

**SAFETY DATA SHEET****WorléeKyd BS 830**Product code : 111022-07467  
Date of revision : 28.01.2013.Version : 2  
Date of printing : 28.01.2013.**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**Product name : **WorléeKyd BS 830, 60% in dearomatized hydrocarbons 160-200****1.2 Relevant identified uses of the substance or mixture and uses advised against**

Use of the substance/mixture : Raw materials for coatings, sealants and adhesives.

Identified uses	
1) Formulation and (re)packing of substances and mixtures	Industrial uses: Uses of substances as such or in preparations* at industrial sites Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
2) Uses in Coatings	Industrial uses: Uses of substances as such or in preparations* at industrial sites
3) Use in laboratories	Industrial uses: Uses of substances as such or in preparations* at industrial sites
4) Uses in Coatings	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
5) Use in laboratories	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
6) Uses in Coatings	Consumer uses: Private households (= general public = consumers)

**1.3 Details of the supplier of the safety data sheet**Prepared by : Worlée-Chemie G.m.b.H.  
Soellerstrasse 14-16  
D - 21481 Lauenburg  
Tel. +49 (0)4153 596-0  
Fax +49 (0)4153 53649

e-mail address of person responsible for this SDS : MSDS@worlee.de

National contact : E.H. Worlee & Co. UK Ltd.  
Suite 5, 3rd Floor  
GB - Staffordshire ST5 1 EZ  
Tel. +441782-714614**1.4 Emergency telephone number**

National advisory body/Poison Centre

Telephone number : +49 (0)551-19240 (Emergency health information)

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flam. Liq. 3, H226 On basis of test data  
STOT SE 3, H336 Calculation method

Classification according to Directive 1999/45/EC [DPD]

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

Physical/chemical hazards : Flammable.

Human health hazards : Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.

See Section 16 for the full text of the R phrases or H statements declared above.  
See Section 11 for more detailed information on health effects and symptoms.**2.2 Label elements**

Hazard pictograms :



Signal word : Warning

**SAFETY DATA SHEET**

WorléeKyd BS 830

**WORLÉE**<sup>®</sup>

seit 1851

Product code : 111022-07467 Version : 2  
 Date of revision : 28.01.2013. Date of printing : 28.01.2013.

Hazard statements : H226 - Flammable liquid and vapour.  
 H336 - May cause drowsiness or dizziness.

**Precautionary statements**

Prevention : P280 - Wear protective gloves. Wear eye or face protection.  
 P210 - Keep away from heat, sparks, open flames and hot surfaces. - No smoking.  
 P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.

Response : P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

Storage : P235 - Keep cool.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients : hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics

Supplemental label elements : Contains phthalic anhydride. May produce an allergic reaction.

**2.3 Other hazards****Other hazards which do not result in classification**

The product is flammable. Keep away from excessive heat, sparks or open fire. In use, may form flammable/explosive vapour-air mixture. Electrostatic charges may be generated during pumping, release of which may cause a fire. The vapour/gas is heavier than air and will spread along the ground. Vapour may travel a considerable distance to source of ignition and flash back. Aspiration hazard if swallowed. Can enter lungs and cause damage.

**SECTION 3: Composition/information on ingredients**

Chemical characterisation : Dissolved alkyd resin (mixture)

Product/ingredient name	Identifiers	%	Classification 67/548/EEC	Type
hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics	REACH #: 01-2119463258-33 EC: 919-857-5 CAS: 64742-48-9 Index: 649-327-00-6	30 - 40	R10 Xn; R65 R66, R67	[1]
phthalic anhydride	EC: 201-607-5 CAS: 85-44-9 Index: 607-009-00-4	0.3 - 1	Xn; R22 Xi; R41, R37/38 R42/43	[1] [2]
See Section 16 for the full text of the R-phrases declared above.				

Product/ingredient name	Identifiers	%	Classification 1272/2008/EC (CLP)	Type
hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics	REACH #: 01-2119463258-33 EC: 919-857-5 CAS: 64742-48-9 Index: 649-327-00-6	30 - 40	Flam. Liq. 3, H226 STOT SE 3, H336 Asp. Tox. 1, H304	[1]
phthalic anhydride	EC: 201-607-5 CAS: 85-44-9 Index: 607-009-00-4	0.3 - 1	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT SE 3, H335	[1] [2]
See Section 16 for the full text of the H statements declared above.				

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Type

**SAFETY DATA SHEET****WorléeKyd BS 830****WORLÉE**<sup>®</sup>  
seit 1851

Product code : 111022-07467

Version : 2

Date of revision : 28.01.2013.

Date of printing : 28.01.2013.

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

Occupational exposure limits, if available, are listed in Section 8.

**SECTION 4: First aid measures****4.1 Description of first aid measures**

- General information** : In all cases of doubt, or when symptoms persist, seek medical attention. If unconscious, place in recovery position and get medical attention immediately. Never give anything by mouth to an unconscious person. In any case show the physician the Safety Data Sheet.
- Eye contact** : Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Begin with medical treatment.
- Inhalation** : Remove affected persons from dangerous area by observing suitable respiratory protection measures. Remove the casualty into fresh air and keep at rest.
- Skin contact** : Take off immediately all contaminated clothing. Wash contaminated clothing before reusing. Do not allow the product to dry on the skin. Wash skin thoroughly with soap and water or use recognised skin cleanser.
- Ingestion** : If swallowed, rinse mouth with water (only if the person is conscious). Do not induce vomiting unless directed to do so by medical personnel. Seek medical attention.

**4.2 Most important symptoms and effects, both acute and delayed**

- General information** : When inhaled or swallowed depending on the time and amount, it can give rise to the following symptoms: headaches, giddiness, tiredness, nausea, vomiting, irregular heart beat, intoxication, unconsciousness, asphyxiation and fatality.

**4.3 Indication of any immediate medical attention and special treatment needed**

- Notes to physician** : When inhaled or swallowed depending on the time and amount, it can give rise to the following symptoms: headaches, giddiness, tiredness, nausea, vomiting, irregular heart beat, intoxication, unconsciousness, asphyxiation and fatality.

