Safety Data Sheet

According to Annex II to REACH - Regulation 2015/830

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

1.1. Product identifier

Code:	**DRAP127**
Product name	**ARMOFIX MTL COMP. B**

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

Intended use	**Two-component epoxy resin - comp B**

1.3. Details of the supplier of the safety data sheet

Name	**DRACO ITALIANA S.p.A.**
Full address	**Via Monte Grappa, 11 D-E**
District and Country	**20067 Tribiano (MI)** **Italia**
	Tel. +39 02.90632917
	Fax +39 02.90631976
e-mail address of the competent person responsible for the Safety Data Sheet	**info@draco-edilizia.it**

1.4. Emergency telephone number

For urgent inquiries refer to	**Centro Antiveleni di Bergamo 800883300 (Azienda Ospedaliera Papa Giovanni XXII)** **Centro Antiveleni di Firenze 0557947819 (Az. Osp. "Careggi" U.O. Tossicologia Medica)** **Centro Antiveleni di Foggia 80018345 (Az. Osp. Univ. Foggia)** **Centro Antiveleni di Milano 0266101029 (Osp. Niguarda Ca' Granda)** **Centro Antiveleni di Napoli 0817472870 (Az. Osp. "A. Cardarelli")** **Centro Antiveleni di Pavia 038224444 (CAV Centro Nazionale di Informazione Tossicologica)** **Centro Antiveleni di Roma 063054343 (CAV Policlinico "A. Gemelli")** **Centro Antiveleni di Roma 0649978000 (CAV Policlinico "Umberto I")** **Centro Antiveleni di Roma 06 68593726 (CAV "Osp. Pediatrico Bambino Gesù" Dip. Emergenza e Accettazione DEA)**

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 2015/830. 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:

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 1	H317	May cause an allergic skin reaction.

2.2. Label elements

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

Hazard pictograms:

SECTION 2. Hazards identification ... / >>

Signal words: Danger

Hazard statements:

H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.

Precautionary statements:

P260 Do not breathe dust / fume / gas / mist / vapours / spray.
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/ protective clothing / eye protection / face protection.
P310 Immediately call a POISON CENTER / doctor / . . .
P264 Wash . . . thoroughly after handling.

Contains: Formaldehyde, polymer with benzenamine, hydrogenated
2-piperazin-1-iletilamina
4,4 Methylenebis (cyclohexylamine)

2.3. Other hazards

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

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
Alcol benzilico		
CAS 100-51-6	5 ≤ x < 9	**Acute Tox. 4 H302, Acute Tox. 4 H332, Eye Irrit. 2 H319**
EC 202-859-9		
INDEX		
Reg. no. 01-2119492630-38-XXXX		
Formaldehyde, polymer with benzenamine, hydrogenated		
CAS 135108-88-2	5 ≤ x < 9	**Acute Tox. 4 H302, STOT RE 2 H373, Skin Corr. 1C H314, Eye Dam. 1 H318, Skin Sens. 1 H317, Aquatic Chronic 3 H412**
EC 603-894-6		
INDEX		
Reg. no. 01-2119983522-33-XXXX		
2-piperazin-1-iletilamina		
CAS 140-31-8	3 ≤ x < 5	**Acute Tox. 3 H311, Acute Tox. 4 H302, Skin Corr. 1B H314, Eye Dam. 1 H318, Skin Sens. 1 H317, Aquatic Chronic 3 H412**
EC 205-411-0		
INDEX 612-105-00-4		
Reg. no. 01-2119471486-30-XXXX		
1-methoxy-2-propanol		
CAS 107-98-2	1 ≤ x < 5	**Flam. Liq. 3 H226, STOT SE 3 H336**
EC 203-539-1		
INDEX 603-064-00-3		
Reg. no. 01-2119457435-35-XXXX		
C9-11 Alcool etossilato		
CAS 68439-46-3	1 ≤ x < 5	**Eye Irrit. 2 H319**
EC		
INDEX		
4,4 Methylenebis (cyclohexylamine)		
CAS 1761-71-3	0,5 ≤ x < 1	**Acute Tox. 4 H302, STOT RE 2 H373, Skin Corr. 1B H314, Eye Dam. 1 H318, Skin Sens. 1 H317**
EC 217-168-8		
INDEX		
Reg. no. 01-2119541673-38-XXXX		

SECTION 3. Composition/information on ingredients ... / >>

Phosphoric acid

CAS	*7664-38-2*	0 ≤ x < 0,5	**Skin Corr. 1B H314, Eye Dam. 1 H318**
EC	*231-633-2*		
INDEX	*015-011-00-6*		
Reg. no.	*01-2119485924-24-XXXX*		

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

Information not available

SECTION 5. Firefighting measures

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.

