		
	Note: see annex for a compl	ete list of uses covere	ed by provided ES	
Uses advised against:	Not known			
	It is recommended that uses	commended that uses be limited to those listed in section 16.		
1.3 Details of the supplier of the safe	ety data sheet			
Manufacturer:	NEOCHIM PLC			
Address:	East Industrial Zone, Himkombinatska Str.			
Tel.;fax:	6403 Dimitrovgrad, Bulgaria +359 391 65 205; +359 391 60 555			
URL website:	http://www.neochim.bg			
Email:	neochim@neochim.bg			
Company e-mail for SDS	pto@neochim.bg			
1.4 Emergency telephone number				
NEOCHIM PLC	+359 2 809 20 30	24/24 h	7/7 d	
European Emergency Number	112	24/24 h	7/7 d	
National Toxicology Center - Pirogov	+ 359 2 915 42 33	24/24 h	7/7 d	
	+ 359 2 915 43 46	24/24 h	7/7 d	
SECTION 2: HAZARDS IDENTI	FICATION			
2.1 Classification of the substance of	or mixture			
2.1.1 Classification according to Reg	ulation (EC) No 1272/2008	(CLP)		
Skin sensitizer, hazard category 1 (Ski		· · ·	on	
2.1.2 Classification according to Dire	,	in allergic skin reaction	JII.	
	` ,			
Xi; R43 - May cause sensitization by sl	an contact.			
	0/0000 (OLD)			
Labelling according to Regulation 127	2/2008 (CLP)			
Hazard pictogram(s):	(!)			
Signal word	Warning			
	May cause an allergic skin			



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statement(s):		
Precautionary statement(s):	P260 P280 P302+P352 P333+P313 P363 P501	Do not breathe vapours. Wear impervious chemical resistant protective gloves and protective goggles. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. Dispose of contents/container in accordance with national and international regulations.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

3.2 Mixtures - hazardous substance Formaldehyde

CAS №	EO №	Index №	REACH registration №	Content, % (w/w)	Name	Classification according to 67/548//EEC	Classification according to Regulation (EC) No 1272/2008 (CLP)
50-00-0	200-001-8	605-001-00-5	01-2119488953- 20-XXXX	мах 0.3	formaldehyde	T; R23/24/25 C; R34 R43 Carc. Cat.3; R40 Specific Conc. Limits: ≥25 % T; R23/24/25	Acute tox. 3 ;H301 Acute tox. 3 ;H311 Acute tox. 3 ;H331 Skin corr. 1B; H314 Skin. Sens. 1; H317 Carc. 2; H351 Specific Conc. Limits: ≥25 % Skun corr. 1B ≥5-<25.0 Skin Irrit. 2
						C; R34 ≥5-<25.0 Xn; R20/21/22 Xi; R 36/37/38 ≥0.2 R34	Eye Irrit. 2 ≥5.0 STOT Single Exp. 3A ≥0.2 Skin Sens.1

For full text of R- phrases, H and EU statements: see section 16

SECTION 4: FIRST- AID MEASURES

4.1 Description of first aid measures

General information	Can cause sensitization after long time contact with skin.
Eye contact:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Skin contact:	Wash affected skin area thoroughly with plenty of water and soap. If irritation persists: Get medical advice/attention.
Ingestion:	Do NOT induce vomiting. Wash out mouth with plenty of water and give to victim plenty of water to drink. Consult a physician.
Inhalation:	Remove the victim to the fresh air. If discomfort occurs and breathing is difficult, seek medical advice.
4.2 Most important symptor	ns and effects, both acute and delayed
A 1 CC 1	LNL (1

Acute effects	Not known
Delayed effects	Not known

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically



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spray, carbon dioxide or dry chemical. own ce or mixture		
ce or mixture		
Evacuate personnel not engaged in fire fighting. Keep containers cooled by spraying with large amounts of water from a safe distance. Hazardous combustion products: carbon dioxide, carbon oxide and nitrogen oxides.		
5.3 Advice for firefighter Self-contained breathing apparatus and a chemical protective suit.		
Hazardous combustion products: carbon dioxide, carbon oxide and nitrogen oxides. 5.3 Advice for firefighter		

personal protective equipment. **6.2 Environmental precautions**

Do not discharge directly to a water sources. If accidental spillage or washings enter drains or watercourses contact local authority.

Immediately take out the staff that is not occupied with the accident from the area. Stop the leak if safe to do so. Isolate every releasing container. Prevent contact with skin and do not breathe fumes. Ensure adequate ventilation. Use

6.3 Methods and material for containment and cleaning up

Small spills - absorb with inert material (eg dry sand). Collect large spills by pumping into a spare container suitably labeled. Wash spill area with water. Do not discharge into drains or watercourses.

6.4 Reference to other sections

See section 8 for personal protective equipment and section 13 for waste disposal.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Ensure adequate ventilation of the stores and work areas. Handle in accordance with good industrial hygiene and safety practice. Handle in a closed system.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures/ Storage conditions:	Do not heat the resin with steam. Heat it using hot water only. Store in tightly covered warehouses at temperatures from 20°C to 30°C.
Suitable packaging materials:	Stainless steel 1.4301 (V2), High density polyethylene (HDPE), Low density polyethylene (LDPE), Stainless steel 1.4401, aluminum
Unsuitable packaging materials:	Paper, board, glass
7.2 Specific end use(s)	See exposure scenario(s) in the attachment to this safety data sheet.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Regulated	occupational	exposure	Workplace exposure limits for formaldehyde according to EH40/2005
limit values:			8 hours - 2.5 mg/m ³
			15 minutes - 2.5 mg/m ³
			2.5 mg/m



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Recommended occupational and consumer exposure limit values (following from the performed CSA of the formaldehyde)	worker:
• ,	worker: Long- term exposure: - systemic effects, Inhalation: 9 mg/m³ - local effects, Inhalation: 0.5 mg/m³
	worker: Long- term exposure: - systemic effects, dermal: 240 mg/kg bw/day - local effects, dermal: 0.037 mg/cm ²
	consumer: Long-term exposure- systemic effects, oral: 4.1 mg/kg bw/day
	consumer: Long-term exposure- systemic effects, dermal: 102 mg/kg bw/day
	consumer: Long-term exposure - local effects, dermal: 0.012 mg/cm ²
	consumer: Long-term exposure- systemic effects, Inhalation: 3.2 mg/m ³
	consumer: Long-term exposure - local effects, Inhalation: 0.1 mg/m ³
	PNEC - Predicted No Effect Concentration
	freshwater: 0.47 mg/l marine water: 0.47 mg/l
	intermittent release: 4.7 mg/l
	sediment (freshwater): 2.44 mg/kg
	sediment (marine water): 2.44 mg/kg soil: 0.21 mg/kg STP: 0.19 mg/l
8.2 Exposure controls	
Appropriate engineering controls:	Use adequate ventilation is good industrial practice.
Environmental exposure controls:	Avoid uncontrolled discharge of rinse water in surface water or sanitary sewer system. Dispose of rinse water in accordance with local and national regulations.
Individual protection measures, suc	h as personal protective equipment (PPE)
Respiratory protection:	Suitable respiratory protection for lower concentrations or short-term effect: Gas filter for gases/vapours of inorganic compounds (e.g. EN 14387 Type B) Suitable respiratory protection for higher concentrations or long-term effect: Self-contained breathing apparatus.
Hand protection:	Protective gloves
Eye protection:	Protective goggles
Skin and body protection:	Protective clothes
Hygiene measures:	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Wash contaminated clothing before reusing.
SECTION 9: PHYSICAL AND CHE	EMICAL PROPERTIES
9.1 Information on basic physical ar	nd chemical properties
Appearance:	Milky white homogeneous suspension without impurities



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Specific odour of formaldehyde
Not applicable
No information available
No information available
Hardly flammable
No explosive properties
Not applicable
1.290 - 1.310 g/cm3 at 20 °C
No information available
2000-4000 mPa.s at 20 °C
No information available
1-3h
Fully
7.5 - 8.5

9.2 Other information

Not available

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Stable under recommended storage and handling conditions (see section 7, handling and storage).

10.2 Chemical stability

Stable under recommended storage and handling conditions (see section 7, handling and storage).

10.3 Possibility of hazardous reactions

Stable under recommended storage and handling conditions (see section 7, handling and storage).

10.4 Conditions to avoid

Heat, flame, ignition sources and incompatible substances.

10.5 Incompatible materials

Incompatible with strong acids and strong oxidizing agents

10.6 Hazardous decomposition product

Carbon dioxide, carbon monoxide, nitrogen oxides and formaldehyde.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

3	
ACUTE TOXICITY	The product has not been tested. The statement that is toxic by inhalation, in contact with skin and if swallowed is based on properties of the formaldehyde .
Acute oral toxicity:	LD ₅₀ : 460-830 mg/kg bw ;(rat)
Acute dermal toxicity:	LD50: 270 mg/kg (rabbit)
Acute inhalation toxicity:	LC ₅₀ (4 h) rat = 588 mg/m³ = 490 ppm



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	LC ₅₀ (30 min) rat = 1000 mg/m ³ = 830 ppm
LOCAL EFFECTS	Depends on the concentration and duration of exposure, aqueous solutions can cause a strongly irritating or corrosive effect on the skin or eyes.
Skin irritation:	Corrosive (rabbit)
Eye irritation:	Irreversible damage (rabbit)
Skin sensitization:	Aqueous solutions can cause skin sensitization in animal experiments and in humans.
Carcinogenicity:	Formaldehyde is classified as carcinogenic category 2 (Carc. Cat.2), in accordance with Regulation 1272/2008 EC, Annex VI. After lifelong inhalation exposure to concentrations that were severely damaging to the nasal epithelium, nasal tumors were induced in rats; in other species these findings were not found or were considerably less pronounced. The International Agency for Research on Cancer (IARC) has classified formaldehyde as a Group 1 (known) human carcinogen based on epidemiological evidence linking formaldehyde exposure to occurrence of nasopharyngeal cancer and leukemia.
Toxicity to reproduction:	There is no evidence for adverse effects of formaldehyde on embryo and fetal development at dose levels inducing local maternal effects and secondary decrease in body weights and growth.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Substance name: **Formaldehyde** Assessment of aquatic toxicity:

Acutely harmful for aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. The product has not been tested. The statement has been derived from products of a similar structure or composition.

Fish:	96h LC ₅₀ : 41 mg/l (Brachydanio rerio)	
Aquatic invertebrates:	24h EC ₅₀ : 42 mg/l, Daphnia magna (DIN 38412 Part 11)	
Aquatic plants:	192h 2.5 mg/l, Scenedesmus subspicatus Limit concentration test only (LIMIT test).	
Microorganisms/Effect on activated sludge:	16-h 14 mg/l, Pseudomonas putida EC20 (5 h) > 1,995 mg/l (DIN EN ISO 8192-OECD 209-88/302/EEC,P. C) The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.	
12.2 Persistence and degradability		
Biodegradation:	On the basis of the data available concerning eliminability/degradation and bioaccumulation potential, longer-term harm to the environment is improbable.	
Assessment of stability in water:	According to structural properties, hydrolysis is not expected.	
12.3 Bioaccumulative potential Insignificantly accumulate in organisms	S.	
Octanol-water partition coefficient (K_{ow}) :	Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.	
12.4 Mobility in soil	1	

12.4 Mobility in soil

The substance will not evaporate into the atmosphere from the water surface. Adsorption to solid soil phase is not expected.

12.5 Results of PBT and vPvB assessment

According to Annex XIII of Regulation 1907/2006(EC): not fulfilling vPvB criteria.

SECTION 13: DISPOSAL CONSIDERATIONS



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Dispose of contents/container in accordance with national and international regulations.

SECTION 14: TRANSPORT INFORMATION

Not classified as dangerous goods according to international transport legislation (ADR, RID, IMDG).

Transport in clean and dry containers and comply with conditions of storage. Do not transport together with food and incompatible materials.

If spillage of the roadway, confined spill, absorb with inert material (e.g. sand) and wash spill area with water.

SECTION 15: REGULATORY INFORMATION

J .	Regulation EC 1907/2006 (REACH), Directive 67/548/EEC and 1999/45/EC , Regulation EC 1272/2008 (CLP), Regulation (EC) 453/2010,
15.2 Chemical safety assessment:	In accordance with REACH Article 14, a Chemical Safety Assessment has been carried out for formaldehyde.

РАЗДЕЛ 16: ДРУГА ИНФОРМАЦИЯ

The information above is on the basis of our knowledge about the product and represents the data currently available to us t the moment of safety data sheet issue. This document is intended as guidance for the appropriate precautionary handling with the product by a properly trained person using this product, and does not legally bind in no way manufacturer with guarantee for specific properties, qualities and applications.

Neochim PLC does not grant, guarantee or implies any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers.

Neochim PLC does not carry any liability for damages resulting from the product use or reliance upon this information, data and recommendations for it. Users are responsible to make their own investigations to determine the suitability of the information and the product for their particular purposes, and to comply with applicable laws.

Full texts of all R-phrases and H-hazards used in Section 3

H statement

H301: Toxic if swallowed.

H311: Toxic in contact with skin.

H314: Causes severe skin burns and eye damage.

H317: May cause an allergic skin reaction.

H331: Toxic if inhaled.

H351: Suspected of causing cancer if inhaled.

R phrases

R23/24/25: Toxic by inhalation, in contact with skin and if swallowed.

R34: Causes burns.

R43: May cause sensitization by skin contact. R40: Limited evidence of a carcinogenic effect.

