

Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II

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

1.1. Product identifier

Code: **RPC7219RP0810**
Product name: **Sarpol RP08 - Part B**

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

Intended 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 pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Physical and chemical hazards: the product is not classified for this hazard category.

Health hazards: the product can harm fertility and is harmful if inhaled. Product causes severe skin burns and serious eye injury. Product may cause an allergic skin reaction.

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

Reproductive toxicity, category 1B	H360F	May damage fertility.
Acute toxicity, category 4	H332	Harmful if inhaled.
Skin corrosion, category 1C	H314	Causes severe skin burns and eye damage.
Serious eye damage, category 1	H318	Causes serious eye damage.
Skin sensitization, category 1A	H317	May cause an allergic skin reaction.
Hazardous to the aquatic environment, acute toxicity, category 1	H400	Very toxic to aquatic life.
Hazardous to the aquatic environment, chronic toxicity, category 1	H410	Very toxic to aquatic life with long lasting effects.

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:

Sarpol RP08 - Parte B



Signal words: Danger

Hazard statements:

H360F May damage fertility.
H332 Harmful if inhaled.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H410 Very toxic to aquatic life with long lasting effects.

EUH071 Corrosive to the respiratory tract.
 Restricted to professional users.

Precautionary statements:

P260 Do not breathe fume, gas, mist and vapours.
P201 Obtain special instructions before use.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P280 Wear protective gloves and protective clothing for eye protection and face protection.
P310 Immediately call a POISON CENTER or a doctor.

Contains: 4,4'-ISOPROPYLIDENEDIPHENOL
 2,2'-DIAMINODIETHYLAMINE
 Unsaturated C18 fatty acids, reaction products with triethylenetetramine
 Fatty acids, C18-unsaturated, dimers, oligomeric reaction products with fatty acids, C16-18 and C18- insatd., branched and linear and tri
 Cashew nut oils
 1,2-ethanediamine, N1-[3-(trimethoxysilyl)propyl]-, homopolymer
 N-(3-(Trimethoxysilyl)propyl)ethylenediamine
 Amines, polyethylenepoly-, triethylenetetraamine fraction

2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage \geq than 0,1%.
 The product contains substances with endocrine disrupting properties in concentration \geq 0,1%:

4,4'-ISOPROPYLIDENEDIPHENOL

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	Concentration. %	Classification (EC) 1272/2008 (CLP)	Specific concentration limits 1272/2008 (CLP)
2,2'-DIAMINODIETHYLAMINE			
INDEX 612-058-00-X	2-5*	Acute Tox. 2 H330, Acute Tox. 4 H302, Acute Tox. 4 H312, Skin Corr. 1B H314, Eye Dam. 1 H318,	<i>Not applicable</i>

Sarpol RP08 - Parte B

EC 203-865-4		STOT SE 3 H335, Skin Sens. 1B H317 STA Oral: 500 mg/kg, STA Dermal: 1100 mg/kg, LC50 Inhalation mists/powders: 0,071 mg/l/4h	
CAS 111-40-0			
Unsaturated C18 fatty acids, reaction products with triethylenetetramine			
INDEX -	2-5*	Skin Corr. 1C H314, Eye Dam. 1 H318, Skin Sens. 1A H317, Aquatic Acute 1 H400 M=10, Aquatic Chronic 1 H410 M=1	<i>Not applicable</i>
EC 629-765-4			
CAS 1226892-44-9			
REACH Reg. 01-2119490750-36-XXXX			
Unsaturated C18 fatty acids, reaction products with triethylenetetramine			
Fatty acids, C18-unsaturated, dimers, oligomeric reaction products with fatty acids, C16-18 and C18- insatd., branched and linear and tri			
INDEX -	2-5*	Eye Dam. 1 H318, Aquatic Chronic 2 H411	<i>Not applicable</i>
EC 500-381-8			
CAS 157707-72-7			
4,4'-ISOPROPYLIDENEDIPHENOL			
INDEX 604-030-00-0	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	
EC 201-245-8			
CAS 80-05-7			
REACH Reg. 01-2119457856-23-XXXX			
Cashew nut oils			
INDEX -	1-3*	Acute Tox. 4 H302, Acute Tox. 4 H312, Eye Dam. 1 H318, Skin Irrit. 2 H315, Skin Sens. 1A H317, Aquatic Chronic 3 H412 STA Oral: 500 mg/kg, STA Dermal: 1100 mg/kg	<i>Not applicable</i>
EC 700-991-6			
CAS 8007-24-7			
REACH Reg. 01-2119502450-57-XXXX			
Calcium oxide			
INDEX -	2 – 3*	Eye Dam. 1 H318, Skin Irrit. 2 H315, STOT SE 3 H335	<i>Not applicable</i>
EC 215-138-9			
CAS 1305-78-8			
REACH Reg. 01-2119475325-36-XXXX			

