

according to Regulation (EC) No 1907/2006 (REACH) as amended

S 2321 O EPOLEX® ENAMEL FOR BATHTUBS

Creation date	09th January 2014	Version	4.0
Revision date	17th December 2020		

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- 1.1. Product identifier**
Substance / mixture S 2321 O EPOLEX® ENAMEL FOR BATHTUBS
Other mixture names mixture
TWO-COMPONENT EPOXY GLOSSY ENAMEL FOR BATHTUBS
- 1.2. Relevant identified uses of the substance or mixture and uses advised against**
Mixture's intended use Varnish.
Mixture uses advised against The product should not be used in ways other than those referred in Section 1.
Exposure scenario is attached to the Safety Data Sheet.
- 1.3. Details of the supplier of the safety data sheet**
Manufacturer
Name or trade name BARVY A LAKY TELURIA,s.r.o.
Address č.p.1, Skrchov, 679 61
Czech Republic
Identification number (CRN) 43420371
VAT Reg No CZ43420371
Phone +420 516 474 211
E-mail tel@teluria.cz
Web address http://www.bal.cz
- Competent person responsible for the safety data sheet**
Name BARVY A LAKY TELURIA, s.r.o.
E-mail tel@teluria.cz
- 1.4. Emergency telephone number**
National Health Service (NHS) 111
National poisoning information centre Scotland, NHS 24: 111

SECTION 2: Hazards identification

- 2.1. Classification of the substance or mixture**
Classification of the mixture in accordance with Regulation (EC) No 1272/2008

The mixture is classified as dangerous.

Flam. Liq. 3, H226
Acute Tox. 4, H312+H332
Skin Irrit. 2, H315
Skin Sens. 1, H317
Eye Dam. 1, H318
STOT SE 3, H335
STOT RE 2, H373
Aquatic Chronic 2, H411

Full text of all classifications and hazard statements is given in the section 16.

Most serious adverse physico-chemical effects

Flammable liquid and vapour.

Most serious adverse effects on human health and the environment

Causes skin irritation. May cause an allergic skin reaction. May cause damage to organs through prolonged or repeated exposure. Causes serious eye damage. May cause respiratory irritation. Harmful in contact with skin or if inhaled. Toxic to aquatic life with long lasting effects.

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2.2. Label elements

Hazard pictogram



Signal word

Danger

Hazardous substances

reaction product: bisphenol-A-(epichlorhydrin)
 xylene (mixture of isomers and ethylbenzene)
 hydrocarbons, C9, aromatics
 butan-1-ol

Hazard statements

H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
H312+H332	Harmful in contact with skin or if inhaled.

Precautionary statements

P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER or doctor if you feel unwell.
P501	Dispose of contents/container to in accordance with local regulations by handing over to a person authorized to dispose of waste or a site designated by the town.

Supplemental information

EUH211	Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.
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Density	1.15 - 1.18 g/cm ³
VOC	0.40 - 0.45 kg/kg
TOC	0.34 - 0.39 kg/kg
Dry matter	49 % volume
VOC limit value	cat. A (j) SB: 500 g/l
Max. VOC content in the product in its ready to use condition	456 g/l

Requirements for child-resistant fastenings and tactile warning of danger

Container must carry a tactile warning of danger.

2.3. Other hazards

Mixture does not contain any substance meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended. Vapours have intoxicating and narcotic effect, causing headaches, eye irritation and respiratory tract irritation.

SECTION 3: Composition/information on ingredients
3.2. Mixtures
Chemical characterization

Mixture of inorganic pigments and fillers in solution of epoxy resin in organic solvents.

The mixture contains a reaction mixture of o, m, p-xylene and ethylbenzene (ethylbenzene content <26%).

Mixture contains these hazardous substances and substances with the highest permissible concentration in the working environment

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
Index: 603-074-00-8 CAS: 25068-38-6 EC: 500-033-5 Registration number: 01-2119456619-26	reaction product: bisphenol-A-(epichlorhydrin)	<43	Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Irrit. 2, H319 Aquatic Chronic 2, H411 Specific concentration limit: Skin Irrit. 2, H315; Eye Irrit. 2, H319: C ≥ 5 %	
Index: 022-006-00-2 CAS: 13463-67-7 EC: 236-675-5 Registration number: 01-2119489379-17-0013	titanium dioxide	25-30	Carc. 2, H351 (inhalation) EUH211 EUH212	3, 4, 5, 6
EC: 905-562-9 Registration number: 01-2119555267-33	xylene (mixture of isomers and ethylbenzene)	<15	Flam. Liq. 3, H226 Asp. Tox. 1, H304 Acute Tox. 4, H312+H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 2, H373 Specific concentration limit: Acute Tox. 4, H312+H332: C ≥ 12,5 %	1
Index: 649-356-00-4 EC: 918-668-5 Registration number: 01-2119455851-35	hydrocarbons, C9, aromatics	10	Flam. Liq. 3, H226 Asp. Tox. 1, H304 STOT SE 3, H335, H336 Aquatic Chronic 2, H411 EUH066	2, 7

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Creation date	09th January 2014	Version	4.0	
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Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
Index: 603-004-00-6 CAS: 71-36-3 EC: 200-751-6 Registration number: 01-2119484630-38	butan-1-ol	5	Flam. Liq. 3, H226 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335, H336	6

Notes

- Note C: Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.
- Note P: The classification as a carcinogen or mutagen need not apply if it can be shown that the substance contains less than 0,1 % w/w benzene (Einecs No 200-753-7). When the substance is not classified as a carcinogen at least the precautionary statements (P102-)P260- P262-P301 + P310-P331 shall apply. This note applies only to certain complex oil-derived substances in Part 3.
- Note V: If the substance is to be placed on the market as fibres (with diameter < 3 µm, length > 5 µm and aspect ratio ≥ 3:1) or particles of the substance fulfilling the WHO fibre criteria or as particles with modified surface chemistry, their hazardous properties must be evaluated in accordance with Title II of this Regulation, to assess whether a higher category (Carc. 1B or 1A) and/or additional routes of exposure (oral or dermal) should be applied.
- Note W: It has been observed that the carcinogenic hazard of this substance arises when respirable dust is inhaled in quantities leading to significant impairment of particle clearance mechanisms in the lung.

