

Safety Data Sheet

Complies with Annex II of REACH - Regulation (EU) 2020/878

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

1.1. Product identifier

Code: RMICR50G00007
Product name: RESINAL μ 50 part A
UFI code: NE00-G0GR-P00N-YRFD

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

Description/Use: Anti-wear coatings

1.3. Details of the supplier of the safety data sheet

Name: SARO Srl
Full address: Via G. Di Vittorio, 5
District and Country: 20020 Arconate (MI)
Italy
tel. 0331453794

e-mail address of the competent person
responsible for the Safety Data Sheet

amministrazione@sa.ro.it

1.4. Emergency telephone number

For urgent inquiries refer to

IRELAND: National Poisons Information Centre (NPIC): +353 1 8092166
MALTA: Medicines & poisons info Office 112

SECTION 2. Hazard identification

2.1. Classification of the substance or mixture

The product is classified as hazardous under the provisions of Regulation (EC) 1272/2008 (CLP) (as amended and adapted). The product therefore requires a safety data sheet in accordance with the provisions of Regulation (EU) 2020/878.

Additional information concerning health and/or environmental hazards can be found in sections 11 and 12 of this sheet.

Classification and hazard statements:

Chemical and physical hazards: the product is not classified for this hazard class

Health hazards: The product may damage fertility or the unborn child and is suspected of causing genetic alterations. The product causes severe skin burns and eye damage. The product may cause an allergic skin reaction.

Environmental hazards: The product is toxic to aquatic organisms, with long-lasting effects.

Germ cell mutagenicity, category 2	H341	Suspected of causing genetic alterations.
Toxicity for reproduction, category 1B	H360	It may harm fertility or the foetus.
Skin corrosion, category 1C	H314	Causes severe skin burns and eye damage.
Serious eye injury, category 1	H318	Causes serious eye injuries.
Skin sensitisation, category 1	H317	It may cause an allergic skin reaction.
Dangerous for the aquatic environment, chronic toxicity, category 2	H411	Toxic to aquatic organisms with long-lasting effects.

2.2 Label Elements

Hazard labelling in accordance with Regulation (EC) 1272/2008 (CLP) and subsequent amendments and adjustments.

Hazard pictograms:

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Signal words: Danger

Hazard statements:

H341 Suspected of causing genetic alterations.
H360 It may harm fertility or the foetus.
H314 Causes severe skin burns and eye damage.
H317 It may cause an allergic skin reaction.
H411 Toxic to aquatic organisms with long-lasting effects.
 Restricted use to professional users.

Precautionary statements:

P260 Do not breathe the fumes, the gases, the mist and the vapours.
P201 Obtain specific instructions before use.
P305+P351+P338 IF IN EYES: Rinse thoroughly for several minutes. Remove any contact lenses if it is easy to do so. Continue rinsing.
P303+P361+P353 IF ON SKIN (or hair): Remove all contaminated clothing immediately. Rinse skin or take a shower .
P280 Wear gloves and protective clothing and protect your eyes and your face.
P310 Contact an ANTIVELENI CENTRE immediately or a doctor .

Contains: Reaction mass of 1-(2,3-epoxypropoxy)-2,2-bis ((2,3-epoxypropoxy)methyl) butane and 1-(2,3-epoxypropoxy)-2-((2,3-epoxypropoxy)methyl)-2-hydroxymethyl butane
 Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol
 2,2-bis-[4-(2,3-epoxypropoxy)phenyl]-propane

2.3. Other hazards

According to the available data, the product does not contain PBT or vPvB substances in a proportion $\geq 0.1\%$.
 The product does not contain substances with endocrine-disrupting properties in concentrations $\geq 0.1\%$.