Phosphoric acid
CO2, dust or water spray. Extinguish large fires with water spray or alcohol resistant foam.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
Do not breathe combustion products.

Phosphoric acid
Hazardous combustion products: phosphorus oxides.
Combustion produces heavy smoke.
Do not inhale explosion and combustion gases.

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

Block the leakage if there is no hazard.
Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency

SECTION 6. Accidental release measures ... / >>

procedures.

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

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat. Avoid leakage of the product into the environment.

Phosphoric acid
Use only suitable materials for transport, storage and handling.
Avoid contact with skin and eyes, inhalation of vapors, mist or dust.
Do not use empty containers before they have been cleaned.
Before transfer operations, make sure that there are no incompatible residual materials in the containers.
Provide for industrial hygiene measures.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store in a cool and well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

Phosphoric acid
Keep packaging tightly closed
Keep away from food, drink and feed.
Incompatible materials: alkalis, reducing agents, metals (see also Section 10).
Suitable packaging materials: stainless steel, polyolefin.
Ensure good ventilation.
Storage class: 8B Deposit class (TRGS 510): 8B

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Fourth Edition 2020)
EU	OEL EU	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 2020

SECTION 8. Exposure controls/personal protection ... / >>

Alcol benzilico

Predicted no-effect concentration - PNEC

Normal value in fresh water	1	mg/l
Normal value in marine water	0,1	mg/l
Normal value for fresh water sediment	5,27	mg/kg/d
Normal value for marine water sediment	0,527	mg/kg/d
Normal value for water, intermittent release	2,3	mg/l
Normal value of STP microorganisms	39	mg/l
Normal value for the terrestrial compartment	0,466	mg/kg/d

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		20 mg/kg bw/d		4 mg/kg bw/d				
Inhalation		27 mg/m3		5,4 mg/m3		110 mg/m3		22 mg/m3
Skin		20 mg/kg bw/d		4 mg/kg bw/d		40 mg/kg bw/d		8 mg/kg bw/d

2-piperazin-1-iletilamina

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,058	mg/l
Normal value in marine water	0,0058	mg/l
Normal value for fresh water sediment	215	mg/kg
Normal value for marine water sediment	21,5	mg/kg
Normal value for water, intermittent release	0,58	mg/l
Normal value of STP microorganisms	250	mg/l
Normal value for the terrestrial compartment	42,9	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		1,5 mg/kg bw/d		0,3 mg/kg bw/d				
Inhalation		5,3 mg/m3		0,9 mg/m3		21,4 mg/m3		3,6 mg/m3
Skin	0,02 mg/cm2	10 mg/kg bw/d	0,003 mg/cm2	1,7 mg/kg bw/d	0,04 mg/cm2	20 mg/kg bw/d	0,006 mg/cm2	3,3 mg/kg bw/d

SECTION 8. Exposure controls/personal protection ... / >>

1-methoxy-2-propanol

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLEP	ITA	375	100	568	150	SKIN
OEL	EU	375	100	568	150	SKIN
TLV-ACGIH			50		100	

Predicted no-effect concentration - PNEC

Normal value in fresh water	10	mg/l
Normal value in marine water	1	mg/l
Normal value for fresh water sediment	52,3	mg/kg
Normal value for marine water sediment	5,2	mg/kg
Normal value for water, intermittent release	100	mg/l
Normal value of STP microorganisms	100	mg/l
Normal value for the terrestrial compartment	4,59	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral								33 mg/kg bw/d
Inhalation				43,9 mg/m3	553,5 mg/m3	553,5 mg/m3		369 mg/m3
Skin				78 mg/kg bw/d				183 mg/kg bw/d

