

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 B
UFI code: XH00-0065-0005-N31F

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)
Italia
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. Hazards 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 and is harmful if inhaled. 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.

Toxicity for reproduction, category 1B	H360F	It can harm fertility.
Acute toxicity, category 4	H332	Harmful if inhaled.
Serious eye injury, category 1	H318	Causes serious eye injuries.
Skin irritation, category 2	H315	Causes skin irritation.
Skin sensitisation, category 1A	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:

RESINAL μ 50 part B

Signal words: Danger

Hazard statements:

H360F May damage fertility.
H332 Harmful if inhaled.
H318 Causes serious eye injuries.
H315 Causes skin irritation.
H317 It may cause an allergic skin reaction.
H411 Toxic to aquatic organisms with long-lasting effects.
 Restricted use to professional users.

Precautionary statements:

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.
P280 Wear gloves and protective clothing and protect your eyes and your face.
P310 Contact an ANTIVELENI CENTRE immediately or a doctor .
P273 Do not disperse in the environment.
P391 Collect the spilled material.

Contains: 4,4'-ISOPROPYLENEDIPHENOL
 2,2'-iminodi(ethylamine)
 Fatty acids, C18-unsaturates, dimers, oligomeric reaction products with tall oil fatty acids and triethylenetetramine

2.3. Other hazards

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

4,4'-ISOPROPYLENEDIPHENOL

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	Concentration%	Classification 1272/2008 (CLP)	Specific concentration limits 1272/2008 (CLP)
Fatty acids, C18-unsaturates, dimers, oligomeric reaction products with tall oil fatty acids and triethylenetetramine INDEX -	50-58*	Eye Dam. 1 H318, Skin Irrit. 2 H315, Skin Sens. 1A H317, Aquatic Chronic 2 H411	<i>Not applicable</i>
EC 500-191-5 CAS 68082-29-1 REACH Reg. 01-2119972320-44-XXXX			
2,2'-iminodi(ethylamine) INDEX 612-058-00-X	3-4*	Acute Tox. 2 H330, Acute Tox. 4 H302, Acute Tox. 4 H312, Skin Corr. 1B H314,	<i>Not applicable</i>

RESINAL μ 50 part B

EC 203-865-4

Eye Dam. 1 H318,
STOT SE 3 H335,
Skin Sens. 1B H317
STA Oral: 500 mg/kg,
STA Dermal: 1100 mg/kg,
LC50 Inhalation mists/dust: 0.071
mg/l/4h

CAS 111-40-0

REACH Reg. 01-2119473793-27-XXXX

4,4'-ISOPROPYLENEDIPHENOL

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1-2,5*

Repr. 1B H360F,
Eye Dam. 1 H318,
STOT SE 3 H335,
Skin Sens. 1 H317,
Aquatic Acute 1 H400 M=1,
Aquatic Chronic 1 H410 M=10

Not applicable

EC 201-245-8

CAS 80-05-7

REACH Reg. 01-2119457856-23-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**

YES: Remove any contact lenses. Wash immediately and thoroughly with 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. Main symptoms and effects, both acute and delayed

No specific information is known about symptoms and effects caused by the product.

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

Treat symptomatically. Consult a doctor.

SECTION 5. Fire-fighting 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 mixtureHAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Avoid breathing in combustion products, especially CO_x and NO_x.

5.3. Recommendations for firefightersGENERAL 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

6.1. Personal precautions, protective equipment and emergency procedures

FOR NON-EMERGENCY PERSONNEL

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

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 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 reprotoxic and as such is subject to the provisions of Title IX, Chapter II of Legislative Decree 81/2008 and subsequent amendments and supplements and Directive 2004/37/EC and subsequent amendments and supplements. 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 the frequency of use, and in terms of 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, see 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

Regulatory references:

ITA	Italy	Decreto Legislativo N. 81 of 9 April 2008
EU	OEL EU	Directive (EU) 2022/431; Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2024

2,2'-iminodi(ethylamine)

Threshold limit value

Type	Status	TWA/8h	STEL/15min	Notes / Remarks	Critical effects
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SARO Srl