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	Concentration%	Classification (EC) 1272/2008 (CLP)	Specific concentration limits 1272/2008 (CLP)
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol INDEX -	35-40*	Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Chronic 2 H411	<i>Not applicable</i>
EC 701-263-0 CAS 9003-36-5 REACH Reg. 01-2119454392-40-XXXX			
Reaction mass of 1-(2,3-epoxypropoxy)-2,2-bis ((2,3-epoxypropoxy)methyl) butane and 1-(2,3-epoxypropoxy)-2-((2,3-epoxypropoxy)methyl)-2-hydroxymethyl butane INDEX -	10-10,5*	Muta. 2 H341, Repr. 1B H360, Skin Corr. 1C H314,	<i>Not applicable</i>

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Eye Dam. 1 H318,
Skin Sens. 1B H317,
Aquatic Chronic 2 H411

CE 701-135-4

CAS -

REACH Reg. 01-2120078341-60- XXXX

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

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1,5-2*

Eye Irrit. 2 H319,
Skin Irrit. 2 H315,
Skin Sens. 1 H317,
Aquatic Chronic 2 H411

*Skin Irrit. 2 H315: \geq 5%,
Eye Irrit. 2 H319: \geq 5%.*

EC 216-823-5

CAS 1675-54-3

REACH Reg. 01-2119456619-26-XXXX

*Upper value of range excluded

The full text of the hazard statements (H) is given in section 16 of the sheet.

SECTION 4. First Aid Measures**4.1. Description of first aid measures**

EYES: Remove any contact lenses. Wash immediately with plenty of water for at least 30 to 60 minutes, opening eyelids widely. Seek medical advice immediately.

SKIN: Remove contaminated clothing. Shower immediately. Seek medical advice immediately.

INGESTION: Drink as much water as possible. Seek medical advice immediately. Do not induce vomiting unless expressly authorised by a doctor.

INHALATION: Get medical attention immediately. Move the person to fresh air, away from the site of the accident. If breathing ceases, administer artificial respiration. Take appropriate precautions for the rescuer.

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

Specific information on symptoms and effects caused by the product are unknown.

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

Treat symptomatically. Consult a doctor.

SECTION 5. Firefighting measures**5.1. Extinguishing media****SUITABLE EXTINGUISHING EQUIPMENT**

The extinguishing media are the traditional ones: carbon dioxide, foam, powder and water mist.

UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

5.2. Special hazards arising from the substance or mixture**HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE**

Avoid breathing in combustion products, especially COx and chlorine compounds.

5.3. Recommendations for firefighters**GENERAL INFORMATION**

Cool containers with jets of water to prevent decomposition of the product and the development of substances potentially hazardous to health. Always wear full fire protection equipment. Collect extinguishing water, which must not be discharged into the sewage system. Dispose of contaminated extinguishing water and fire residue in accordance with current regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire-fighting clothing, such as an open-circuit self-contained breathing apparatus (EN 137), flame-resistant suit (EN469), flame-resistant gloves (EN 659) and firefighter's boots (HO A29 or A30).

SECTION 6. Accidental Release Measures

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Alert personnel responsible coordinating the response to such emergencies. Move away from the area affected by the accident if you are not in possession of the personal protective equipment listed in section 8.

FOR EMERGENCY RESPONDERS

Evacuate all personnel not suitably equipped to deal with the emergency.

Wear suitable protective clothing and equipment, as set out in section 8 of the safety data sheet, to prevent any contamination of the skin, eyes and personal clothing. Stop leak if safe to do so.

Do not permit workers to access the area affected by the accident until safe conditions have been restored. Ventilate the areas affected

6.2. Environmental Precautions

Prevent the product from entering sewers, surface water and groundwater.

6.3 Methods and materials for containment and remediation

Vacuum the spilled product into a suitable container. Assess the compatibility of the container to be used with the product, checking section 10. Absorb the remainder with inert absorbent material (e.g. vermiculite, diatomaceous earth, sand, kieselguhr, zeolites, activated carbon, aluminium/silica gel).