This note aims to describe the particular toxicity of the substance; it does not constitute a criterion for classification according to this Regulation.

- Note 10: The classification as a carcinogen by inhalation applies only to mixtures in powder form containing 1 % or more of titanium dioxide which is in the form of or incorporated in particles with aerodynamic diameter ≤ 10 µm.
- Substance for which exposure limits of Community for working environment exist.
- Fulfilled Note P

Full text of all classifications and hazard statements is given in the section 16.

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

Take care of your own safety. If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet. If unconscious, put the person in the stabilized (recovery) position on his side with his head slightly bent backwards and make sure that airways are free; never induce vomiting. If the person vomits by himself, make sure that the vomit is not inhaled. In life threatening conditions first of all provide resuscitation of the affected person and ensure medical assistance. Respiratory arrest - provide artificial respiration immediately. Cardiac arrest - provide indirect cardiac massage immediately.

If inhaled

Terminate the exposure immediately; move the affected person to fresh air. Protect the person against growing cold. Provide medical treatment if irritation, dyspnoea or other symptoms persist.

If on skin

Remove contaminated clothes. Wash the affected area with plenty of water, lukewarm if possible. Soap, soap solution or shampoo should be used if there is no skin injury. Provide medical treatment if skin irritation persists. Rinse skin with water or shower.

If in eyes

Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person. No neutralization should be performed in any case! Rinsing should be continued for 10-30 minutes from the inner to the outer eye corner to make sure that the other eye is not involved. Depending on the situation, call medical rescue service or ensure medical treatment as promptly as possible. Everyone must be referred for treatment even if affected only a little.

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If swallowed

Provide medical treatment.

4.2. Most important symptoms and effects, both acute and delayed**If inhaled**

Inhaling vapours can cause corrosion of the breathing system. Cough, headache. May cause respiratory irritation.

If on skin

May cause an allergic skin reaction.

If in eyes

Causes serious eye damage.

If swallowed

Corrosion of the digestion system can occur.

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

Symptomatic treatment. If you see a doctor, take this safety data sheet with you.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Alcohol-resistant foam, carbon dioxide, powder, water spray jet, water mist.

Unsuitable extinguishing media

Water - full jet.

5.2. Special hazards arising from the substance or mixture

In the event of fire, carbon monoxide, carbon dioxide and other toxic gases may arise. Inhalation of hazardous degradation (pyrolysis) products may cause serious health damage.

5.3. Advice for firefighters

Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely. Use a self-contained breathing apparatus and full-body protective clothing. Closed containers with the product near the fire should be cooled with water. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water.

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

For workers apart from emergency teams: Avoid inhalation of vapour, prevent skin and eye contact. Wear appropriate protective clothing and gloves. Wear eye protection and face shield if necessary. Use suitable respiratory protection. In closed spaces, ensure fresh air supply. Eliminate all ignition sources. No smoking and no open fire. Keep unnecessary personnel away.

For members of emergency teams: Use appropriate personal protective equipment – protective clothing with antistatic finish and impermeable work shoes. Treat unprotected skin with barrier cream. Anti-chemical protective gloves. For short-time exposure or low concentration, use respirator with organic vapour and dust filter (protection level A/P2); for high concentration and long-term exposure, self-contained respirator is necessary.

6.2. Environmental precautions

Prevent contamination of the soil and entering surface or ground water. In the event of substantial pollution, contact respective authorities and wastewater treatment plants.

6.3. Methods and material for containment and cleaning up

Spilled product should be covered with suitable (non-flammable) absorbing material (sand, diatomaceous earth, earth and other suitable absorption materials); to be contained in well closed containers and removed as per the Section 13. After removal of the product, wash the contaminated site with plenty of water.

6.4. Reference to other sections

See the Section 7, 8 and 13.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

7.1.1. General health measures

Use the product after due familiarization with its hazard characteristics and proper training or training in its safe use. Do not eat, drink, smoke on the site. Wash your hands and other contaminated parts of body by soap and water before eating and after the use of product is finished. Abide by requirements on personal hygiene when working with hazardous chemical products.

Use technical equipment on the site to control human and environment exposure. Regularly inspect the equipment, ensure cleaning, timely maintenance and permanent functionality. When working, use the recommended personal protective equipment listed in 8.2 of the Safety Data Sheet and in Annex to the Safety Data Sheet. Keep the protective clothing and protective equipment sound and clean. Immediately replace the damaged protective aids for sound ones. Keep the site, tools and aids clean and in sound state. On the site, keep the product in labelled containers or tanks. Store product waste and wastes contaminated by the product in suitable and properly labelled vessels located on designated marked and protected places. Ensure long-term storing of wastes containing the product outside the site.