Sarpol RP08 - Parte B

**Amines, polyethylenepoly-,
triethylenetetraamine fraction**
INDEX -

0,5-1*

Acute Tox. 4 H302,
Acute Tox. 4 H312,
Skin Corr. 1B H314,
Eye Dam. 1 H318,
Skin Sens. 1 H317,
Aquatic Chronic 3 H412, EUH071
LD50 Oral: 1591,4 mg/kg,
LD50 Dermal: 1465,4 mg/kg*Not applicable*

EC 292-588-2

CAS 90640-67-8

REACH Reg. 01-2119487919-13-
XXXX**N-(3-
(Trimethoxysilyl)propyl)ethylenedi
amine**
INDEX -

0,5-1*

Acute Tox. 4 H332,
STOT RE 2 H373,
Eye Dam. 1 H318,
Skin Sens. 1B H317
LC50 Inhalation mists/powders: >1,49
mg/l/4h*Not applicable*

EC 217-164-6

CAS 1760-24-3

REACH Reg. 01-2119970215-39-
XXXX**1,2-ethanediamine, N1-[3-
(trimethoxysilyl)propyl]-
,homopolymer**
INDEX -

0,05-0,1*

Acute Tox. 4 H332,
STOT RE 2 H373,
Eye Dam. 1 H318,
Skin Sens. 1A H317
LC50 Inhalation mists/powders: 1,49
mg/l/4h*Not applicable*

EC 898-687-2

CAS 29226-47-9

Copper (II) oxide
INDEX 029-016-00-6

0,05-0,1*

Aquatic Acute 1 H400 M=100,
Aquatic Chronic 1 H410 M=10*Not applicable*

EC 215-269-1

CAS 1317-38-0

*Upper value of range excluded

The full wording of hazard (H) phrases is given in section 16 of the sheet.

SECTION 4. First aid measures**4.1. Description of first aid measures****EYES:** Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.**SKIN:** Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.**INGESTION:** Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.**INHALATION:** Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.**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

Sarpol RP08 - Parte B

5.1. Extinguishing media**SUITABLE EXTINGUISHING EQUIPMENT**

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

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**

Do not breathe combustion products, in particular COx, NOx, and copper compounds.

5.3. Advice for firefighters**GENERAL INFORMATION**

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

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

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

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

Any information on personal protection and disposal is given 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, as amended, and Directive 2004/37/EC, as amended. Eliminate or minimize exposure by operating in a closed loop; if this is not technically feasible, limit exposure to the product in terms of both the quantities used and frequency of use, and the number of workers exposed.

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.

Storage class TRGS 510 (Germany):

6.1C

Sarpol RP08 - Parte B

7.3. Specific end use(s)

No specific end uses are intended other than the relevant uses set out in Section 1.2 of this safety data sheet.

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

Regulatory references:

ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
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

For the substances mentioned in this section, DNEL/PNEC values are also reported (although the relevant REACH registration numbers are not available for these substances) in order to convey as much information as possible to enable identification and application of appropriate risk management measures.

