Safety Data Sheet according to Regulation (EC) No. 2020/878

SECTION 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product Identifier B024

Product Name: CARBOGUARD 1212 GF PART A

Revision Date: 23/01/2024

Supercedes Date: 22/03/2023

Version Number: 5

UFI Code: F552-30AJ-H001-4JYW

Contain nanoform: No

1.2 Relevant identified uses of the substance or mixture and uses advised against

Base component of 2 components coating - Industrial use.
Advised against: others than recommended

Product to be mixed with: CARBOGUARD 1212 GF PART B

Mixing ratio by volume Part A/ Part B: 3:1

1.3 Details of the supplier of the safety data sheet

Supplier:

Carboline Italia, S.p.a.
Via Margherita Viganò De Vizzi, 77
20092 Cinisello Balsamo (MI)
Italy

Regulatory / Technical Information:
+32 67493710 Nivelles, Belgium
+39 0294759236 Cinisello Balsamo, Italy

regulatoryeurope@carboline.com

1.4 Emergency telephone number:

CHEMTREC +1 703 5273887 (Outside US)
112 (24/7)
Croatia +3851 2348 342 (24/7 in Croatian and English)
Iceland 112 (24/7)
Malta 112 (24/7)

SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture

Classification according to Classification, Labeling & Packaging Regulation (EC) 1272/2008

EU Other	EUH205
EU Other	EUH211

Flam. Liq. 3	H226
Skin Irrit. 2	H315
Skin Sens. 1	H317
Eye Irrit. 2	H319
Aquatic Chronic 2	H411

2.2 Label elements

Symbol(s) of Product

Signal Word

Warning

Named Chemicals on Label

2,2-bis-[4-(2,3-epoxipropoxi)phenyl]propane, poly(bisphenol a-co-epichlorohydrin), glycidyl end-capped, phenol, styrenated, phenol, methylstyrenated

HAZARD STATEMENTS

EU Other	EUH205	Contains epoxy constituents. May produce an allergic reaction.
EU Other	EUH211	Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.
Flam. Liq. 3	H226	Flammable liquid and vapour.
Skin Irrit. 2	H315	Causes skin irritation.
Skin Sens. 1	H317	May cause an allergic skin reaction.
Eye Irrit. 2	H319	Causes serious eye irritation.
Aquatic Chronic 2	H411	Toxic to aquatic life with long lasting effects.

PRECAUTION PHRASES

	P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
	P273	Avoid release to the environment.
	P280	Wear protective gloves/protective clothing/eye protection/ face protection.
	P302+352	IF ON SKIN: Wash with plenty of soap and water.
	P333+313	If skin irritation or rash occurs: Get medical advice/attention.
	P337+313	If eye irritation persists: Get medical advice/attention.

2.3 Other hazards

No Information

Results of PBT and vPvB assessment:

The product does not meet the criteria for PBT/vPvB in accordance with Annex XIII.

Endocrine disrupting properties - Toxicity

Based on the available data, the product does not contain substances identified as having endocrine disrupting properties according to Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 in concentration of 0,1% or higher.

Endocrine disrupting properties - Ecotoxicity

Name According to EEC	CAS-No.
phenol, styrenated	61788-44-1

SECTION 3: Composition/Information On Ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Hazardous ingredients

Name According to EEC EINECS No. CAS-No. REACH Reg No. Index NUmber	%	Classifications	SCL Value ATE Value M-Factor	
2,2-bis-[4-(2,3-epoxipropoxi) phenyl]propane 216-823-5 1675-54-3 01-2119456619-26 603-073-00-2	25 - <50	H315-317-319-411 Aquatic Chronic 2, Eye Irrit. 2, Skin Irrit. 2, Skin Sens. 1	SCL: ATE: M-Factor: (acute) M-Factor: (chronic)	H319 ≥ 5 H315 ≥ 5 -
glass oxide 266-046-0 65997-17-3 - -	10 - <25		SCL: ATE: M-Factor: (acute) M-Factor: (chronic)	- -
talc 238-877-9 14807-96-6 - -	10 - <25		SCL: ATE: M-Factor: (acute) M-Factor: (chronic)	- -