List of abbreviations

PBT – persistent, bioaccumulative and toxic

vPvB - very persistent and very bioaccumulative

NOAEL - no observed adverse effect level

NOAEC - no observed adverse effect concentration

DNEL - derived no-effect level

PNEC - predicted no-effect concentration

PEC - predicted environmental concentration

LOEC - lowest observed effect concentration

NOEC - no observed effect concentration

OECD - Organisation for Economic Cooperation and Development

LC_x - lethal concentration

EC_X - effective concentration

LDx - lethal dose



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List of attached exposure scenarios

ES 1: Industrial use of products containing formaldehyde up to 1.5%: production of adhesives, foams, bonded particulates (casting, molding), use in coatings, rubber production and processing, production of firelighters, use in leather tanning, finishing, impregnation

ES 2: Industrial use of products containing formaldehyde up to 1%: production of wood based materials (panels, bricks, etc.), impregnated paper, paper, use in textile finishing, production of bonded fibers or fiber mats

ES 3: Professional use of products containing formaldehyde up to 1.5%: adhesives, foams, coatings, firelighters and cleaning agents

ES 4: Professional use of products containing formaldehyde up to 1%: resins in wood applications (eg. glues)

ES 5: Consumer use of formaldehyde based products: adhesives, coatings, firelighters and cleaning agents

Version:	4.0
Creation date:	1.12.2010
Revision date:	3/26.02.2007
Release info:	This version replaces all previous documents



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1. Short title of exposure scenario (ES 1) - Industrial use of products containing formaldehyde up to 1.5%: production of adhesives, foams, bonded particulates (casting, molding), use in coatings, rubber production and processing, production of firelighters, use in leather tanning, finishing, impregnation

Use descriptors related to the life cycle stage		of end use: SU2a, SU3, SU5, SU8, SU9, SU10, SU11, SU12, SU14, SU17, SU19
		category:
		/2/3/4/5/6/7/8a/8b/9/10/13/14/16/21/22/23/24/25
		mental release category: ERC/2/3/5/6d
Name of contributing environmental		Formulation of mixture (ERC2)
scenario (1) and corresponding ERC		Formulation in materials (ERC3)
		Industrial use resulting in inclusion into or onto a matrix (ERC5)
	4	Industrial use of process regulators for polymerization processes in production of resins, rubbers, polymers (ERC6d)
List of names of contributing worker	1	Use in closed process, no likelihood of exposure (PROC1)
scenarios (2) and corresponding PROC	2	Use in closed, continuous process with occasional controlled exposure (PROC2)
	3	Use in closed batch process (synthesis or formulation) (PROC3)
	4	Use in batch and other process (synthesis) where opportunity for exposure arises (PROC4)
	5	Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) (PROC5)
	6	Calendering operations (PROC6)
	7	Industrial spraying (PROC7)
	8	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities (PROC8a)
	9	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities (PROC8b)
		Transfer of substance or preparation into small containers (dedicated filling line, including weighing) (PROC9)
		Roller application and brushing (PROC10)
		Treatment of articles by dipping and pouring (PROC13)
		Production of preparations or articles by tabletting, compression, extrusion, pelettisation. (<i>PROC14</i>)
	14	Using material as fuel sources, limited exposure to unburned to be expected (PROC16)
	15	Low energy manipulation of substances bound in materials and/or articles (PROC21)
	16	Potentially closed processing with minerals/metals at elevated temperature (PROC22) Industrial setting
	17	Open processing and transfer with minerals/ metals at elevated temperature (PROC23)
	18	High (mechanical) energy work- up of substances bound in materials and/or articles (PROC24)
		Other hot work operations with metals (PROC25)
2 Contributing sconario controlling on	, i	tel everences

2. Contributing scenario controlling environmental exposure

Formulation of mixture (ERC2); Formulation in materials (ERC3); Industrial use resulting in inclusion into or onto a matrix (ERC5); Industrial use of process regulators for polymerization processes in production of resins,



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rubbers, polymers (ERC6d)

An environmental assessment has not been performed as the product does not meet the criteria for being classified.

2.1 Contributing scenario (1) controll	ing worker exposure
	SU3: Industrial uses
Use descriptors covered	PROC1: Use in closed process, no likelihood of exposure. PROC2: Use in closed, continuous process with occasional controlled exposure.
Operational conditions	
-	formaldehyde
Concentration of the substance	Content: >= 0 % - <= 1.5 %
Physical state	Liquid, moderate fugacity
Vapour pressure of the substance during use	14 hPa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Wear chemically resistant gloves in combination with specific activity training	Effectiveness: 95 %
Exposure estimate and reference to	ts source
PROC1, PROC2	
	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified
Assessment method	version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally.
	Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day
Risk Characterization Ratio (RCR)	< 0.01
PROC1	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	< 0.001 mg/m³
Risk Characterization Ratio (RCR)	< 0.01
PROC1	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, short-term - systemic
Exposure estimate	< 0.01 mg/m³
Risk Characterization Ratio (RCR)	< 0.01
PROC2	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.188 mg/m³
Risk Characterization Ratio (RCR)	0.38
	The short-term exposure value corresponds to the long-term value multiplied by a factor of 2.
PROC1, PROC2	
Assessment method	Qualitative assessment



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	Worker - dermal
	The use is assessed to be safe.
PROC1, PROC2	
Assessment method	Qualitative assessment
	Worker - contact with eyes
	The use is assessed to be safe.
Guidance to Downstream Use	ers
For scaling see: http://www.ece estimates)	etoc.org/tra Please note that a modified version has been used (see exposure

2.2 Contributing scenario (2) controll	SU3: Industrial uses
	PROC2: Use in closed, continuous process with occasional controlled
Use descriptors covered	exposure. (closed systems)
	exposure. (closed systems)
Operational conditions	
•	formaldehyde
Concentration of the substance	Content: >= 0 % - <= 100 %
Physical state	Liquid, high fugacity
Vapour pressure of the substance during use	1000 hPa
Process temperature	150 °C
Duration and Frequency of activity	360 min 5 days per week
Indoor/Outdoor	Indoor
Room size	300 m3
	Operation is carried out at elevated temperature (> 20°C above ambient temperature).
Risk Management Measures	,
Provide a good standard of general	
ventilation (not less than 3 - 5 air	
changes per hour)	
Use suitable eye protection.	
Personal measures have to be	
applied in case of potential exposure	
only. Handle substance within closed	
system.	Effectiveness: 99 %
Wear chemically resistant gloves in	
combination with intensive	Effectiveness: 98 %
management supervision control.	
Personal measures have to be	
applied in case of potential exposure only.	
Exposure estimate and reference to i	its source
	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified
Assessment method	version: Use of gloves has been considered additionally.
	Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day
Risk Characterization Ratio (RCR)	< 0.01
Assessment method	Advanced REACH Tool v1.0
	Worker - inhalative, long-term - systemic
Exposure estimate	0.253 mg/m³
Risk Characterization Ratio (RCR)	0.51
. ,	The exposure estimate represents the 75th percentile of the exposure
	distribution. The short-term exposure value corresponds to the long



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	term value multiplied by a factor of 2.
Assessment method	Qualitative assessment
	Worker - dermal
	The use is assessed to be safe.
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates)	
For scaling see: http://www.advancedreachtool.com	

2.3 Contributing scenario (3) controlling worker exposure		
Use descriptors covered	SU3: Industrial uses PROC2: Use in closed, continuous process with occasional controlled exposure. Transfer of liquid products - falling liquids Submerged loading Dedicated facility (open systems)	
Operational conditions		
Concentration of the substance	formaldehyde Content: >= 0 % - <= 60 %	
Physical state	Liquid, moderate fugacity	
Vapour pressure of the substance during use	15.2 hPa	
Process temperature	150 °C	
Duration and Frequency of activity	120 min 5 days per week	
Indoor/Outdoor	Indoor	
Room size	300 m3	
	Operation is carried out at elevated temperature (> 20°C above ambient temperature).	
Amounts used	Amount per use 1,000 I	
Risk Management Measures		
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)		
Use suitable eye protection.		
Personal measures have to be applied in case of potential exposure only.		
Handle substance within closed system.	Effectiveness: 99 %	
Wear chemically resistant gloves in combination with intensive management supervision control.	Effectiveness: 98 %	
Vapour recovery system	Effectiveness: 80 %	
Wear suitable respiratory protection.	Effectiveness: 90 %	
Exposure estimate and reference to i	ts source	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally. Worker - dermal, long-term - systemic	
Exposure estimate	< 0.1 mg/kg bw/day	
Risk Characterization Ratio (RCR)	< 0.01	
Assessment method	Advanced REACH Tool v1.0	
	Worker - inhalative, long-term - systemic	
Exposure estimate	0.253 mg/m³	
Risk Characterization Ratio (RCR)	0.51	



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	The short-term exposure value corresponds to the long-term value multiplied by a factor of 2. The exposure estimate represents the 75th percentile of the exposure distribution.
Assessment method	Qualitative assessment
	Worker - dermal
	The use is assessed to be safe.
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates)	
For scaling see: http://www.advancedreachtool.com	

2.4 Contributing scenario (4) controlling worker exposure		
Use descriptors covered	SU3: Industrial uses PROC3: Use in closed batch process (synthesis or formulation). PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises.	
Operational conditions		
Concentration of the substance	formaldehyde Content: >= 0 % - <= 1.5 %	
Physical state	Liquid, moderate fugacity	
Vapour pressure of the substance during use	14 hPa	
Duration and Frequency of activity	480 min 5 days per week	
Indoor/Outdoor	Indoor	
Risk Management Measures		
Wear chemically resistant gloves in combination with specific activity training		
Exposure estimate and reference to i	ts source	
PROC3, PROC4		
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally.	
	Worker - dermal, long-term - systemic	
Exposure estimate	< 0.1 mg/kg bw/day	
Risk Characterization Ratio (RCR)	< 0.01	
PROC3		
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.	
	Worker - inhalative, long-term - systemic	
Exposure estimate	0.469 mg/m³	
Risk Characterization Ratio (RCR)	0.94	
	The short-term exposure value corresponds to the long-term value multiplied by a factor of 2.	
PROC4		
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.	
Evacure estimate	Worker - inhalative, long-term - systemic	
Exposure estimate	0.375 mg/m³	
Risk Characterization Ratio (RCR)	0.75 The short-term exposure value corresponds to the long-term value multiplied by a factor of 2.	



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PROC3, PROC4	
Assessment method	Qualitative assessment
	Worker - dermal
	The use is assessed to be safe
PROC3, PROC4	
Assessment method	Qualitative assessment
	Worker - contact with eyes
	The use is assessed to be safe
Guidance to Downstream Us	sers
For scaling see: http://www.ee estimates)	cetoc.org/tra Please note that a modified version has been used (see exposure

2.5 Contributing scenario (5) controlling worker exposure	
2.0 Contributing Section (0) Control	SU3: Industrial uses
Use descriptors covered	PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact). PROC6: Calendering operations PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities
Operational conditions	
Concentration of the substance	formaldehyde Content: >= 0 % - <= 1.5 %
Physical state	Liquid, high fugacity
Vapour pressure of the substance during use	14 hPa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 90 %
Wear chemically resistant gloves in combination with specific activity training	
Exposure estimate and reference to it	ts source
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach., ECETOC TRA modified version: Use of gloves has been considered additionally., ECETOC TRA modified version: Reduction factor for local exhaust ventilation (LEV) has not been used for the calculation of dermal exposure estimates.
	Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day
Risk Characterization Ratio (RCR)	< 0.01
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.094 mg/m³
Risk Characterization Ratio (RCR)	0.19
Assessment method	The short-term exposure value corresponds to the long-term value multiplied by a factor of 2.
Assessment method	Qualitative assessment
	Worker - dermal
Assessment method	The use is assessed to be safe.
Assessment method	Qualitative assessment Worker - contact with eyes
	WORKER - CORRECT WITH GYES



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The use is assessed to be safe
Guidance to Downstream Users
For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure
estimates)

2.6 Contributing scenario (6) controll	SU3: Industrial uses
	PROC7: Industrial spraying
Use descriptors covered	Aerosol formation is not covered within the CES
·	Aerosor formation is not covered within the CES
Operational conditions	
	formaldehyde
Concentration of the substance	Content: >= 0 % - <= 1.5 %
Physical state	Liquid, high fugacity
Vapour pressure of the substance during use	14 hPa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 95 %
Wear chemically resistant gloves in	
combination with specific activity	Effectiveness: 95 %
training	
Exposure estimate and reference to it	ts source
	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified
	version: The concentration of the substance has been considered using
Assessment method	a linear approach, ECETOC TRA modified version: Use of gloves has
Assessment method	been considered additionally. ECETOC TRA modified version
	Reduction factor for local exhaust ventilation (LEV) has not been used
	for the calculation of dermal exposure estimates.
	Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day
Risk Characterization Ratio (RCR)	< 0.01
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.230 mg/m³
Risk Characterization Ratio (RCR)	0.47
MISK CHARACICHZALIOH NALIO (NCK)	The short-term exposure value corresponds to the long-term value
	multiplied by a factor of 2.
Assessment method	Qualitative assessment
ASSESSITICITE HIGHIOU	Worker - dermal
	The use is assessed to be safe
Assessment method	Qualitative assessment
ASSESSITELL HIGHIOU	
	Worker - contact with eyes The use is assessed to be safe
Cuidanas ta Dawnatraam Haara	וווב מסב וס מססבססבת נט מב סמוב
Guidance to Downstream Users	/Ann Diagon make that a goodified warning has been word /-
For scaling see: http://www.ecetoc.org	tra Please note that a modified version has been used (see exposure

2.7 Contributing scenario (7) controlling worker exposure		
Use descriptors covered	SU3: Industrial uses	
	PROC8a: Transfer of substance or preparation (charging/discharging)	
	from/to vessels/large containers at non-dedicated facilities Submerged	
	loading PROC8b: Transfer of substance or preparation	



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	(charging/discharging) from/to vessels/large containers at dedicated facilities	
Operational conditions		
Concentration of the substance	formaldehyde Content: >= 1 % - <= 5 %	
Physical state	Liquid, moderate fugacity	
Vapour pressure of the substance during use	14 hPa	
Duration and Frequency of activity	480 min 5 days per week	
Indoor/Outdoor	Outdoor	
Risk Management Measures		
Vapour recovery system	Effectiveness: 80 %	
Wear chemically resistant gloves in combination with specific activity training		
Exposure estimate and reference to it	Exposure estimate and reference to its source	
Assessment method	Qualitative assessment	
	Worker - all relevant routes	
	The use is assessed to be safe., In case the identified operational conditions and risk management measures are applied:	
Guidance to Downstream Users		
For scaling see: http://www.ecetoc.org.estimates)	tra Please note that a modified version has been used (see exposure	

2.8 Contributing scenario (8) controll	2.8 Contributing scenario (8) controlling worker exposure	
Use descriptors covered	SU3: Industrial uses PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	
Operational conditions	<u>I</u>	
Concentration of the substance	formaldehyde Content: >= 0 % - <= 1.5 %	
Physical state	Liquid, moderate fugacity	
Vapour pressure of the substance during use	14 hPa	
Duration and Frequency of activity	480 min 5 days per week	
Indoor/Outdoor	Indoor	
Risk Management Measures		
Local exhaust ventilation	Effectiveness: 97 %	
Wear chemically resistant gloves in combination with specific activity training	Effectiveness: 95 %	
Exposure estimate and reference to	its source	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach. ECETOC TRA modified version: Use of gloves has been considered additionally., ECETOC TRA modified version: Reduction factor for local exhaust ventilation (LEV) has not been used for the calculation of dermal exposure estimates.	
	Worker - dermal, long-term - systemic	
Exposure estimate	< 0.1 mg/kg bw/day	
Risk Characterization Ratio (RCR)	< 0.01	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using	



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	a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.028 mg/m³
Risk Characterization Ratio (RCR)	0.06
	The short-term exposure value corresponds to the long-term value multiplied by a factor of 2.
Assessment method	Qualitative assessment
	Worker - dermal
	The use is assessed to be safe.
Assessment method	Qualitative assessment
	Worker - contact with eyes
	The use is assessed to be safe.
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.o estimates)	rg/tra Please note that a modified version has been used (see exposure

2.9 Contributing scenario (9) controll	ing worker exposure
Use descriptors covered	SU3: Industrial uses PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). PROC10: Roller application or brushing PROC13: Treatment of articles by dipping and pouring. PROC14: Production of preparations or articles by tabletting, compression, extrusion, pelettisation.
Operational conditions	
Concentration of the substance	formaldehyde Content: >= 0 % - <= 1.5 %
Physical state	Liquid, moderate fugacity
Vapour pressure of the substance during use	14 hPa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 90 %
Wear chemically resistant gloves in combination with specific activity training	Effectiveness: 95 %
Exposure estimate and reference to i	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally. ECETOC TRA modified version: Reduction factor for local exhaust ventilation (LEV) has not been used for the calculation of dermal exposure estimates.
For a super a stire at a	Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day
Risk Characterization Ratio (RCR) Assessment method	< 0.01 ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.094 mg/m³
Risk Characterization Ratio (RCR)	0.19
, ,	The short-term exposure value corresponds to the long-term value multiplied by a factor of 2.
Assessment method	Qualitative assessment