**SECTION 5: Firefighting measures****5.1 Extinguishing media**

- Suitable** : Extinguishing measures to suit surroundings. In case of fire, use water spray jet, dry extinguishing powder, foam or carbon dioxide.
- Not suitable** : water jet.

**5.2 Special hazards arising from the substance or mixture**

- Hazardous combustion products** : In a fire, the following may be released: carbon dioxide, carbon monoxide, not combusted hydrocarbons.

**5.3 Advice for firefighters**

- Special protective equipment for fire-fighters** : During fire-fighting wear self-contained breathing apparatus and protective clothing.
- Additional information** : The product is flammable. Use water spray to keep fire-exposed containers cool. Use extinguishing media suitable for surrounding materials. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

- General information** : To avoid fire, eliminate ignition sources. Provide adequate ventilation. Use personal protective equipment. Avoid contact with skin.

**6.2 Environmental precautions**

- General information** : Do not discharge into the drains / surface waters / groundwater. Prevent spread over a wide area e.g. by containment or oil barriers.

**6.3 Methods and materials for containment and cleaning up**

**SAFETY DATA SHEET**



**WorléeKyd BS 830**

Product code : 111022-07467 Version : 2  
 Date of revision : 28.01.2013. Date of printing : 28.01.2013.

seit 1851

**General information** : Absorb with liquid-binding material (sand, diatomite, universal binders etc.) or use a spill kit. Containers in which spilt substance has been collected must be adequately labelled. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

**6.4 Reference to other sections**

**General information** : See Section 1 for emergency contact information.  
 See Section 8 for information on appropriate personal protective equipment.  
 See Section 13 for additional waste treatment information.

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

**Protective measures** : Keep away from sources of ignition - No smoking. Vapours may form explosive mixtures with air. Take precautionary measures against electrostatic discharges. Provide good ventilation of working area. The working procedure should be planned as far as allowed by state-of-the-art technology so as to avoid release of hazardous substances or prevent skin contact. The level of risk involved in product handling must be reduced to a minimum by means of protective and preventive measures.

**7.2 Conditions for safe storage, including any incompatibilities**

**General information** Store in a dry, cool and well-ventilated area. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. Store in accordance with local regulations.

**Packaging materials**

**Recommended** : Glass. Stainless steel. Coated steel. Unlined steel.

**Seveso II Directive - Reporting thresholds (in tonnes)**

**Danger criteria**

Category	Notification and MAPP threshold	Safety report threshold
P5c: Flammable liquids 2 and 3 not falling under P5a or P5b	5000	50000
C6: Flammable (R10)	5000	50000

**7.3 Specific end use(s)**

**Recommendations** : Not available.

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

**Occupational exposure limits**

Product/ingredient name	Exposure limit values
phthalic anhydride	<b>EH40/2005 WELs (United Kingdom (UK), 1/2012). Skin sensitiser. Inhalation sensitiser.</b> STEL: 12 mg/m <sup>3</sup> 15 minutes. TWA: 4 mg/m <sup>3</sup> 8 hours.

**DNELs/DMELs**

Product/ingredient name	Type	Exposure	Value	Population	Effects
hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics	DNEL	Long term Dermal	208 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	871 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	125 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Inhalation	900 mg/m <sup>3</sup>	Consumers	Systemic
	DNEL	Long term Oral	125 mg/kg bw/day	Consumers	Systemic

**SAFETY DATA SHEET****WorléeKyd BS 830****WORLÉE®**

seit 1851

Product code : 111022-07467  
Date of revision : 28.01.2013.Version : 2  
Date of printing : 28.01.2013.**PNECs**

No PECs available.

**8.2 Exposure controls**

- Hygiene measures** : Observe the usual precautions for handling chemicals. When using do not eat, drink or smoke. Use protective skin cream for preventive skin protection. Clean skin thoroughly after work; apply skin cream.
- Eye/face protection** : Safety goggles with lateral shielding (DIN EN 166)
- Skin protection** : Usual working clothes for the chemical industry, suitable for the job.
- Hand protection** : If there is a potential for product skin contact, use of gloves tested to e.g. EN 374 will provide sufficient protection. Protective gloves should in any case be tested for workplace-specific suitability (e.g. mechanical resistance, product compatibility, antistatic properties). Comply with instructions and information provided by the glove manufacturer concerning use, care and replacement of the gloves. Replace protective gloves immediately upon damage or at the first signs of wear. As far as possible, plan work procedures so that wearing gloves will not be necessary.
- Recommended gloves should be made of** : nitrile
- Material thickness** : >0,4 mm
- Permeation time** : >480 min
- Respiratory protection** : If the occupational exposure limits are exceeded, suitable respiratory protective equipment must be worn. If no occupational exposure limits are defined, sufficiently effective respiratory protective measures must be taken in the presence of aerosols and vapours. Recommended: organic vapour filter (Type A) organic vapour filter (Type AX)

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****Appearance**

- Physical state** : Liquid. [Viscous liquid.]
- Colour** : Yellowish.
- Odour** : Paraffinic
- Boiling point** : 160 to 200 °C
- Flash point** : 35 to 40 °C
- Explosion limits** : Lower: 0,6%  
Upper: 7%
- Oxidising properties** : Not oxidising.
- Ignition temperature** : >200 °C
- Vapour pressure** : 0,21 kPa [20 °C]
- Density** : 0,944 g/cm<sup>3</sup> [20 °C]
- Viscosity** : 6000 mPa\*s [20 °C] [Rheometer]
- Efflux time** : >90 s [20 °C] [DIN 4]
- Solubility in water** : Not miscible

**9.2 Other information**

No additional information.

**SECTION 10: Stability and reactivity****10.1 Reactivity**

- General information** : No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability**

- General information** : The product is stable.

**10.3 Possibility of hazardous reactions**

- General information** : No hazardous reactions when stored and handled according to prescribed instructions.