phenol, methylstyrenated 270-966-8 68512-30-1 01-2119555274-38 -	2.5 - <10	H315-317-412 Aquatic Chronic 3, Skin Irrit. 2, Skin Sens. 1	SCL: ATE: M-Factor: (acute) M-Factor: (chronic)	- -
xylene 215-535-7 1330-20-7 01-2119488216-32 601-022-00-9	2.5 - <10	H226-304-312-315-319-332-335-373-412 Acute Tox. 4 Dermal, Acute Tox. 4 Inhalation, Aquatic Chronic 3, Asp. Tox. 1, Eye Irrit. 2, Flam. Liq. 3, Skin Irrit. 2, STOT RE 2, STOT SE 3 RTI	SCL: ATE: M-Factor: (acute) M-Factor: (chronic)	- -
poly(bisphenol a-co-epichlorohydrin), glycidyl end-capped 607-500-3 25036-25-3 - -	2.5 - <10	H315-317-319 Eye Irrit. 2, Skin Irrit. 2, Skin Sens. 1	SCL: ATE: M-Factor: (acute) M-Factor: (chronic)	- -
2-methylpropan-1-ol 201-148-0 78-83-1 01-2119484609-23 603-108-00-1	2.5 - <10	H226-315-318-332-335-336 Acute Tox. 4 Inhalation, Eye Dam. 1, Flam. Liq. 3, Skin Irrit. 2, STOT SE 3 NE, STOT SE 3 RTI	SCL: ATE: M-Factor: (acute) M-Factor: (chronic)	- -

12-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimeth 432-840-2 220926-97-6 01-0000017900-73 616-201-00-7	1.0 - <2.5	H332-373-413 Acute Tox. 4 Inhalation, Aquatic Chronic 4, STOT RE 2	SCL: ATE: M-Factor: (acute) M-Factor: (chronic)	- -
phenol, styrenated 262-975-0 61788-44-1 01-2119980970-27 -	1.0 - <2.5	H315-317-411 Aquatic Chronic 2, Skin Irrit. 2, Skin Sens. 1	SCL: ATE: M-Factor: (acute) M-Factor: (chronic)	- -
benzyl alcohol 202-859-9 100-51-6 01-2119492630-38 603-057-00-5	1.0 - <2.5	H302-319-332 Acute Tox. 4 Inhalation, Acute Tox. 4 Oral, Eye Irrit. 2	SCL: ATE: M-Factor: (acute) M-Factor: (chronic)	- 1 620 mg/ kg (oral); >2 000 mg/kg (dermal); 1,5 mg/L
titanium dioxide 236-675-5 13463-67-7 01-2119489379-17 -	1.0 - <2.5		SCL: ATE: M-Factor: (acute) M-Factor: (chronic)	- -

ethylbenzene 202-849-4 100-41-4 01-2119489370-35 601-023-00-4	1.0 - <2.5	H225-304-332-373-412 Acute Tox. 4 Inhalation, Aquatic Chronic 3, Asp. Tox. 1, Flam. Liq. 2, STOT RE 2	SCL: ATE: M-Factor: (acute) M-Factor: (chronic)	- -
quartz (silicon dioxide binded within a mineral structure) 238-878-4 14808-60-7 - -	1.0 - <2.5		SCL: ATE: M-Factor: (acute) M-Factor: (chronic)	- -
1-methoxypropan-2-ol 203-539-1 107-98-2 01-2119457435-35 603-064-00-3	1.0 - <2.5	H226-336 Flam. Liq. 3, STOT SE 3 NE	SCL: ATE: M-Factor: (acute) M-Factor: (chronic)	- 3739 - 4277 mg/kg (oral); >2000 mg/kg (derm.); 30.02 mg/LDamp4 times (inh.)
4-methylpentan-2-one 203-550-1 108-10-1 01-2119473980-30 606-004-00-4	0.1 - <1.0	H225-319-332-335-336-351 Acute Tox. 4 Inhalation, Carc. 2, Eye Irrit. 2, Flam. Liq. 2, Skin Cracking, STOT SE 3 NE, STOT SE 3 RTI	SCL: ATE: M-Factor: (acute) M-Factor: (chronic)	- 2080 mg/kg (oral,rat); >2000 mg/kg (derm., rat); 11 mg/L (inh-vapour, rat)

quartz (silicon dioxide) - 14808-60-7 - -	0.1 - <1.0	H372 STOT RE 1	SCL: ATE: M-Factor: (acute) M-Factor: (chronic)	- -
toluene 203-625-9 108-88-3 01-2119471310-51 601-021-00-3	0.1 - <1.0	H225-304-315-336-361d-373-412 Aquatic Chronic 3, Asp. Tox. 1, Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT RE 2, STOT SE 3 NE	SCL: ATE: M-Factor: (acute) M-Factor: (chronic)	- -

Remarks: CAS No. 68512-30-1 identified as EC No. 700-960-7 under REACH Registration
CAS No 13463-67-7: Note 10

Additional Information: The text for CLP Hazard Statements shown above (if any) is given in Section 16.

SECTION 4: First-aid Measures

4.1 Description of First Aid Measures

GENERAL NOTES: Show this safety data sheet to the doctor in attendance.

AFTER INHALATION: Move to fresh air. Give oxygen or artificial respiration if needed. When risk of unconsciousness, place and transport the victim in secured recovery position. Provide fresh air, rest and warmth. Call a physician immediately.

AFTER SKIN CONTACT: Use a mild soap if available. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician. Do not use solvent or thinners to clean skin.

AFTER EYE CONTACT: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. If eye irritation persists, consult a specialist.