4,4 Methylenebis (cyclohexylamine)

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,08	mg/l
Normal value in marine water	0,008	mg/l
Normal value for fresh water sediment	137	mg/kg/d
Normal value for marine water sediment	13,7	mg/kg/d
Normal value for water, intermittent release	0,08	mg/l
Normal value of STP microorganisms	3,2	mg/l
Normal value for the terrestrial compartment	27,2	mg/kg/d

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				0,06 mg/kg bw/d				
Inhalation				0,21 mg/m3				1 mg/m3
Skin								0,1 mg/kg bw/d

Phosphoric acid

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLEP	ITA	1		2		
WEL	GBR	1		2		
OEL	EU	1		2		
TLV-ACGIH		1		3		SKIN

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation			0,73 mg/m3		2 mg/m3		1 mg/m3	

Legend:
(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

SECTION 8. Exposure controls/personal protection ... / >>

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

Phosphoric acid
The toxicity of phosphoric acid is linked to its acidic nature. A generic PNEC (water) cannot be derived as the effects are highly dependent on the pH of the receiving waters and its repelling ability is highly variable.

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.
Provide an emergency shower with face and eye wash station.
HAND PROTECTION
Protect hands with category III work gloves (see standard EN 374).
The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.
The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type 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.
EYE PROTECTION
Wear airtight protective goggles (see standard EN 166).
RESPIRATORY PROTECTION
If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required. Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.
If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard 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.

Phosphoric acid
Suitable respirator: use protective mask with ABEK-P2 filter.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties		Value	Information
Appearance		liquid	
Colour		grey	
Odour		characteristic	
Odour threshold		Not available	
pH		Not determined	
Melting point / freezing point		Not available	
Initial boiling point		Not determined	
Boiling range		Not available	
Flash point	>	60 °C	
Evaporation rate		Not available	
Flammability (solid, gas)		Not available	
Lower inflammability limit		Not available	
Upper inflammability limit		Not available	
Lower explosive limit		Not available	
Upper explosive limit		Not available	
Vapour pressure		Not available	
Vapour density		Not available	
Relative density		1,45 g/cm3	
Solubility		not applicable	
Partition coefficient: n-octanol/water		Not determined	
Auto-ignition temperature		Not available	
Decomposition temperature		Not determined	

SECTION 9. Physical and chemical properties ... / >>

Viscosity	Not available
Explosive properties	Not available
Oxidising properties	Not available

9.2. Other information

VOC (Directive 2010/75/EC) : 1,50 % - 21,75 g/litre

SECTION 10. Stability and reactivity

10.1. Reactivity

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

Phosphoric acid
It can give violent reaction. In contact with water an exothermic reaction may occur. In contact with reactive metals (mild steel, aluminum, etc.) hydrogen (explosive) may develop. Reaction with reducing agents.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

The vapours may also form explosive mixtures with the air.

Phosphoric acid
When mixing with water, do not allow the mixture to reach too high temperatures. Add the acid in water slowly and with simultaneous stirring.
Dangerous reactions with metals (formation of hydrogen), alkalis (alkaline solutions), reducing agents, ammonia, fluorine, sulfur trioxide, phosphorus pentoxide.

10.4. Conditions to avoid

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

Phosphoric acid
Avoid exposing the product to high temperatures

10.5. Incompatible materials

Phosphoric acid
Ammonia. Reactive metals. Strong bases.

10.6. Hazardous decomposition products

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

Formaldehyde, polymer with benzenamine, hydrogenated
Organic decomposition products containing nitrogen. carbon monoxide, carbon dioxide

Phosphoric acid
Toxic phosphorus compounds.

SECTION 11. Toxicological information

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.

Phosphoric acid
The product is corrosive, therefore extremely irritated to the eyes, skin and mucous membranes, it can cause serious damage.

11.1. Information on toxicological effects

SECTION 11. Toxicological information ... / >>

Alcol benzilico
Inhalation: Vapor may irritate the respiratory tract / lungs. Vapors can irritate the throat / respiratory tract. Symptoms following overexposure may include the following: Cough. Vapors can cause headache, fatigue, dizziness and nausea. Harmful by inhalation.
Ingestion: Harmful if swallowed. Nausea, vomiting. Diarrhea. Headache. The ingestion of large quantities can cause unconsciousness.
Skin contact: Prolonged and frequent contact may cause redness and irritation.
Eye contact: Causes serious eye irritation.