Ensure sufficient ventilation of the site affected by the leak. Disposal of the contaminated material must be carried out in accordance with the provisions of section 13.

6.4. Reference to other sections

Information on personal protection and disposal can be found in sections 8 and 13.

SECTION 7. Handling and Storage**7.1. Precautions for safe handling**

The product is classified as mutagenic and reprotoxic and as such is subject to the provisions of Title IX, Chapter II of Legislative Decree 81/2008 as amended and Directive 2004/37/EC as amended. Eliminate or minimise exposure by operating in a closed loop; if this is not technically feasible, limit exposure to the product both in terms of the quantities used and frequency of use, and the number of workers exposed.

Handle the product after consulting all other sections of this safety data sheet. Avoid dispersing the product in the environment. Do not eat, drink or smoke during use. Remove contaminated clothing and protective equipment before entering eating areas.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Keep containers closed, in a well-ventilated place, out of direct sunlight. Keep containers away from any incompatible materials, e.g. acids, bases and strong oxidants, check section 10.

Storage class TRGS 510 (Germany):

6.1C

7.3. Specific end use(s)

There are no particular end uses other than the identified relevant uses listed in Section 1.2 of this safety data sheet.

SECTION 8. Exposure controls/personal protection**8.1. Control Parameters**

The product does not contain substances for which there are Community Occupational Exposure Limits (OELs) or National Occupational Exposure Limits (VLEPs) that require declaration in this section.

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

Predicted concentration of no effect on the environment - PNEC

Reference value in fresh water	0,006	mg/l
Reference value in seawater	0,001	mg/l
Freshwater sediment reference value	0,341	mg/kg
Reference value for sediments in seawater	0,034	mg/kg
Reference value for water, intermittent release	0,018	mg/l
Reference value for STP microorganisms	10	mg/l

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Reference value for the food chain (secondary poisoning)	11	mg/kg
Reference value for the terrestrial compartment	0,065	mg/kg

Health - Derived No-Effect Level - DNEL / DMEL								
Exhibition Street	Effects on consumers			Effects on workers				
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				0.5 mg/kg bw/d				
Inhalation				0.87 mg/m3				4.93 mg/m3
Dermica				89.3 μ g/kg bw/d				0.75 mg/kg bw/d

Reaction mass of 1-(2,3-epoxypropoxy)-2,2-bis ((2,3-epoxypropoxy)methyl) butane and 1-(2,3-epoxypropoxy)-2-((2,3-epoxypropoxy)methyl)-2-hydroxymethyl butane

Predicted concentration of no effect on the environment - PNEC

Reference value in fresh water	0,004	mg/l
Freshwater sediment reference value	0,02	mg/kg
Reference value for sediments in seawater	0,02	mg/kg
Reference value for seawater, intermittent release	0,037	mg/l
Reference value for STP microorganisms	16,8	mg/l
Reference value for the terrestrial compartment	0,002	mg/kg

Health - Derived No-Effect Level - DNEL / DMEL								
Exhibition Street	Effects on consumers			Effects on workers				
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral								0.67 mg/kg bw/d
Inhalation								1.17 mg/m3

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified ; LOW = low hazard ; MED = medium hazard ; HIGH = high hazard.

8.2. Exposure controls

Since the use of appropriate technical measures should always take priority over personal protective equipment, ensure good ventilation in the workplace through effective local exhaust ventilation.

When choosing personal protective equipment, seek advice from your chemical suppliers if necessary.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

HAND PROTECTION

Protect hands with category III at least type B work gloves, which protect against aromatic hydrocarbons (class F), heterocyclic and ether compounds (class H) and aldehydes (class T). recommended material: PVA and similar.

For the final choice of work glove material (ref. standard EN 374), the following must be considered: compatibility, degradation, breakage time and permeation.

In the case of preparations, the resistance of work gloves to chemicals must be checked before use as it cannot be predicted. Gloves have a wear time that depends on the duration and mode of use.