AFTER INGESTION: Do not induce vomiting. Get immediate medical attention. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously: Keep head below hips to prevent aspiration of stomach vomit into lungs. Provide fresh air, rest and warmth.

Self protection of the first aider:

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

May cause sensitization by skin contact. Irritating to eyes and skin.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.
When symptoms persist or in all cases of doubt seek medical advice.

SECTION 5: Firefighting Measures

5.1 Extinguishing Media:

Carbon Dioxide, Dry Chemical, Foam

FOR SAFETY REASONS NOT TO BE USED: Alcohol, Alcohol based solutions, any other media not listed above.
Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture

Heating or fire conditions liberates toxic gas. Flash back possible over considerable distance. As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10). Vapours may form explosive mixtures with air. Solvent vapours are heavier than air and may spread along floors and ignite.

5.3 Advice for firefighters

In the event of fire, wear self-contained breathing apparatus. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Keep containers and surroundings cool with water spray.

SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

Ensure adequate ventilation. Use personal protective equipment. Remove all sources of ignition.

6.1.2 For emergency responders

See Section 7, 8 and 10 for further information.

6.2 Environmental precautions

Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Do not let product enter drains. Prevent further leakage or spillage if safe to do so. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections

Please refer to EU disposal requirements or country specific disposal requirements for this material. See Section 8 and 13 for further information.

SECTION 7: Handling and Storage

7.1 Precautions for safe handling

Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits. Electrical equipment should be protected to the appropriate standard. Use only in area provided with appropriate exhaust ventilation. Wear personal protective equipment. Do not breathe vapours or spray mist. Use only explosion-proof equipment. Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this preparation is being used. Apply technical measures to comply with the occupational exposure limits (see section 8). People handling polyurethane or epoxy products must have received special training according to guidelines from the National Occupational Health and Safety Board.
Wash hands before breaks and at the end of workday. When using, do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities

CONDITIONS TO AVOID: Avoid heat, sparks, flames and other ignition sources.
STORAGE CONDITIONS: Store in original container. Keep locked up or in an area accessible only to qualified or authorised persons. Keep container closed. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. Store in upright position only. Storage of flammable liquids.

7.3 Specific end use(s)

The mixing and application to be in accordance with the technical data sheets.

SECTION 8: Exposure Controls/Personal Protection

8.1 Control parameters

Ingredients with Occupational Exposure Limits (EU)

Name	CAS-No.	LTEL ppm	STEL ppm	STEL mg/m3	LTEL mg/m3
2,2-bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3				
glass oxide	65997-17-3				
talc	14807-96-6				
phenol, methylstyrenated	68512-30-1				
xylene	1330-20-7	50	100	442	221
poly(bisphenol a-co-epichlorohydrin), glycidyl end-capped	25036-25-3				
2-methylpropan-1-ol	78-83-1				
12-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimeth	220926-97-6				
phenol, styrenated	61788-44-1				
benzyl alcohol	100-51-6				
titanium dioxide	13463-67-7				
ethylbenzene	100-41-4	100	200	884	442
quartz (silicon dioxide binded within a mineral structure)	14808-60-7				
1-methoxypropan-2-ol	107-98-2	100	150	568	375
4-methylpentan-2-one	108-10-1	20	50	208	83
quartz (silicon dioxide)	14808-60-7				
toluene	108-88-3	50	100	384	192

Name	CAS-No.	OEL Note
2,2-bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	
glass oxide	65997-17-3	
talc	14807-96-6	
phenol, methylstyrenated	68512-30-1	
xylene	1330-20-7	Can be absorbed through the skin.
poly(bisphenol a-co-epichlorohydrin), glycidyl end-capped	25036-25-3	
2-methylpropan-1-ol	78-83-1	Can be absorbed through the skin.
12-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimeth	220926-97-6	
phenol, styrenated	61788-44-1	
benzyl alcohol	100-51-6	
titanium dioxide	13463-67-7	
ethylbenzene	100-41-4	Can be absorbed through the skin.
quartz (silicon dioxide binded within a mineral structure)	14808-60-7	
1-methoxypropan-2-ol	107-98-2	Can be absorbed through the skin.
4-methylpentan-2-one	108-10-1	Can be absorbed through the skin.
quartz (silicon dioxide)	14808-60-7	
toluene	108-88-3	Can be absorbed through the skin.

FURTHER ADVICE: Refer to the regulatory exposure limits for the workforce enforced in each country. Some components may not have been classified under the EU CLP Regulation. Annotations: Carc = Capable of causing cancer and/or heritable genetic damage, Sen = Capable of causing occupational asthma, Sk = Can be absorbed through the skin.