2-piperazin-1-iletilamina
Inhalation: Gases or vapors in high concentrations can irritate the respiratory tract.
Ingestion: Harmful if swallowed.
Skin contact: Causes severe burns. Toxic in contact with the skin. May cause an allergic skin reaction.
Contact with eyes: Causes serious eye damage.

1-methoxy-2-propanol
Low toxicity in case of ingestion. Small amounts ingested incidentally during normal operations should not cause harm; however the ingestion of larger quantities may cause damage.

Prolonged skin contact is unlikely to produce harmful absorption of the substance.

A brief exposure (a few minutes) is unlikely to cause harmful effects. The smell is unpleasant at 100 p.p.m.; higher levels produce irritation to the eye, nose and throat and are intolerable to 1000 p.p.m .. Anesthetic effects have been observed at / or above 1000 p.p.m .. LC50, Rat, 6 h, steam,> 25.8 mg / l

Subacute skin toxicity
Parameter: NOAEL (C)
Route of exposure: Dermal
Species: Rabbit
Effective dose:> 1000 mg / kg bw / day
Method: OECD 410

Subacute inhalative toxicity
Parameter: NOAEL (C
Route of exposure: Inhalation
Species: Rabbit
Effective dose: 1000 ppm
Method: OECD 413

4,4 Methylenebis (cyclohexylamine)
Inhalation: Gas or vapor in high concentrations may irritate the respiratory tract.
Ingestion: Harmful if swallowed. It can cause burns in mucous membranes, in the throat, in the esophagus and in the stomach. May cause damage to organs (Liver) in case of prolonged or repeated exposure if swallowed.
Skin contact: Causes severe burns. May cause sensitization by skin contact.
Eye contact: Causes serious eye damage.

Metabolism, toxicokinetics, mechanism of action and other information

1-methoxy-2-propanol
Methyl ether propylene glycol is easily absorbed orally and by inhalation. A 100% absorption rate can be taken into account for these routes. Human data have shown that dermal absorption of vapor through the skin is limited. When exposed the whole body (normal clothing), the steam provided a contribution of about 4-8% to the total body load. An in vitro absorption rate of 1.17 mg / cm2 / h was estimated for propyleneglycol methyl ether on human skin. If the dermal absorption of liquid methyl ether propylene glycol is compared with other glycolethers, available data show that propylene glycol methyl ether is less absorbed than ethylene glycol butyl ether (it is estimated that methyl ether propylene glycol is twice less absorbed by butyl ether ethylene glycol). According to these data, a 30% cutaneous absorption factor for liquid propyleneglycol methyl ether should be considered as the worst value for risk assessment.

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

SECTION 11. Toxicological information ... / >>

ACUTE TOXICITY

ATE (Inhalation) of the mixture:	> 20 mg/l
ATE (Oral) of the mixture:	>2000 mg/kg
ATE (Dermal) of the mixture:	>2000 mg/kg

Alcol benzilico

LD50 (Oral)	1620 mg/kg Ratto
LD50 (Dermal)	2001 mg/kg Ratto
LC50 (Inhalation)	11 mg/l Ratto

Formaldehyde, polymer with benzenamine, hydrogenated

LD50 (Oral)	> 1000 mg/kg Rat
LD50 (Dermal)	2001 mg/kg Rabbit

4,4 Methylenebis (cyclohexylamine)

LD50 (Oral)	625 mg/kg Rat
LD50 (Dermal)	2110 mg/kg Rabbit

1-methoxy-2-propanol

LD50 (Oral)	4016 mg/kg Rat
LD50 (Dermal)	> 2000 mg/kg Rabbit
LC50 (Inhalation)	> 25,8 mg/l/6h Rat

Phosphoric acid

LD50 (Oral)	2600 mg/kg Ratto
LD50 (Dermal)	2740 mg/kg Coniglio

2-piperazin-1-iletilamina

LD50 (Oral)	500 mg/kg
LD50 (Dermal)	866 mg/kg Rat

C9-11 Alcool etossilato

LD50 (Oral)	> 2000 Rat

Alcol benzilico
Repeated dose toxicity
Species: rat, male and female
NOEX: 400 mg / kg, 1072
Method of application: inhalation
Atomosphere test: dust / fog
Exposure time: 4 w
Number of exhibitions: 6 h
Method: OECD 412

1-methoxy-2-propanol
Acute oral toxicity
Low toxicity in case of ingestion. Small amounts ingested incidentally during normal operations should not cause harm; however the ingestion of larger quantities may cause damage.