2,2'-DIAMINODIETHYLAMINE**Threshold Limit Value**

Type	Country	TWA/8h		STEL/15min		Remarks / Observations	Critical effects
		mg/m3	ppm	mg/m3	ppm		
TLV-ACGIH		4,2	1			SKIN	Irritation of the upper respiratory tract Eye irritation

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,56	mg/l
Normal value in marine water	0,056	mg/l
Normal value for fresh water sediment	1072	mg/kg
Normal value for marine water sediment	107,2	mg/kg/d
Normal value for water, intermittent release	0,32	mg/l
Normal value of STP microorganisms	6	mg/l
Normal value for the terrestrial compartment	7,97	mg/kg/d

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	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/m3		4.6 mg/m3	2.6 mg/m3	92.1 mg/m3	0.87 mg/m3	15.4 mg/m3
Skin		4.88 mg/kg bw/d		4.88 mg/kg bw/d			1.1 mg/cm ²	11.4 mg/kg bw/d

Unsaturated C18 fatty acids, reaction products with triethylenetetramine**Predicted no-effect concentration - PNEC**

Normal value in fresh water	25,4	µg/L
Normal value in marine water	2,54	µg/L
Normal value for fresh water sediment	99,4	mg/kg
Normal value for marine water sediment	9,94	mg/kg
Normal value of STP microorganisms	5,57	mg/l
Normal value for the food chain (secondary poisoning)	2	mg/kg
Normal value for the terrestrial compartment	9,44	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers	Effects on workers
--	----------------------	--------------------

Sarpol RP08 - Parte B

N-(3-(Trimethoxysilyl)propyl)ethylenediamine

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,05	mg/l
Normal value in marine water	0,005	mg/l
Normal value for fresh water sediment	0,181	mg/kg
Normal value for marine water sediment	0,018	mg/kg
Normal value for marine water, intermittent release	0,072	mg/l
Normal value of STP microorganisms	20	mg/l
Normal value for the terrestrial compartment	0,007	mg/kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers			Effects on workers				
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				4 mg/kg bw/d				
Inhalation				26 mg/m3			130 mg/m3	

4,4'-ISOPROPYLIDENEDIPHENOL**Threshold Limit Value**

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

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,023	mg/l
Normal value in marine water	0,019	mg/l
Normal value for fresh water sediment	1,2	mg/kg
Normal value for marine water sediment	0,24	mg/kg
Normal value for marine water, intermittent release	0,011	mg/l
Normal value of STP microorganisms	320	mg/l
Normal value for the terrestrial compartment	2,7	mg/kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers			Effects on workers				
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		53 µg/kg bw/day		53 µg/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
Skin		24 mg/kg bw/d		24 µg/kg bw/day		66 µg/kg bw/day		66 µg/kg bw/day

Cashew nut oils

Predicted no-effect concentration - PNEC

Normal value in fresh water	11,4	µg/L
Normal value in marine water	1,14	µg/L
Normal value for fresh water sediment	5	mg/kg
Normal value for marine water sediment	0,5	mg/kg
Normal value of STP microorganisms	100	mg/l
Normal value for the food chain (secondary poisoning)	33,3	mg/kg

Sarpol RP08 - Parte B

Normal value for the terrestrial compartment 171,41 mg/kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				0,75 mg/kg bw/d				
Inhalation				1,31 mg/m3				7,4 mg/m3
Skin				0,75 mg/kg bw/d				2,1 mg/kg bw/d

Amines, polyethylenepoly-, triethylenetetraamine fraction

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,027	mg/l
Normal value in marine water	0,003	mg/l
Normal value for fresh water sediment	8,572	mg/kg
Normal value for marine water sediment	0,857	mg/kg
Normal value for water, intermittent release	0,2	mg/l
Normal value of STP microorganisms	0,13	mg/l
Normal value for the terrestrial compartment	1,25	mg/kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				0,14 mg/kg bw/d				
Inhalation				0,096 mg/m3				0,54 mg/m3

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = 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

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

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 that protect against amines (class G), saturated hydrocarbons (class J) and alcohols (class A). Recommended material: fluorinated rubber and related.

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

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

SKIN PROTECTION

Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing. Provide an emergency shower with face and eye wash station.

EYE PROTECTION

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

RESPIRATORY PROTECTION

The use of respiratory protective means is necessary in case the technical measures taken are not sufficient to limit the worker's exposure to the considered threshold values. It is recommended to wear a mask with combined filter type AK whose class (1, 2 or 3) should be chosen in relation to the limit concentration of use. (ref. standard EN 14387). It is recommended the use of a type P filtering facemask whose class (1, 2 or 3) and actual need, will have

to be defined according to the outcome of the risk assessment (ref. standard EN 149).