**SAFETY DATA SHEET**

WorléeKyd BS 830

Product code : 111022-07467  
Date of revision : 28.01.2013.Version : 2  
Date of printing : 28.01.2013.**WORLÉE**<sup>®</sup>  
seit 1851**10.4 Conditions to avoid**

General information : The product is flammable. Keep away from excessive heat, sparks or open fire.

**10.5 Incompatible materials**

General information : oxidising agents

**10.6 Hazardous decomposition products**

General information : Thermal disintegration depends to a great extent on the external conditions. A complex mixture of solids, liquids and gases forms in the air, including among other substances carbon dioxide, carbon monoxide and other organic compounds, when this material is burnt or is thermally or oxidatively degraded.

**SECTION 11: Toxicological information****11.1 Information on toxicological effects****General information**

Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. High vapour concentrations can cause headaches, dizziness, drowsiness and nausea and may lead to unconsciousness.

**Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics	LD50 Dermal	Rabbit	>5000 mg/kg	-
phthalic anhydride	LD50 Oral	Rat	>5000 mg/kg	-
	LD50 Oral	Rat	1530 mg/kg	-

**Acute toxicity estimates**

Not available.

**Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure	Observation
phthalic anhydride	Eyes - Moderate irritant	Rabbit	-	24 hours 50 milligrams	-

**Evaluation**Skin : Frequent persistent contact with the skin can cause skin irritation.  
Eyes : May cause mild eye irritation.**Sensitiser****Remarks**Skin : No evidence of sensitizing effects.  
Respiratory : No evidence of sensitizing effects.**Mutagenicity**

Remarks : No evidence of mutagenic effects.

**Carcinogenicity**

Remarks : No evidence of carcinogenic effects.

**Reproductive toxicity**

Remarks : No evidence that the substance is toxic for reproduction.

**Teratogenicity**

Remarks : No evidence that the substance may cause birth defects.

**Specific target organ toxicity (single exposure)**

Product/ingredient name	Category	Route of exposure	Target organs
hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics	Category 3	Not applicable.	Narcotic effects
phthalic anhydride	Category 3	Not applicable.	Respiratory tract irritation

**Specific target organ toxicity (repeated exposure)**

**SAFETY DATA SHEET****WORLÉE**<sup>®</sup>

WorléeKyd BS 830

Product code : 111022-07467

Version : 2

Date of revision : 28.01.2013.

Date of printing : 28.01.2013.

seit 1851

Remarks : Not available.

**Aspiration hazard**

Product/ingredient name	Result
hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics	ASPIRATION HAZARD - Category 1

**Potential chronic health effects**

Remarks : Not available.

**SECTION 12: Ecological information****12.1 Toxicity**

## General information

Do not allow spillage to soil, waterways or waste water canal.

Product/ingredient name	Result	Species	Exposure
hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics	Acute IC50 >1000 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute LC50 >1000 mg/l	Fish - Oncorhynchus mykiss	96 hours
	Acute NOEC 100 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours

Remarks : No known significant effects or critical hazards.

**12.2 Persistence and degradability**

Product/ingredient name	Result
hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics	80 % - 28 days

Remarks : The polymer is only slightly biodegradable in view of the desired stability.

**12.3 Bioaccumulative potential**

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics	5 to 6.7	-	high
phthalic anhydride	1,6	-	low

**12.4 Mobility in soil**Soil/water partition coefficient (K<sub>oc</sub>) : Not available.**12.5 Results of PBT and vPvB assessment**

PBT : Not applicable.

vPvB : Not applicable.

**12.6 Other adverse effects** : No known significant effects or critical hazards.**SECTION 13: Disposal considerations****13.1 Waste treatment methods**

## Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Incineration in suitable incineration plant. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

## Packaging




Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.



**SAFETY DATA SHEET**

WorléeKyd BS 830

Product code : 111022-07467  
Date of revision : 28.01.2013.Version : 2  
Date of printing : 28.01.2013.**WORLÉE**<sup>®</sup>  
seit 1851**SECTION 14: Transport information**

	ADR/RID	IMDG	IATA
<b>14.1 UN number</b>	1866	1866	1866
<b>14.2 UN proper shipping name</b>	Resin solution, flammable	Resin solution, flammable	Resin solution, flammable
<b>14.3 Hazard class</b> <b>Danger labels and placards</b>	3 	3 	3 
<b>14.4 Packing group</b>	III	III	III
<b>14.5 Environmental hazards</b>	No.	No.	No.
<b>14.6 Special precautions for user</b>	Not available.	Not available.	Not available.
<b>Additional information</b>	Exempted according to 2.2.3.1.5 (Viscous substance exemption)	Exempted according to 2.3.2.5 (Viscous substance exemption)	Not available.
<b>Special provisions</b>	640 E		
<b>Classification code</b>	F1		
<b>Transport category</b>	3		
<b>HI/Kemler number</b>	30		
<b>Tunnel code</b>	D/E		
<b>Emergency schedules (EmS)</b>		F-E;S-E	

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Substances of very high concern

Substances mentioned on the so-called "candidate list of substances of very high concern (SVHC) for authorisation" published by the ECHA are not intentionally added to this product. Therefore it is not expected, that these substances are present in amounts of  $\geq 0,1\%$  in this product.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Not applicable.

**15.2 Chemical Safety Assessment**

This product contains substances for which Chemical Safety Assessments are still required.



**SAFETY DATA SHEET**

**WorléeKyd BS 830**

Product code : 111022-07467

Version : 2

Date of revision : 28.01.2013.

Date of printing : 28.01.2013.

seit 1851

**SECTION 16: Other information**

✔ Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ATE = Acute Toxicity Estimate  
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 PNEC = Predicted No Effect Concentration  
 RRN = REACH Registration Number

**Full text of abbreviated H statements** : H226 Flammable liquid and vapour.  
 H302 Harmful if swallowed.  
 H304 May be fatal if swallowed and enters airways.  
 H315 Causes skin irritation.  
 H317 May cause an allergic skin reaction.  
 H318 Causes serious eye damage.  
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 H335 May cause respiratory irritation.  
 H336 May cause drowsiness or dizziness.