Chemical Name:

2,2-bis-[4-(2,3-epoxipropoxi)phenyl]propane

EC No.: 216-823-5

CAS-No.: 1675-54-3

DNELs - Derived no effect level

	Workers				Consumers			
Route of Exposure	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required					0.75 mg/kg bw/day		0.75 mg/kg bw/day
Inhalation		12.25 mg/m3		12.25 mg/m3				
Dermal		8.33 mg/kg bw/day		8.33 mg/kg bw/day		3.571 mg/kg bw/day		3.571 mg/kg bw/day

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	0.006 mg/L
Fresh water sediments	0.996 mg/kg
Marine water	0.0006 mg/L
Marine sediments	0.0996 mg/kg
Food chain	
Microorganisms in sewage treatment	10 mg/L
soil (agricultural)	0.196 mg/kg
Air	

Chemical Name:

glass oxide

EC No.: 266-046-0

CAS-No.: 65997-17-3

DNELs - Derived no effect level

	Workers				Consumers			
Route of Exposure	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required							
Inhalation								
Dermal								

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	6.5 µg/L
Fresh water sediments	174 mg/kg sediment dw
Marine water	3.4 µg/L
Marine sediments	164 mg/kg sediment dw
Food chain	
Microorganisms in sewage treatment	
soil (agricultural)	147 mg/kg soil dw
Air	

Chemical Name:

phenol, methylstyrenated

EC No.: 270-966-8

CAS-No.: 68512-30-1

DNELs - Derived no effect level

	Workers				Consumers			
Route of Exposure	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required							0.2 mg/kg bw/ day
Inhalation				1.4 mg/m3				0.35 mg/m3
Dermal				0.35 mg/kg bw/ day				1.7 mg/kg bw/ day

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	14 µg/L
Fresh water sediments	1064 mg/kg dw
Marine water	1.4 µg/L
Marine sediments	106 mg/kg dw
Food chain	
Microorganisms in sewage treatment	
soil (agricultural)	212 mg/kg dw
Air	

Chemical Name:

xylene

EC No.: 215-535-7

CAS-No.: 1330-20-7

DNELs - Derived no effect level

	Workers				Consumers			
Route of Exposure	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required				174 mg/m³	174 mg/m³		1.6 mg/kg bw/ day
Inhalation	289 mg/m³	289 mg/m³	77 mg/m³	77 mg/m³				14.8 mg/m³
Dermal				180 mg/kg bw/ day				108 mg/kg bw/ day

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	0.327 mg/L
Fresh water sediments	12.46 mg/kg
Marine water	0.327 mg/L
Marine sediments	12.46 mg/kg
Food chain	
Microorganisms in sewage treatment	6.58 mg/L
soil (agricultural)	2.31 mg/kg
Air	

Chemical Name:

2-methylpropan-1-ol

EC No.: 201-148-0

CAS-No.: 78-83-1

DNELs - Derived no effect level

	Workers				Consumers			
Route of Exposure	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required						55 mg/m3	25 mg/kg
Inhalation			310 mg/m3					
Dermal								

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	0,4 mg/l
Fresh water sediments	1,56 mg/kg
Marine water	0,04 mg/l
Marine sediments	0,156 mg/kg
Food chain	
Microorganisms in sewage treatment	10 mg/l
soil (agricultural)	0,0756 mg/kg
Air	

Chemical Name:

12-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimeth

EC No.: 432-840-2

CAS-No.: 220926-97-6

DNELs - Derived no effect level

	Workers				Consumers			
Route of Exposure	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required				25.7 mg/m3		0.08 mg/m3	
Inhalation	51.3 mg/m3		0.33 mg/m3					
Dermal								

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	
Fresh water sediments	
Marine water	
Marine sediments	
Food chain	
Microorganisms in sewage treatment	
soil (agricultural)	
Air	

Chemical Name:

phenol, styrenated

EC No.: 262-975-0

CAS-No.: 61788-44-1

DNELs - Derived no effect level

	Workers				Consumers			
Route of Exposure	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required							
Inhalation				1.21 mg/m3				
Dermal				2.87 mg/kg bw/ day				

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	11,5 µg/L
Fresh water sediments	1.564 mg/kg dw
Marine water	1.15 µg/L
Marine sediments	0.156 mg/kg dw
Food chain	
Microorganisms in sewage treatment	
soil (agricultural)	0.305 mg/kg dw
Air	

Chemical Name:

benzyl alcohol

EC No.: 202-859-9

CAS-No.: 100-51-6

DNELs - Derived no effect level

	Workers				Consumers			
Route of Exposure	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required					20 mg/kg bw/ day	5 mg/kg bw/ day	4 mg/kg bw/day
Inhalation		110 mg/m³		22 mg/m3				5.4 mg/m3
Dermal		40 mg/kg bw/ day		8 mg/kg bw/day		27 mg/m3		4 mg/kg bw/day
						20 mg/kg bw/ day		

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	1 mg/L
Fresh water sediments	5.27 mg/kg wwt
Marine water	0.1 mg/L
Marine sediments	0.527 mg/kg wwt
Food chain	
Microorganisms in sewage treatment	39 mg/L
soil (agricultural)	0.456 mg/kg wwt
Air	