In case the substance under consideration is odorless or its odor threshold is higher than the relevant TLV-TWA and in case of emergency, wear an open-circuit self-contained compressed-air breathing apparatus (ref. standard EN 137) or an air-supplied respirator (ref. standard EN 138). For the correct choice of respiratory protective device, refer to EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	liquid	
Colour	Metallic	
Odour	Amine	
Melting point / freezing point	not available	
Initial boiling point	not available	
Flammability	not flammable	
Lower explosive limit	not available	
Upper explosive limit	not available	
Flash point	> 115 °C	
Auto-ignition temperature	not available	
Decomposition temperature	not available	
pH	not applicable	The product is not soluble in water
Kinematic viscosity	>99,99 mm ² /s	
Solubility	insoluble in water	
Partition coefficient: n-octanol/water	not applicable	The product is a mixture
Vapour pressure	<100 hPa	
Density and/or relative density	2,4	
Relative vapour density	>1	
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

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

Sarpol RP08 - Parte B

No hazardous reactions are foreseeable in normal conditions of use and storage.

10.4. Conditions to avoid

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

10.5. Incompatible materials

Strong oxidizers, acids and bases

10.6. Hazardous decomposition products

By thermal decomposition, gases and vapors potentially harmful to health can be released, in particular CO_x, NO_x and copper compounds.

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

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate 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

On the basis of available data and in view of the classification criteria of Annex I, Part 3 of (EC) Reg. 1272/2008 as amended, the product is classified as **Inhalat) Acute Tox. 4, H332**

ATE (Inhalation - mists / powders) of the mixture:	1,4 mg/l
ATE (Oral) of the mixture:	>2000 mg/kg
ATE (Dermal) of the mixture:	>2000 mg/kg

2,2'-DIAMINODIETHYLAMINE

LD50 (Dermal):	1,09 mg/kg Coniglio
STA (Dermal):	1100 mg/kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)
LD50 (Oral):	1,62 mg/kg ratto
STA (Oral):	500 mg/kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)
LC50 (Inhalation mists/powders):	0,071 mg/l/4h

Unsaturated C18 fatty acids, reaction products with triethylenetetramine

LD50 (Oral):	> 2000 mg/kg Rat
--------------	------------------

Calcium oxide

LD50 (Dermal):	> 2500 mg/kg bw Coniglio
LD50 (Oral):	> 2000 mg/kg bw Ratto
LC50 (Inhalation mists/powders):	> 6,04 mg/l/4h Ratto

Copper (II) oxide

LD50 (Dermal):	> 2000 mg/kg bw Rat
LD50 (Oral):	> 2500 mg/kg bw Rat

Sarpol RP08 - Parte B

N-(3-(Trimethoxysilyl)propyl)ethylenediamine

LD50 (Dermal):	> 2000 mg/kg Rabbit
LD50 (Oral):	1897 mg/kg Rat
LC50 (Inhalation mists/powders):	> 1,49 mg/l/4h Rat

1,2-ethanediamine, N1-[3-(trimethoxysilyl)propyl]-, homopolymer

LC50 (Inhalation mists/powders):	1,49 mg/l/4h ATE inhalation
----------------------------------	-----------------------------

4,4'-ISOPROPYLDIENEDIPHENOL

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

Cashew nut oils

LD50 (Dermal):	> 2000 mg/kg Rat
STA (Dermal):	1100 mg/kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)
LD50 (Oral):	> 2000 mg/kg Rat
STA (Oral):	500 mg/kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)

Amines, polyethylenepoly-, triethylenetetraamine fraction

LD50 (Dermal):	1465,4 mg/kg Rabbit
LD50 (Oral):	1591,4 mg/kg Rat

SKIN CORROSION / IRRITATION

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

SERIOUS EYE DAMAGE / IRRITATION

On the basis of available data and in view of the classification criteria set forth in table 3.3.3 of Annex I of (EC) Reg. 1272/2008 as amended, the product is classified as **Eye dam. 1, H318**

RESPIRATORY OR SKIN SENSITISATION

On the basis of available data and in view of the classification criteria of Annex I, Part 3 of (EC) Reg. 1272/2008 as amended, the product is classified as **Skin Sens. 1A, H317**

GERM CELL MUTAGENICITY

On the basis of available data and in view of the classification criteria of Annex I, Part 3 of (EC) Reg. 1272/2008 as amended, the product is not classified for this hazard class.