7.1.2. Fire precautions

When using the product, prevent potential ignition or explosion of the mixture of product vapour and air caused by contact with open flame, sparks, extremely hot surfaces, electrostatic discharges. Do not smoke on the site, use non-sparking tools. Places with increased occurrence of the vapour-air mixture need to be ventilated to prevent formation of explosive mixtures. Solvent vapours are heavier than air. The site should be protected from electrostatic discharges.

7.1.3. Environmental precautions

Handle the product on a site technically adapted to avoid accidental leakage to sewerage systems, water or soil. Product waste and wastes contaminated by the product to be disposed of as hazardous waste. Waste water contaminated by the product may only be discharged to water reservoirs after the product components are properly removed in a waste water treatment plant or in other appropriate treatment plant able to remove drifted product components from water. Do not pour the product to waste water. Emissions of solvent from point sources are subjected to control requirements acc. to air protection regulations.

7.2. Conditions for safe storage, including any incompatibilities

Store the product in properly marked, closed containers in well ventilated spaces at 5 – 25 °C. The storages must meet the requirements on storing of flammable liquids and substances hazardous for aquatic life and soil. Protect from heat, hot surfaces, sparks, open flame and other ignition sources. No smoking. Store away from oxidising substances and strong acids. Do not store with food, drinks, feed material, medicines. Storages should be protected from static electricity. First aid kit and water suitable for eye rinsing should be available.

Keep away from products that are corrosive to metals (eg acids or pool chemicals).

Storage class

3A - Flammable liquids (flash point below 55 °C)

Material of package

FE (40), Steel (Metals)



Storage temperature

min 5 °C, max 25 °C

The specific requirements or rules relating to the substance/mixture

The product contains titanium dioxide. Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist. Solvent vapours are heavier than air and accumulate especially near the floor where they may form an explosive mixture with the air.

7.3. Specific end use(s)

Use in coating compositions was assessed for all of substances except epoxy resin. Conditions of safe use of the registered coating composition components specified in exposure scenarios to SDSs of the components are incorporated to this Safety Data Sheet and its Annex.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

The mixture contains substances for which occupational exposure limits are set.

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European Union
Commission Directive 2000/39/EC

Substance name (component)	Type	Value	Note
xylene (mixture of isomers and ethylbenzene)	OEL 8 hours	221 mg/m ³	Skin
	OEL 8 hours	50 ppm	
	OEL 15 minutes	442 mg/m ³	
	OEL 15 minutes	100 ppm	

United Kingdom of Great Britain and Northern Ireland
EH40/2005 Workplace exposure limits (Fourth Edition 2020)

Substance name (component)	Type	Value	Note
titanium dioxide (CAS: 13463-67-7)	WEL 8h	10 mg/m ³	total inhalable
	WEL 8h	4 mg/m ³	respirable
butan-1-ol (CAS: 71-36-3)	WEL 15min	154 mg/m ³	Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.
	WEL 15min	50 ppm	

DNEL

butan-1-ol

Workers / consumers	Route of exposure	Value	Effect	Determining method
Workers	Inhalation	310 mg/m ³	Systemic chronic effects	
Consumers	Inhalation	55.36 mg/m ³	Systemic chronic effects	
Consumers	Oral	1.56 mg/kg bw/day	Systemic chronic effects	
Consumers	Inhalation	155 mg/m ³	Systemic acute effects	
Consumers	Dermal	3.125 mg/kg bw/day	Systemic chronic effects	

hydrocarbons, C9, aromatics

Workers / consumers	Route of exposure	Value	Effect	Determining method
Workers	Inhalation	150 mg/kg	Systemic chronic effects	
Workers	Dermal	25 mg/kg	Systemic chronic effects	
Consumers	Inhalation	32 mg/kg	Systemic chronic effects	
Consumers	Dermal	11 mg/kg	Systemic chronic effects	
Consumers	Oral	11 mg/kg	Systemic chronic effects	

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reaction product: bisphenol-A-(epichlorhydrin)

Workers / consumers	Route of exposure	Value	Effect	Determining method
Workers	Inhalation	12.25 mg/m ³	Systemic chronic effects	
Workers	Inhalation	12.25 mg/m ³	Systemic acute effects	
Workers	Dermal	8.33 mg/kg bw/day	Systemic chronic effects	
Workers	Dermal	8.33 mg/kg bw/day	Systemic acute effects	
Consumers	Dermal	3.571 mg/kg bw/day	Systemic chronic effects	
Consumers	Dermal	3.571 mg/kg bw/day	Systemic acute effects	
Consumers	Oral	0.75 mg/kg bw/day	Systemic chronic effects	
Consumers	Oral	0.75 mg/kg bw/day	Systemic acute effects	

xylene (mixture of isomers and ethylbenzene)

Workers / consumers	Route of exposure	Value	Effect	Determining method
Workers	Inhalation	77 mg/m ³	Systemic chronic effects	
Workers	Inhalation	289 mg/m ³	Systemic acute effects	
Workers	Inhalation	289 mg/m ³	Local acute effects	
Workers	Dermal	180 mg/kg bw/day	Systemic chronic effects	
Consumers	Inhalation	14.8 mg/m ³	Systemic chronic effects	
Consumers	Inhalation	174 mg/m ³	Systemic acute effects	
Consumers	Inhalation	174 mg/m ³	Local acute effects	
Consumers	Dermal	108 mg/kg bw/day	Systemic chronic effects	
Consumers	Oral	1.6 mg/kg bw/day	Systemic chronic effects	