**Full text of classifications [CLP/GHS]** : Acute Tox. 4, H302 ACUTE TOXICITY: ORAL - Category 4  
 Asp. Tox. 1, H304 ASPIRATION HAZARD - Category 1  
 Eye Dam. 1, H318 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1  
 Flam. Liq. 3, H226 FLAMMABLE LIQUIDS - Category 3  
 Resp. Sens. 1, H334 RESPIRATORY SENSITIZATION - Category 1  
 Skin Irrit. 2, H315 SKIN CORROSION/IRRITATION - Category 2  
 Skin Sens. 1, H317 SKIN SENSITIZATION - Category 1  
 STOT SE 3, H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)  
 [Respiratory tract irritation] - Category 3  
 STOT SE 3, H336 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)  
 [Narcotic effects] - Category 3

**Full text of abbreviated R phrases** : R10- Flammable.  
 R22- Harmful if swallowed.  
 R65- Harmful: may cause lung damage if swallowed.  
 R41- Risk of serious damage to eyes.  
 R37/38- Irritating to respiratory system and skin.  
 R42/43- May cause sensitisation by inhalation and skin contact.  
 R66- Repeated exposure may cause skin dryness or cracking.  
 R67- Vapours may cause drowsiness and dizziness.

**Full text of classifications [DSD/DPD]** : Xn - Harmful  
 Xi - Irritant

**Notice to reader**

**This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.**

**hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics**

**Section 1: - Title**

- Use Descriptor : **Identified use name:** Formulation and (re)packing of substances and mixtures  
**Process Category:** PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC15  
**Substance supplied to that use in form of:** In a mixture  
**Sector of end use:** SU03, SU10  
**Subsequent service life relevant for that use:** No.  
**Environmental Release Category:** ERC02
- Health Contributing Scenarios : **General exposures (closed systems) -** PROC01, PROC02, PROC03  
**General exposures (open systems) -** PROC04  
**Operation is carried out at elevated temperature (> 20°C above ambient temperature).** - PROC03  
**Process sampling -** PROC03  
**Laboratory activities -** PROC15  
**Material transfers -** PROC08b  
**Mixing operations (open systems) -** PROC05  
**Transfer from/pouring from containers -** PROC08a  
**Drum/batch transfers -** PROC08b  
**Production of preparation or articles by tableting, compression, extrusion or pelletisation -** PROC14  
**Clean-down and maintenance of equipment -** PROC08a  
**Storage -** PROC01, PROC02
- Processes and activities covered by the exposure scenario : Formulation, packing and re-packing of the substance and its mixtures in batch or continuous operations, including storage, materials transfers, mixing, tableting, compression, pelletisation, extrusion, large and small scale packing, sampling, maintenance and associated laboratory activities.

**Section 2: - Exposure Scenarios**

**2.1 Control of environmental exposure**

No exposure assessment presented for the environment.

**2.2 Control of worker exposure**

- Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).
- Physical state : Liquid, vapour pressure < 0.5 kPa at STP.
- Frequency and duration of use : Covers daily exposures up to 8 hours (unless stated differently).
- Other given operational conditions affecting workers exposure : Assumes a good basic standard of occupational hygiene has been implemented  
 Assumes use at not more than 20°C above ambient temperature, unless stated differently.

**Contributing exposure scenario controlling worker exposure**

**General exposures (closed systems)**

- Process control measures : Undertake operation in enclosed conditions.
- Product safety-related measures : Recommended gloves should be made of: Nitrile.  
 Material thickness: > 0.4 mm  
 Permeation time: > 480 min
- Eye protection: Safety goggles with lateral shielding (DIN EN 166)
- If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.  
 Wear a respirator conforming to EN140 with Type A filter or better.

### General exposures (open systems)

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### Operation is carried out at elevated temperature (> 20°C above ambient temperature).

Process control measures : Formulate in enclosed or ventilated mixing vessels.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### Process sampling

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### Laboratory activities

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### Material transfers

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### Mixing operations (open systems)

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### Transfer from/pouring from containers

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### Drum/batch transfers

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 mm

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### Production of preparation or articles by tableting, compression, extrusion or pelletisation

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### Clean-down and maintenance of equipment

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### Storage

Process control measures : Store substance within a closed system.

## Section 3: - Exposure estimation and reference to its source

### Exposure estimation and reference to its source - Environment

Exposure assessment (environment) : No exposure assessment presented for the environment.

### Exposure estimation and reference to its source - Workers

Exposure assessment (human) : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

## Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : No exposure assessment presented for the environment.

Health : Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Risk Management Measures are based on qualitative risk characterisation. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

**hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics**

**Section 1: - Title**

- Use Descriptor : **Identified use name:** Uses in Coatings  
**Process Category:** PROC01, PROC02, PROC03, PROC04, PROC05, PROC07, PROC08a, PROC08b, PROC09, PROC10, PROC13, PROC14, PROC15  
**Substance supplied to that use in form of:** In a mixture  
**Sector of end use:** SU03  
**Subsequent service life relevant for that use:** No.  
**Environmental Release Category:** ERC04
- Health Contributing Scenarios : **General exposures (closed systems) - PROC01**  
**General exposures (closed systems) with sample collection - PROC02, PROC03**  
**Film formation - force drying, stoving and other technologies - Operation is carried out at elevated temperature (> 20°C above ambient temperature). - PROC02**  
**Mixing operations (closed systems) - PROC03**  
**Film formation - air drying - PROC04**  
**Mixing operations (open systems) - PROC05**  
**Spraying (automatic/robotic) - PROC07**  
**Spraying/fogging by manual application - PROC07**  
**Material transfers - PROC08a, PROC08b**  
**Roller, spreader, flow application - PROC10**  
**Dipping, immersion and pouring - PROC13**  
**Laboratory activities - PROC15**  
**Transfer from/pouring from containers - PROC09**  
**Production of preparation or articles by tableting, compression, extrusion or pelletisation - PROC14**  
**Equipment cleaning and maintenance - PROC08a**  
**Storage - PROC01**
- Processes and activities covered by the exposure scenario : Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including materials receipt, storage, preparation and transfer from bulk and semi-bulk, application by spray, roller, spreader, dip, flow, fluidised bed on production lines and film formation) and equipment cleaning, maintenance and associated laboratory activities.