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	Worker - dermal
	The use is assessed to be safe.
Assessment method	Qualitative assessment
	Worker - contact with eyes
	The use is assessed to be safe.
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates)	

2.10 Contributing scenario (10) controlling worker exposure	
Use descriptors covered	SU3: Industrial uses PROC16: Using material as fuel sources, limited exposure to unburned product to be expected.
Operational conditions	
Concentration of the substance	formaldehyde Content: >= 0 % - <= 1.5 %
Physical state	Liquid, moderate fugacity
Vapour pressure of the substance during use	14 hPa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Wear chemically resistant gloves in combination with specific activity training	Effectiveness: 95 %
Perform task in a fume cupboard.	
Exposure estimate and reference to	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally.
	Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day
Risk Characterization Ratio (RCR)	< 0.01
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.094 mg/m³
Risk Characterization Ratio (RCR)	0.19
	The short-term exposure value corresponds to the long-term value multiplied by a factor of 2.
Assessment method	Qualitative assessment
	Worker - dermal
	The use is assessed to be safe.
Assessment method	Qualitative assessment
	Worker - contact with eyes
	The use is assessed to be safe.
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org estimates)	/tra Please note that a modified version has been used (see exposure

2.11 Contributing scenario (11) controlling worker exposure	
Use descriptors covered	SU3: Industrial uses
	PROC21: Low energy manipulation of substances bound in materials



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	and/or articles PROC22: Potentially closed processing operations (with
	minerals) at elevated temperature PROC23: Open processing and
	transfer operations (with minerals) at elevated temperature PROC24:
	High (mechanical) energy work-up of substances bound in materials
	and/or articles PROC25: Other hot work operations with metals
Operational conditions	
Concentration of the substance	formaldehyde
	Content: >= 0 % - <= 1.5 %
Physical state	Solid
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	- F
Wear chemically resistant gloves in	
combination with specific activity	Effectiveness: 95 %
training	
Exposure estimate and reference to it	ts source
PROC21, PROC22, PROC23, PROC24	
, , , , , , , , , , , , , , , , , , , ,	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified
Access on the state of	version: The concentration of the substance has been considered using
Assessment method	a linear approach, ECETOC TRA modified version: Use of gloves has
	been considered additionally.
	Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day
Risk Characterization Ratio (RCR)	< 0.01
PROC21, PROC22, PROC23, PROC24	
	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified
Assessment method	version: The concentration of the substance has been considered using
	a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.15 mg/m³
Risk Characterization Ratio (RCR)	0.3
	The short-term exposure value corresponds to the long-term value
	multiplied by a factor of 2.
PROC21, PROC22, PROC23, PROC24	
Assessment method	Qualitative assessment
	Worker - dermal
	The use is assessed to be safe.
PROC21, PROC22, PROC23, PROC24	
Assessment method	Qualitative assessment
	Worker - contact with eyes
	The use is assessed to be safe.
PROC25	1 5.5 .0 6000000 10 00 00101
	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified
Assessment method	version: The concentration of the substance has been considered using
, accommon mother	a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.075 mg/m³
Risk Characterization Ratio (RCR)	0.15
1 don OndradionZadion (datio (NOT)	The short-term exposure value corresponds to the long-term value
	multiplied by a factor of 2.
Guidance to Downstream Users	
	/tra Please note that a modified version has been used (see exposure
estimates)	The Freder Hote that a modified version has been used (see exposure

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2. Short title of exposure scenario (ES 2) - Industrial use of products containing formaldehyde up to 1%: production of wood based materials (panels, bricks, etc), impregnated paper, paper, use in textile finishing, production of bonded fibers or fiber mats

Use descriptors related to the life	Sector of end use SU3, SU5, SU6a, SU66, SU10, SU11, SU12, SU13, SU18,
cycle stage	SU19 Process category:
	PROC1/2/3/4/5/6/7/8a/8b/9/10/13/14/16/21/22/23/24/25
	Environmental release category: ERC/2/3/5/6d
Name of contributing environmental scenario (1) and corresponding ERC	1 Formulation of mixture (ERC2)
Scenario (1) and corresponding ENC	 Formulation in materials (ERC3) Industrial use resulting in inclusion into or onto a matrix (ERC5)
	4 Industrial use of process regulators for polymerization processes in production of resins, rubbers, polymers (ERC6d)
List of names of contributing worker	1 Use in closed process, no likelihood of exposure (PROC1)
scenarios (2) and corresponding PROC	2 Use in closed, continuous process with occasional controlled exposure (PROC2)
	3 Use in closed batch process (synthesis or formulation) (PROC3)
	4 Use in batch and other process (synthesis) where opportunity for exposure arises (<i>PROC4</i>)
	5 Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) (PROC5)
	6 Calendering operations (PROC6)
	7 Industrial spraying (PROC7)
	8 Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities (PROC8a)
	9 Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities (PROC8b)
	10 Transfer of substance or preparation into small containers (dedicated filling line, including weighing) (PROC9)
	11 Roller application and brushing (PROC10)
	12 Treatment of articles by dipping and pouring (PROC13)
	13 Production of preparations or articles by tabletting, compression, extrusion, pelettisation. (<i>PROC14</i>)
	14 Using material as fuel sources, limited exposure to unburned to be expected (PROC16)
	15 Low energy manipulation of substances bound in materials and/or articles (PROC21)
	16 Potentially closed processing with minerals/metals at elevated temperature (PROC22) Industrial setting
	17 Open processing and transfer with minerals/ metals at elevated temperature (PROC23)
	18 High (mechanical) energy work- up of substances bound in materials and/or articles (PROC24)
O O o o de la	19 Other hot work operations with metals (PROC25)
2. Contributing scenario controlling e	environmental exposure



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Formulation of mixture (ERC2); Formulation in materials (ERC3); Industrial use resulting in inclusion into or onto a matrix (ERC5); Industrial use of process regulators for polymerization processes in production of resins, rubbers, polymers (ERC6d)

An environmental assessment has not been performed as the product does not meet the criteria for being classified.

2.1 Contributing scenario (1) controll	2.1 Contributing scenario (1) controlling worker exposure		
SU3: Industrial uses			
Use descriptors covered	PROC1: Use in closed process, no likelihood of exposure.		
Operational conditions			
Concentration of the substance	formaldehyde		
Dharia I stata	Content: >= 0 % - <= 100 %		
Physical state	Liquid, high fugacity		
Vapour pressure of the substance	1000 hPa		
during use	150 °C		
Process temperature Duration and Frequency of activity			
Indoor/Outdoor	480 min 5 days per week Indoor		
Room size	300 m3		
Room size			
	Operation is carried out at elevated temperature (> 20°C above ambient		
Disk Management Measures	temperature).		
Risk Management Measures Ensure that the task is being carried			
out outside the breathing zone of a			
worker (distance head-product greater			
than 1m).			
Provide a good standard of general			
ventilation (not less than 3 - 5 air			
changes per hour)			
Use suitable eye protection.			
Personal measures have to be			
applied in case of potential exposure			
only.			
Handle substance within closed			
system.	Effectiveness: 90 %		
Wear chemically resistant gloves in			
combination with intensive	Effectiveness: 98 %		
management supervision control.	Enocations of the		
Personal measures have to be			
applied in case of potential exposure			
only.			
Exposure estimate and reference to i	ts source		
•	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified		
Assessment method	version: Use of gloves has been considered additionally.		
	Worker - dermal, long-term - systemic		
Exposure estimate	< 0.1 mg/kg bw/day		
Risk Characterization Ratio (RCR)	< 0.01		
Assessment method	Advanced REACH Tool v1.0		
· · · · · · · · · · · · · · · · · · ·	Worker - inhalative, long-term - systemic		
Exposure estimate	0.025 mg/m³		
,	The exposure estimate represents the 75th percentile of the exposure		
	distribution. The short-term exposure value corresponds to the long-		
	term value multiplied by a factor of 2.		
Assessment method	Qualitative assessment		
· · · · · · · · · · · · · · · · · · ·	Worker - dermal		
	The use is assessed to be safe		
Guidance to Downstream Users			



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For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates) For scaling see: http://www.advancedreachtool.com

2.2 Contributing scenario (2) controlling worker exposure		
Use descriptors covered	SU3: Industrial uses	
	PROC1: Use in closed process, no likelihood of exposure.	
Operational conditions		
Concentration of the substance	formaldehyde	
	Content: >= 0 % - <= 5 %	
Physical state	Liquid, moderate fugacity	
Vapour pressure of the substance	14 hPa	
during use		
Duration and Frequency of activity	480 min 5 days per week	
Indoor/Outdoor	Indoor	
Risk Management Measures		
Wear chemically resistant gloves in		
combination with specific activity	Effectiveness: 95 %	
training		
Exposure estimate and reference to it		
	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified	
Assessment method	version: The concentration of the substance has been considered using	
Assessment method	a linear approach, ECETOC TRA modified version: Use of gloves has	
	been considered additionally.	
	Worker - dermal, long-term - systemic	
Exposure estimate	< 0.1 mg/kg bw/day	
Risk Characterization Ratio (RCR)	< 0.01	
	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified	
Assessment method	version: The concentration of the substance has been considered using	
	a linear approach.	
	Worker - inhalative, long-term - systemic	
Exposure estimate	< 0.001 mg/m³	
Risk Characterization Ratio (RCR)	< 0.01	
	The use is assessed to be safe	
	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified	
Assessment method	version: The concentration of the substance has been considered using	
	a linear approach.	
	Worker - inhalative, short-term - systemic	
Exposure estimate	< 0.01 mg/m³	
Risk Characterization Ratio (RCR)	< 0.01	
Assessment method	Qualitative assessment	
	Worker - dermal	
	The use is assessed to be safe	
Assessment method	Qualitative assessment	
	Worker - contact with eyes	
	The use is assessed to be safe	
Guidance to Downstream Users		
	/tra Please note that a modified version has been used (see exposure	
estimates)		

2.3 Contributing scenario (3) controlling worker exposure	
Use descriptors covered	SU3: Industrial uses PROC1: Use in closed process, no likelihood of exposure. PROC2: Use in closed, continuous process with occasional controlled exposure.
Operational conditions	
Concentration of the substance	formaldehyde
	Content: >= 0 % - <= 2.5 %
Physical state	Liquid, moderate fugacity



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Vapour pressure of the substance during use	
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Wear chemically resistant gloves in combination with specific activity training	Effectiveness: 95 %
Exposure estimate and reference to	its source
PROC1, PROC2	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally.
	Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day
Risk Characterization Ratio (RCR)	< 0.01
PROC1	LEGETOG TRA GOVE I I I I I I I I I I I I I I I I I I I
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	< 0.001 mg/m³
Risk Characterization Ratio (RCR)	< 0.01
PROC1	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, short-term - systemic
Exposure estimate	< 0.01 mg/m³
Risk Characterization Ratio (RCR)	< 0.01
PROC2	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.313 mg/m³
Risk Characterization Ratio (RCR)	0.63
	The short-term exposure value corresponds to the long-term value multiplied by a factor of 2.
PROC1, PROC2	
Assessment method	Qualitative assessment
	Worker - dermal
	The use is assessed to be safe.
PROC1, PROC2	
Assessment method	Qualitative assessment
	Worker - contact with eyes
	The use is assessed to be safe.
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org estimates)	/tra Please note that a modified version has been used (see exposure

2.4 Contributing scenario (4) controlling worker exposure	
Use descriptors covered	SU3: Industrial uses PROC1: Use in closed process, no likelihood of exposure. PROC2: Use in closed, continuous process with occasional controlled exposure.



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Operational conditions	
Concentration of the substance	formaldehyde
	Content: >= 0 % - <= 1.5 %
Physical state	Liquid, moderate fugacity
Vapour pressure of the substance	14 hPa
during use	
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Wear chemically resistant gloves in	
combination with specific activity	Effectiveness: 95 %
training	
Exposure estimate and reference to	its source
PROC1, PROC2	LEGETOG TRA GOW I WE I FORTOG TRA WE I
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally.
	Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day
Risk Characterization Ratio (RCR)	< 0.01
PROC1	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	< 0.001 mg/m³
Risk Characterization Ratio (RCR)	< 0.01
PROC1	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, short-term - systemic
Exposure estimate	< 0.01 mg/m³
Risk Characterization Ratio (RCR)	< 0.01
PROC2	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.188 mg/m³
Risk Characterization Ratio (RCR)	0.38
,	The short-term exposure value corresponds to the long-term value multiplied by a factor of 2.
PROC1, PROC2	
Assessment method	Qualitative assessment
	Worker - dermal
	The use is assessed to be safe.
PROC1, PROC2	
Assessment method	Qualitative assessment
	Worker - contact with eyes
	The use is assessed to be safe.
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.or estimates)	g/tra Please note that a modified version has been used (see exposure

2.5 Contributing scenario (5) controlling worker exposure	
Use descriptors covered	SU3: Industrial uses



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	PROC1: Use in closed process, no likelihood of exposure. PROC2: Use
	in closed, continuous process with occasional controlled exposure.
Operational conditions	
Concentration of the substance	formaldehyde
B	Content: >= 0 % - <= 1 %
Physical state	Liquid, moderate fugacity
Vapour pressure of the substance	14 hPa
during use	490 min 5 days nor wook
Duration and Frequency of activity Indoor/Outdoor	480 min 5 days per week Indoor
Risk Management Measures	IIIdooi
Wear chemically resistant gloves in	
combination with specific activity	Effectiveness: 95 %
training	2.1003.1101.1000.100 //
Exposure estimate and reference to	its source
PROC1, PROC2	
,	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified
Assessment method	version: The concentration of the substance has been considered using
Assessment method	a linear approach, ECETOC TRA modified version: Use of gloves has
	been considered additionally.
	Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day
Risk Characterization Ratio (RCR)	< 0.01
PROC1	
	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified
Assessment method	version: The concentration of the substance has been considered using
	a linear approach.
F	Worker - inhalative, long-term - systemic
Exposure estimate	< 0.001 mg/m³
Risk Characterization Ratio (RCR) PROC1	< 0.01
PROCI	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified
Assessment method	version: The concentration of the substance has been considered using
Assessment method	a linear approach.
	Worker - inhalative, short-term - systemic
Exposure estimate	< 0.01 mg/m³
Risk Characterization Ratio (RCR)	< 0.01
PROC2	1
	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified
Assessment method	version: The concentration of the substance has been considered using
	a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.125 mg/m³
Risk Characterization Ratio (RCR)	0.25
	The short-term exposure value corresponds to the long-term value
	multiplied by a factor of 2.
PROC1, PROC2	
Assessment method	Qualitative assessment
	Worker - dermal
DDOOL DDOOC	The use is assessed to be safe.
PROC1, PROC2	Ovalitativa accessment
Assessment method	Qualitative assessment
	Worker - contact with eyes
Cuidanas ta Dawnatras en Hases	The use is assessed to be safe.
Guidance to Downstream Users	the Diagon note that a modified version has been used to a
	/tra Please note that a modified version has been used (see exposure
estimates)	