PNEC

butan-1-ol

Route of exposure	Value	Determining method
Freshwater environment	0.082 mg/l	
Seawater	0.0082 mg/l	
Water (intermittent release)	2.25 mg/l	
Microorganisms in wastewater treatment plants	2476 mg/l	
Freshwater sediment	0.324 mg/kg of dry substance of sediment	
Sea sediments	0.0324 mg/kg of dry substance of sediment	
Soil (agricultural)	0.0166 mg/kg of dry substance of soil	

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reaction product: bisphenol-A-(epichlorhydrin)

Route of exposure	Value	Determining method
Freshwater environment	6 µg/l	
Seawater	0.6 µg/l	
Water (intermittent release)	18 µg/l	
Microorganisms in wastewater treatment plants	10 mg/l	
Freshwater sediment	0.996 mg/kg of dry substance of sediment	
Sea sediments	0.0996 mg/kg of dry substance of sediment	
Soil (agricultural)	0.196 mg/kg of dry substance of soil	

xylene (mixture of isomers and ethylbenzene)

Route of exposure	Value	Determining method
Drinking water	0.327 mg/l	
Seawater	0.327 mg/l	
Water (intermittent release)	0.327 mg/l	
Microorganisms in wastewater treatment plants	6.58 mg/l	
Freshwater sediment	12.46 mg/kg of dry substance of sediment	
Sea sediments	12.46 mg/kg of dry substance of sediment	
Soil (agricultural)	2.31 mg/kg of dry substance of soil	

8.2. Exposure controls

Conditions of safe use of the registered coating composition components specified in exposure scenarios to Safety Data Sheets of the components are given in Annex of the SDS, including the required additional measures restricting the exposure – see the exposure scenarios for the intended uses of the coating composition.

General safety and hygienic measures. When working, do not eat, drink, smoke. Before the break and after the work, hands should be washed with soap and hot water, treated with barrier cream. Overall and local ventilation, effective extraction.

Eye/face protection

Protective goggles or face shield (based on the nature of the work performed).

Skin protection

Skin protection: Protective clothes with antistatic finish, protective shoes; treat unprotected skin with barrier cream.

Hand protection: Chemical resistant protective gloves (EN 374-1:2003). Suitable material – nitrile rubber, PVA, fluoroelastomer and others, time of penetration corresponding to > 480 minutes. The time of penetration specified by the manufacturer should be followed and the glove replaced after expiration. If damaged, the gloves should be replaced immediately.

The selection of suitable protective gloves does not only depend on their material, but also on other qualitative features. Furthermore, since the mixture can be used for various purposes, mixed with other substances, the suitability of gloves for all purposes cannot be predetermined and must be verified in particular use.

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Respiratory protection

Don't breathe vapours. For short-time exposure or low concentration, use respirator with organic vapour and dust filter (protection level A/P2); for high concentration and long-term exposure, self-contained respirator is necessary.

Thermal hazard

Not available.

Environmental exposure controls

Observe usual measures for protection of the environment, see Section 6.2. Ensure that containers are properly closed during storage, handling and transport. Secure storage areas against possible leakage of product into the environment (sewerage, water, soil - see 6.2). Do not flush product into drains or watercourses.

More information

Exposure scenario is attached to the Safety Data Sheet.

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

Appearance	
physical state	liquid at 20 °C
color	white
Odour	typical aromatic
Odour threshold	data not available
pH	data not available
Melting point/freezing point	data not available
Initial boiling point and boiling range	data not available
Flash point	>25 °C (EN ISO 2719)
Evaporation rate	data not available
Flammability (solid, gas)	data not available
Upper/lower flammability or explosive limits	
flammability limits	data not available
explosive limits	data not available
Vapour pressure	data not available
Vapour density	data not available
Relative density	data not available
Solubility(ies)	
solubility in water	data not available
solubility in fats	data not available
Partition coefficient: n-octanol/water	data not available
Auto-ignition temperature	data not available
Decomposition temperature	data not available
Viscosity	data not available
Kinematic viscosity	>20.5 mm ² /s at 40 °C
Explosive properties	The product does not have explosive properties but can be explosive when blended with air.
Oxidising properties	The product has no oxidizing properties.

9.2. Other information

Density	1.15 - 1.18 g/cm ³ at 23 °C (EN ISO 2811-1)
ignition temperature	>420 °C (EN ISO 14522)
content of organic solvents (VOC)	0.40 - 0.45 kg/kg
total organic carbon (TOC)	0.34 - 0.39 kg/kg
solid content (dry matter)	49 % volume
VOC limit value	cat. A (j) SB: 500 g/l

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Max. VOC content in the product in its ready to use condition 456 g/l

SECTION 10: Stability and reactivity
10.1. Reactivity

When used in the standard way, there is not any dangerous reaction with other substances.

10.2. Chemical stability

The product is volatile and evaporates under standard temperature and pressure. It is stable when stored and handled under standard ambient conditions.

10.3. Possibility of hazardous reactions

No known dangerous reactions when used under standard conditions. Flammable liquid. Vapours may form explosive mixture with air. Vapours are heavier than air, accumulate near the ground and below ground, and the fire can spread over long distances.

10.4. Conditions to avoid

The product is stable and no degradation occurs under normal use. Protect against flames, sparks, overheating and against frost.

10.5. Incompatible materials

Protect against strong acids, bases and oxidizing agents.