Acute dermal toxicity
Prolonged skin contact is unlikely to produce harmful absorption of the substance.

Acute toxicity by inhalation
A brief exposure (a few minutes) is unlikely to cause harmful effects. The smell is unpleasant at 100 ppm .; higher levels produce eye, nose and throat irritations and are intolerable at 1000 ppm. Anesthetic effects have been observed at / or above 1000 ppm.

SKIN CORROSION / IRRITATION

Corrosive for the skin

Formaldehyde, polymer with benzenamine, hydrogenated
The substance was corrosive in an in vitro Corrositex test. Signs of irritation / corrosivity were also observed in acute oral and dermal toxicity tests with this material and in tests with similar substances.

SECTION 11. Toxicological information ... / >>

Alcol benzilico
Species: rabbit
Assessment: no skin irritation
Method: OECD 404

2-piperazin-1-iletilamina
Corrosive to the skin.

1-methoxy-2-propanol
Species: Rabbit
Method: Directive 67/548 / EEC, Annex V, B.4.
Result: No skin irritation
BPL: yes

4,4 Methylenebis (cyclohexylamine)
Corrosive to the skin.

Phosphoric acid
Strongly corrosive on the skin and mucous membranes.

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

Alcol benzilico
Species: rabbit
Evaluation: irritating
Method: OECD 405
Result: irritating to the eyes

2-piperazin-1-iletilamina
Causes serious eye damage.

1-methoxy-2-propanol
Species: Rabbit
Method: Directive 67/548 / EEC, Annex V, B.5.
Result: No eye irritation
BPL: yes

C9-11 Alcool etossilato
Slight eye irritation

4,4 Methylenebis (cyclohexylamine)
Risk of serious eye damage.

Phosphoric acid
Strongly corrosive on the eyes.

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

1-methoxy-2-propanol
Type of test: Maximization Test
Route of exposure: Dermal
Species: Guinea pig
Method: Directive 67/548 / EEC, Annex V, B.6.
Result: Does not cause skin sensitization.
BPL: yes

C9-11 Alcool etossilato
Maximization test
Species: Guinea pig
Result: negative
Method: OECD 406

Skin sensitization

SECTION 11. Toxicological information ... / >>

Alcol benzilico
Species: Guinea pig
Method: OECD 406
Result: Not sensitizing.

Species: Guinea pig
Result: does not cause skin sensitization

4,4 Methylenebis (cyclohexylamine)
Sensitizing.

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

Alcol benzilico
Method of application: intraperitoneal injection
Dose: 200 mg / kg
Method: OECD 474
Result: negative

4,4 Methylenebis (cyclohexylamine)
Genotoxicity - in vitro Ames test: Negative.

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

Alcol benzilico
NOAEL 200 mg / kg / day, Oral, Mouse OECD 453
NOAEL> 400 mg / kg bw / day, Oral, Rat OECD 451 Based on available data the classification criteria are not met.
NOALE: 400 mg / kg, oral, Rat (103 weeks of exposure, 5 times a day). Method: OECD 453

1-methoxy-2-propanol
Parameter: NOAEC
Route of exposure: Mouse
Effective dose: 3000 ppm

Phosphoric acid
Effetti CMR (cancerogeni, mutageni, tossici per la riproduzione)
Tossicità per la riproduzione
Tossicità dello sviluppo/teratogenicità
Saggio sulla tossicità riproduttiva a una generazione
Parametro : NOAEL(C)
Via di esposizione : Ratto
Dosi efficace : >= 500 mg/kg bw/day

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

Alcol benzilico
Based on available data, the classification criteria are not met. Fertility - NOAEL 1072 mg / kg bw / day, Inhalation, Rat

Species: mouse, female
Method of application: oral
General toxicity in mothers: lowest observed toxicity level: 550 mg / kg bw
Result: no teratogenic effect

1-methoxy-2-propanol
It was toxic to the fetus in laboratory animals at doses toxic to the mother. It did not cause birth defects in laboratory animals.