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2.6 Contributing scenario (6) controll	ing worker exposure
	SU3: Industrial uses
Use descriptors covered	PROC2: Use in closed, continuous process with occasional controlled
	exposure. (closed systems)
Operational conditions	
Concentration of the substance	formaldehyde
	Content: >= 0 % - <= 100 %
Physical state	Liquid, high fugacity 1000 hPa
Vapour pressure of the substance	1000 nPa
during use Process temperature	150 °C
Duration and Frequency of activity	360 min 5 days per week
Indoor/Outdoor	Indoor
Room size	300 m3
100111 SIZE	Operation is carried out at elevated temperature (> 20°C above ambient
	temperature).
Risk Management Measures	temperature).
Provide a good standard of general	
ventilation (not less than 3 - 5 air	
changes per hour)	
Use suitable eye protection.	
Personal measures have to be	
applied in case of potential exposure	
only.	
Handle substance within closed	Effectiveness: 99 %
system.	Effectiveness. 99 %
Wear chemically resistant gloves in	
combination with intensive	Effectiveness: 98 %
management supervision control.	
Personal measures have to be	
applied in case of potential exposure	
only.	4
Exposure estimate and reference to	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified
	version: Use of gloves has been considered additionally. Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day
Exposure estimate Risk Characterization Ratio (RCR)	< 0.01
Assessment method	Advanced REACH Tool v1.0
ASSESSMENT METHOD	Worker - inhalative, long-term - systemic
Exposure estimate	0.253 mg/m³
Risk Characterization Ratio (RCR)	0.51
Table Official Control (1001)	The exposure estimate represents the 75th percentile of the exposure
	distribution. The short-term exposure value corresponds to the long-
	term value multiplied by a factor of 2.
Assessment method	Qualitative assessment
	Worker - dermal
	The use is assessed to be safe
Guidance to Downstream Users	
	/tra Please note that a modified version has been used (see exposure
For scaling see: http://www.advancedreachtool.com	
i or scaring see. http://www.auvanceureachttoor.com	

2.7 Contributing scenario (7) controlling worker exposure	
Use descriptors covered	SU3: Industrial uses PROC2: Use in closed, continuous process with occasional controlled exposure. Transfer of liquid products - falling liquids Submerged loading Dedicated facility (open systems)



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Operational conditions	
Concentration of the substance	formaldehyde
Concentration of the substance	Content: >= 0 % - <= 60 %
Physical state	Liquid, moderate fugacity
Vapour pressure of the substance during use	15.2 hPa
Process temperature	150 °C
Duration and Frequency of activity	120 min 5 days per week
Indoor/Outdoor	Indoor
Room size	300 m3
	Operation is carried out at elevated temperature (> 20°C above ambient temperature).
Amounts used	Amount per use 1,000 l
Risk Management Measures	
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	
Use suitable eye protection. Personal measures have to be	
applied in case of potential exposure only.	
Handle substance within closed system.	Effectiveness: 99 %
Wear chemically resistant gloves in combination with intensive management supervision control.	Effectiveness: 98 %
Vapour recovery system	Effectiveness: 80 %
Wear suitable respiratory protection.	Effectiveness: 90 %
Exposure estimate and reference to	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally.
Evaceura catimata	Worker - dermal, long-term - systemic
Exposure estimate Risk Characterization Ratio (RCR)	< 0.1 mg/kg bw/day < 0.01
Assessment method	Advanced REACH Tool v1.0
Assessment method	Worker - inhalative, long-term - systemic
Exposure estimate	0.253 mg/m ³
Risk Characterization Ratio (RCR)	0.51
	The short-term exposure value corresponds to the long-term value multiplied by a factor of 2. The exposure estimate represents the 75th percentile of the exposure distribution.
Assessment method	Qualitative assessment
	Worker - dermal
	The use is assessed to be safe.
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates)	
For scaling see: http://www.advancedreachtool.com	

2.8 Contributing scenario (8) controlling worker exposure	
Use descriptors covered	SU3: Industrial uses PROC2: Use in closed, continuous process with occasional controlled exposure. PROC3: Use in closed batch process (synthesis or
	formulation).



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Operational conditions	
Concentration of the substance	formaldehyde
Concentration of the substance	Content: >= 0 % - <= 5 %
Physical state	Liquid, moderate fugacity
Vapour pressure of the substance	14 hPa
during use	
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 90 %
Wear chemically resistant gloves in	
combination with specific activity	Effectiveness: 95 %
training	
Exposure estimate and reference to	ts source
PROC2, PROC3	
	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified
	version: The concentration of the substance has been considered using
Accomment mathed	a linear approach, ECETOC TRA modified version: Use of gloves has
Assessment method	been considered additionally., ECETOC TRA modified version:
	Reduction factor for local exhaust ventilation (LEV) has not been used
	for the calculation of dermal exposure estimates.
	Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day
Risk Characterization Ratio (RCR)	< 0.01
PROC2	
	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified
Assessment method	version: The concentration of the substance has been considered using
	a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.06 mg/m³
Risk Characterization Ratio (RCR)	< 0.13
,	The short-term exposure value corresponds to the long-term value
	multiplied by a factor of 2.
PROC3	
	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified
Assessment method	version: The concentration of the substance has been considered using
	a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.156 mg/m³
Risk Characterization Ratio (RCR)	0.31
	The short-term exposure value corresponds to the long-term value
	multiplied by a factor of 2.
PROC2, PROC3	
Assessment method	Qualitative assessment
-	Worker - dermal
	The use is assessed to be safe.
PROC2, PROC3	
Assessment method	Qualitative assessment
- isosomone mounda	Worker - contact with eyes
	The use is assessed to be safe.
Guidance to Downstream Users	This doe is descessed to be suite.
	/tra Please note that a modified version has been used (see exposure
estimates)	The Frederic Hat a modified version has been used (see exposure
ootiiii iidiooj	

2.9 Contributing scenario (9) controlling worker exposure	
Use descriptors covered	SU3: Industrial uses PROC3: Use in closed batch process (synthesis or formulation). PROC4: Use in batch and other process (synthesis) where opportunity



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	for exposure arises.
Operational conditions	
Concentration of the substance	formaldehyde
	Content: >= 0 % - <= 2.5 %
Physical state	Liquid, moderate fugacity
Vapour pressure of the substance	14 hPa
during use	400 min E days nor wook
Duration and Frequency of activity Indoor/Outdoor	480 min 5 days per week Indoor
Risk Management Measures	Indoor
Local exhaust ventilation	Effectiveness: 90 %
Wear chemically resistant gloves in	Lifectiveness. 90 70
combination with specific activity	Effectiveness: 95 %
training	
Exposure estimate and reference to it	ts source
PROC3, PROC4	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally. ECETOC TRA modified version: Reduction factor for local exhaust ventilation (LEV) has not been used for the calculation of dermal exposure estimates.
	Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day
Risk Characterization Ratio (RCR)	< 0.01
PROC3	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.078 mg/m³
Risk Characterization Ratio (RCR)	< 0.16
	The short-term exposure value corresponds to the long-term value multiplied by a factor of 2.
PROC4	Thurspied by a factor of 2.
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.063 mg/m³
Risk Characterization Ratio (RCR)	0.13
	The short-term exposure value corresponds to the long-term value
	multiplied by a factor of 2.
PROC3, PROC4	
Assessment method	Qualitative assessment
	Worker - dermal
DDOCA DDOCA	The use is assessed to be safe.
PROC3, PROC4	Ovalitativa accessment
Assessment method	Qualitative assessment
	Worker - contact with eyes
Guidance to Downstream Users	The use is assessed to be safe.
	/tra Please note that a modified version has been used (see exposure

2.10 Contributing scenario (10) controlling worker exposure		
Use descriptors covered	SU3: Industrial uses	
	PROC3: Use in closed batch process (synthesis or formulation)	



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	PROC4: Use in batch and other process (synthesis) where opportunity
	for exposure arises.
Operational conditions	
Concentration of the substance	formaldehyde Content: >= 0 % - <= 1.5 %
Physical state	Liquid, moderate fugacity
Vapour pressure of the substance during use	14 hPa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Wear chemically resistant gloves in combination with specific activity	Effectiveness: 95 %
training	
Exposure estimate and reference to	its source
PROC3, PROC4	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally.
	Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day
Risk Characterization Ratio (RCR)	< 0.01
PROC3	T
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.469 mg/m³
Risk Characterization Ratio (RCR)	0.94 The short-term exposure value corresponds to the long-term value multiplied by a factor of 2
PROC4	multiplied by a factor of 2.
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.375 mg/m³
Risk Characterization Ratio (RCR)	0.75 The short-term exposure value corresponds to the long-term value
	multiplied by a factor of 2.
PROC3, PROC4	
Assessment method	Qualitative assessment
	Worker - dermal
	The use is assessed to be safe
PROC3, PROC4	
Assessment method	Qualitative assessment
	Worker - contact with eyes
	The use is assessed to be safe
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org estimates)	/tra Please note that a modified version has been used (see exposure

2.11 Contributing scenario (11) controlling worker exposure	
Use descriptors covered	SU3: Industrial uses
	PROC4: Use in batch and other process (synthesis) where opportunity
	for exposure arises. PROC5: Mixing or blending in batch processes for
	formulation of preparations and articles (multistage and/or significant



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	contact).
Operational conditions	
•	formaldehyde
Concentration of the substance	Content: >= 0 % - <= 5 %
Physical state	Liquid, high fugacity
Vapour pressure of the substance	14 hPa
during use	
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 90 %
Use suitable eye protection.	Effectiveness: 90 %
Exposure estimate and reference to i	ts source
PROC4, PROC5	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally. ECETOC TRA modified version: Reduction factor for local exhaust ventilation (LEV) has not been used for the calculation of dermal exposure estimates.
	Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day
Risk Characterization Ratio (RCR)	< 0.01
PROC4	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.125 mg/m³
Risk Characterization Ratio (RCR)	0.25 The short-term exposure value corresponds to the long-term value multiplied by a factor of 2.
PROC5	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.313 mg/m³
Risk Characterization Ratio (RCR)	0.63
	The short-term exposure value corresponds to the long-term value multiplied by a factor of 2.
PROC4, PROC5	
Assessment method	Qualitative assessment
	Worker - dermal
DDOOL DDOOF	The use is assessed to be safe
PROC4, PROC5	Ovalitativa accessment
Assessment method	Qualitative assessment
	Worker - contact with eyes
Cuidanas to Daymatras - Harra	The use is assessed to be safe
Guidance to Downstream Users	/tra Plages note that a modified version has been used (see expenses
estimates)	/tra Please note that a modified version has been used (see exposure

2.12 Contributing scenario (12) controlling worker exposure	
Use descriptors covered	SU3: Industrial uses
	PROC5: Mixing or blending in batch processes for formulation of
	preparations and articles (multistage and/or significant contact).
	PROC6: Calendering operations PROC8a: Transfer of substance or



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	preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities
Operational conditions	Tion doubted resinger
Concentration of the substance	formaldehyde Content: >= 0 % - <= 2.5 %
Physical state	Liquid, high fugacity
Vapour pressure of the substance during use	14 hPa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 90 %
Wear chemically resistant gloves in combination with specific activity training	Effectiveness: 95 %
Exposure estimate and reference to	its source
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally. ECETOC TRA modified version: Reduction factor for local exhaust ventilation (LEV) has not been used for the calculation of dermal exposure estimates.
	Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day
Risk Characterization Ratio (RCR)	< 0.01
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.156 mg/m³
Risk Characterization Ratio (RCR)	0.31
Assessment method	The short-term exposure value corresponds to the long-term value multiplied by a factor of 2. Qualitative assessment
	Worker - dermal The use is assessed to be safe
Assessment method	Qualitative assessment
	Worker - contact with eyes
	The use is assessed to be safe
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org.estimates)	/tra Please note that a modified version has been used (see exposure

2.13 Contributing scenario (13) controlling worker exposure		
Use descriptors covered	SU3: Industrial uses PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact). PROC6: Calendering operations PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities	
Operational conditions		
Concentration of the substance	formaldehyde Content: >= 0 % - <= 1.5 %	
Physical state	Liquid, high fugacity	
Vapour pressure of the substance during use	14 hPa	
Duration and Frequency of activity	480 min 5 days per week	
Indoor/Outdoor	Indoor	



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Risk Management Measures		
Local exhaust ventilation	Effectiveness: 90 %	
Wear chemically resistant gloves in		
combination with specific activity	Effectiveness: 95 %	
training		
Exposure estimate and reference to		
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally. ECETOC TRA modified version: Reduction factor for local exhaust ventilation (LEV) has not been used for the calculation of dermal exposure estimates.	
	Worker - dermal, long-term - systemic	
Exposure estimate	< 0.1 mg/kg bw/day	
Risk Characterization Ratio (RCR)	< 0.01	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.	
	Worker - inhalative, long-term - systemic	
Exposure estimate	0.094 mg/m³	
Risk Characterization Ratio (RCR)	0.19	
	The short-term exposure value corresponds to the long-term value multiplied by a factor of 2.	
Assessment method	Qualitative assessment	
	Worker - dermal	
	The use is assessed to be safe	
Assessment method	Qualitative assessment	
	Worker - contact with eyes	
	The use is assessed to be safe	
Guidance to Downstream Users		
For scaling see: http://www.ecetoc.org estimates)	/tra Please note that a modified version has been used (see exposure	

2.14 Contributing scenario (14) contr	olling worker exposure
Use descriptors covered	SU3: Industrial uses PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact). PROC6: Calendering operations PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities
Operational conditions	
Concentration of the substance	formaldehyde Content: >= 0 % - <= 1 %
Physical state	Liquid, high fugacity
Vapour pressure of the substance	14 hPa
during use	
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 90 %
Wear chemically resistant gloves in combination with specific activity training	
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally, ECETOC TRA modified version:



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	Reduction factor for local exhaust ventilation (LEV) has not been used
	for the calculation of dermal exposure estimates.
	Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day
Risk Characterization Ratio (RCR)	< 0.01
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.063 mg/m³
Risk Characterization Ratio (RCR)	0.13
	The short-term exposure value corresponds to the long-term value multiplied by a factor of 2.
Assessment method	Qualitative assessment
	Worker - dermal
	The use is assessed to be safe
Assessment method	Qualitative assessment
	Worker - contact with eyes
	The use is assessed to be safe
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.or	g/tra Please note that a modified version has been used (see exposure

For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates)

2.15 Contributing scenario (15) contr	2.15 Contributing scenario (15) controlling worker exposure	
Use descriptors covered	SU3: Industrial uses PROC6: Calendering operations PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). PROC10: Roller application or brushing PROC13: Treatment of articles by dipping and pouring. PROC14: Production of preparations or articles by tabletting, compression, extrusion, pelettisation. PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities	
Operational conditions	•	
Concentration of the substance	formaldehyde Content: >= 0 % - <= 5 %	
Physical state	Liquid, high fugacity	
Vapour pressure of the substance during use	14 hPa	
Duration and Frequency of activity	480 min 5 days per week	
Indoor/Outdoor	Indoor	
	Risk Management Measures	
Local exhaust ventilation	Effectiveness: 90 %	
Wear chemically resistant gloves in combination with specific activity training		
Exposure estimate and reference to		
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally, ECETOC TRA modified version: Reduction factor for local exhaust ventilation (LEV) has not been used for the calculation of dermal exposure estimates.	
	Worker - dermal, long-term - systemic	
Exposure estimate	< 0.1 mg/kg bw/day	
Risk Characterization Ratio (RCR)	< 0.01	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.	