CARCINOGENICITY

On the basis of available data and in view of the classification criteria of Annex I, Part 3 of (EC) Reg. 1272/2008 as amended, the product is not classified for this hazard class.

REPRODUCTIVE TOXICITY

On the basis of available data and in view of the classification criteria of Annex I, Part 3 of (EC) Reg. 1272/2008 as amended, the product is classified as **Repr. Tox. 1B, H360F**

STOT - SINGLE EXPOSURE

Sulla base dei dati disponibili e considerati i criteri di classificazione dell'Allegato I, Parte 3 del Reg. (CE) 1272/2008 e s.m.i., il prodotto non è classificato per questa classe di pericolo.

STOT - REPEATED EXPOSURE

Sulla base dei dati disponibili e considerati i criteri di classificazione dell'Allegato I, Parte 3 del Reg. (CE) 1272/2008 e s.m.i., il prodotto non è classificato per questa classe di pericolo.

ASPIRATION HAZARD

Sulla base dei dati disponibili e considerati i criteri di classificazione dell'Allegato I, Parte 3 del Reg. (CE) 1272/2008 e s.m.i., il prodotto non è classificato

per questa classe di pericolo.

11.2. Information on other hazards

Based on the available data, the product contains the following endocrine disruptors in concentrations of 0.1% or greater by weight that may have endocrine disrupting effects on humans and cause adverse effects on the exposed individual or his or her progeny:

4,4'-ISOPROPYLIDENEDIPHENOL

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 1, H410**.

2,2'-DIAMINODIETHYLAMINE

LC50 - for Fish	0,43 g/l/96h Poecilia reticulata
EC50 - for Crustacea	64,6 mg/l/48h Daphnia magna - WoE
EC50 - for Algae / Aquatic Plants	187 mg/l/72h Raphidocelis subcapitata
Chronic NOEC for Fish	> 10 mg/l Gasterosteus aculeatus, 28 days
Chronic NOEC for Crustacea	5,6 mg/l Daphnia magna, 21 days
Chronic NOEC for Algae / Aquatic Plants	10 mg/l

Unsaturated C18 fatty acids, reaction products with triethylenetetramine

LC50 - for Fish	0,19 mg/l/96h Danio rerio
EC50 - for Crustacea	0,18 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	0,505 mg/l/72h Raphidocelis subcapitata
Chronic NOEC for Crustacea	311 µg/L Daphnia magna, 21 days

Calcium oxide

LC50 - for Fish	0,19 mg/l/96h Danio rerio
EC50 - for Crustacea	0,18 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	0,505 mg/l/72h Raphidocelis subcapitata
Chronic NOEC for Crustacea	311 µg/L Daphnia magna, 21 giorni

Copper (II) oxide

LC50 - for Fish	38,4 µg/L Pimephales promelas calculated using Trimmed Spearman Karber method
EC50 - for Crustacea	109 µg/l/48h Daphnia Magna - WoE
Chronic NOEC for Fish	13 µg/l 60 giorni; other: Salvelinus fontinalis and Ictalurus punctatus, solfato
Chronic NOEC for Algae / Aquatic Plants	15,7 µg/l 72h; other Raphidocelis subcapitata

N-(3-(Trimethoxysilyl)propyl)ethylenediamine

LC50 - for Fish	597 mg/l/96h Danio rerio
EC50 - for Crustacea	81 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	5,5 mg/l/72h Raphidocelis subcapitata

4,4'-ISOPROPYLIDENEDIPHENOL

LC50 - for Fish	4,6 mg/l/96h Pimephales promelas
-----------------	----------------------------------