SKIN PROTECTION

Wear long-sleeved work clothes and category III occupational safety footwear (ref. Reg. (EU) 2016/425 and EN ISO 20344). Wash with soap and water after removing protective clothing. Provide an emergency shower with visocular tray.

EYE PROTECTION

Wear airtight protective goggles (ref. standard EN ISO 16321).

RESPIRATORY PROTECTION

The use of respiratory protective equipment is necessary if the technical measures taken are not sufficient to limit the worker's exposure to the threshold values taken into consideration. It is advisable to wear a mask with a type A filter, the class (1, 2 or 3) of which should be chosen in relation to the limit

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concentration of use. (ref. standard EN 14387). We recommend the use of a type P filtering facemask, the class (1, 2 or 3) and actual need for which must be defined according to the outcome of the risk assessment (ref. standard EN 149).

In the event that the substance in question is odourless or its odour threshold is above the relevant TLV-TWA and in the event of an emergency, wear an open-circuit self-contained breathing apparatus (ref. standard EN 137) or a supplied-air respirator (ref. standard EN 138). For the correct choice of respiratory protective device, refer to EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS

Emissions from production processes, including those from ventilation equipment, should be controlled in order to comply with environmental protection regulations.

Product residues must not be discharged unchecked into drains or watercourses.

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

Properties	Value	Information
Appearance	liquid	
Colour	dark grey	
Odour	characteristic	
Melting or freezing point	not available	
Initial boiling point	not available	
Flammability	not flammable	
Lower explosive limit	not available	
Upper explosive limit	not available	
Flash point	> 60 °C	
Auto-ignition temperature	not available	
Decomposition temperature	not available	
pH	7-9	
Kinematic viscosity	not available	
Solubility	insoluble	
Partition coefficient: n-octanol/water	not applicable	The product is a mixture
Vapour pressure	not applicable	The product is a mixture
Density and/or relative density	1.7 g/cm ³	
Relative vapour density	not applicable	The product is a mixture
Particle characteristics	not applicable	The product is liquid

9.2. Other information

9.2.1. Information on physical hazard classes

Information not available

9.2.2. Other safety features

Information not available

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

There are no particular risk of reaction with other substances under normal conditions of use.

10.2. Chemical stability

The product is stable under normal conditions of use and storage.

10.3. Possibility of dangerous reactions

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Under normal use and storage conditions, no hazardous reactions are to be expected.

10.4. Conditions to avoid

None in particular. However the usual precautions used for chemical products should be respected.

10.5. Incompatible materials

Acids, bases and strong oxidants

10.6. Hazardous decomposition products

By thermal decomposition, gases and vapors potentially harmful to health can be released, in particular COx and chlorine compounds.

SECTION 11. Toxicological information**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

In the absence of experimental toxicological data on the product itself, the possible health hazards of the product were assessed on the basis of the properties of the substances contained, according to the criteria laid down in the relevant classification regulations.

Therefore, consider the concentration of any individual hazardous substances mentioned in Section 3 to assess the toxicological effects of exposure to the product.

Metabolism, kinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Immediate, delayed and chronic effects from short- and long-term exposures

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

Based on the available data and considering the classification criteria of Annex I, Part 3 of Regulation (EC) 1272/2008 as amended, the product is not classified for this hazard class

ATE (Inhalation) of the mixture:	Not classified (no relevant components)
ATE (Oral) of the mixture:	Not classified (no relevant components)
ATE (Dermal) of the mixture:	Not classified (no relevant components)

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

LD50 (Dermal):	23.032 mg/kg Rabbit
LD50 (Oral):	19800 mg/kg Rat

Reaction mass of 1-(2,3-epoxypropoxy)-2,2-bis ((2,3-epoxypropoxy)methyl) butane and 1-(2,3-epoxypropoxy)-2-((2,3-epoxypropoxy)methyl)-2-hydroxymethyl butane