10.6. Hazardous decomposition products

Not developed under normal uses. Dangerous outcomes such as carbon monoxide and carbon dioxide are formed at high temperature and in fire.

SECTION 11: Toxicological information
11.1. Information on toxicological effects

Inhalation of solvent vapors above values exceeding exposure limits for working environment may result in acute inhalation poisoning, depending on the level of concentration and exposure time. No toxicological data is available for the mixture.

Acute toxicity

Harmful in contact with skin or if inhaled.

butan-1-ol

Route of exposure	Parameter	Value	Time of exposure	Species	Sex
Oral	LD ₅₀	2292 mg/kg		Rat (Rattus norvegicus)	
Inhalation	LC ₅₀	17.76 mg/l	4 hour	Rat (Rattus norvegicus)	
Dermal	LD ₅₀	3434 mg/kg		Rabbit	

hydrocarbons, C9, aromatics

Route of exposure	Parameter	Value	Time of exposure	Species	Sex
Oral	LD ₅₀	3492 mg/kg		Rat (Rattus norvegicus)	
Dermal	LD ₅₀	3160 mg/kg		Rabbit	
Inhalation	LC ₅₀	6193 mg/m ³	4 hour	Rat (Rattus norvegicus)	

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reaction product: bisphenol-A-(epichlorhydrin)

Route of exposure	Parameter	Value	Time of exposure	Species	Sex
Oral	LD ₅₀	2000-15000 mg/kg bw		Rat (Rattus norvegicus)	
Dermal	LD ₅₀	2000 mg/kg bw		Rat	

titanium dioxide

Route of exposure	Parameter	Value	Time of exposure	Species	Sex
Oral	LD ₅₀	5000 mg/kg			
Inhalation	LC ₅₀	6.82 mg/l			

xylene (mixture of isomers and ethylbenzene)

Route of exposure	Parameter	Value	Time of exposure	Species	Sex
Oral	LD ₅₀	3523 mg/kg bw		Rat (Rattus norvegicus)	M
Inhalation	LC ₅₀	6350-6700 ppm	4 hour	Rat (Rattus norvegicus)	
Dermal	LD ₅₀	>5000 mg/kg		Rabbit	
Oral	LD ₅₀	>4000 mg/kg bw		Rat (Rattus norvegicus)	F
	ATE	1100 mg/kg		Rabbit	

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/irritation

Causes serious eye damage.

Respiratory or skin sensitisation

May cause an allergic skin reaction.

Germ cell mutagenicity

Based on available data the classification criteria are not met.

Carcinogenicity

Based on available data the classification criteria are not met.

Reproductive toxicity

Based on available data the classification criteria are not met.

Toxicity for specific target organ - single exposure

May cause respiratory irritation.

Toxicity for specific target organ - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

according to Regulation (EC) No 1907/2006 (REACH) as amended

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Aspiration hazard

Based on available data the classification criteria are not met.

SECTION 12: Ecological information
12.1. Toxicity
Acute toxicity

The complete mixture has not been tested. The classification is based on the calculation method. Information on toxic effects are based on the effects of the substances, the data are taken from the safety data sheets of raw materials. The mixture is classified as dangerous for the environment. Toxic to aquatic life with long lasting effects. The mixture is a source of volatile organic emissions. Avoid release to the environment.

butan-1-ol

Parameter	Value	Time of exposure	Species	Environment
LC ₅₀	1376 mg/l	96 hour	Fishes (Oncorhynchus mykiss)	
EC ₅₀	1328 mg/l	48 hour	Daphnia (Daphnia magna)	
EC ₅₀	225 mg/l	72 hour	Algae and other aquatic plants	
EC 10	2476 mg/l	17 hour	Microorganisms (Photobacterium phosphoreum)	

hydrocarbons, C9, aromatics

Parameter	Value	Time of exposure	Species	Environment
LC ₅₀	9.2 mg/l	96 hour	Fishes (Oncorhynchus mykiss)	
EC ₅₀	3.2 mg/l	48 hour	Daphnia (Daphnia magna)	
EC ₅₀	2.9 mg/l	72 hour	Algae (Selenastrum capricornutum)	

reaction product: bisphenol-A-(epichlorhydrin)

Parameter	Value	Time of exposure	Species	Environment
LD ₅₀	1.2-3.6 mg/l	96 hour	Fishes (Oncorhynchus mykiss)	
EC ₅₀	1.1-2.8 mg/l	48 hour	Aquatic invertebrates	
EC ₅₀	9.4-11 mg/l	72 hour	Algae and other aquatic plants	
IC ₅₀	100 mg/l	3 hour	Microorganisms (Photobacterium phosphoreum)	

xylene (mixture of isomers and ethylbenzene)

Parameter	Value	Time of exposure	Species	Environment
LC ₅₀	2.6 mg/l	96 hour	Fishes (Oncorhynchus mykiss)	
IC ₅₀	1 mg/l	24 hour	Daphnia (Daphnia magna)	

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xylene (mixture of isomers and ethylbenzene)

Parameter	Value	Time of exposure	Species	Environment
EC ₅₀	4.36 mg/l	73 hour	Algae (Pseudokirchneriella subcapitata)	

Chronic toxicity

xylene (mixture of isomers and ethylbenzene)

Parameter	Value	Time of exposure	Species	Environment
NOEC	>1.3 mg/l	56 day	Fishes (Oncorhynchus mykiss)	
NOEC	0.96-1.17 mg/l	7 day	Invertebrates (Ceriodaphnia dubia)	

12.2. Persistence and degradability

Data not available.