Sarpol RP08 - Parte B

EC50 - for Crustacea	10,2 mg/l/48h Daphnia magna
Chronic NOEC for Fish	3,64 mg/l Oncorhynchus mykiss, 28 days
Chronic NOEC for Crustacea	> 3,146 mg/l Daphnia magna, 21 days

Cashew nut oils

LC50 - for Fish	> 0,08 mg/l/96h Danio rerio
EC50 - for Crustacea	40,46 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	5,82 mg/l/72h Raphidocelis subcapitata
Chronic NOEC for Crustacea	10 mg/l Daphnia magna, 21 days

Amines, polyethylenepoly-, triethylenetraamine fraction

LC50 - for Fish	330 mg/l/96h Pimephales promelas
EC50 - for Crustacea	31,1 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	20 mg/l/72h Raphidocelis subcapitata

12.2. Persistence and degradability2,2'-DIAMINODIETHYLAMINE

Solubility in water 1000 - 10000 mg/l

4,4'-ISOPROPYLIDENEDIPHENOL

Solubility in water 301 mg/l
Rapidly degradable

12.3. Bioaccumulative potential2,2'-DIAMINODIETHYLAMINE

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

4,4'-ISOPROPYLIDENEDIPHENOL

Partition coefficient: n-octanol/water 3,4

12.4. Mobility in soil

Information not available

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage \geq than 0,1%.

12.6. Endocrine disrupting properties

Based on the available data, the product contains the following endocrine disruptors in concentrations of 0.1% or greater by weight that may have endocrine disrupting effects on the environment and on animal species causing adverse effects on the exposed organisms or on their progeny:

4,4'-ISOPROPYLIDENEDIPHENOL**12.7. Other adverse effects**

Information not available

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information

14.1. ONU number or ID number

ADR / RID, IMDG, IATA: ONU 1760

14.2. ONU proper shipping name

ADR / RID: CORROSIVE LIQUID, N.O.S.(2,2'-iminodi(ethylamine), C18 unsaturated fatty acids, reaction products with triethylenetetramine)

IMDG: CORROSIVE LIQUID, N.O.S.(2,2'-iminodi(ethylamine), C18 unsaturated fatty acids, reaction products with triethylenetetramine)

IATA: CORROSIVE LIQUID, N.O.S.(2,2'-iminodi(ethylamine), C18 unsaturated fatty acids, reaction products with triethylenetetramine)

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

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

Special provision: 274

Limited
Quantities: 5
L

Tunnel
restriction
code: (E)

Sarpol RP08 - Parte B

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 regulations/legislation specific for the substance or mixture**Seveso Category - Directive 2012/18/EU: E1Biocidal Products Regulation (Reg. (EU) 528/2012): not applicableDetergent regulations (Reg. (EC) 648/2004): not applicableDir. 2004/42/EC - VOC/Italian Leg. Decr. 161/2006: not applicableRestrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006Product

Point 3

Contained substance

Point 75 2,2'-DIAMINODIETHYLAMINE

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

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

None

Substances subject to exportation reporting pursuant to 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 must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

Sarpol RP08 - Parte B

German regulation on the classification of substances hazardous to water (AwSV, vom 18. April 2017)

WGK 3: Severe hazard to waters

15.2. Chemical safety assessment

A chemical safety assessment has been performed for the following contained substances

N-(3-(Trimethoxysilyl)propyl)ethylenediamine
Unsaturated C18 fatty acids, reaction products with triethylenetetramine
Cashew nut oils
Amines, polyethylenepoly-, triethylenetetraamine fraction
Calcium oxide

SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Repr. 1B	Reproductive toxicity, category 1B
Acute Tox. 2	Acute toxicity, category 2
Acute Tox. 4	Acute toxicity, category 4
STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
Skin Corr. 1B	Skin corrosion, category 1B
Skin Corr. 1C	Skin corrosion, category 1C
Eye Dam. 1	Serious eye damage, category 1
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Skin Sens. 1	Skin sensitization, category 1
Skin Sens. 1A	Skin sensitization, category 1A
Skin Sens. 1B	Skin sensitization, category 1B
Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H360F	May damage fertility.
H330	Fatal if inhaled.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H317	May cause an allergic skin reaction.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