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	mg/m ³	ppm	mg/m ³	ppm		
TLV-ACGIH	4,2	1			SKIN	Irritation of the upper respiratory tract Eye irritation
Predicted concentration of no effect on the environment - PNEC						
Reference value in fresh water			0,56		mg/l	
Reference value in seawater			0,056		mg/l	
Freshwater sediment reference value			1072		mg/kg	
Reference value for sediments in seawater			107,2		mg/kg/d	
Reference value for water, intermittent release			0,32		mg/l	
Reference value for STP microorganisms			6		mg/l	
Reference value for the terrestrial compartment			7,97		mg/kg/d	

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
Inhalation		27.5 mg/m ³		4.6 mg/m ³	2.6 mg/m ³	92.1 mg/m ³	0.87 mg/m ³	15.4 mg/m ³
Dermica		4.88 mg/kg bw/d		4.88 mg/kg bw/d			1.1 mg/cm ²	11.4 mg/kg bw/d

Although it is not obligatory to declare the following substance (titanium dioxide) in section 3.2 of this Safety Data Sheet (because the requirements of Section 3.2.1 of the Annex to Regulation (EU) 878/2020 are not met), it is nevertheless mentioned in this section in compliance with the provisions of Section 8.1.1 of the Annex to Regulation (EU) 878/2020.

Titanium dioxide**Threshold limit value**

Type	Status	TWA/8h	STEL/15min	Notes / Remarks	Critical effects
		mg/m ³	ppm		
TLV-ACGIH (Nanoscale particles)		0,2		A3	Irritation of the upper respiratory tract
TLV-ACGIH (Finescale particles)		2,5		A3	pneumoconiosis
Predicted concentration of no effect on the environment - PNEC					
Reference value in fresh water			0,184	mg/l	
Reference value in seawater			0,018	mg/l	

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				700 mg/kg bw/day				
Inhalation								10 mg/m ³

Fatty acids, C18-unsaturates, dimers, oligomeric reaction products with tall oil fatty acids and triethylenetetramine

Predicted concentration of no effect on the environment - PNEC

Reference value in fresh water			0,004	mg/l	
Reference value in seawater			0	mg/l	
Freshwater sediment reference value			434,02	mg/kg	
Reference value for sediments in seawater			43,4	mg/kg	
Reference value for water, intermittent release			0,043	mg/l	
Reference value for STP microorganisms			3,84	mg/l	
Reference value for the terrestrial compartment			86,78	mg/kg	

RESINAL μ 50 part B**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				0.0972 mg/kg bw/d				
Inhalation				0.169 mg/m3				0.952 mg/m3
Dermica				0.56 mg/kg bw/d				0.272 mg/kg bw/d

4,4'-ISOPROPYLENEDIPHENOL**Threshold limit value**

Type	Status	TWA/8h	STEL/15min	Notes / Remarks
		mg/m3	ppm	
VLEP	ITA	10		INHAL
OEL	EU	2		INHAL

Predicted concentration of no effect on the environment - PNEC

Reference value in fresh water	0,023	mg/l
Reference value in seawater	0,019	mg/l
Freshwater sediment reference value	1,2	mg/kg
Reference value for sediments in seawater	0,24	mg/kg
Reference value for seawater, intermittent release	0,011	mg/l
Reference value for STP microorganisms	320	mg/l
Reference value for the terrestrial compartment	2,7	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		53 μ g/kg bw/day		53 μ g/kg bw/day				
Inhalation	1 mg/m3	1 mg/m3	1 mg/m3	1 mg/m3	2 mg/m3	2 mg/m3	2 mg/m3	2 mg/m3
Dermica		24 mg/kg bw/d		24 μ g/kg bw/day		66 μ g/kg bw/day		66 μ g/kg bw/day

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESPIR = Respirable Fraction ; TORAC = Thoracic Fraction.

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 bear the CE marking attesting to its conformity with current standards.

HAND PROTECTION

Protect hands with category III work gloves of at least type B, which protect against amines (class G) and alcohols (class A). Recommended materials: butyl rubber, fluorine rubber or 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 face and eye wash station.

RESINAL μ 50 part B**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 an AK type combined filter, the class (1, 2 or 3) of which should be chosen in relation to the limit concentration of use. (ref. standard EN 14387). We recommend the use of a type P filtering facemask whose class (1, 2 or 3) and actual necessity 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	light grey	
Odour	Ammonic	
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	8-9	
Kinematic viscosity	not available	
Solubility	Insoluble in water	
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	1.37 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 with regard to physical hazard classes

Information not available

9.2.2. Other safety characteristics

Information not available

SECTION 10. Stability and reactivity

RESINAL μ 50 part B**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 hazardous reactions

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

10.4. Conditions to be avoided

None in particular. However, observe the usual precautions with chemicals.