12.3. Bioaccumulative potential

xylene (mixture of isomers and ethylbenzene)

Parameter	Value	Time of exposure	Species	Environment	Surrounding temperature [°C]
BCF	6-23				
Log Pow	3.15-3.2				

Not available.

12.4. Mobility in soil

xylene (mixture of isomers and ethylbenzene)

Parameter	Value	Environment	Surrounding temperature
Koc	48-540		

The mixture is a liquid insoluble in water, in case of leakage into environment, it may be dispersed over large distances and penetrate into underground water. It contains components with the potential of mobility in soil. When released into the soil may occur due to contamination of groundwater.

12.5. Results of PBT and vPvB assessment

Product does not contain any substance meeting the criteria for PBT or vPvB in accordance with the Annex XIII of Regulation (EC) No 1907/2006 (REACH) as amended.

12.6. Other adverse effects

Volatile organic substances contained in the mixture have the potential to damage ozone layer.

SECTION 13: Disposal considerations

according to Regulation (EC) No 1907/2006 (REACH) as amended

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13.1. Waste treatment methods

Hazard of environmental contamination; dispose of the waste in accordance with the local and/or national regulations. Proceed in accordance with valid regulations on waste disposal. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification. Perfectly cleaned containers can be submitted for recycling.

Waste management legislation

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

Waste type code

08 01 11 waste paint and varnish containing organic solvents or other hazardous substances *

Packaging waste type code

15 01 10 packaging containing residues of or contaminated by hazardous substances *

(*) - Hazardous waste according to Directive 2008/98/EC on hazardous waste

SECTION 14: Transport information

14.1. UN number

UN 1263

14.2. UN proper shipping name

PAINT

14.3. Transport hazard class(es)

3 Flammable liquids

14.4. Packing group

III - substances presenting low danger

14.5. Environmental hazards

The product is dangerous for the environment.

14.6. Special precautions for user

Reference in the Sections 4 to 8.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not classified.

Additional information

Hazard identification No.

30

UN number

1263

Classification code

F1

Safety signs

3+ hazardous for the environment



Air transport - ICAO/IATA

Packaging instructions passenger 355

Cargo packaging instructions 366

Marine transport - IMDG

EmS (emergency plan) F-E, S-E

MFAG 310

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SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16th December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No. 1907/2006, as amended.

15.2. Chemical safety assessment

The chemical safety assessment has been carried out on all substances of the mixture, except epoxy resin. The relevant exposure scenarios for the components are incorporated in the annex to the safety data sheet.

SECTION 16: Other information

A list of standard risk phrases used in the safety data sheet

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.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
H312+H332	Harmful in contact with skin or if inhaled.

Guidelines for safe handling used in the safety data sheet

P102	Keep out of reach of children.
P280	Wear protective gloves/protective clothing/eye protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501	Dispose of contents/container to in accordance with local regulations by handing over to a person authorized to dispose of waste or a site designated by the town.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing spray.
P273	Avoid release to the environment.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER or doctor if you feel unwell.

A list of additional standard phrases used in the safety data sheet

EUH211	Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.
EUH212	Warning! Hazardous respirable dust may be formed when used. Do not breathe dust.
EUH066	Repeated exposure may cause skin dryness or cracking.

Other important information about human health protection

The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per the Section 1. The user is responsible for adherence to all related health protection regulations.

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Key to abbreviations and acronyms used in the safety data sheet

ADR	European agreement concerning the international carriage of dangerous goods by road
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures
DNEL	Derived no-effect level
EC	Identification code for each substance listed in EINECS
EC ₅₀	Concentration of a substance when it is affected 50% of the population
EINECS	European Inventory of Existing Commercial Chemical Substances
EmS	Emergency plan
EU	European Union
IATA	International Air Transport Association
IBC	International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals
IC ₅₀	Concentration causing 50% blockade
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
INCI	International Nomenclature of Cosmetic Ingredients
ISO	International Organization for Standardization
IUPAC	International Union of Pure and Applied Chemistry
LC ₅₀	Lethal concentration of a substance in which it can be expected death of 50% of the population
LD ₅₀	Lethal dose of a substance in which it can be expected death of 50% of the population
LOAEC	Lowest observed adverse effect concentration
LOAEL	Lowest observed adverse effect level
log K _{ow}	Octanol-water partition coefficient
MARPOL	International Convention for the Prevention of Pollution From Ships
NOAEC	No observed adverse effect concentration
NOAEL	No observed adverse effect level
NOEC	No observed effect concentration
NOEL	No observed effect level
OEL	Occupational Exposure Limits
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted no-effect concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Agreement on the transport of dangerous goods by rail
UN	Four-figure identification number of the substance or article taken from the UN Model Regulations
UVCB	Substances of unknown or variable composition, complex reaction products or biological materials
VOC	Volatile organic compounds
vPvB	Very Persistent and very Bioaccumulative
Acute Tox.	Acute toxicity
Aquatic Chronic	Hazardous to the aquatic environment (chronic)
Asp. Tox.	Aspiration hazard
Carc.	Carcinogenicity
Eye Dam.	Serious eye damage
Eye Irrit.	Eye irritation

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Flam. Liq.	Flammable liquid
Skin Irrit.	Skin irritation
Skin Sens.	Skin sensitization
STOT RE	Specific target organ toxicity - repeated exposure
STOT SE	Specific target organ toxicity - single exposure

Training guidelines

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

Recommended restrictions of use

not available

Information about data sources used to compile the Safety Data Sheet

REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) as amended.
REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

The changes (which information has been added, deleted or modified)

The version 4.0 replaces the SDS version from 17.05.2019. Changes were made in sections 2, 3, 7, 8, 11 and 16.