In studies on laboratory animals, effects on reproduction were found only at doses that produced significant toxicity in the parents.

Adverse effects on sexual function and fertility

SECTION 11. Toxicological information ... / >>

2-piperazin-1-iletilamina
Contiene una sostanza/un gruppo di sostanze che possono nuocere alla fertilità.

1-methoxy-2-propanol
Parameter: NOAEL (Fetal development)
Route of exposure: Rat
Effective dose: 1500 ppm
Method: OECD 414

Adverse effects on development of the offspring
1-methoxy-2-propanol
Parameter: NOAEL (C)
Route of exposure: Rat
Effective dose: 300 ppm

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

1-methoxy-2-propanol
May cause drowsiness or dizziness.
Route of exposure: Inhalation
Target organs: Central nervous system

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

Formaldehyde, polymer with benzenamine, hydrogenated
NOAEL 15 mg / kg bw / day, Oral, Rat

Alcol benzilico
NOAEL 400 mg / kg, Oral, Rat

Species: rat, male and female
NOEC: 400 mg / kg
Method of application: inhalation
Test atmosphere: dust / fog
Exposure time: 4 w
Exposure number: 6 h
Method: OECD 412

1-methoxy-2-propanol
Excessive exposure symptoms can be anesthetic or narcotic effects: dizziness and lightheadedness may occur.
In animals, effects have been reported on the following organs: Kidney, Liver.

4,4 Methylenebis (cyclohexylamine)
May cause damage to organs (Liver) in case of prolonged or repeated exposure if swallowed.

Phosphoric acid
Toxicity after repeated use (subacute, subchronic, chronic)
Subacute oral toxicity
Parameter: NOAEL (C)
Route of exposure: Oral route
Species: Rat
Effective dose: 250 mg / kg

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

SECTION 12. Ecological information

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

SECTION 12. Ecological information ... / >>

Phosphoric acid
Use according to good working practices, avoiding to disperse the product in the environment.

12.1. Toxicity

Formaldehyde, polymer with benzenamine, hydrogenated
Acute toxicity microorganisms - EC50, 3 hours: 187 mg / l, activated sludge

Alcol benzilico
It is not considered toxic to fish.
LC50, 96 hours: 10 mg / l, Lepomis macrochirus (Perch)
Acute toxicity microorganisms - CI50, 49 hours: 2100 mg / l, activated sludge

1-methoxy-2-propanol
Acute toxicity for algae / aquatic plants
CE50r, Pseudokirchneriella subcapitata (chlorophytic algae), Static test, 7 d, Growth inhibition,> 1,000 mg / l, OECD test method guideline 201 or equivalent

Bacterial toxicity
Parameter: IC10
Species: Activated sludge
Effective dose:> 1000 mg / l
Exposure time: 3 h

C9-11 Alcool etossilato
CL50:>1-10mg/l
Tempo di esposizione: 96 h
Specie: Oncorhynchus mykiss (Trota iridea)
Metodo: Linee Guida 203 per il Test dell'OECD

CE50:>1-10mg/l
Tempo di esposizione: 48 h
Specie: Daphnia magna (Pulce d'acqua grande)

CE50:>1-10mg/l
Tempo di esposizione: 72 h
Specie: Skeletonema costatum

4,4 Methylenebis (cyclohexylamine)
CL0, 96 hours: 46 mg / L, Leuciscus idus (golden Ido)
EC50, 72 hours: 140 - 200 mg / L, Algae

Alcol benzilico

LC50 - for Fish	460 mg/l/96h Pimephales promelas, OECD 203
EC50 - for Crustacea	230 mg/l/48h Daphnia magna, OECD 202
EC50 - for Algae / Aquatic Plants	770 mg/l/72h Selenastrum capricornutum, OECD 201, static test
Chronic NOEC for Crustacea	51 mg/l Daphnia magna, 21 d, OECD 211, semistatic test
Chronic NOEC for Algae / Aquatic Plants	310 mg/l Pseudokirchneriella subcapitata, OECD 201