LD50 (Dermal):	> 3170 mg/kg Rat
LD50 (Oral):	3398 mg/kg Rat

SKIN CORROSION / SKIN IRRITATION

On the basis of the available data and considering the classification criteria set out in Table 3.2.3 of Annex I of Regulation (EC) 1272/2008 as amended, the product is classified as **Skin corr. 1C, H314**

SEVERE EYE DAMAGE/EYE IRRITATION

Based on the available data and considering the classification criteria in Table 3.3.3 of Annex I of Regulation (EC) 1272/2008 as amended, the product is classified as **Eye dam. 1, H318**

RESPIRATORY OR SKIN SENSITISATION

Based on available data and considering the classification criteria of Annex I, Part 3 of Regulation (EC) 1272/2008 as amended, the product is classified as **Skin Sens. 1, H317**

RESINAL μ 50 part A**GERM CELL MUTAGENICITY**

Based on available data and considering the classification criteria of Annex I, Part 3 of Regulation (EC) 1272/2008 as amended, the product is classified as **Muta. 2, H341**

CARCINOGENICITY

Based on available data and considering the classification criteria of Annex I, Part 3 of Regulation (EC) 1272/2008 as amended, the product is not classified for this hazard class.

REPRODUCTIVE TOXICITY

Based on available data and considering the classification criteria of Annex I, Part 3 of Regulation (EC) 1272/2008 as amended, the product is classified as **Repr. Tox. 1B, H360**

STOT - SINGLE EXPOSURE

Based on available data and considering the classification criteria of Annex I, Part 3 of Regulation (EC) 1272/2008 as amended, the product is not classified for this hazard class.

STOT - REPEATED EXPOSURE

Based on available data and considering the classification criteria of Annex I, Part 3 of Regulation (EC) 1272/2008 as amended, the product is not classified for this hazard class.

ASPIRATION HAZARD

Based on available data and considering the classification criteria of Annex I, Part 3 of Regulation (EC) 1272/2008 as amended, the product is not classified for this hazard class.

11.2. Information on other hazards

According to the available data, the product does not contain any substances listed in the main European lists of potential or suspected endocrine disruptors with effects on human health under evaluation.

SECTION 12. Ecological Information**12.1. Toxicity**

Based on the assessment of the classification of components and the classification provisions of Annex I, Part 4 of Regulation (EC) 1272/2008 as amended, the mixture is classified as dangerous for the environment with long-term effects **Aq. Chronic 2, H411**.

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

LC50 - Fish	1.5 mg/l/96h Oncorhynchus mykiss
EC50 - Crustaceans	1.1 mg/l/48h Daphnia magna
EC50 - Algae / Aquatic Plants	9.1 mg/l/72h Scenedesmus capricornutum
NOEC Chronic Crustaceans	0.3 mg/l Daphnia magna, 21 days

Reaction mass of 1-(2,3-epoxypropoxy)-2,2-bis ((2,3-epoxypropoxy)methyl) butane and 1-(2,3-epoxypropoxy)-2-((2,3-epoxypropoxy)methyl)-2-hydroxymethyl butane

LC50 - Fish	75 mg/l/96h Cyprinus carpio
EC50 - Crustaceans	3.7 mg/l/48h Daphnia magna
EC50 - Algae / Aquatic Plants	3.4 mg/l/72h Raphidocelis subcapitata

12.2. Persistence and degradability

Information not available

12.3. Bioaccumulative potential

Information not available

RESINAL μ 50 part A**12.4. Mobility in soil**

Information not available

12.5. Results of PBT and vPvB assessmentAccording to the available data, the product does not contain PBT or vPvB substances in a proportion \geq 0.1%.**12.6 Endocrine disrupting properties**

According to the available data, the product does not contain any substances listed in the main European lists of potential or suspected endocrine disrupters with effects on the environment under evaluation.