More information

Classification procedure - calculation method.

Statement

The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.

Annex to the Product Safety Data Sheet - EXPOSURE SCENARIO

1. Industrial use

Application sector	: SU 3
Chemical product category	: PC9a
Partial processes covered by exposure scenario:	PROC1, PROC2, PROC 3, PROC4, PROC5, PROC 7, PROC8a, PROC8b, PROC10, PROC13, PROC15
Environmental release	: ERC4

Basic conditions to control the hazard for workers:

Duration of work activities	: Covers exposure up to 8 h/d (unless otherwise specified)
Concentration	: Work with standard coating composition or coating composition thinned by solvents containing the same volatile components as the coating composition is anticipated.
Temperature	: Work at temperature up to 20 °C higher than site temperature is anticipated except for the coating composition's drying and hardening processes at increased temperature.
General risk management measures	: Wear protective working clothes. Wear protective gloves and eye protection if in danger of contact with the coating composition. Basic training required. Abide by general principles of safe and hygienic work with chemical substances.
Site where the activities are performed	: Indoor use is anticipated.

Additional requirements to control the hazard for workers carrying out partial work activities:

Partial work activities with the product (Partial contributing scenarios)	Process category	Required additional measures to control worker exposure
Pumping from/to containers and devices within a closed system with no possibility to release emission	PROC 1 Use within closed production process	Does not require further risk control measures.
Pumping the coating composition from/to containers and devices at non dedicated facility with potential human and environment exposure	PROC 8a Transfer of the product (charging / discharging) to/from vessels/large containers at non dedicated facilities	Local air extraction at potential emission release or good ventilation (3-5 air exchanges per hour).
Pumping the coating composition from/to containers and devices at non dedicated facility with potential human and environment exposure	PROC 8b Transfer of the product (charging / discharging) to/from vessels/large containers at dedicated facilities	Local air extraction at potential emission release or good ventilation (3-5 air exchanges per hour).
Mixing, blending, thinning of coating composition in open devices with possible exposure to volatile components of the coating composition	PROC5 Mixing or blending in batch processes at mixture manufacturing (excl. charging and discharging of vessels).	Local air extraction at potential emission release or good ventilation (3-5 air exchanges per hour).
Application by spraying.	PROC 7 Industrial spraying.	Robotic spraying in closed chambers or closed cabs with laminar extraction. In course of spraying, enter the chambers only with self-contained respirator. Manual spraying in spraying chambers with laminar flow of extracted air directed from the worker or in intensively ventilated spaces (5-10 air exchanges per hour) with respiratory protection (half-face or full-face respirator) provided with type A/P2 filter.
Manual coating composition application by roller, brush or palette knife.	PROC 10 Roller, palette knife or brush application	Local air extraction at potential emission release or good ventilation (3-5 air exchanges per hour).
Dipping or pouring application of coating composition.	PROC 13 Treatment of articles by dipping and pouring	Local air extraction at potential emission release or good ventilation (3-5 air exchanges per hour).
Free drying of coating composition film at standard or slightly increased ambient temperature (by max. 20 °C)	PROC 4 Use within batch or other process where opportunity for exposure arises	Carry out in well ventilated spaces (3-5 air exchanges per hour).
Continuous drying and hardening processes of the coating composition film at increased temperature in drying tunnels equipped with vapour extraction	PROC 2 Use within continuous chemical production process with occasional controlled exposure (e.g. at sampling).	Does not require further risk control measures.
Batch drying and hardening processes of the coating composition film at increased temperature in extracted chambers	PROC 3 Use within closed batch process of mixture manufacturing.	Does not require further risk control measures.
Machine cleaning and washing of closed tanks, containers and devices equipped with vapour extraction	PROC 3 Use within closed batch process of mixture manufacturing	Does not require further risk control measures.
Manual cleaning of small containers, application devices and tools	PROC 10 Roller, palette knife or brush application (by a tool held in hand) PROC8a Transfer of the product (charging / discharging) to/from vessels/large containers at non dedicated facilities	Local air extraction at potential emission release or good ventilation (3-5 air exchanges per hour).

Laboratory checks on the coating composition	PROC 15 Use as laboratory reagent (laboratory work with the product)	Good ventilation (3 – 5 air exchanges per hour).
Activities involving product waste and waste contaminated by the product		If in risk of contact with waste, wear protective gloves. Store the waste in closable containers stored in well ventilated storages or outdoor.

Additional requirements to control environmental hazards

Air emission control	When spraying, remove fly coating mist from the air extracted from the work site. If the limits for solvent consumption defined in Ordinance no. 415/2012 Coll. are exceeded, use solvent recuperation from waste air or remove the solvents by incineration or other processes guaranteeing observation of emission parameters specified in air protection regulations.
Water emission control	Store the coating and waste contaminated by coat in buildings structurally protected from leakage release and emergency release to surface and ground water. Treat water contaminated by coat compounds and remove solid impurities and organic compounds by sedimentation, filtration, biological treatment processes or special processes developed for treatment of water contaminated by coating compositions before discharging to surface water. When discharging the treated waste water, observe the contamination parameters specified for the involved facility by water management authority.
Disposal of waste	Dispose of coat waste and materials contaminated by coat and its compounds in cooperation with authorised persons as of hazardous waste. Dispose of solvent waste from tools and device cleaning as of hazardous waste. Prevent release or discharge of any liquid waste to surface and ground water unless it is treated and coating composition compounds are removed.