**Section 2: - Exposure Scenarios**

**2.1 Control of environmental exposure**

No exposure assessment presented for the environment.

**2.2 Control of worker exposure**

- Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).
- Physical state : Liquid, vapour pressure < 0.5 kPa at STP.
- Frequency and duration of use : Covers daily exposures up to 8 hours (unless stated differently).
- Other given operational conditions affecting workers exposure : Assumes use at not more than 20°C above ambient temperature, unless stated differently. Assumes a good basic standard of occupational hygiene has been implemented

**Contributing exposure scenario controlling worker exposure**

**General exposures (closed systems)**

- Process control measures : Undertake operation in enclosed conditions.

**General exposures (closed systems) with sample collection**

Process control measures : Store substance within a closed system.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

**Film formation - force drying, stoving and other technologies - Operation is carried out at elevated temperature (> 20°C above ambient temperature).**

Process control measures : Store substance within a closed system.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

**Mixing operations (closed systems)**

Process control measures : Undertake operation in enclosed conditions.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

**Film formation - air drying**

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

**Mixing operations (open systems)**

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.



### **Spraying (automatic/robotic)**

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### **Spraying/fogging by manual application**

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### **Material transfers**

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### **Roller, spreader, flow application**

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### **Dipping, immersion and pouring**

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### Laboratory activities

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### Transfer from/pouring from containers

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### Production of preparation or articles by tableting, compression, extrusion or pelletisation

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### Equipment cleaning and maintenance

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### Storage

Process control measures : No other specific measures identified.

## Section 3: - Exposure estimation and reference to its source

### Exposure estimation and reference to its source - Environment

Exposure assessment (environment) : No exposure assessment presented for the environment.

### Exposure estimation and reference to its source - Workers

Exposure assessment (human) : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

#### **Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES**

- Environment : No exposure assessment presented for the environment.
- Health : Available hazard data do not enable the derivation of a DNEL for dermal irritant effects.  
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented.  
Risk Management Measures are based on qualitative risk characterisation.  
Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

**hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics**

**Section 1: - Title**

Use Descriptor	: <b>Identified use name:</b> Use in laboratories <b>Process Category:</b> PROC10, PROC15 <b>Substance supplied to that use in form of:</b> In a mixture <b>Sector of end use:</b> SU03 <b>Subsequent service life relevant for that use:</b> No. <b>Environmental Release Category:</b> ERC02, ERC04
Health Contributing Scenarios	: <b>Laboratory activities</b> - PROC15 <b>Cleaning</b> - PROC10
Processes and activities covered by the exposure scenario	: Use of the substance within laboratory settings, including material transfers and equipment cleaning.

**Section 2: - Exposure Scenarios**

**2.1 Control of environmental exposure**

No exposure assessment presented for the environment.

**2.2 Control of worker exposure**

Concentration of substance in mixture or article	: Covers percentage substance in the product up to 100% (unless stated differently).
Physical state	: Liquid, vapour pressure < 0.5 kPa at STP.
Frequency and duration of use	: Covers daily exposures up to 8 hours (unless stated differently).
Other given operational conditions affecting workers exposure	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Assumes a good basic standard of occupational hygiene has been implemented

**Contributing exposure scenario controlling worker exposure**

**Laboratory activities**

Process control measures	: No other specific measures identified.
Product safety-related measures	: Recommended gloves should be made of: Nitrile. Material thickness: > 0.4 mm Permeation time: > 480 min  Eye protection: Safety goggles with lateral shielding (DIN EN 166)  If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn. Wear a respirator conforming to EN140 with Type A filter or better.

**Cleaning**

Process control measures	: No other specific measures identified.
Product safety-related measures	: Recommended gloves should be made of: Nitrile. Material thickness: > 0.4 mm Permeation time: > 480 min  Eye protection: Safety goggles with lateral shielding (DIN EN 166)  If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn. Wear a respirator conforming to EN140 with Type A filter or better.

### Section 3: - Exposure estimation and reference to its source

#### Exposure estimation and reference to its source - Environment

Exposure assessment (environment) : No exposure assessment presented for the environment.

#### Exposure estimation and reference to its source - Workers

Exposure assessment (human) : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

### Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : No exposure assessment presented for the environment.

Health : Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Risk Management Measures are based on qualitative risk characterisation. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

**hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics**

**Section 1: - Title**

- Use Descriptor : **Identified use name:** Uses in Coatings  
**Process Category:** PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC10, PROC11, PROC13, PROC15, PROC19  
**Substance supplied to that use in form of:** In a mixture  
**Sector of end use:** SU22  
**Subsequent service life relevant for that use:** No.  
**Environmental Release Category:** ERC08a, ERC08d
- Health Contributing Scenarios : **General exposures (closed systems) - PROC01**  
**Filling/preparation of equipment from drums or containers - PROC02**  
**Preparation of material for application - PROC03**  
**Film formation - air drying (Outdoor use) - PROC04**  
**Film formation - air drying (Indoor use) - PROC04**  
**Preparation of material for application (Indoor) - PROC05**  
**Preparation of material for application (Outdoor) - PROC05**  
**Material transfers - PROC08a, PROC08b**  
**Roller, spreader, flow application (Indoor use) - PROC10**  
**Roller, spreader, flow application (Outdoor use) - PROC10**  
**Spraying/fogging by manual application (Indoor use) - PROC11**  
**Spraying/fogging by manual application (Outdoor use) - PROC11**  
**Dipping, immersion and pouring (Indoor use) - PROC13**  
**Dipping, immersion and pouring (Outdoor use) - PROC13**  
**Laboratory activities - PROC15**  
**Hand application - fingerpaints, pastels, adhesives (Indoor use) - PROC19**  
**Hand application - fingerpaints, pastels, adhesives (Outdoor use) - PROC19**
- Processes and activities covered by the exposure scenario : Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including materials receipt, storage, preparation and transfer from bulk and semi-bulk, application by spray, roller, spreader, dip, flow, fluidised bed on production lines and film formation) and equipment cleaning, maintenance and associated laboratory activities.