10.5. Incompatible materials

Acids, bases and strong oxidants.

10.6. Hazardous decomposition products

Gases and vapours potentially harmful to health can be released by thermal decomposition.

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, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

Interactive effects

Information not available

ACUTE 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 **(inhal) Acute. Tox. 4, H332**

ATE (Inhalation - mists/dusts) of the mixture:	1.8 mg/l
ATE (Oral) of the mixture:	>2000 mg/kg
ATE (Dermal) of the mixture:	>2000 mg/kg

2,2'-iminodi(ethylamine)

LD50 (Dermal):	1.09 mg/kg Rabbit
STA (Cutaneous):	1100 mg/kg estimated from Table 3.1.2 of Annex I of the CLP (data used to calculate the estimated acute toxicity of the mixture)
LD50 (Oral):	1.62 mg/kg rat
STA (Oral):	500 mg/kg estimated from Table 3.1.2 of Annex I of the CLP (data used to calculate the estimated acute toxicity of the mixture)
LC50 (inhalation mists/dust):	0.071 mg/l/4h

Fatty acids, C18-unsaturates, dimers, oligomeric reaction products with tall oil fatty acids and triethylenetetramine

LD50 (Dermal):	> 2000 mg/kg rat
LD50 (Oral):	> 2000 mg/kg rat

RESINAL μ 50 part B4,4'-ISOPROPYLENEDIPHENOL

LD50 (Dermal): 3000 mg/kg Rabbit
 LD50 (Oral): 4100 mg/kg Rat (F)

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 Irrit. 2, H315**

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 the 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. 1A, H317**

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 not classified for this hazard class.

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, H360F**

SPECIFIC TARGET ORGAN TOXICITY (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.

SPECIFIC TARGET ORGAN TOXICITY (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.

DANGER IN THE EVENT OF ASPIRATION

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 contains the following endocrine disruptors in concentrations of 0.1 % by weight or more that may cause endocrine disrupting effects in humans and cause adverse effects in exposed individuals or their offspring:

4,4'-ISOPROPYLIDENE DIPHENOL**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'-iminodi(ethylamine)

LC50 - Fish 0.43 g/l/96h Poecilia reticulata
 EC50 - Crustaceans 64.6 mg/l/48h Daphnia magna - WoE
 EC50 - Algae / Aquatic Plants 187 mg/l/72h Raphidocelis subcapitata
 NOEC Chronic Fish > 10 mg/l Gasterosteus aculeatus, 28 days

RESINAL μ 50 part B

NOEC Chronic Crustaceans 5.6 mg/l Daphnia magna, 21 days
 NOEC Chronic Algae / Aquatic Plants 10 mg/l

Fatty acids, C18-unsaturates, dimers,
 oligomeric reaction products with tall oil fatty
 acids and triethylenetetramine

LC50 - Fish 7.07 mg/l/96h Danio rerio
 EC50 - Crustaceans 7.07 mg/l/48h Daphnia magna
 EC50 - Algae / Aquatic Plants 4.34 mg/l/72h Raphidocelis subcapitata

4,4'-ISOPROPYLENEDIPHENOL

LC50 - Fish 4.6 mg/l/96h Pimephales promelas
 EC50 - Crustaceans 10.2 mg/l/48h Daphnia magna
 NOEC Chronic Fish 3.64 mg/l Oncorhynchus mykiss, 28 days
 NOEC Chronic Crustaceans > 3.146 mg/l Daphnia magna, 21 days

12.2. Persistence and degradability

2,2'-iminodi(ethylamine)

Solubility in water 1000 - 10000 mg/l

4,4'-ISOPROPYLIDENE DIPHENOL

Solubility in water 301 mg/l
 Rapidly degradable

12.3. Bioaccumulation potential

2,2'-iminodi(ethylamine)

Partition coefficient: n-octanol/water -5,58

4,4'-ISOPROPYLIDENE DIPHENOL

Partition coefficient: n-octanol/water 3,4

12.4. Mobility in soil

Information not available

12.5. Results of PBT and vPvB assessment

According 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 contains the following endocrine disruptors in concentrations of 0.1 % by weight or more that may have endocrine disrupting effects on the environment or animal species causing adverse effects on exposed organisms or their offspring:

4,4'-ISOPROPYLENEDIPHENOL

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 accordance with national and possibly local regulations.