2. Professional use

Application sector	: SU 22
Chemical product category	: PC9a
Partial processes covered by exposure scenario:	PROC 3, PROC4, PROC5, PROC 7, PROC8a, PROC8b, PROC10, PROC11, PROC13, PROC15, PROC19
Environmental release	: ERC 8a, ERC 8d

Basic conditions to control the hazard for workers:

Duration of work activities	: Covers exposure up to 8 h/d (unless otherwise specified)
Concentration	: Work with standard coating composition or coating composition thinned by solvents containing the same volatile components as the coating composition is anticipated.
Temperature	: Work at temperature up to 20 °C higher than site temperature is anticipated except for the coating composition's drying and hardening processes at increased temperature.
General risk management measures	: Wear protective working clothes. Wear protective gloves and eye protection if in danger of contact with the coating composition. Basic training required. Abide by general principles of safe and hygienic work with chemical substances.
Site where the activities are performed	: Indoor and outdoor use is anticipated.

Additional requirements to control the hazard for workers carrying out partial work activities:

Partial work activities with the product (Partial contributing scenarios)	Process category	Required additional measures to control worker exposure
Pumping the coating composition from/to containers and devices at non dedicated facility with potential human and environment exposure	PROC 8a Transfer of the product (charging / discharging) to/from vessels/large containers at non dedicated facilities	Indoor: local air extraction at potential emission release or good ventilation (3-5 air exchanges per hour). Outdoor: secure catch dripping paint
Pumping the coating composition from/to containers and devices at non dedicated facility with potential human and environment exposure	PROC 8b Transfer of the product (charging / discharging) to/from vessels/large containers at dedicated facilities	Indoor: local air extraction at potential emission release or good ventilation (5 - 10 air exchanges per hour). Outdoor: does not require further risk control measures
Mixing, blending, thinning of coating composition in open devices with possible exposure to volatile components of the coating composition	PROC5 Mixing or blending in batch processes at mixture manufacturing (excl. charging and discharging of vessels).	Indoor: local air extraction at potential emission release or good ventilation (3-5 air exchanges per hour). Outdoor: working process a maximum of 4h per day does not require further risk control measures or use respiratory protection with filter type A.
Application by spraying.	PROC 11 Non industrial spraying.	Indoor: do spraying in spraying chambers with laminar flow of extracted air directed from the worker or in intensively ventilated spaces (5-10 air exchanges per hour) with respiratory

		protection (half-face or full-face respirator) provided with type A/P2 filter. Outdoor: use respiratory protection with filter type A/P2.
Manual coating composition application by roller, brush or palette knife.	PROC 10 Roller, palette knife or brush application	Indoor: local air extraction at potential emission release or good ventilation (5 - 10 air exchanges per hour). Outdoor: does not require further risk control measures
Dipping or pouring application of coating composition.	PROC 13 Treatment of articles by dipping and pouring	Indoor: local air extraction at potential emission release or good ventilation (5 - 10 air exchanges per hour). Outdoor: use respiratory protection with filter type A.
Free drying of coating composition film at standard or slightly increased ambient temperature (by max. 20 °C)	PROC 4 Use within batch or other process where opportunity for exposure arises	Indoor: carry out in well ventilated spaces (5 -- 10 air exchanges per hour). Outdoor: does not require further risk control measures
Batch drying and hardening processes of the coating composition film at increased temperature in extracted chambers	PROC 3 Use within closed batch process of mixture manufacturing.	Does not require further risk control measures.
Machine cleaning and washing of closed tanks, containers and devices equipped with vapour extraction	PROC 3 Use within closed batch process of mixture manufacturing	Does not require further risk control measures.
Manual cleaning of small containers, application devices and tools	PROC 10 Roller, palette knife or brush application (by a tool held in hand)	Indoor: local air extraction at potential emission release or good ventilation (5 - 10 air exchanges per hour). Outdoor: does not require further risk control measures
Laboratory checks on the coating composition	PROC 15 Use as laboratory reagent (laboratory work with the product)	Good ventilation (3 – 5 air exchanges per hour).
Manual activities involving hand contact	PROC19 Hand-mixing with intimate contact and only PPE available	Indoor. Use protective gloves, local air extraction at potential emission release or good ventilation Outdoor: use protective gloves
Activities involving product waste and waste contaminated by the product		If in risk of contact with waste, wear protective gloves. Store the waste in closable containers stored in well ventilated storages or outdoor.

Additional requirements to control environmental hazards

Air emission control	Does not require special risk control measures
Water emission control	Store the paints and waste contaminated by paints in buildings structurally protected from leakage release and emergency release to surface and ground water. Clean up waste water contaminated by paints in the Municipal wastewater treatment plants before discharging to surface water or capture or dispose them as hazardous waste in cooperation with the authorized person. Overspray and drips paint as possible to capture and dispose as hazardous waste.
Disposal of waste	Prevent leakage or discharge of any liquid waste into surface and groundwater unless it is cleaned up from the paint compounds. Dispose of paint waste and materials contaminated by paints and its compounds in cooperation with authorised persons as of hazardous waste. Dispose of solvent waste from tools and device cleaning as of hazardous waste.