**Section 2: - Exposure Scenarios**

**2.1 Control of environmental exposure**

No exposure assessment presented for the environment.

**2.2 Control of worker exposure**

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : Liquid, vapour pressure < 0.5 kPa at STP.

Frequency and duration of use : Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure : Assumes use at not more than 20°C above ambient temperature, unless stated differently. Assumes a good basic standard of occupational hygiene has been implemented

**Contributing exposure scenario controlling worker exposure**

**General exposures (closed systems)**

Process control measures : Undertake operation in enclosed conditions.

### Filling/preparation of equipment from drums or containers

Process control measures : Undertake operation in enclosed conditions.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### Preparation of material for application

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### Film formation - air drying (Outdoor use)

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### Film formation - air drying (Indoor use)

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### Preparation of material for application (Indoor)

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.



### Preparation of material for application (Outdoor)

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### Material transfers

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### Roller, spreader, flow application (Indoor use)

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### Roller, spreader, flow application (Outdoor use)

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### Spraying/fogging by manual application (Indoor use)

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### **Spraying/fogging by manual application (Outdoor use)**

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### **Dipping, immersion and pouring (Indoor use)**

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### **Dipping, immersion and pouring (Outdoor use)**

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### **Laboratory activities**

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

### **Hand application - fingerpaints, pastels, adhesives (Indoor use)**

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

**Hand application - fingerpaints, pastels, adhesives (Outdoor use)**

Process control measures : No other specific measures identified.

Product safety-related measures : Recommended gloves should be made of: Nitrile.  
Material thickness: > 0.4 mm  
Permeation time: > 480 min

Eye protection: Safety goggles with lateral shielding (DIN EN 166)

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

**Section 3: - Exposure estimation and reference to its source**

**Exposure estimation and reference to its source - Environment**

Exposure assessment (environment) : No exposure assessment presented for the environment.

**Exposure estimation and reference to its source - Workers**

Exposure assessment (human) : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

**Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES**

Environment : No exposure assessment presented for the environment.

Health : Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Risk Management Measures are based on qualitative risk characterisation. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

**hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics**

**Section 1: - Title**

- Use Descriptor : **Identified use name:** Use in laboratories  
**Process Category:** PROC10, PROC15  
**Substance supplied to that use in form of:** In a mixture  
**Sector of end use:** SU22  
**Subsequent service life relevant for that use:** No.  
**Environmental Release Category:** ERC08a
- Health Contributing Scenarios : **Laboratory activities - PROC15**  
**Cleaning - PROC10**
- Processes and activities covered by the exposure scenario : Use of small quantities within laboratory settings, including material transfers and equipment cleaning.

**Section 2: - Exposure Scenarios**

**2.1 Control of environmental exposure**

No exposure assessment presented for the environment.

**2.2 Control of worker exposure**

- Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).
- Physical state : Liquid, vapour pressure < 0.5 kPa at STP.
- Frequency and duration of use : Covers daily exposures up to 8 hours (unless stated differently).
- Other given operational conditions affecting workers exposure : Assumes use at not more than 20°C above ambient temperature, unless stated differently.  
 Assumes a good basic standard of occupational hygiene has been implemented

**Contributing exposure scenario controlling worker exposure**

**Laboratory activities**

- Process control measures : No other specific measures identified.
- Product safety-related measures : Recommended gloves should be made of: Nitrile.  
 Material thickness: > 0.4 mm  
 Permeation time: > 480 min
- Eye protection: Safety goggles with lateral shielding (DIN EN 166)
- If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.  
 Wear a respirator conforming to EN140 with Type A filter or better.

**Cleaning**

- Process control measures : No other specific measures identified.
- Product safety-related measures : Recommended gloves should be made of: Nitrile.  
 Material thickness: > 0.4 mm  
 Permeation time: > 480 min
- Eye protection: Safety goggles with lateral shielding (DIN EN 166)
- If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.  
 Wear a respirator conforming to EN140 with Type A filter or better.

### Section 3: - Exposure estimation and reference to its source

#### Exposure estimation and reference to its source - Environment

Exposure assessment (environment) : No exposure assessment presented for the environment.

#### Exposure estimation and reference to its source - Workers

Exposure assessment (human) : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

### Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : No exposure assessment presented for the environment.

Health : Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Risk Management Measures are based on qualitative risk characterisation. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

**hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics**

**Section 1: - Title**

- Use Descriptor : **Identified use name:** Uses in Coatings  
**Substance supplied to that use in form of:** In a mixture  
**Sector of end use:** SU21  
**Subsequent service life relevant for that use:** No.  
**Environmental Release Category:** ERC08a, ERC08d  
**Market sector by type of chemical product:** PC01, PC09a, PC09b, PC09c, PC15, PC18, PC34
- Health Contributing Scenarios : **Sealants and adhesives - PC01**  
**Sealants and adhesives - PC01**  
**Sealants and adhesives - PC01**  
**Sealants and adhesives - PC01**  
**Coatings and paints, thinners, paint removers - PC09a**  
**Coatings and paints, thinners, paint removers - PC09a**  
**Coatings and paints, thinners, paint removers - PC09a**  
**Coatings and paints, thinners, paint removers - PC09a**  
**Fillers, putties, plasters, modelling clay - PC09b**  
**Fillers, putties, plasters, modelling clay - PC09b**  
**Fillers, putties, plasters, modelling clay - PC09b**  
**Finger paints - PC09c**  
**Non-metal-surface treatment products - PC15**  
**Non-metal-surface treatment products - PC15**  
**Non-metal-surface treatment products - PC15**  
**Non-metal-surface treatment products - PC15**  
**Ink and toners - PC18**  
**Textile dyes, finishing and impregnating products; including bleaches and other processing aids - PC34**
- Processes and activities covered by the exposure scenario : Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including product transfer and preparation, application by brush, spray by hand or similar methods) and equipment cleaning.