The transport of waste may be subject to the ADR.

RESINAL μ 50 part B**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 3082

ADR / RID: In accordance with Special Provision 375, this product, when is packed in receptacles of a capacity \leq 5Kg or 5L, is not submitted to ADR provisions.

IMDG: In accordance with Section 2.10.2.7 of IMDG Code, this product, when is packed in receptacles of a capacity \leq 5Kg or 5L, is not submitted to IMDG Code provisions.

IATA: In accordance with SP A197, this product, when is packed in receptacles of a capacity \leq 5Kg or 5L, is not submitted to IATA dangerous goods regulations.

14.2. ONU proper shipping name

ADR / RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Fatty acids, C18-unsaturates, dimers, oligomeric reaction products with tall oil fatty acids and triethylenetetramine, 4,4'-isopropilidendifenol)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Fatty acids, C18-unsaturates, dimers, oligomeric reaction products with tall oil fatty acids and triethylenetetramine, 4,4'-isopropilidendifenol)

IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Fatty acids, C18-unsaturates, dimers, oligomeric reaction products with tall oil fatty acids and triethylenetetramine, 4,4'-isopropilidendifenol)

14.3. Transport hazard class(es)

ADR / RID: Class: 9 Label: 9



IMDG: Class: 9 Label: 9



IATA: Class: 9 Label: 9

**14.4. Packing group**

ADR / RID, IMDG, IATA: III

14.5. Environmental hazards

ADR / RID: NO

IMDG: NO

IATA: NO

14.6. Special precautions for user

ADR / RID: HIN - Kemler: 90

Limited
Quantities: 5
L

Tunnel
restriction
code: (-)

Special provision: 274, 335, 375, 601

IMDG: EMS: F-A, S-F

Limited
Quantities: 5
L

IATA: Cargo:

Maximum
quantity: 450

Packaging
instructions:

RESINAL μ 50 part B

Passengers:

L
Maximum
quantity: 450964
Packaging
instructions:
964

Special provision:

L
A97, A158,
A197, A215**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: E2Biocides Regulation (Reg. (EU) 528/2012): not applicableDetergents Regulation (Reg. (EC) 648/2004): not applicableDir. 2004/42/EC - VOC / Legislative Decree 161/2006: not applicableRestrictions on the product or contained substances according to Annex XVII Regulation (EC) 1907/2006Product

Point 3

Substances contained

Point 75 2,2'-iminodi(ethylamine)

Point 30-66-75 4,4'-ISOPROPYLENEDIPHENOL

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors
not applicableCandidate List Substances (Art. 59 REACH)**4,4'-ISOPROPYLENEDIPHENOL**Substances subject to authorisation (Annex XIV REACH)

None

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 be subject to 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 safety and health of the worker 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

RESINAL μ 50 part B**15.2. Chemical Safety Assessment**

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

2,2'-iminodi(ethylamine)

Fatty acids, C18-unsaturates, dimers, oligomeric reaction products with tall oil fatty acids and triethylenetetramine

4,4'-ISOPROPYLIDENE DIPHENOL**SECTION 16. Other information**

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

Repr. 1B	Toxicity for reproduction, category 1B
Acute Tox. 2	Acute toxicity, category 2
Acute Tox. 4	Acute toxicity, category 4
Skin Corr. 1B	Skin corrosion, category 1B
Eye Dam. 1	Serious eye injury, category 1
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Skin Sens. 1	Skin sensitisation, category 1
Skin Sens. 1A	Skin sensitisation, category 1A
Skin Sens. 1B	Skin sensitisation, category 1B
Aquatic Acute 1	Dangerous for the aquatic environment, acute toxicity, category 1
Aquatic Chronic 1	Dangerous for the aquatic environment, chronic toxicity, category 1
Aquatic Chronic 2	Dangerous for the aquatic environment, chronic toxicity, category 2
H360F	It can harm fertility.
H330	Lethal if inhaled.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye injuries.
H315	Causes skin irritation.
H335	May irritate the respiratory tract.
H317	It may cause an allergic skin reaction.
H400	Very toxic to aquatic organisms.
H410	Very toxic to aquatic organisms with long-lasting effects.
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
- 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

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- 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
 - 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.

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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.

Environmental 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:

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 for 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 revised from previous version: ALL.