12.7. Other adverse effects

Information not available

SECTION 13. Disposal considerations**13.1. Waste treatment methods**

Reuse if possible. Product residues are to be regarded as special hazardous waste. The hazardousness of waste containing some of this product must be assessed in accordance with current legislation.

Disposal must be entrusted to an authorised waste management company, in compliance with national and possibly local regulations.

CONTAMINATED PACKAGING

Contaminated packaging must be sent for recovery or disposal in accordance with national waste management regulations.

SECTION 14. Transport information**14.1. ONU number or ID number**

ADR / RID, IMDG, IATA: ONU 3267

14.2. UN proper shipping name

ADR / RID: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.(Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol, epoxy)-2-((2,3-epoxypropoxy)methyl)-2-hydroxymethyl butane)

IMDG: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.(Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol, epoxy)-2-((2,3-epoxypropoxy)methyl)-2-hydroxymethyl butane)

IATA: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.(Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol, epoxy)-2-((2,3-epoxypropoxy)methyl)-2-hydroxymethyl butane)

14.3. Transport hazard class(es)

ADR / RID: Class: 8 Label: 8

IMDG: Class: 8 Label: 8

IATA: Class: 8 Label: 8

**14.4. Packing group**

ADR / RID, IMDG, IATA: III

14.5. Environmental hazards

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ADR / RID: Environmentally
Hazardous



IMDG: Marine Pollutant



IATA: NO

For Air transport, environmentally hazardous mark is only mandatory for UN 3077 and UN 3082.

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 80	Limited Quantities: 5 L	Tunnel restriction code: (E)
	Special provision: 274		
IMDG:	EMS: F-A, S-B	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 60 L	Packaging instructions: 856
	Passengers:	Maximum quantity: 5 L	Packaging instructions: 852
	Special provision:	A3, A803	

14.7. Maritime transport in bulk according to IMO instruments

Information not relevant

SECTION 15. Regulatory Information

15.1. Safety, health and environmental laws and regulations specific to the substance or mixture

Seveso Category - Directive 2012/18/EU: E2

Biocides Regulation (Reg. (EU) 528/2012): not applicable

Detergents Regulation (Reg. (EC) 648/2004): not applicable

Dir. 2004/42/EC - VOC / Legislative Decree 161/2006: not applicable

Restrictions on the product or contained substances according to Annex XVII Regulation (EC) 1907/2006

Product

Point 3

Substances contained

Point 75 2,2-bis-[4-(2,3-epoxypropoxy)phenyl]-propane

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors
not applicable

Candidate List Substances (Art. 59 REACH)

According to the available data, the product does not contain SVHC substances in a proportion ≥ 0.1 %.

Substances subject to authorisation (Annex XIV REACH)

None

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Substances subject to export notification Regulation (EU) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent hazardous to health must undergo health surveillance carried out in accordance with the provisions of Article 41 of Legislative Decree 81 of 9 April 2008, unless the risk to the worker's health and safety has been assessed as insignificant, in accordance with Article 224(2).

Classification for water pollution in Germany (AwSV, vom 18. April 2017)

WGK 3: Very dangerous for water

15.2. Chemical Safety Assessment

A chemical safety assessment was carried out for the following contained substances:

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

Reaction mass of 1-(2,3-epoxypropoxy)-2,2-bis ((2,3-epoxypropoxy)methyl) butane and 1-(2,3-epoxypropoxy)-2-((2,3-epoxypropoxy)methyl)-2-hydroxymethyl butane

Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

SECTION 16. Other information

Text of the hazard statements (H) cited in sections 2-3 of the sheet:

Muta. 2	Germ cell mutagenicity, category 2
Repr. 1B	Toxicity for reproduction, category 1B
Skin Corr. 1C	Skin corrosion, category 1C
Eye Dam. 1	Serious eye injury, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
Skin Sens. 1	Skin sensitisation, category 1
Skin Sens. 1B	Skin sensitisation, category 1B
Aquatic Chronic 2	Dangerous for the aquatic environment, chronic toxicity, category 2
H341	Suspected of causing genetic alterations.
H360	It may harm fertility or the foetus.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye injuries.
H319	Causes severe eye irritation.
H315	Causes skin irritation.
H317	It may cause an allergic skin reaction.
H411	Toxic to aquatic organisms with long-lasting effects.