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	Worker - inhalative, long-term - systemic
Exposure estimate	0.313 mg/m³
Risk Characterization Ratio (RCR)	0.63
	The short-term exposure value corresponds to the long-term value
	multiplied by a factor of 2.
Assessment method	Qualitative assessment
	Worker - dermal
	The use is assessed to be safe
Assessment method	Qualitative assessment
	Worker - contact with eyes
	The use is assessed to be safe
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.o	rg/tra Please note that a modified version has been used (see exposure

For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates)

2.16 Contributing scenario (16) controlling worker exposure	
SU3: Industrial uses	
Use descriptors covered	PROC7: Industrial spraying
	Aerosol formation is not covered within the CES
Operational conditions	
Concentration of the substance	formaldehyde
Concentration of the substance	Content: >= 0 % - <= 5 %
Physical state	Liquid, high fugacity
Vapour pressure of the substance	14 hPa
during use	
Duration and Frequency of activity	60 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 95 %
Wear chemically resistant gloves in	
combination with specific activity	Effectiveness: 95 %
training	
Exposure estimate and reference to	ts source
	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified
	version: The concentration of the substance has been considered using
Assessment method	a linear approach, ECETOC TRA modified version: Use of gloves has
Assessment method	been considered additionally., ECETOC TRA modified version:
	Reduction factor for local exhaust ventilation (LEV) has not been used
	for the calculation of dermal exposure estimates.
	Worker - dermal, long-term - systemic
Exposure estimate	0.1 mg/kg bw/day
Risk Characterization Ratio (RCR)	< 0.01
	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified
Assessment method	version: The concentration of the substance has been considered using
	a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.156 mg/m³
Risk Characterization Ratio (RCR)	0.31
Assessment method	Qualitative assessment
	Worker - dermal
	The use is assessed to be safe
Assessment method	Qualitative assessment
	Worker - contact with eyes
	The use is assessed to be safe
	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified
Assessment method	version: The concentration of the substance has been considered using
	a linear approach.
	Worker - inhalative, short-term - systemic



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Exposure estimate	0.78 mg/m³
Risk Characterization Ratio (RCR)	0.78
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure	
estimates)	

2.17 Contributing scenario (17) contr	2.17 Contributing scenario (17) controlling worker exposure	
. ,	SU3: Industrial uses	
Use descriptors covered	PROC7: Industrial spraying	
•	Aerosol formation is not covered within the CES	
Operational conditions		
Concentration of the substance	formaldehyde	
	Content: >= 0 % - <= 2.5 %	
Physical state	Liquid, high fugacity	
Vapour pressure of the substance during use	14 hPa	
Duration and Frequency of activity	240 min 5 days per week	
Indoor/Outdoor	Indoor	
Risk Management Measures		
Local exhaust ventilation	Effectiveness: 95 %	
Wear chemically resistant gloves in combination with specific activity	Effectiveness: 95 %	
training		
Exposure estimate and reference to	ts source	
	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified	
	version: The concentration of the substance has been considered using	
Assessment method	a linear approach, ECETOC TRA modified version: Use of gloves has	
Assessment method	been considered additionally. ECETOC TRA modified version:	
	Reduction factor for local exhaust ventilation (LEV) has not been used	
	for the calculation of dermal exposure estimates.	
	Worker - dermal, long-term - systemic	
Exposure estimate	< 0.1 mg/kg bw/day	
Risk Characterization Ratio (RCR)	< 0.01	
	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified	
Assessment method	version: The concentration of the substance has been considered using	
	a linear approach.	
	Worker - inhalative, long-term - systemic	
Exposure estimate	0.235 mg/m³	
Risk Characterization Ratio (RCR)	0.47	
Assessment method	Qualitative assessment	
	Worker - dermal	
	The use is assessed to be safe.	
Accessors and modber-	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified	
Assessment method	version: The concentration of the substance has been considered using	
	a linear approach.	
Exposure estimate	Worker - inhalative, short-term - systemic	
Exposure estimate	0.78 mg/m³ 0.78	
Risk Characterization Ratio (RCR) Assessment method		
Moocooment method	Qualitative assessment Worker contact with eyes	
	Worker - contact with eyes The use is assessed to be safe.	
Guidance to Downstream Users	THE USE IS ASSESSED TO DE SATE.	
	tro Diagon note that a modified version has been used (as surround	
	tra Please note that a modified version has been used (see exposure	
estimates)		

2.18 Contributing scenario (18) controlling worker exposure	
Use descriptors covered	SU3: Industrial uses
	PROC7: Industrial spraying



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Operational conditions Concentration of the substance formaldehyde Content: >= 0 % - <= 1.5 % Physical state Liquid, high fugacity Vapour pressure of the substance during use 14 hPa	
Content: >= 0 % - <= 1.5 % Physical state Liquid, high fugacity Vapour pressure of the substance 14 hPa	
Content: >= 0 % - <= 1.5 % Physical state Liquid, high fugacity Vapour pressure of the substance 14 hPa	
Vapour pressure of the substance 14 hPa	
during use	
Duration and Frequency of activity 480 min 5 days per week	
Indoor/Outdoor Indoor	
Risk Management Measures	
Local exhaust ventilation Effectiveness: 95 %	
Wear chemically resistant gloves in	
combination with specific activity Effectiveness: 95 %	
training	
Exposure estimate and reference to its source	
ECETOC TRA v2.0 Worker; modified version, ECETOC	
version: The concentration of the substance has been co	
Assessment method a linear approach, ECETOC TRA modified version: Use	
been considered additionally, ECETOC TRA mod	
Reduction factor for local exhaust ventilation (LEV) has	not been used
for the calculation of dermal exposure estimates.	
Worker - dermal, long-term - systemic	
Exposure estimate < 0.1 mg/kg bw/day	
Risk Characterization Ratio (RCR) < 0.01	
ECETOC TRA v2.0 Worker; modified version, ECETOC	
Assessment method version: The concentration of the substance has been co	nsidered using
a linear approach.	
Worker - inhalative, long-term - systemic	
Exposure estimate 0.230 mg/m³	
Risk Characterization Ratio (RCR) 0.47	
The short-term exposure value corresponds to the lo	ong-term value
multiplied by a factor of 2.	
Assessment method Qualitative assessment	
Worker - dermal	
The use is assessed to be safe	
Assessment method Qualitative assessment	
Worker - contact with eyes	
The use is assessed to be safe	
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used	(see exposure
estimates)	

2.19 Contributing scenario (19) controlling worker exposure	
• •	SU3: Industrial uses
Use descriptors covered	PROC7: Industrial spraying
	Aerosol formation is not covered within the CES
Operational conditions	
Concentration of the substance	formaldehyde
Concentration of the substance	Content: >= 0 % - <= 1 %
Physical state	Liquid, moderate fugacity
Vapour pressure of the substance	14 hPa
during use	
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 95 %
Wear chemically resistant gloves in combination with specific activity	Effectiveness: 95 %



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training	
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally, ECETOC TRA modified version: Reduction factor for local exhaust ventilation (LEV) has not been used for the calculation of dermal exposure estimates.
	Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day
Risk Characterization Ratio (RCR)	< 0.01
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.156 mg/m³
Risk Characterization Ratio (RCR)	0.31
	The short-term exposure value corresponds to the long-term value multiplied by a factor of 2.
Assessment method	Qualitative assessment
	Worker - dermal
	The use is assessed to be safe
Assessment method	Qualitative assessment
	Worker - contact with eyes
	The use is assessed to be safe
Guidance to Downstream Users	•
For scaling see: http://www.ecetoc.orgestimates)	g/tra Please note that a modified version has been used (see exposure

2.20 Contributing scenario (20) contr	2.20 Contributing scenario (20) controlling worker exposure	
Use descriptors covered	SU3: Industrial uses PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities Submerged loading PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	
Operational conditions		
Concentration of the substance	formaldehyde Content: >= 1 % - <= 5 %	
Physical state	Liquid, moderate fugacity	
Vapour pressure of the substance during use	14 hPa	
Duration and Frequency of activity	480 min 5 days per week	
Indoor/Outdoor	Outdoor	
Risk Management Measures		
Vapour recovery system	Effectiveness: 80 %	
Wear chemically resistant gloves in combination with specific activity training	Effectiveness: 95 %	
Exposure estimate and reference to i	ts source	
Assessment method	Qualitative assessment	
	Worker - all relevant routes	
	The use is assessed to be safe., In case the identified operational	
	conditions and risk management measures are applied:	
Guidance to Downstream Users		
For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates)		



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2.21 Contributing scenario (21) controlling worker exposure		
	SU3: Industrial uses	
Use descriptors covered	PROC8b: Transfer of substance or preparation (charging/discharging)	
	from/to vessels/large containers at dedicated facilities	
Operational conditions		
Concentration of the substance	formaldehyde	
Concentration of the substance	Content: >= 0 % - <= 5 %	
Physical state	Liquid, moderate fugacity	
Vapour pressure of the substance	14 hPa	
during use		
Duration and Frequency of activity	480 min 5 days per week	
Indoor/Outdoor	Indoor	
Risk Management Measures		
Local exhaust ventilation	Effectiveness: 97 %	
Wear chemically resistant gloves in		
combination with specific activity	Effectiveness: 95 %	
training		
Exposure estimate and reference to i		
	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified	
	version: The concentration of the substance has been considered using	
Assessment method	a linear approach, ECETOC TRA modified version: Use of gloves has	
	been considered additionally. ECETOC TRA modified version:	
	Reduction factor for local exhaust ventilation (LEV) has not been used	
	for the calculation of dermal exposure estimates.	
Typesum estimate	Worker - dermal, long-term - systemic	
Exposure estimate	< 0.1 mg/kg bw/day	
Risk Characterization Ratio (RCR)	< 0.01 FCETOC TDA v2.0 Worker: modified version, FCETOC TDA modified	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using	
Assessment method	a linear approach.	
	Worker - inhalative, long-term - systemic	
Exposure estimate	0.094 mg/m³	
Risk Characterization Ratio (RCR)	0.19	
Trisk Gharacterization (Ratio (ROR)	The short-term exposure value corresponds to the long-term value	
	multiplied by a factor of 2.	
Assessment method	Qualitative assessment	
, locosomont motilou	Worker - dermal	
	The use is assessed to be safe.	
Assessment method	Qualitative assessment	
	Worker - contact with eyes	
	The use is assessed to be safe.	
Guidance to Downstream Users		
	/tra Please note that a modified version has been used (see exposure	
estimates)	(000 onpossio	
/		

2.22 Contributing scenario (22) controlling worker exposure		
Use descriptors covered	SU3: Industrial uses PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	
Operational conditions		
Concentration of the substance	formaldehyde Content: >= 0 % - <= 2.5 %	
Physical state	Liquid, moderate fugacity	
Vapour pressure of the substance during use	14 hPa	
Duration and Frequency of activity	480 min 5 days per week	
Indoor/Outdoor	Indoor	
Risk Management Measures		



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Local exhaust ventilation	Effectiveness: 97 %
Wear chemically resistant gloves in	
combination with specific activity	Effectiveness: 95 %
training	
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally, ECETOC TRA modified version: Reduction factor for local exhaust ventilation (LEV) has not been used for the calculation of dermal exposure estimates.
	Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day
Risk Characterization Ratio (RCR)	< 0.01
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.047 mg/m³
Risk Characterization Ratio (RCR)	0.09
	The short-term exposure value corresponds to the long-term value multiplied by a factor of 2.
Assessment method	Qualitative assessment
	Worker - dermal
	The use is assessed to be safe.
Assessment method	Qualitative assessment
	Worker - contact with eyes
	The use is assessed to be safe.
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org estimates)	/tra Please note that a modified version has been used (see exposure

2.23 Contributing scenario (23) controlling worker exposure		
2.23 Continuating Scenario (23) Conti	SU3: Industrial uses	
Use descriptors covered	PROC8b: Transfer of substance or preparation (charging/discharging)	
osc accomptors covered	from/to vessels/large containers at dedicated facilities	
Operational conditions	noninto vesseisharge containers at dedicated facilities	
	formaldehyde	
Concentration of the substance	Content: >= 0 % - <= 1.5 %	
Physical state	Liquid, moderate fugacity	
Vapour pressure of the substance	14 hPa	
during use		
Duration and Frequency of activity	480 min 5 days per week	
Indoor/Outdoor	Indoor	
Risk Management Measures		
Local exhaust ventilation	Effectiveness: 97 %	
Wear chemically resistant gloves in		
combination with specific activity	Effectiveness: 95 %	
training		
Exposure estimate and reference to its source		
	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified	
	version: The concentration of the substance has been considered using	
Assessment method	a linear approach, ECETOC TRA modified version: Use of gloves has	
	been considered additionally, ECETOC TRA modified version:	
	Reduction factor for local exhaust ventilation (LEV) has not been used	
	for the calculation of dermal exposure estimates.	
e .	Worker - dermal, long-term - systemic	
Exposure estimate	< 0.1 mg/kg bw/day	



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Risk Characterization Ratio (RCR)	< 0.01
	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified
Assessment method	version: The concentration of the substance has been considered using
	a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.028 mg/m³
Risk Characterization Ratio (RCR)	0.06
	The short-term exposure value corresponds to the long-term value
	multiplied by a factor of 2.
Assessment method	Qualitative assessment
	Worker - dermal
	The use is assessed to be safe
Assessment method	Qualitative assessment
	Worker - contact with eyes
	The use is assessed to be safe
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.o	rg/tra Please note that a modified version has been used (see exposure
estimates)	

2.24 Contributing scenario (24) controlling worker exposure		
Use descriptors covered	SU3: Industrial uses PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	
Operational conditions		
Concentration of the substance	formaldehyde Content: >= 0 % - <= 1 %	
Physical state	Liquid, moderate fugacity	
Vapour pressure of the substance during use	14 hPa	
Duration and Frequency of activity	480 min 5 days per week	
Indoor/Outdoor	Indoor	
Risk Management Measures		
Local exhaust ventilation	Effectiveness: 97 %	
Wear chemically resistant gloves in combination with specific activity training		
Exposure estimate and reference to its source		
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally, ECETOC TRA modified version: Reduction factor for local exhaust ventilation (LEV) has not been used for the calculation of dermal exposure estimates.	
	Worker - dermal, long-term - systemic	
Exposure estimate	< 0.1 mg/kg bw/day	
Risk Characterization Ratio (RCR)	< 0.01	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.	
	Worker - inhalative, long-term - systemic	
Exposure estimate	0.019 mg/m³	
Risk Characterization Ratio (RCR)	The short town synasure value corresponds to the long town value	
	The short-term exposure value corresponds to the long-term value multiplied by a factor of 2.	
Assessment method	Qualitative assessment	
-	Worker - dermal	
	The use is assessed to be safe	
Assessment method	Qualitative assessment	



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	Worker - contact with eyes
	The use is assessed to be safe
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure	
estimates)	