Chemical Name:

titanium dioxide

EC No.: 236-675-5

CAS-No.: 13463-67-7

DNELs - Derived no effect level

	Workers				Consumers			
Route of Exposure	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required						10 mg/m³	700 mg/kg/ bw/ day
Inhalation			10 mg/m³					
Dermal								

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	0.127 mg/L
Fresh water sediments	1000 mg/kg dw
Marine water	1 mg/L
Marine sediments	100 mg/kg dw
Food chain	1667 mg/kg (oral)
Microorganisms in sewage treatment	100 mg/kg
soil (agricultural)	100 mg/kg dw
Air	

Chemical Name:

ethylbenzene

EC No.: 202-849-4

CAS-No.: 100-41-4

DNELs - Derived no effect level

	Workers				Consumers			
Route of Exposure	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required							1.6 mg/kg bw/ day
Inhalation	293 mg/m3			77 mg/m3				15 mg/m3
Dermal				180 mg/kg bw/ day				

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	0.1 mg/L
Fresh water sediments	13.7 mg/kg
Marine water	0.01 mg/L
Marine sediments	1.37 mg/kg
Food chain	
Microorganisms in sewage treatment	
soil (agricultural)	2.68 mg/kg
Air	

Chemical Name:

1-methoxypropan-2-ol

EC No.: 203-539-1

CAS-No.: 107-98-2

DNELs - Derived no effect level

	Workers				Consumers			
Route of Exposure	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required						33 mg/kg	43.9 mg/m3
Inhalation	553.5 mg/m3	553.5 mg/m³		369 mg/m3				78 mg/kg
Dermal				183 mg/kg bw/ day				

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	10 mg/L
Fresh water sediments	52.3 mg/kg
Marine water	1 mg/L
Marine sediments	5.2 mg/kg
Food chain	
Microorganisms in sewage treatment	100 mg/L
soil (agricultural)	5.49 mg/kg
Air	

Chemical Name:

4-methylpentan-2-one

EC No.: 203-550-1

CAS-No.: 108-10-1

DNELs - Derived no effect level

	Workers				Consumers			
Route of Exposure	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required				115,2 mg/m3	115,2 mg/m3		4.2 mg/kg bw/ day
Inhalation	208 mg/m3	208 mg/m3		83 mg/m3				14,7 mg/m
Dermal				11,8 mg/kg bw/ day				4,2 mg/kg bw/ day

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	600 µg/L
Fresh water sediments	8.27 mg/kg sediment dw
Marine water	60 µg/L
Marine sediments	0,83 mg/kg sediment dw
Food chain	
Microorganisms in sewage treatment	
soil (agricultural)	1.3 mg/kg soil dw
Air	

Chemical Name:
toluene

EC No.: 203-625-9

CAS-No.: 108-88-3

DNELs - Derived no effect level

	Workers				Consumers			
Route of Exposure	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required				226 mg/m3	226 mg/m3	56.5 mg/m3	8.13 mg/kg bw/ day
Inhalation	384 mg/m3	384 mg/m3	192 mg/m3	192 mg/m3				56.5 mg/m3
Dermal				384 mg/kg bw/ day				226 mg/kg bw/ day

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	0.68 mg/L
Fresh water sediments	16.39 mg/kg
Marine water	0.68 mg/L
Marine sediments	16.39 mg/kg
Food chain	
Microorganisms in sewage treatment	13.61 mg/L
soil (agricultural)	2.89 mg/kg
Air	

8.2 Exposure controls

Personal Protection

RESPIRATORY PROTECTION: Wear a battery powered assisted air-fed mask during spraying operations and long-term exposure. When working in confined or poorly ventilated spaces, a battery powered assisted air-fed mask must be used. When painting small areas, or when using a roller or brush, respiratory protection with combination filter (dust and gas filter, EN 14387:2004+A1:2008) may be used: Gas filter type A2 (organic substances). Dust filter P3 (for fine dust).

EYE PROTECTION: If splashes are likely to occur, wear: Face-shield, tightly fitting safety goggles (EN 166).

HAND PROTECTION: Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). Be aware that in daily use the durability of a chemical resistant protective glove can be notably shorter than the break through time measured according to EN 374, due to the numerous outside influences (e.g. temperature). Use chemical resistant gloves and lotions and barrier creams to prevent drying of the skin. Protective gloves complying with EN 374: Butyl rubber. Nitril rubber. Recommended glove material for mixed product: Protective gloves complying with EN 374: Butyl rubber. Nitril rubber. Thickness >= 0,5 mm; breakthrough time >=480 min.

BODY PROTECTION: Long sleeved clothing.
Remove and wash contaminated clothing before re-use.

OTHER PROTECTIVE EQUIPMENT: Ensure that eyewash stations and safety showers are close to the workstation location.