LEGEND:

- ADR: European Agreement concerning the Transport of Dangerous Goods by Road
- CAS: Chemical Abstract Service number

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- EC: Identification number in ESIS (European Substances Database)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived level without effect
- EC50: Concentration affecting 50% of the test population
- EmS: Emergency Schedule
- GHS: Globally Harmonised System for the Classification and Labelling of Chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulations
- IC50: 50 per cent immobilisation concentration of the test population
- IMDG: International Maritime Dangerous Goods Code
- IMO: International Maritime Organisation
- INDEX: Identification number in Annex VI of the CLP
- LC50: Lethal concentration 50%
- LD50: Lethal dose 50%.
- OEL: Occupational Exposure Level
- PBT: Persistent, bioaccumulative and toxic
- PEC: Predictable environmental concentration
- PEL: Expected Exposure Level
- PMT: Persistent, mobile and toxic
- PNEC: Predictable no-effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulations for the International Carriage of Dangerous Goods by Rail
- STA: Acute Toxicity Estimate
- TLV: Threshold Limit Value
- TLV CEILING: Concentration not to be exceeded at any time during work exposure.
- TWA: Weighted Average Exposure Limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile Organic Compound
- vPvB: Very persistent and very bioaccumulative
- vPvM: Very persistent and very mobile
- WGK: Aquatic Hazard Class (Germany).
- A1 = recognised human carcinogen.
- A2 = suspected human carcinogen.
- A3 = recognised animal carcinogen with unknown relevance in humans.
- A4 = not classified as carcinogenic to humans.
- A5 = not suspected of being carcinogenic to humans.
- IBE = Substance with Biological Exposure Indicator.

GENERAL BIBLIOGRAPHY:

1. Regulation (EC) 1907/2006 of the European Parliament (REACH)
 2. Regulation (EC) 1272/2008 of the European Parliament (CLP)
 3. Regulation (EU) 2020/878 (All. II REACH Regulation)
 4. Regulation (EC) 790/2009 of the European Parliament (I Atp. CLP)
 5. Regulation (EU) 286/2011 of the European Parliament (II Atp. CLP)
 6. Regulation (EU) 618/2012 of the European Parliament (III Atp. CLP)
 7. Regulation (EU) 487/2013 of the European Parliament (IV Atp. CLP)
 8. Regulation (EU) 944/2013 of the European Parliament (V Atp. CLP)
 9. Regulation (EU) 605/2014 of the European Parliament (VI Atp. CLP)
 10. Regulation (EU) 2015/1221 of the European Parliament (VII Atp. CLP)
 11. Regulation (EU) 2016/918 of the European Parliament (VIII Atp. CLP)
 12. Regulation (EU) 2016/1179 (IX Atp. CLP)
 13. Regulation (EU) 2017/776 (X Atp. CLP)
 14. Regulation (EU) 2018/669 (XI Atp. CLP)
 15. Regulation (EU) 2019/521 (XII Atp. CLP)
 16. Delegated Regulation (EU) 2018/1480 (XIII Atp. CLP)
 17. Regulation (EU) 2019/1148
 18. Delegated Regulation (EU) 2020/217 (XIV Atp. CLP)
 19. Delegated Regulation (EU) 2020/1182 (XV Atp. CLP)
 20. Delegated Regulation (EU) 2021/643 (XVI Atp. CLP)
 21. Delegated Regulation (EU) 2021/849 (XVII Atp. CLP)
 22. Delegated Regulation (EU) 2022/692 (XVIII Atp. CLP)
 23. Delegated Regulation (EU) 2023/707
- The Merck Index. - 10th Edition
 - Handling Chemical Safety
 - INRS - Fiche Toxicologique (toxicological sheet)
 - Patty - Industrial Hygiene and Toxicology
 - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
 - IFA GESTIS website