2.25 Contributing scenario (25) contr	olling worker exposure
Use descriptors covered	SU3: Industrial uses PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). PROC10: Roller application or brushing PROC13: Treatment of articles by dipping and pouring. PROC14: Production of preparations or articles by tabletting, compression, extrusion, pelettisation.
Operational conditions	
Concentration of the substance	formaldehyde Content: >= 0 % - <= 2.5 %
Physical state	Liquid, moderate fugacity
Vapour pressure of the substance during use	14 hPa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 90 %
Wear chemically resistant gloves in combination with specific activity training	Effectiveness: 95 %
Exposure estimate and reference to i	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally., ECETOC TRA modified version: Reduction factor for local exhaust ventilation (LEV) has not been used for the calculation of dermal exposure estimates.
	Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day
Risk Characterization Ratio (RCR)	< 0.01
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.156 mg/m³
Risk Characterization Ratio (RCR)	0.31 The short-term exposure value corresponds to the long-term value multiplied by a factor of 2.
Assessment method	Qualitative assessment
	Worker - dermal
	The use is assessed to be safe.
Assessment method	Qualitative assessment
	Worker - contact with eyes
	The use is assessed to be safe.
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/ estimates)	tra Please note that a modified version has been used (see exposure

2.26 Contributing scenario (26) controlling worker exposure	
Use descriptors covered	SU3: Industrial uses PROC9: Transfer of substance or preparation into small containers
	(dedicated filling line, including weighing). PROC10: Roller application



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	or brushing PROC13: Treatment of articles by dipping and pouring. PROC14: Production of preparations or articles by tabletting, compression, extrusion, pelettisation.
Operational conditions	
Concentration of the substance	formaldehyde Content: >= 0 % - <= 1.5 %
Physical state	Liquid, moderate fugacity
Vapour pressure of the substance during use	14 hPa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 90 %
Wear chemically resistant gloves in combination with specific activity training	Effectiveness: 95 %
Exposure estimate and reference to it	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally, ECETOC TRA modified version: Reduction factor for local exhaust ventilation (LEV) has not been used for the calculation of dermal exposure estimates.
	Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day
Risk Characterization Ratio (RCR)	< 0.01
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.094 mg/m³
Risk Characterization Ratio (RCR)	0.19 The short-term exposure value corresponds to the long-term value multiplied by a factor of 2.
Assessment method	Qualitative assessment Worker - dermal
	The use is assessed to be safe
Assessment method	Qualitative assessment
	Worker - contact with eyes
	The use is assessed to be safe
Guidance to Downstream Users	
	/tra Please note that a modified version has been used (see exposure

2.27 Contributing scenario (27) contr	olling worker exposure
Use descriptors covered	SU3: Industrial uses PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). PROC10: Roller application or brushing PROC13: Treatment of articles by dipping and pouring. PROC14: Production of preparations or articles by tabletting, compression, extrusion, pelettisation.
Operational conditions	
Concentration of the substance	formaldehyde Content: >= 0 % - <= 1 %
Physical state	Liquid, moderate fugacity
Vapour pressure of the substance during use	14 hPa
Duration and Frequency of activity	480 min 5 days per week



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Indoor/Outdoor	Indoor
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 90 %
Wear chemically resistant gloves in	
combination with specific activity	Effectiveness: 95 %
training	
Exposure estimate and reference to	ts source
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally, ECETOC TRA modified version: Reduction factor for local exhaust ventilation (LEV) has not been used for the calculation of dermal exposure estimates.
	Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day
Risk Characterization Ratio (RCR)	< 0.01
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.063 mg/m ³
Risk Characterization Ratio (RCR)	0.13
Nisk Gharacterization (Not)	The short-term exposure value corresponds to the long-term value multiplied by a factor of 2.
Assessment method	Qualitative assessment
	Worker - dermal
	The use is assessed to be safe.
Assessment method	Qualitative assessment
	Worker - contact with eyes
	The use is assessed to be safe.
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org estimates)	tra Please note that a modified version has been used (see exposure

2.28 Contributing scenario (28) controlling worker exposure	
	SU3: Industrial uses
Use descriptors covered	PROC16: Using material as fuel sources, limited exposure to unburned
·	product to be expected.
Operational conditions	
Concentration of the substance	formaldehyde
Concentration of the substance	Content: >= 0 % - <= 5 %
Physical state	Liquid, moderate fugacity
Vapour pressure of the substance	14 hPa
during use	
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Wear chemically resistant gloves in	
combination with specific activity	Effectiveness: 95 %
training	
Perform task in a fume cupboard.	
Exposure estimate and reference to	its source
	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified
Assessment method	version: The concentration of the substance has been considered using
	a linear approach, ECETOC TRA modified version: Use of gloves has
	been considered additionally.
	Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day



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Risk Characterization Ratio (RCR)	< 0.01
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.313 mg/m³
Risk Characterization Ratio (RCR)	0.63
	The short-term exposure value corresponds to the long-term value multiplied by a factor of 2.
Assessment method	Qualitative assessment
	Worker - dermal
	The use is assessed to be safe
Assessment method	Qualitative assessment
	Worker - contact with eyes
	The use is assessed to be safe
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.or estimates)	g/tra Please note that a modified version has been used (see exposure

,		
2.29 Contributing scenario (29) contr	olling worker exposure	
2.23 Continuuting Scenario (23) Conti	2.29 Contributing scenario (29) controlling worker exposure SU3: Industrial uses	
Use descriptors covered	PROC16: Using material as fuel sources, limited exposure to unburned	
Use descriptors covered		
Operational conditions	product to be expected.	
Operational conditions	formaldehyde	
Concentration of the substance	Content: >= 0 % - <= 2.5 %	
Physical state	Liquid, moderate fugacity	
Vapour pressure of the substance	14 hPa	
	14 11Fa	
during use Duration and Frequency of activity	490 min 5 days por wook	
Indoor/Outdoor	480 min 5 days per week Indoor	
	1110001	
Risk Management Measures		
Wear chemically resistant gloves in	Effectiveness: 05 %	
combination with specific activity	Effectiveness: 95 %	
training		
Perform task in a fume cupboard. Exposure estimate and reference to it.	ito pource	
Exposure estimate and reference to i		
	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using	
Assessment method	a linear approach, ECETOC TRA modified version: Use of gloves has	
	been considered additionally.	
	Worker - dermal, long-term - systemic	
Exposure estimate	< 0.1 mg/kg bw/day	
Risk Characterization Ratio (RCR)	< 0.01	
RISK CHARACTERIZATION RATIO (RCR)	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified	
Assessment method	version: The concentration of the substance has been considered using	
Assessment method	a linear approach.	
	Worker - inhalative, long-term - systemic	
Exposure estimate	0.156 mg/m³	
Risk Characterization Ratio (RCR)	0.31	
NISK CHARACTERIZATION RATIO (RCR)	The short-term exposure value corresponds to the long-term value	
	multiplied by a factor of 2.	
Assessment method	Qualitative assessment	
Assessment method	Worker - dermal	
Assessment method	The use is assessed to be safe Qualitative assessment	
Assessment method		
	Worker - contact with eyes	
	The use is assessed to be safe	



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Guidance to Downstream Users

For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates)

SU3: Industrial uses PROC16: Using material as fuel sources, limited exposure to unburned product to be expected.	2.30 Contributing scenario (30) controlling worker exposure	
Departional conditions		SU3: Industrial uses
product to be expected.	Use descriptors covered	PROC16: Using material as fuel sources, limited exposure to unburned
Concentration of the substance Physical state Liquid, moderate fugacity Vapour pressure of the substance during use Duration and Frequency of activity Indoor/Outdoor Risk Management Measures Wear chemically resistant gloves in combination with specific activity training Perform task in a fume cupboard. Exposure estimate and reference to its source ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: Use of gloves has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally. Worker - dermal, long-term - systemic Exposure estimate Assessment method ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: Use of gloves has been considered additionally. Worker - dermal, long-term - systemic ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach. Worker - inhalative, long-term - systemic Exposure estimate ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach. Worker - inhalative, long-term - systemic Exposure estimate O.19 The short-term exposure value corresponds to the long-term value multiplied by a factor of 2. Qualitative assessment Worker - dermal The use is assessed to be safe. Assessment method Qualitative assessment Worker - contact with eyes The use is assessed to be safe. Guidance to Downstream Users For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure		
Content: >= 0 % - <= 1.5 % Physical state Liquid, moderate fugacity Vapour pressure of the substance during use Duration and Frequency of activity Indoor/Outdoor Risk Management Measures Wear chemically resistant gloves in combination with specific activity training Perform task in a fume cupboard. Exposure estimate and reference to its source ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA wodified version: Use of gloves has been considered additionally. Worker - dermal, long-term - systemic EXPOSURE estimate Risk Characterization Ratio (RCR) EXPOSURE estimate Risk Characterization Ratio (RCR) EXPOSURE estimate Risk Characterization Ratio (RCR) Dull ECETOC TRA v2.0 Worker; modified version: Use of gloves has been considered additionally. Worker - dermal, long-term - systemic EXPOSURE estimate Risk Characterization Ratio (RCR) Uwriter - inhalative, long-term - systemic EXPOSURE estimate Risk Characterization Ratio (RCR) Uwriter - inhalative, long-term - systemic EXPOSURE estimate Qualitative assessment Worker - dermal The short-term exposure value corresponds to the long-term value multiplied by a factor of 2. Qualitative assessment Worker - dermal The use is assessed to be safe. Guidance to Downstream Users For scalling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure	Operational conditions	
Content: 2-0 % -<= 1.5 % Vapour pressure of the substance during use Duration and Frequency of activity Indoor/Outdoor Risk Management Measures Wear chemically resistant gloves in combination with specific activity training Perform task in a fume cupboard. Exposure estimate and reference to its source ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA wodified version: Use of gloves has been considered using a linear approach. EXPOSURE estimate EXPOSURE estima	Concentration of the substance	
Vapour pressure of the substance during use Duration and Frequency of activity Indoor/Outdoor Risk Management Measures Wear chemically resistant gloves in combination with specific activity training Perform task in a fume cupboard. Exposure estimate and reference to its source ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally. Worker - dermal, long-term - systemic < 0.1 mg/kg bw/day ECETOC TRA v2.0 Worker; modified version: Use of gloves has been considered additionally. Worker - dermal, long-term - systemic < 0.1 mg/kg bw/day < 0.01 ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach. Worker - inhalative, long-term - systemic Exposure estimate Risk Characterization Ratio (RCR) O.19 The short-term exposure value corresponds to the long-term value multiplied by a factor of 2. Assessment method Assessment method Qualitative assessment Worker - dermal The use is assessed to be safe. Assessment method Qualitative assessment Worker - contact with eyes The use is assessed to be safe. Guidance to Downstream Users For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure	Concentration of the substance	Content: >= 0 % - <= 1.5 %
during use Duration and Frequency of activity Indoor Risk Management Measures Wear chemically resistant gloves in combination with specific activity training Perform task in a fume cupboard. Exposure estimate and reference to its source ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally. Worker - dermal, long-term - systemic 4 0.01 mg/kg bw/day Risk Characterization Ratio (RCR) Exposure estimate Assessment method ECETOC TRA v2.0 Worker; modified version: Use of gloves has been considered additionally. ECETOC TRA would be version: Use of gloves has been considered using a linear approach, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach. Worker - inhalative, long-term - systemic Exposure estimate 0.094 mg/m³ Risk Characterization Ratio (RCR) 1.19 The short-term exposure value corresponds to the long-term value multiplied by a factor of 2. Assessment method Qualitative assessment Worker - dermal The use is assessed to be safe. Assessment method Qualitative assessment Worker - contact with eyes The use is assessed to be safe. Guidance to Downstream Users For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure		
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Exposure estimate		
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Guidance to Downstream Users For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure		
	Guidance to Downstream Users	
	For scaling see: http://www.ecetoc.org	/tra Please note that a modified version has been used (see exposure
		·

2.31 Contributing scenario (31) co	ntrolling worker exposure
Use descriptors covered	SU3: Industrial uses PROC21: Low energy manipulation of substances bound in materials and/or articles PROC22: Potentially closed processing operations (with minerals) at elevated temperature PROC23: Open processing and transfer operations (with minerals) at elevated temperature
Operational conditions	
Concentration of the substance	formaldehyde Content: >= 0 % - <= 5 %
Physical state	Solid



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Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 90 %
Wear chemically resistant gloves in	
combination with specific activity	Effectiveness: 95 %
training	
Exposure estimate and reference to	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally., ECETOC TRA modified version: Reduction factor for local exhaust ventilation (LEV) has not been used for the calculation of dermal exposure estimates.
	Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day
Risk Characterization Ratio (RCR)	< 0.01
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.05 mg/m³
Risk Characterization Ratio (RCR)	0.1
	The short-term exposure value corresponds to the long-term value multiplied by a factor of 2.
Assessment method	Qualitative assessment
	Worker - dermal
	The use is assessed to be safe.
Assessment method	Qualitative assessment
	Worker - contact with eyes
	The use is assessed to be safe.
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org.estimates)	tra Please note that a modified version has been used (see exposure

2.32 Contributing scenario (32) controlling worker exposure		
Use descriptors covered	SU3: Industrial uses PROC21: Low energy manipulation of substances bound in materials and/or articles PROC22: Potentially closed processing operations (with minerals) at elevated temperature PROC23: Open processing and transfer operations (with minerals) at elevated temperature PROC24: High (mechanical) energy work-up of substances bound in materials and/or articles PROC25: Other hot work operations with metals	
Operational conditions		
Concentration of the substance	formaldehyde Content: >= 0 % - <= 2.5 %	
Physical state	Solid	
Duration and Frequency of activity	480 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated temperatures	
Risk Management Measures		
Wear chemically resistant gloves in combination with specific activity training	Effectiveness: 95 %	
Exposure estimate and reference to its source		
PROC21, PROC22, PROC23, PROC24	PROC25	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified	



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	version: The concentration of the substance has been considered using
	a linear approach, ECETOC TRA modified version: Use of gloves has
	been considered additionally.
	Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day
Risk Characterization Ratio (RCR)	< 0.01
PROC21, PROC22, PROC23, PROC24	4
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.25 mg/m ³
Risk Characterization Ratio (RCR)	0.5
	The short-term exposure value corresponds to the long-term value multiplied by a factor of 2.
PROC21, PROC22, PROC23, PROC24, PROC25	
Assessment method	Qualitative assessment
	Worker - dermal
	The use is assessed to be safe
PROC21, PROC22, PROC23, PROC24	4, PROC25
Assessment method	Qualitative assessment
	Worker - contact with eyes
	The use is assessed to be safe
PROC25	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.125 mg/m³
Risk Characterization Ratio (RCR)	0.25
	The short-term exposure value corresponds to the long-term value multiplied by a factor of 2.
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org estimates)	/tra Please note that a modified version has been used (see exposure