Sarpol RP08 - Parte B

H412 Harmful to aquatic life with long lasting effects.
EUH071 Corrosive to the respiratory tract.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent, bioaccumulative and toxic
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PMT: Persistent, mobile and toxic
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very persistent and very bioaccumulative
- vPvM: Very persistent and very mobile
- WGK: Water hazard classes (German).
- A1 = Confirmed Human Carcinogen
- A2 = Suspected Human Carcinogen
- A3 = Confirmed Animal Carcinogen with Unknown Relevance to Humans
- A4 = Not Classifiable as a Human Carcinogen
- A5 = Not Suspected as a Human Carcinogen
- IBE = Biological Indicators of Exposure.

GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
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 (UE) 2018/1480 (XIII Atp. CLP)
17. Regulation (EU) 2019/1148
18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)

Sarpol RP08 - Parte B

22. Delegated Regulation (UE) 2022/692 (XVIII Atp. CLP)
23. Delegated Regulation (UE) 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 website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

CALCULATION METHODS

Chemical-physical hazards: the dangerousness has been derived from the classification criteria of CLP Regulation Annex I Part 2 as amended and added.

Health hazards have been assessed with the calculation method set out by Reg. (EC) 1272/2008 (CLP) as amended and added for the classification of mixtures when data are available on all components of the mixture or some of them:

Acute Tox: application of criteria in Table 3.1.1. Annex I Part 3 of CLP Regulation as amended and added.
Skin Corr. 1A/1B/1C H314: application of additivity formula criteria in Table 3.2.3 Annex I Part 3 of CLP Regulation
Skin Irrit. 2 H315: application of additivity formula criteria in Table 3.2.3 Annex I Part 3 of CLP Regulation
Eye Dam 1 H318: application of additivity formula criteria in Table 3.3.3 Annex I Part 3 of CLP Regulation
Eye Irrit. 2 H319: application of the additivity formula criteria in Table 3.3.3 Annex I Part 3 of CLP Regulation
Eye Irrit. 2 H319: table 3.3.3 of Annex I, Part 3 of Reg. (EC) 1272/2008 (CLP) as amended and added.
Skin Sens 1A/1B/1 H317 Table 3.4.5 of Annex I, Part 3 of Reg. (EC) 1272/2008 (CLP) as amended and added.
Resp Sens 1A/1B/1 H334 Table 3.4.5 of Annex I, Part 3 of Reg. (EC) 1272/2008 (CLP) as amended and added.
Muta. 1A/1B, 2 H340 - H341: table 3.5.2 Annex I Part 3 of CLP Regulation as amended and added.
Carc 1A/1B, 2 H350 - H351: table 3.6.2 Annex I Part 3 of CLP Regulation as amended and added.
Repr 1A/1B, 2 H360 - H361: table 3.7.2 Annex I Part 3 of CLP Regulation as amended and added.
STOT SE 1, 2 H370 - 371: application of the calculation methods - table 3.8.3 of Ann. I, Part 3 of Reg. (EC) 1272/2008 (CLP) as amended and added.
STOT SE 3 H336: ch. 3.8.3.4.5 of Annex I, Part 3 of Reg. (EC) 1272/2008 (CLP) as amended and added.
STOT RE 1, 2 H372 - H373: table 3.9.4 Annex I Part 3 of CLP Regulation as amended and added.
Asp Tox 1 H304: application of criteria 3.10 Annex I Part 3 of CLP Regulation as amended and added.

Environmental hazards have been assessed with the calculation method set out by Reg. (EC) 1272/2008 (CLP) as amended and added for the classification of mixtures when data are available on all components of the mixture or some of them:

toxicity for the aquatic environment acute effects: table 4.1.1 of Annex I, Part 4 of Reg. (EC) 1272/2008 (CLP) as amended and added;
toxicity for the aquatic environment chronic effects: table 4.1.2 of Annex I, Part 4 of Reg. (EC) 1272/2008 (CLP) as amended and added.

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.
This document must not be regarded as a guarantee on any specific product property.
The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.
Provide appointed staff with adequate training on how to use chemical products.

Sections revised from previous version: ALL.