ENGINEERING CONTROLS: Ensure adequate ventilation, especially in confined areas.

SECTION 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Colour	Misc. colours
Physical State	LIQUID
Odor	Solvent
Odor threshold	Not determined
pH	Not determined
Melting point / freezing point (°C)	Not determined
Boiling point or initial boiling point and boiling range (°C)	106 - 152
Flash Point, (°C)	26
Evaporation rate	

	Not determined
Flammability (solid, gas)	Not determined
Lower and upper explosive limit	1.0 - 10.9
Vapour Pressure	Not determined
Relative vapour density	>1 (air = 1)
Density and/or relative density	1.3 - 1.4
Solubility in / Miscibility with water	Negligible
Partition coefficient: n-octanol/water	Not determined
Auto-ignition temperature (°C)	290
Decomposition temperature (°C)	Not determined
Kinematic viscosity	35 000 - 45 000 cPs
Particle characteristics	Not applicable to liquids

9.2 Other information

VOC Content g/l:	170
Specific Gravity (g/cm3)	1.38

SECTION 10: Stability and Reactivity

10.1 Reactivity
No reactivity hazards known under normal storage and use conditions.

10.2 Chemical stability
Stable under normal conditions.

10.3 Possibility of hazardous reactions
No reactivity hazards known under normal storage and use conditions.

10.4 Conditions to avoid
Avoid heat, sparks, flames and other ignition sources.

10.5 Incompatible materials
Keep away from strong oxidising agents and strongly acid or alkaline materials.

10.6 Hazardous decomposition products
In case of fire or hot work operations, hazardous decomposition products may be formed such as: Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), aliphatic amines, aldehydes.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute Toxicity:

Oral LD50:	No information available on the product itself as the product is not tested.
Inhalation LC50:	No information available on the product itself as the product is not tested.
Dermal LD50:	No information available on the product itself as the product is not tested.
Irritation:	Irritating to eyes and skin.
Corrosivity:	No information available.
Sensitization:	May cause an allergic skin reaction.

Repeated dose toxicity: No information available.

Carcinogenicity: No information available.

Mutagenicity: No information available.

Toxicity for reproduction: No information available.

STOT-single exposure: No information available.

STOT-repeated exposure: No information available.

Aspiration hazard: No information available.

If no information is available above under Acute Toxicity then the acute effects of this product have not been tested. Data on individual components are tabulated below:

CAS-No.	Name According to EEC	Oral LD50	Dermal LD50	Vapor LC50	Gas LC50	Dust/Mist LC50
1675-54-3	2,2-bis-[4-(2,3-epoxipropoxi) phenyl]propane	>2000 mg/kg (oral-rat)	>2000 mg/kg (dermal-rabbit)	No information	No information	No information
65997-17-3	glass oxide	>2000 - 5000 mg/kg bw (rat)	No information	No information	No information	No information
68512-30-1	phenol, methylstyrenated	>2000 mg/kg (oral-rat)	>2000 mg/kg (dermal-rat)	No information	No information	No information
1330-20-7	xylene	>2000 mg/kg (oral-rat)	1100 mg/kg (ATE dermal-rabbit)	11 mg/L (ATE inh/vapour)	4500 ppmV (ATE inh - Gas)	1.5 mg/L (ATE inh/dust/mist)
78-83-1	2-methylpropan-1-ol	24600 mg/kg (oral-rat)	> 2000 mg/kg (dermal - rabbit)	> 20 mg/L (Inhalation, rat, 6h)	8000 ppm	No information
220926-97-6	12-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimeth	>2000 mg/kg, rat (24 hr.)	>2000 mg/kg, rat (24 hr)	3650 mg/m3, rat (4 hr.)	No information	No information
61788-44-1	phenol, styrenated	>2000 mg/kg (Oral-rat)	>2000 mg/kg (Dermal-rat)	No information	No information	No information
100-51-6	benzyl alcohol	1620 mg/kg rat	>2000 mg/kg, rabbit	No information	No information	>4.178 mg/L (4h/ rat, mist)
13463-67-7	titanium dioxide	>5000 mg/kg (oral-rat)	10000 mg/kg	No information	No information	>6.82 mg/L (inh-rat-4h)
100-41-4	ethylbenzene	3500 mg/kg rat, oral	5001 mg/kg, rabbit	17.2 mg/L. rat, 4h	10000 ppm	1.5 mg/L
107-98-2	1-methoxypropan-2-ol	4016 mg/kg (oral-rat)	>13000 mg/kg (dermal-rabbit)	28.8 mg/L (inh., rat)	No information	No information
108-10-1	4-methylpentan-2-one	2080 mg/kg, (oral, rat)	>2000 mg/kg (dermal, rabbit)	11 mg/L	4500 ppm	1.5 mg/L
108-88-3	toluene	5580 mg/kg (oral, rat)	>5000 mg/kg (dermal, rabbit)	28.1 mg/L (4hrs, rat, inhal., vapor)	No information	No information