2.33 Contributing scenario (33) controlling worker exposure				
Use descriptors covered	SU3: Industrial uses PROC21: Low energy manipulation of substances bound in material and/or articles PROC22: Potentially closed processing operations (wit minerals) at elevated temperature PROC23: Open processing antransfer operations (with minerals) at elevated temperature PROC24 High (mechanical) energy work-up of substances bound in material and/or articles PROC25: Other hot work operations with metals			
Operational conditions	·			
Concentration of the substance	formaldehyde Content: >= 0 % - <= 1.5 %			
Physical state	Solid			
Duration and Frequency of activity	480 min 5 days per week			
Indoor/Outdoor	Indoor			
	Operation is carried out at ambient or elevated temperatures			
Risk Management Measures				
Wear chemically resistant gloves in combination with specific activity training	Effectiveness: 95 %			
Exposure estimate and reference to i	ts source			
PROC21, PROC22, PROC23, PROC24	-, PROC25			
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified			

The latest version can be found on: $\underline{\text{http://www.neochim.bg/files/sds}} \underline{\text{kfse2_en.pdf}}$



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	version: The concentration of the substance has been considered using	
	a linear approach, ECETOC TRA modified version: Use of gloves has	
	been considered additionally.	
	Worker - dermal, long-term - systemic	
Exposure estimate	< 0.1 mg/kg bw/day	
Risk Characterization Ratio (RCR)	< 0.01	
PROC21, PROC22, PROC23, PROC24	1	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.	
	Worker - inhalative, long-term - systemic	
Exposure estimate	0.15 mg/m³	
Risk Characterization Ratio (RCR)	0.3	
	The short-term exposure value corresponds to the long-term value multiplied by a factor of 2.	
PROC21, PROC22, PROC23, PROC24	4, PROC25	
Assessment method	Qualitative assessment	
	Worker - dermal	
	The use is assessed to be safe	
PROC21, PROC22, PROC23, PROC24	4, PROC25	
Assessment method	Qualitative assessment	
	Worker - contact with eyes	
	The use is assessed to be safe	
PROC25		
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.	
	Worker - inhalative, long-term - systemic	
Exposure estimate	0.075 mg/m³	
Risk Characterization Ratio (RCR)	0.15	
	The short-term exposure value corresponds to the long-term value multiplied by a factor of 2.	
Guidance to Downstream Users		
For scaling see: http://www.ecetoc.org estimates)	/tra Please note that a modified version has been used (see exposure	

2.34 Contributing scenario (34) controlling worker exposure				
Use descriptors covered	SU3: Industrial uses PROC24: High (mechanical) energy work-up of substances bound in materials and/or articles			
Operational conditions				
Concentration of the substance	formaldehyde Content: >= 0 % - <= 5 %			
Physical state	Solid			
Duration and Frequency of activity	480 min 5 days per week			
Indoor/Outdoor	Indoor			
	Operation is carried out at ambient or elevated temperatures			
Risk Management Measures				
Local exhaust ventilation	Effectiveness: 90 %			
Wear chemically resistant gloves in combination with specific activity training	Effectiveness: 95 %			
Exposure estimate and reference to its source				
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally. ECETOC TRA modified version: Reduction factor for local exhaust ventilation (LEV) has not been used			



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	for the calculation of dermal exposure estimates.		
	Worker - dermal, long-term - systemic		
Exposure estimate	< 0.1 mg/kg bw/day		
Risk Characterization Ratio (RCR)	< 0.01		
	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified		
Assessment method	version: The concentration of the substance has been considered using		
	a linear approach.		
	Worker - inhalative, long-term - systemic		
Exposure estimate	0.10 mg/m³		
Risk Characterization Ratio (RCR)	0.2		
	The short-term exposure value corresponds to the long-term value		
	multiplied by a factor of 2.		
Assessment method	Qualitative assessment		
	Worker - dermal		
	The use is assessed to be safe		
Assessment method	Qualitative assessment		
	Worker - contact with eyes		
	The use is assessed to be safe		
Guidance to Downstream Users			
For scaling see: http://www.ecetoc.or estimates)	g/tra Please note that a modified version has been used (see exposure		

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2.35 Contributing scenario (35) contr			
	SU3: Industrial uses		
Use descriptors covered	PROC24: High (mechanical) energy work-up of substances bound in		
	materials and/or articles		
Operational conditions			
Concentration of the substance	formaldehyde		
	Content: >= 0 % - <= 1 %		
Physical state	Solid		
Duration and Frequency of activity	480 min 5 days per week		
Indoor/Outdoor	Indoor		
	Operation is carried out at ambient or elevated temperatures		
Risk Management Measures			
Wear chemically resistant gloves in			
combination with specific activity	Effectiveness: 95 %		
training			
Exposure estimate and reference to it	ts source		
-	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified		
A	version: The concentration of the substance has been considered using		
Assessment method	a linear approach, ECETOC TRA modified version: Use of gloves has		
	been considered additionally.		
	Worker - dermal, long-term - systemic		
Exposure estimate	< 0.1 mg/kg bw/day		
Risk Characterization Ratio (RCR)	< 0.01		
,	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified		
Assessment method	version: The concentration of the substance has been considered using		
	a linear approach.		
	Worker - inhalative, long-term - systemic		
Exposure estimate	0.10 mg/m³		
Risk Characterization Ratio (RCR)	0.2		
	The short-term exposure value corresponds to the long-term value		
	multiplied by a factor of 2.		
Assessment method	Qualitative assessment		
- issueson mound	Worker - dermal		
	The use is assessed to be safe		
Assessment method	Qualitative assessment		
7.00000 ITTO LITTOU	Worker - contact with eyes		
	worker - contact with eyes		



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		The use is	assessed t	o be safe					
Guidance to Do	wnstream Users								
For scaling see:	http://www.ecetoc.org	tra Please	note that a	modified	version	has been	used	(see	exposure
estimates)									

Concentration of the substance Concentration and Frequency of activity Indoor/Outdoor In Outdoor Risk Management Measures Wear chemically resistant gloves in combination with specific activity raining Exposure estimate and reference to its standard processing to the substance of the substance	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally. Worker - dermal, long-term - systemic
Concentration of the substance Separation and Frequency of activity Indoor/Outdoor Concentration and Frequency of activity I	Content: >= 0 % - <= 5 % Solid 180 min 5 days per week Indoor Departion is carried out at ambient or elevated temperatures Effectiveness: 95 % Source ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally. Worker - dermal, long-term - systemic
Physical state Curation and Frequency of activity Indoor/Outdoor Risk Management Measures Wear chemically resistant gloves in combination with specific activity raining Exposure estimate and reference to its serious activity of a because the serious activity of activity of a because the serious activity of a	Content: >= 0 % - <= 5 % Solid 180 min 5 days per week Indoor Departion is carried out at ambient or elevated temperatures Effectiveness: 95 % Source ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally. Worker - dermal, long-term - systemic
Physical state Duration and Frequency of activity Indoor/Outdoor Risk Management Measures Vear chemically resistant gloves in combination with specific activity raining Exposure estimate and reference to its serious activity Assessment method Exposure estimate Exposure estimate Exposure estimate Risk Characterization Ratio (RCR)	Solid 180 min 5 days per week Indoor Departion is carried out at ambient or elevated temperatures Effectiveness: 95 % Source ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally. Worker - dermal, long-term - systemic
Duration and Frequency of activity ndoor/Outdoor In O Risk Management Measures Wear chemically resistant gloves in combination with specific activity raining Exposure estimate and reference to its: Assessment method Exposure estimate Exposure estimate Exposure estimate Risk Characterization Ratio (RCR)	Source ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally. Worker - dermal, long-term - systemic
Indoor/Outdoor In O Risk Management Measures Wear chemically resistant gloves in combination with specific activity raining Exposure estimate and reference to its selection is selected by the selection is selected by	Departion is carried out at ambient or elevated temperatures Effectiveness: 95 % Source ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally. Worker - dermal, long-term - systemic
Risk Management Measures Wear chemically resistant gloves in combination with specific activity raining Exposure estimate and reference to its seem to be	Departion is carried out at ambient or elevated temperatures Effectiveness: 95 % Source ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally. Worker - dermal, long-term - systemic
Risk Management Measures Wear chemically resistant gloves in combination with specific activity raining Exposure estimate and reference to its search seems and seems are seems as a seem at the combination with specific activity and seems are seems and reference to its seems are seems as a seems are seems as a seems are seems are seems are seems as a seems are see	Effectiveness: 95 % Source ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally. Worker - dermal, long-term - systemic
Wear chemically resistant gloves in combination with specific activity raining Exposure estimate and reference to its: Assessment method Exposure estimate Can be wear and the combination of the combi	source ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally. Worker - dermal, long-term - systemic
combination with specific activity Effectivity raining Exposure estimate and reference to its serious activity Effectivity Ef	source ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally. Worker - dermal, long-term - systemic
Assessment method Exposure estimate and reference to its serior version and between the control of the control	source ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally. Worker - dermal, long-term - systemic
Exposure estimate and reference to its solution Assessment method Assessment method Exposure estimate Risk Characterization Ratio (RCR)	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally. Worker - dermal, long-term - systemic
Assessment method Assessment method Exposure estimate Risk Characterization Ratio (RCR)	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally. Worker - dermal, long-term - systemic
Assessment method Assessment method Assessment method W Exposure estimate Risk Characterization Ratio (RCR)	version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally. Worker - dermal, long-term - systemic
Assessment method a be well as be well as be a be well as be well as be well as be a be well as be	a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally. Worker - dermal, long-term - systemic
a be W Exposure estimate < Risk Characterization Ratio (RCR) <	peen considered additionally. Worker - dermal, long-term - systemic
be W Exposure estimate < Risk Characterization Ratio (RCR) <	peen considered additionally. Worker - dermal, long-term - systemic
Exposure estimate < Risk Characterization Ratio (RCR) <	Vorker - dermal, long-term - systemic
Risk Characterization Ratio (RCR) <	
Risk Characterization Ratio (RCR) <	< 0.1 mg/kg bw/day
	< 0.01
L	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified
	version: The concentration of the substance has been considered using
	a linear approach.
	Vorker - inhalative, long-term - systemic
	0.25 mg/m³
	0.5
	The short-term exposure value corresponds to the long-term value
	nultiplied by a factor of 2.
	Qualitative assessment
	Vorker - dermal
	The use is assessed to be safe
	Qualitative assessment
·	Vorker - contact with eyes
	The use is assessed to be safe
Guidance to Downstream Users	The doe to doocood to be oute

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3. Short title of exposure scenario (ES 3) - Professional use of products containing formaldehyde up to 1.5%: adhesives, foams, coatings, firelighters and cleaning agents

Use descriptors related to the life cycle stage	Sector of end use: SU22; Process category: PROC 5/8a/8b/10/11/13/15/16/19/21/22/23/24/25 Chemical product category: PC8/9a/39/13/31/35 Environmental release category: ERC/2/3/5/8a/8b/8c/8d/8f		
Name of contributing environmental scenario (1) and corresponding ERC	1 Formulation of mixture (ERC2) 2 Formulation in materials (ERC3) 3 Industrial use resulting in inclusion into or onto a matrix (ERC5) 4 Wide dispersive indoor use of processing aids in open systems (ERC8a) 5 Wide dispersive indoor use of reactive substances in open systems (ERC8b) 6 Wide dispersive indoor use resulting in inclusion into or onto a matrix (ERC8c) 7 Wide dispersive outdoor use of processing aids in open systems (ERC8d) 8 Wide dispersive outdoor use resulting in inclusion into or onto a matrix (ERC8f)		
List of names of contributing worker scenarios (2) and corresponding PROC	1 Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) (PROC5) 2 Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities (PROC8a) 3 Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities (PROC8b) 4 Roller application and brushing (PROC10) 5 Non industrial spraying (PROC11) 6 Treatment of articles by dipping and pouring (PROC13) 7 Use as laboratory reagent (PROC15) 8 Using material as fuel sources, limited exposure to unburned to be expected (PROC16) 9 Hand-mixing with intimate contact and only PPE available (PROC19) 10 Low energy manipulation of substances bound in materials and/or articles (PROC21) 11 Potentially closed processing with minerals/metals at elevated temperature (PROC22) Industrial setting 12 Open processing and transfer with minerals/ metals at elevated temperature (PROC23) 13 High (mechanical) energy work- up of substances bound in materials and/or articles (PROC24) 14 Other hot work operations with metals (PROC25)		
List of names of corresponding PC	 Biocide products (PC8) Coating and paints, thinners, paint removal (PC9a) Fillers, putties, plasters, modelling clay (PC9b) Finger paints (PC9c) Fuels (PC13) Polishes and wax blends (PC31) Washing and cleaning products (including solvent based products) (PC35) 		



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8. Cosmetics, personal care products (PC39)

2. Contributing scenario controlling environmental exposure

Formulation of mixture (ERC2); Formulation in materials (ERC3); Industrial use resulting in inclusion into or onto a matrix (ERC5); Wide dispersive indoor use of processing aids in open systems (ERC8a); Wide dispersive indoor use of reactive substances in open systems (ERC8b); Wide dispersive indoor use resulting in inclusion into or onto a matrix (ERC8c); Wide dispersive outdoor use of processing aids in open systems (ERC8d); Wide dispersive outdoor use resulting in inclusion into or onto a matrix (ERC8f)

An environmental assessment has not been performed as the product does not meet the criteria for being classified.