**Section 2: - Exposure Scenarios**

**2.1 Control of environmental exposure**

No exposure assessment presented for the environment.

**2.2 Control of consumer exposure**

- Physical state : liquid
- Other given operational conditions affecting consumers exposure : Covers use at ambient temperatures.

**Contributing scenario controlling consumer exposure for Sealants and adhesives**

- Further specification : **Glues, hobby use**
- Concentration of substance in mixture or article : Covers concentrations up to 3 %
- Amounts used : For each use event, covers use amounts up to 5 g
- Frequency and duration of use/exposure : Covers use up to 365 days/year  
Covers exposure up to 4 h
- Human factors not influenced by risk management : Covers skin contact area up to 35.73 cm<sup>2</sup>
- Other given operational conditions affecting consumers exposure : Do not use in a room with a room volume below 20 m<sup>3</sup>  
Covers use under typical household ventilation.

**Sealants and adhesives**

- Further specification : **Glues DIY-use (carpet glue, tile glue, wood parquet glue)**
- Concentration of substance in mixture or article : Covers concentrations up to 3.3 %
- Amounts used : For each use event, covers use amounts up to 6390 g
- Frequency and duration of use/exposure : Covers use up to 1 days/year  
Covers exposure up to 6 h
- Human factors not influenced by risk management : Covers skin contact area up to 110 cm<sup>2</sup>
- Other given operational conditions affecting consumers exposure : Do not use in a room with a room volume below 20 m<sup>3</sup>  
Covers use under typical household ventilation.  
Avoid using when windows closed.

**Sealants and adhesives**

- Further specification : **Spraying adhesive**
- Concentration of substance in mixture or article : Covers concentrations up to 11 %
- Amounts used : For each use event, covers use amounts up to 85.05 g
- Frequency and duration of use/exposure : Covers use up to 6 days/year  
Covers exposure up to 4 h
- Human factors not influenced by risk management : Covers skin contact area up to 35.73 cm<sup>2</sup>
- Other given operational conditions affecting consumers exposure : Do not use in a room with a room volume below 20 m<sup>3</sup>  
Covers use under typical household ventilation.

**Sealants and adhesives**

- Further specification : **Sealants**
- Concentration of substance in mixture or article : Covers concentrations up to 2.5 %
- Amounts used : For each use event, covers use amounts up to 25 g
- Frequency and duration of use/exposure : Covers use up to 365 days/year  
Covers exposure up to 1 h
- Human factors not influenced by risk management : Covers skin contact area up to 35.73 cm<sup>2</sup>
- Other given operational conditions affecting consumers exposure : Do not use in a room with a room volume below 20 m<sup>3</sup>  
Covers use under typical household ventilation.  
Avoid using when windows closed.

**Coatings and paints, thinners, paint removers**

- Further specification : **Water-borne latex wall paint**
- Concentration of substance in mixture or article : Covers concentrations up to 1.5 %
- Amounts used : For each use event, covers use amounts up to 2760 g
- Frequency and duration of use/exposure : Covers use up to 4 days/year  
Covers exposure up to 2.2 h
- Human factors not influenced by risk management : Covers skin contact area up to 428.75 cm<sup>2</sup>
- Other given operational conditions affecting consumers exposure : Do not use in a room with a room volume below 20 m<sup>3</sup>  
Covers use under typical household ventilation.  
Avoid using when windows closed.



**Coatings and paints, thinners, paint removers**

- Further specification : **Solvent-rich, high-solid, water-borne paint**
- Concentration of substance in mixture or article : Covers concentrations up to 5 %
- Amounts used : For each use event, covers use amounts up to 744 g
- Frequency and duration of use/exposure : Covers use up to 6 days/year  
Covers exposure up to 2.2 h
- Human factors not influenced by risk management : Covers skin contact area up to 428.75 cm<sup>2</sup>
- Other given operational conditions affecting consumers exposure : Do not use in a room with a room volume below 20 m<sup>3</sup>  
Covers use under typical household ventilation.  
Avoid using when windows closed.

**Coatings and paints, thinners, paint removers**

- Further specification : **Aerosol spray can**
- Concentration of substance in mixture or article : Covers concentrations up to 50 %
- Amounts used : For each use event, covers use amounts up to 215 g
- Frequency and duration of use/exposure : Covers use up to 2 days/year  
Covers exposure up to 0.33 h
- Human factors not influenced by risk management : Covers skin contact area up to 6600 cm<sup>2</sup>
- Other given operational conditions affecting consumers exposure : Covers use in a one car garage (34 m<sup>3</sup>) under typical ventilation.  
Do not use in a room with a room volume below 34 m<sup>3</sup>

**Coatings and paints, thinners, paint removers**

- Further specification : **Removers (paint-, glue-, wall paper-, sealant-remover)**
- Concentration of substance in mixture or article : Covers concentrations up to 14 %
- Amounts used : For each use event, covers use amounts up to 491 g
- Frequency and duration of use/exposure : Covers use up to 3 days/year  
Covers exposure up to 2 h
- Human factors not influenced by risk management : Covers skin contact area up to 857.5 cm<sup>2</sup>
- Other given operational conditions affecting consumers exposure : Do not use in a room with a room volume below 20 m<sup>3</sup>  
Covers use under typical household ventilation.  
Avoid using when windows closed.

**Fillers, putties, plasters, modelling clay**

- Further specification : **Fillers and putty**
- Concentration of substance in mixture or article : Covers concentrations up to 2 %
- Amounts used : For each use event, covers use amounts up to 85 g
- Frequency and duration of use/exposure : Covers use up to 12 days/year  
Covers exposure up to 4 h
- Human factors not influenced by risk management : Covers skin contact area up to 35.73 cm<sup>2</sup>
- Other given operational conditions affecting consumers exposure : Do not use in a room with a room volume below 20 m<sup>3</sup>  
Covers use under typical household ventilation.