Additional Information:

This product may contain Ethyl Benzene, which is listed by IARC as possibly carcinogenic to humans (Group 2B). This listing is based on inadequate evidence of carcinogenicity in humans and sufficient evidence in experimental animals. This product may contain Quartz (silicon dioxide), which is listed by IARC as a known carcinogenic to humans (Group 1). This classification is relevant when exposed to Quartz (silicon dioxide) in dust or powder form only, including cured product that is subject to sanding, grinding, cutting, or other surface preparation activities. Chronic exposure causes drying effect on the skin and eczema. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Repeated skin contact leads to irritation and to sensitisation, possible with cross-sensitisation to other epoxies. This product may contain Titanium Dioxide, which is listed by IARC as possibly carcinogenic to humans (Group 2B). This listing is based on inadequate evidence of carcinogenicity in humans and sufficient evidence in experimental animals. Chronic exposure has been associated with various neurotoxic effects including permanent brain damage. The product is irritating to the eyes and may cause sensitisation to the respiratory system. Swallowing concentrated chemical may cause severe internal injury. Inhalation of vapour or mist can cause headache, nausea, irritation of nose, throat, and lungs.

11.2 Information on other hazards

Endocrine disrupting properties - Toxicity

Based on the available data, the product does not contain substances identified as having endocrine disrupting properties according to Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 in concentration of 0,1% or higher.

SECTION 12: Ecological Information

12.1 Toxicity:

EC50 48hr (Daphnia): No information

IC50 72hr (Algae): No information

LC50 96hr (fish): No information

12.2 Persistence and degradability: No information

12.3 Bioaccumulative potential: No information

12.4 Mobility in soil: No information

12.5 Results of PBT and vPvB assessment: The product does not meet the criteria for PBT/vPvB in accordance with Annex XIII.

12.6 Endocrine disrupting properties

Endocrine disrupting properties - Ecotoxicity

Name According to EEC	CAS-No.
phenol, styrenated	61788-44-1

12.7 Other adverse effects: No information

CAS-No.	Name According to EEC	EC50 48hr	IC50 72hr	LC50 96hr
1675-54-3	2,2-bis-[4-(2,3-epoxipropoxi)phenyl]propane	2.7 mg/L (Daphnia magna)	9.4 mg/L (EC50, Selenastrum capricornutum))	1.5 mg/L (Oncorhynchus mykiss)
65997-17-3	glass oxide	No information	1000 mg/L	1000 mg/L
68512-30-1	phenol, methylstyrenated	14 - 51 mg/L (daphnia)	15 mg/L (algae)	25.8 mg/L (fish)
1330-20-7	xylene	1 - 5 mg/L (Daphnia magna)	3 - 5 mg/L (Selenastrum sp.)	2 - 11 mg/L (Roccus saxatilis), 8.2 mg/L (Salmo gairdneri), 13.5 mg/L (Lepomis macrichirus), 21.0 mg/L (Pimephales promelas)
78-83-1	2-methylpropan-1-ol	1100 mg/L (Daphnia magna)	1799 mg/L (Scenedesmus subspicatus)	1430 mg/L (Pimephales promelas)
220926-97-6	12-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimeth	>100 mg/L (Daphnia magna)	>100 mg/L (Pseudokirchneriella subcapitata)	>100 mg/L (Oncorhyncus mykiss)
61788-44-1	phenol, styrenated	1-10 mg/L (EL50, daphnia OECD 202)	3.14 mg/L (ErL50, algae, OECD 201)	14.8 mg/L (LL50, OECD 203)
100-51-6	benzyl alcohol	230 mg/L (Daphnia Magna)	770 mg/L (EgC50, Selenastrum capricornutum)	10 mg/L (Lepomis macrochirus)
13463-67-7	titanium dioxide	>100 mg/l (EC50, 48h, Daphnia magna OECD202)	16 mg/l (EC50, 72h, Pseudokirchnerella subcapitata)	>100 mg/l (EC50, 96h, Oncorhynchus Mykiss OECD203)

100-41-4	ethylbenzene	1.8 - 2.4 mg/L (Daphnia magna)	5.4 mg/L (Pseudokirchneriella subcapitata)	4.2 mg/L (Oncorhynchus mykissl)
107-98-2	1-methoxypropan-2-ol	>21000 mg/L (Daphnia magna)	No information	6812 mg/L (Leuciscus idus)
108-10-1	4-methylpentan-2-one	>100 mg/L	>100 mg/L	>179 mg/L (Brachydanio rerio, LD50, 96h)
108-88-3	toluene	3.78 mg/L (Ceriodaphnia dubia)	10 mg/L OECD Guideline 201 (Algae, Growth Inhibition Test)	5.5 mg/L (Oncorhynchus kisutch)

SECTION 13: Disposal Considerations

13.1 **WASTE TREATMENT METHODS:** Do not burn, or use a cutting torch on, the empty drum. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Empty containers should be taken to an approved waste handling site for recycling or disposal. Dispose of waste material at an approved (hazardous) waste treatment/disposal facility in accordance with applicable local state, and federal regulations. Do not dispose of waste with normal garbage, or to sewer systems.