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- ECHA Agency Website
- Database of model SDSs of chemical substances - Ministry of Health and Istituto Superiore di Sanità

CALCULATION METHODS

Chemical-physical hazards: The hazard was derived from the classification criteria of the CLP Regulation Annex I Part 2 as amended.

Health hazards were assessed using the calculation method laid down in Regulation (EC) 1272/2008 (CLP) as amended for the classification of mixtures when data exist on all or some of the components of the mixture:

Acute Tox: application of criteria Table 3.1.1. Annex I Part 3 of the CLP Regulation as amended.

Skin Corr. 1A/1B/1C H314: application of additivity formula criteria Table 3.2.3 Annex I Part 3 of the CLP Regulation

Skin Irrit 2 H315: application formula additivity criteria Table 3.2.3 Annex I Part 3 of the CLP Regulation

Eye Dam 1 H318: application of additivity formula criteria Table 3.3.3 Annex I Part 3 of the CLP Regulation

Eye Irrit. 2 H319: application of the formula of the criteria additivity Table 3.3.3 Annex I Part 3 of the CLP Regulation

Eye Irrit. 2 H319: Table 3.3.3 of Annex I, Part 3 of Regulation (EC) 1272/2008 (CLP) as amended.

Skin Sens 1A/1B/1 H317 Table 3.4.5 of Annex I, Part 3 of Regulation (EC) 1272/2008 (CLP) as amended.

Resp Sens 1A/1B/1 H334 Table 3.4.5 of Annex I, Part 3 of Regulation (EC) 1272/2008 (CLP) as amended.

Muta. 1A/1B, 2 H340 - H341: Table 3.5.2 Annex I Part 3 of the CLP Regulation as amended.

Carc 1A/1B, 2 H350 - H351: Table 3.6.2 Annex I Part 3 of the CLP Regulation as amended.

Repr 1A/1B, 2 H360 - H361: Table 3.7.2 Annex I Part 3 of the CLP Regulation as amended.

STOT SE 1, 2 H370 - 371: application of calculation methods - Table 3.8.3 of Annex I, Part 3 of Regulation (EC) 1272/2008 (CLP) as amended.

STOT SE 3 H336: Chap. 3.8.3.4.5 of Annex I, Part 3 of Regulation (EC) 1272/2008 (CLP) as amended.

STOT RE 1, 2 H372 - H373: Table 3.9.4 Annex I Part 3 of the CLP Regulation as amended.

Asp Tox 1 H304: application of criteria 3.10 Annex I Part 3 of the CLP Regulation as amended.

Hazards to the environment were assessed using the calculation method laid down in Regulation (EC) 1272/2008 (CLP) as amended for the classification of mixtures when data exist on all or some of the components of the mixture:

toxicity to the aquatic environment acute effects: Table 4.1.1 of Annex I, Part 4 of Regulation (EC) 1272/2008 (CLP) as amended;

toxicity to the aquatic environment chronic effects: Table 4.1.2 of Annex I, Part 4 of Regulation (EC) 1272/2008 (CLP) as amended.

Note to the user:

The information contained in this sheet is based on the knowledge available to us at the date of the last version. The user must ensure the suitability and completeness of the information in relation to the specific use of the product.

It should not be interpreted as a guarantee of any specific product properties.

Since the use of the product is not under our direct control, it is the user's responsibility to observe the applicable laws and regulations regarding hygiene and safety. We accept no liability for improper use.

Provide adequate training for personnel handling chemicals.

Sections changed from the previous version: ALL.