2.1 Contributing scenario (1) controlling worker exposure				
Use descriptors covered	SU22: Professional uses PROC5: Mixing or blending in batch processes for formulation or preparations and articles (multistage and/or significant contact).			
Operational conditions				
Concentration of the substance	formaldehyde Content: >= 0 % - <= 1.5 %			
Physical state	Liquid, high fugacity			
Vapour pressure of the substance during use	14 hPa			
Duration and Frequency of activity	480 min 5 days per week			
Indoor/Outdoor	Indoor			
Risk Management Measures				
Wear chemically resistant gloves in combination with specific activity training	Effectiveness: 95 %			
Wear a half face respirator conforming to EN140 Type A filter or better.	Effectiveness: 90 %			
Exposure estimate and reference to				
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally.			
	Worker - dermal, long-term - systemic			
Exposure estimate	< 0.1 mg/kg bw/day			
Risk Characterization Ratio (RCR)	< 0.01			
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.			
	Worker - inhalative, long-term - systemic			
Exposure estimate	0.188 mg/m³			
Risk Characterization Ratio (RCR)	0.38 The short-term exposure value corresponds to the long-term value multiplied by a factor of 2.			
Assessment method	Qualitative assessment			
	Worker - dermal			
	The use is assessed to be safe.			
Assessment method	Qualitative assessment			
	Worker - contact with eyes			
	The use is assessed to be safe.			
Guidance to Downstream Users				
For scaling see: http://www.ecetoc.org	/tra Please note that a modified version has been used (see exposure			

2.2 Contributing scenario (2) controlling worker exposure

estimates)



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	SU3: Industrial uses				
Use descriptors covered	PROC8b: Transfer of substance or preparation (charging/discharging)				
•	from/to vessels/large containers at dedicated facilities				
Operational conditions	· · · · · · · · · · · · · · · · · · ·				
-	formaldehyde				
Concentration of the substance	Content: >= 0 % - <= 1.5 %				
Physical state	Liquid, moderate fugacity				
Vapour pressure of the substance	14 hPa				
during use					
Duration and Frequency of activity	480 min 5 days per week				
Indoor/Outdoor	Indoor				
Risk Management Measures					
Local exhaust ventilation	Effectiveness: 90 %				
Wear chemically resistant gloves in					
combination with specific activity	Effectiveness: 95 %				
training					
Exposure estimate and reference to					
	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified				
	version: The concentration of the substance has been considered using				
Assessment method	a linear approach, ECETOC TRA modified version: Use of gloves has				
7 toobbonnenit mound	been considered additionally., ECETOC TRA modified version:				
	Reduction factor for local exhaust ventilation (LEV) has not been used				
	for the calculation of dermal exposure estimates.				
	Worker - dermal, long-term - systemic				
Exposure estimate	< 0.1 mg/kg bw/day				
Risk Characterization Ratio (RCR)	< 0.01				
	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified				
Assessment method	version: The concentration of the substance has been considered using				
	a linear approach.				
	Worker - inhalative, long-term - systemic				
Exposure estimate	0.094 mg/m³				
Risk Characterization Ratio (RCR)	0.19				
	The short-term exposure value corresponds to the long-term value				
	multiplied by a factor of 2.				
Assessment method	Qualitative assessment				
	Worker - dermal				
	The use is assessed to be safe.				
Assessment method	Qualitative assessment				
	Worker - contact with eyes				
	The use is assessed to be safe.				
Guidance to Downstream Users					
	/tra Please note that a modified version has been used (see exposure				
estimates)					

2.3 Contributing scenario (3) controlling worker exposure		
	SU3: Industrial uses	
Use descriptors covered	PROC11: Non industrial spraying	
	Aerosol formation is not covered within the CES	
Operational conditions		
Concentration of the substance	formaldehyde	
	Content: >= 0 % - <= 1.5 %	
Physical state	Liquid, moderate fugacity	
Vapour pressure of the substance	14 hPa	
during use		
Duration and Frequency of activity	480 min 5 days per week	
Indoor/Outdoor	Indoor	
Risk Management Measures		
Local exhaust ventilation	Effectiveness: 90 %	



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Wear chemically resistant gloves in combination with specific activity training	
Wear a half face respirator conforming to EN140 Type A filter or better.	Effectiveness: 90 %
Exposure estimate and reference to	ts source
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally, ECETOC TRA modified version: Reduction factor for local exhaust ventilation (LEV) has not been used for the calculation of dermal exposure estimates.
	Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day
Risk Characterization Ratio (RCR)	< 0.01
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.113 mg/m³
Risk Characterization Ratio (RCR)	0.23
Assessment method	Qualitative assessment
	Worker - dermal
	The use is assessed to be safe.
Assessment method	Qualitative assessment
	Worker - contact with eyes
	The use is assessed to be safe.
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach. Worker - inhalative, short-term - systemic
Exposure estimate	0.38 mg/m³
Risk Characterization Ratio (RCR)	0.38
Guidance to Downstream Users	0.00
	/tra Please note that a modified version has been used (see exposure
estimates)	The Fredoc Hote that a modified version has been used (see exposure

2.4 Contributing scenario (4) controlling worker exposure		
Use descriptors covered	SU22: Professional uses PROC15: Use a laboratory reagent. PROC16: Using material as fuel	
Ose descriptors covered	sources, limited exposure to unburned product to be expected.	
Operational conditions		
Concentration of the substance	formaldehyde Content: >= 0 % - <= 1.5 %	
Physical state	Liquid, moderate fugacity	
Vapour pressure of the substance	14 hPa	
during use		
Duration and Frequency of activity	480 min 5 days per week	
Indoor/Outdoor	Indoor	
Risk Management Measures		
Wear chemically resistant gloves in		
combination with specific activity	Effectiveness: 95 %	
training		
Perform task in a fume cupboard.		
Exposure estimate and reference to its source		
	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified	
Assessment method	version: The concentration of the substance has been considered using	
	a linear approach, ECETOC TRA modified version: Use of gloves has	



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	been considered additionally.
	Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day
Risk Characterization Ratio (RCR)	< 0.01
	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified
Assessment method	version: The concentration of the substance has been considered using
	a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.188 mg/m³
Risk Characterization Ratio (RCR)	0.38
	The short-term exposure value corresponds to the long-term value
	multiplied by a factor of 2.
Assessment method	Qualitative assessment
	Worker - dermal
	The use is assessed to be safe
Assessment method	Qualitative assessment
	Worker - contact with eyes
	The use is assessed to be safe
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org estimates)	/tra Please note that a modified version has been used (see exposure

2.5 Contributing scenario (5) controll	
Use descriptors covered	SU3: Industrial uses PROC19: Hand-mixing with intimate contact and only PPE available.
Operational conditions	
Concentration of the substance	formaldehyde Content: >= 0 % - <= 1.5 %
Physical state	Liquid, moderate fugacity
Vapour pressure of the substance during use	14 hPa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Wear chemically resistant gloves in combination with specific activity training	
Perform task in a fume cupboard.	
Wear a half face respirator conforming to EN140 Type A filter or better.	Effectiveness: 90 %
Exposure estimate and reference to	its source
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally.
	Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day
Risk Characterization Ratio (RCR)	< 0.01
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.113 mg/m³
Risk Characterization Ratio (RCR)	0.23
Assessment method	Qualitative assessment
	Worker - dermal
	The use is assessed to be safe.
Assessment method	Qualitative assessment

The latest version can be found on: $\underline{\text{http://www.neochim.bg/files/sds} \ kfse2_en.pdf}$



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	Worker - contact with eyes
	The use is assessed to be safe
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, short-term - systemic
Exposure estimate	0.38 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.38
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org	g/tra Please note that a modified version has been used (see exposure

2.6 Contributing scenario (6) controll	ing worker exposure
Use descriptors covered	SU22: Professional uses PROC21: Low energy manipulation of substances bound in materials and/or articles PROC23: Open processing and transfer operations (with minerals) at elevated temperature PROC24: High (mechanical) energy work-up of substances bound in materials and/or articles PROC25: Other hot work operations with metals
Operational conditions	
Concentration of the substance	formaldehyde Content: >= 0 % - <= 1.5 %
Physical state	Solid
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Wear chemically resistant gloves in combination with specific activity training	
Exposure estimate and reference to	
PROC21, PROC23, PROC24, PROC25	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach, ECETOC TRA modified version: Use of gloves has been considered additionally.
	Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day
Risk Characterization Ratio (RCR)	< 0.01
PROC21, PROC23, PROC24	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.30 mg/m³
Risk Characterization Ratio (RCR)	0.6
	The short-term exposure value corresponds to the long-term value multiplied by a factor of 2.
PROC21, PROC23, PROC24, PROC25	
Assessment method	Qualitative assessment
-	Worker - dermal
-	The use is assessed to be safe
PROC21, PROC23, PROC24, PROC25	
Assessment method	Qualitative assessment
	Worker - contact with eyes
	The use is assessed to be safe
PROC25	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified

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	version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.15 mg/m³
Risk Characterization Ratio (RCR)	0.3
	The short-term exposure value corresponds to the long-term value multiplied by a factor of 2.
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.or estimates)	rg/tra Please note that a modified version has been used (see exposure

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4. Short title of exposure scenario (ES 4) - Professional use of products containing formaldehyde up to 1%: resins in wood applications (eg. glues)

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Use descriptors related to the life	Sector of end use: SU22
cycle stage	Process category: PROC 5/8a/8b/10/15
	Product category: PC1
	Environmental release category: ERC1/2/3/4/6a/6b/6c/6d/7
	Article category: AC11
Name of contributing environmental	Manufacture of substances(ERC1)
scenario (1) and corresponding ERC	Formulation of mixture (ERC2)
	Formulation in materials(ERC3)
	Industrial use of processing aids in processes and products, not becoming part of articles (ERC4)
	 Industrial use resulting in manufacture of another substance (use of intermediates) (ERC6a)
	Industrial use of reactive processing aids (ERC6b)
	7. Industrial use of monomers for manufacture of thermoplastics (ERC6c)
	8. Industrial use of process regulators for polymerization processes in production of resins, rubbers, polymers (ERC6d)
	Industrial use of substances in closed systems (ERC7)
List of names of contributing worker scenarios (2) and corresponding	Mixing or blending in batch processes for formulation of mixture and articles (multistage and/or significant contact) (PROC5)
PROC	Transfer of substance or mixture (charging/discharging) from/to vessels/large containers at non-dedicated facilities (PROC8a)
	 Transfer of substance or mixture (charging/discharging) from/to vessels/large containers at dedicated facilities (PROC8b)
	Roller application or brushing (PROC10)
	Use as laboratory reagent (PROC15)
List of names of corresponding PC	Adhesives, sealants (PC1)

2. Contributing scenario controlling environmental exposure

Manufacture of substances(ERC1); Formulation of mixture (ERC2); Formulation in materials(ERC3); Industrial use of processing aids in processes and products, not becoming part of articles (ERC4); Industrial use resulting in manufacture of another substance (use of intermediates) (ERC6a); Industrial use of reactive processing aids (ERC6b); Industrial use of monomers for manufacture of thermoplastics (ERC6c); Industrial use of process regulators for polymerization processes in production of resins, rubbers, polymers (ERC6d); Industrial use of substances in closed systems (ERC7)

An environmental assessment has not been performed as the substance does not meet the criteria for being classified as dangerous for the environment.

2.1 Contributing scenario (1) controlling worker exposure for:		
Use descriptors covered	SU22: Professional uses PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact). PROC10: Roller application or brushing PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities	
Operational conditions		
Concentration of the substance	formaldehyde Content: >= 0 % - <= 1 %	
Physical state	Liquid, high fugacity	
Vapour pressure of the substance during use	14 hPa	



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Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 80 %
Wear chemically resistant gloves in	
combination with specific activity	Effectiveness: 95 %
training	
Exposure estimate and reference to	its source
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach., ECETOC TRA modified version: Use of gloves has been considered additionally., ECETOC TRA modified version: Reduction factor for local exhaust ventilation (LEV) has not been used for the calculation of dermal exposure estimates.
	Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day
Risk Characterization Ratio (RCR)	< 0.01
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.25 mg/m³
Risk Characterization Ratio (RCR)	0.5
	The short-term exposure value corresponds to the long-term value multiplied by a factor of 2.
Assessment method	Qualitative assessment
	Worker - dermal
	The use is assessed to be safe.
Assessment method	Qualitative assessment
	Worker - contact with eyes
	The use is assessed to be safe.
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates)	

2.2 Contributing scenario (2) controlling worker exposure for:	
Use descriptors covered	SU3: Industrial uses PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Operational conditions	
Concentration of the substance	formaldehyde Content: >= 0 % - <= 1 %
Physical state	Liquid, moderate fugacity
Vapour pressure of the substance	14 hPa
during use	
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 90 %
Wear chemically resistant gloves in combination with specific activity training	Effectiveness: 95 %
Exposure estimate and reference to its source	
Assessment method	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified version: The concentration of the substance has been considered using a linear approach. ECETOC TRA modified version: Use of gloves has been considered additionally. ECETOC TRA modified version:



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	Reduction factor for local exhaust ventilation (LEV) has not been used
	for the calculation of dermal exposure estimates.
	Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day
Risk Characterization Ratio (RCR)	< 0.01
	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified
Assessment method	version: The concentration of the substance has been considered using
	a linear approach.
	Worker - inhalative, long-term - systemic
Exposure estimate	0.063 mg/m³
Risk Characterization Ratio (RCR)	0.13
	The short-term exposure value corresponds to the long-term value
	multiplied by a factor of 2.
Assessment method	Qualitative assessment
	Worker - dermal
	The use is assessed to be safe
Assessment method	Qualitative assessment
	Worker - contact with eyes
	The use is assessed to be safe
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.or estimates)	g/tra Please note that a modified version has been used (see exposure

2.3 Contributing scenario (3) controlli	ng worker exposure for:
Use descriptors covered	SU22: Professional uses
	PROC15: Use a laboratory reagent.
Operational conditions	
Concentration of the substance	formaldehyde
Concentration of the substance	Content: >= 0 % - <= 1 %
Physical state	Liquid, moderate fugacity
Vapour pressure of the substance	14 hPa
during use	
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Wear chemically resistant gloves in	
combination with specific activity	Effectiveness: 95 %
training	
Perform task in a fume cupboard.	
Exposure estimate and reference to it	
	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified
Assessment method	version: The concentration of the substance has been considered
	using a linear approach., ECETOC TRA modified version: Use of
	gloves has been considered additionally.
	Worker - dermal, long-term - systemic
Exposure estimate	< 0.1 mg/kg bw/day
Risk Characterization Ratio (RCR)	< 0.01
A	ECETOC TRA v2.0 Worker; modified version, ECETOC TRA modified
Assessment method	version: The concentration of the substance has been considered
	using a linear approach.
Evaceure estimate	Worker - inhalative, long-term - systemic
Exposure estimate	0.125 mg/m³
Risk Characterization Ratio (RCR)	The short term expected value corresponds to the long term value
	The short-term exposure value corresponds to the long-term value
Assessment method	multiplied by a factor of 2. Qualitative assessment
Assessment method	
	Worker - dermal
	The use is assessed to be safe



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Assessment method	Qualitative assessment	
	Worker - contact with eyes	
	The use is assessed to be safe	
Guidance to Downstream Users		
For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure		
estimates)		

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5. Short title of exposure scenario (ES 5) - Consumer use of formaldehyde based products: adhesives, coatings, firelighters and cleaning agents

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Use descriptors related to the life cycle	Sector of end use: SU21
stage	Chemical product category:
	PC1/3/8/9a/9b/9c/13/15/18/21/23/31/32/35/37/39
	Environmental release category: ERC8a/8b/8c/8d/8f/10a/11a
Name of contributing environmental scenario (1) and corresponding ERC	1. Wide dispersive indoor use of processing aids in open
	systems (ERC8a)
	Wide dispersive indoor use of reactive substances in open systems (ERC8b)
	 Wide dispersive indoor use resulting in inclusion into or onto a matrix (ERC8c)
	 Wide dispersive outdoor use of processing aids in open systems (ERC8d)
	 Wide dispersive outdoor use resulting in inclusion into or onto a matrix (ERC8f)
	6. Wide dispersive outdoor use of long-life articles and materials
	with low release (ERC10a)
	 Wide dispersive indoor use of long-life articles and materials with low release (ERC11a)
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Списък с имена на съответните	1. Adhesives, sealants (PC1)
Категории на химическия продукт (РС)	2. Air care products (PC3)
	3. Biocides products (PC8)
	4. Coatings and paints, thinners, paint removers (PC9a)
	Fillers, putties, plasters, modeling clay (PC9b)
	6. Finger paints (PC9c)
	7. Fuels (PC13)
	8. Non-metal-surface treatment products (PC15)
	9. Ink and toners (PC18)
	10. Laboratory chemicals (PC21)
	11. Leather tanning (PC23)
	12. Polishes and wax blends (PC31)
	13. Polymer preparations and compounds (PC32)
	14. Washing and cleaning products (including solvent based products) (PC35)
	15. Water treatment chemicals (PC37)
	16. Cosmetics, personal care products (PC39)
	To. Obstrictios, personal care products (1 009)
In accordance to the Article 14 (2a-f) of the REACH Regulation (EC) No 1907/2006, exposure estimation and risk	

characterization needs not to be performed if the substance in a preparation is less than 0.1%.