European Waste Code: 08 01 11*

Packaging Waste Code: 15 01 10*

SECTION 14: Transport Information

	ADR/RID	ADN	IMDG	IATA
14.1 UN-number or ID number	UN1263	UN1263	UN1263	UN1263
14.2 UN proper shipping name	PAINT	PAINT	PAINT	PAINT
14.3 Transport Hazard Class(es)	3	3	3	3
14.4 Packing Group	III	III	III	III
14.5 Enviromental Hazards	Marine Pollutant: Yes (Bisphenol A epoxy resin)	Marine Pollutant: Yes (Bisphenol A epoxy resin)	Marine Pollutant: Yes (Bisphenol A epoxy resin)	Marine Pollutant: Yes (Bisphenol A epoxy resin)

14.6 **Special precautions for user** No Information

EmS-No.: F-E, S-E

14.7 **Maritime transport in bulk according to IMO instruments** No Information

SECTION 15: Regulatory Information

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

National Regulations:

Denmark Product Registration Number:	Not available
Danish MAL Code:	Not available
Danish MAL Code - Mixture:	Not available
Sweden Product Registration Number:	Not available
Norway Product Registration Number:	Not available
WGK Class:	3
Covered by Directive 2012/18/EC (Seveso III):	P5c, E2
Restrictions to product or to substances according to Annex XVII, Regulation (CE) 1907/2006:	Entry 3, 40

Annex XIV - Annex XIV, Regulation (CE) 1907/2006 - Authorisation List:

CAS-No.	Name According to EEC

Not Applicable

SVHC - Substances of very high concern (Candidate List - Art. 59 REACH):

CAS-No.	Name According to EEC

Not Applicable

15.2 Chemical Safety Assessment:

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16: Other Information

Text for CLP Hazard Statements shown in Section 3 describing each ingredient:

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H361d	Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

Reasons for revision

Changes have been made to Section 2 of the Safety Data Sheet (SDS). Please refer to the Hazard Identification information in Section 2 of this SDS. Changes have been made to Section 12 of the Safety Data Sheet (SDS). Please refer to the Ecological Information in Section 12 of this SDS. . .

List of References

This Safety Data Sheet was compiled with data and information from the following sources:

- The Ariel Regulatory Database provided by the 3E Corporation in Copenhagen, Denmark
- Joint Research Centre in Ispra, Italy
- Regulation (EC) 1272/2008 with subsequent amendments
- Regulation (EC) 1907/2006 with subsequent amendments
- Commission Regulation (EU) 2020/878
- Eu Council Decision 2000/532/EC and its Annex entitled "List of Wastes"
- Safety Data Sheet from raw material supplier
- The classification declared in sec. 2.2 is based on the calculation methods set out in Annex I and Annex II of the CLP Reg. 1272/2008 on the composition of the formula.

Acronym & Abbreviation Key

CLP Classification, Labeling & Packaging Regulation
EC European Commission
EU European Union
US United States
CAS Chemical Abstract Service
EINECS European Inventory of Existing Chemical Substances
REACH Registration, Evaluation, Authorization of Chemicals Regulation
GHS Globally Harmonized System of Classification and Labeling of Chemicals
LTEL Long term exposure limit
STEL Short term exposure limit
OEL Occupational exposure limit
ppm Parts per million
mg/m3 Milligrams per cubic meter
TLV Threshold Limit Value
ACGIH American Conference of Governmental Industrial Hygienists
OSHA Occupational Safety & Health Administration
PEL Permissible Exposure Limits
VOC Volatile organic compounds
g/l Grams per liter
mg/kg milligrams per kilogram
N/A Not applicable
LD50 Lethal dose at 50%
LC50 Lethal concentration at 50%
EC50 Half maximal effective concentration
IC50 Half maximal inhibitory concentration
PBT Persistent bioaccumulative toxic chemical
vPvB Very persistent and very bioaccumulative
EEC European Economic Community
ADR International Transport of Dangerous Goods by Road
RID International Transport of Dangerous Goods by Rail
UN United Nations
IMDG International Maritime Dangerous Goods Code
IATA International Air Transport Association
MARPOL International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978
IBC International Bulk Container
RTI Respiratory Tract Irritation
NE Narcotic Effects
IMO International Maritime Organization
Note P: The classification as a carcinogen or mutagen need not apply; the substance contains less than 0,1 % w/w benzene
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.

For further information, please contact: Regulatory Department

The information on this sheet corresponds to our present knowledge. It is not a specification and it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage, and use of the product. It is not applicable to unusual or non-standard uses of the product or where instructions and recommendations are not followed.