**Fillers, putties, plasters, modelling clay**

- Further specification : **Plasters and floor equalisers**
- Concentration of substance in mixture or article : Covers concentrations up to 1.8 %
- Amounts used : For each use event, covers use amounts up to 900 g
- Frequency and duration of use/exposure : Covers use up to 12 days/year  
Covers exposure up to 2 h
- Human factors not influenced by risk management : Covers skin contact area up to 857.5 cm<sup>2</sup>
- Other given operational conditions affecting consumers exposure : Do not use in a room with a room volume below 20 m<sup>3</sup>  
Covers use under typical household ventilation.  
Avoid using when windows closed.

**Fillers, putties, plasters, modelling clay**

- Further specification : **Modelling clay**
- Concentration of substance in mixture or article : Covers concentrations up to 0.027 %
- Amounts used : For each use event, covers use amounts up to 37500 g  
For each use event, assumes swallowed amount of 1 g
- Frequency and duration of use/exposure : Covers use up to 365 days/year  
Covers exposure up to 8 h
- Human factors not influenced by risk management : Covers skin contact area up to 254.4 cm<sup>2</sup>
- Other given operational conditions affecting consumers exposure : Do not use in a room with a room volume below 20 m<sup>3</sup>  
Covers use under typical household ventilation.

**Finger paints**

- Further specification : **Finger paints**
- Concentration of substance in mixture or article : Covers concentrations up to 0.025 %
- Amounts used : For each use event, covers use amounts up to 37500 g  
For each use event, assumes swallowed amount of 1.35 g
- Frequency and duration of use/exposure : Covers use up to 365 days/year  
Covers exposure up to 8 h
- Human factors not influenced by risk management : Covers skin contact area up to 254.4 cm<sup>2</sup>
- Other given operational conditions affecting consumers exposure : Do not use in a room with a room volume below 20 m<sup>3</sup>  
Covers use under typical household ventilation.

**Non-metal-surface treatment products**

- Further specification : **Water-borne latex wall paint**
- Concentration of substance in mixture or article : Covers concentrations up to 1.5 %
- Amounts used : For each use event, covers use amounts up to 2760 g
- Frequency and duration of use/exposure : Covers use up to 4 days/year  
Covers exposure up to 2.2 h
- Human factors not influenced by risk management : Covers skin contact area up to 428.75 cm<sup>2</sup>

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Other given operational conditions affecting consumers exposure : Do not use in a room with a room volume below 20 m<sup>3</sup>  
Covers use under typical household ventilation.  
Avoid using when windows closed.

**Non-metal-surface treatment products**

Further specification : **Solvent-rich, high-solid, water-borne paint**  
 Concentration of substance in mixture or article : Covers concentrations up to 5 %  
 Amounts used : For each use event, covers use amounts up to 744 g  
 Frequency and duration of use/exposure : Covers use up to 6 days/year  
 Covers exposure up to 2.2 h  
 Human factors not influenced by risk management : Covers skin contact area up to 428.75 cm<sup>2</sup>  
 Other given operational conditions affecting consumers exposure : Do not use in a room with a room volume below 20 m<sup>3</sup>  
 Covers use under typical household ventilation.  
 Avoid using when windows closed.

**Non-metal-surface treatment products**

Further specification : **Aerosol spray can**  
 Concentration of substance in mixture or article : Covers concentrations up to 50 %  
 Amounts used : For each use event, covers use amounts up to 215 g  
 Frequency and duration of use/exposure : Covers use up to 2 days/year  
 Covers exposure up to 0.33 h  
 Human factors not influenced by risk management : Covers skin contact area up to 6600 cm<sup>2</sup>  
 Other given operational conditions affecting consumers exposure : Covers use in a one car garage (34 m<sup>3</sup>) under typical ventilation.  
 Do not use in a room with a room volume below 34 m<sup>3</sup>

**Non-metal-surface treatment products**

Further specification : **Removers (paint-, glue-, wall paper-, sealant-remover)**  
 Concentration of substance in mixture or article : Covers concentrations up to 14 %  
 Amounts used : For each use event, covers use amounts up to 491 g  
 Frequency and duration of use/exposure : Covers use up to 3 days/year  
 Covers exposure up to 2 h  
 Human factors not influenced by risk management : Covers skin contact area up to 857.5 cm<sup>2</sup>  
 Other given operational conditions affecting consumers exposure : Do not use in a room with a room volume below 20 m<sup>3</sup>  
 Covers use under typical household ventilation.  
 Avoid using when windows closed.

**Ink and toners**

Further specification : **Inks and toners**  
 Concentration of substance in mixture or article : Covers concentrations up to 0.45 %  
 Amounts used : For each use event, covers use amounts up to 40 g  
 Frequency and duration of use/exposure : Covers use up to 365 days/year  
 Covers exposure up to 2.2 h

Human factors not influenced by risk management : Covers skin contact area up to 71.4 cm<sup>2</sup>

Other given operational conditions affecting consumers exposure : Do not use in a room with a room volume below 20 m<sup>3</sup>  
Covers use under typical household ventilation.

### **Textile dyes, finishing and impregnating products; including bleaches and other processing aids**

Further specification : **Textile dyes, finishing and impregnating products; including bleaches and other processing aids**

Concentration of substance in mixture or article : Covers concentrations up to 1.1 %

Amounts used : For each use event, covers use amounts up to 45 g

Frequency and duration of use/exposure : Covers use up to 365 days/year  
Covers exposure up to 1 h

Human factors not influenced by risk management : Covers skin contact area up to 857.5 cm<sup>2</sup>

Other given operational conditions affecting consumers exposure : Do not use in a room with a room volume below 20 m<sup>3</sup>  
Covers use under typical household ventilation.

### **Section 3: - Exposure estimation and reference to its source**

#### **Exposure estimation and reference to its source - Environment**

Exposure assessment (environment) : Not applicable.

#### **Exposure estimation and reference to its source - Consumers**

Exposure assessment (human) : Not applicable.

### **Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES**

Environment : Not applicable.

Health : Available hazard data do not enable the derivation of a DNEL for dermal irritant effects.  
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented.  
Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.