Formaldehyde, polymer with benzenamine, hydrogenated

LC50 - for Fish	63 mg/l/96h Poecilia reticulata
EC50 - for Crustacea	15,4 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	43,9 mg/l/72h Algae

4,4 Methylenebis (cyclohexylamine)

LC50 - for Fish	> 100 mg/l/96h Leuciscus idus
EC50 - for Crustacea	6,84 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	> 140 mg/l/72h
Chronic NOEC for Crustacea	4 mg/l Daphnia magna, 604 h

1-methoxy-2-propanol

LC50 - for Fish	6812 mg/l/96h Leuciscus idus, Prova statica, DIN 38412
EC50 - for Crustacea	21100 mg/l/48h Daphnia magna. OECD 202

SECTION 12. Ecological information ... / >>

Phosphoric acid

EC50 - for Crustacea	> 100 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	> 100 mg/l/72h Desmodesmus subspicatus

2-piperazin-1-iletilamina

LC50 - for Fish	2190 mg/l/96h
EC50 - for Crustacea	58 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	> 1000 mg/l/72h Algae

12.2. Persistence and degradability

Alcol benzilico
Degradation 92 - 96%: 14 days OECD 301C
Degradation 95 - 97%: 21 days OECD 301A

Inoculum: waste water (STP outflow)
Concentration: 20mg / l
Result: rapidly biodegradable
Biodegradation: 95-97%
Exposure time: 21 d
Method: OECD 301 A

1-methoxy-2-propanol
Biodegradability: The material is easily biodegradable. Pass the (I) OECD test for the immediate biodegradability.
10 day window period: OK
Biodegradation: 96%
Exposure time: 28 d
Method: OECD 301E test method guideline or equivalent

Photodegradation
Type of test: Half-life (indirect photolysis)
Sensitizing: OH radicals
Atmospheric half-life: 7.8 h
Method: estimated

C9-11 Alcool etossilato
Quickly biodegradable
Method: OECD 301D

Phosphoric acid
The substance is inorganic, therefore biodegradability tests are not applicable.
The phosphoric acid dissociates in water in the H3O +, H2PO4-, HPO4-- ioins, which can be further degraded.

Alcol benzilico
Rapidly degradable

Formaldehyde, polymer with benzenamine, hydrogenated
NOT rapidly degradable

4,4 Methylenebis (cyclohexylamine)
NOT rapidly degradable

1-methoxy-2-propanol
Rapidly degradable

2-piperazin-1-iletilamina
NOT rapidly degradable

12.3. Bioaccumulative potential

4,4 Methylenebis (cyclohexylamine)
The product is insoluble in water.

SECTION 12. Ecological information ... / >>

Phosphoric acid
Does not bioaccumulate
Phosphoric acid dissociates in water from the H3O +, H2PO4-, HPO4-- ioins, which are present in the environment. Phosphoric acid is absorbed in the form of phosphate anions.

Alcol benzilico

Partition coefficient: n-octanol/water	1,1
BCF	1

4,4 Methylenebis (cyclohexylamine)

Partition coefficient: n-octanol/water	2,03

1-methoxy-2-propanol

Partition coefficient: n-octanol/water	0,37 Log Kow Sperimentale
BCF	< 2

2-piperazin-1-iletilamina

Partition coefficient: n-octanol/water	-1,48 Log Kow

C9-11 Alcool etossilato

Partition coefficient: n-octanol/water	2,4

12.4. Mobility in soil

Alcol benzilico
Surface tension 39 mN / m @ 20 ° C OECD 115
Koc: 5-15

1-methoxy-2-propanol
The mobility potential in the soil is very high (Koc between 0 and 50).
Partition coefficient (Koc): 0.2 - 1.0 estimated

Phosphoric acid
This substance is highly soluble and dissociates in water.

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 ≥ than 0,1%.

12.6. 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.
Waste transportation may be subject to ADR restrictions.
CONTAMINATED PACKAGING
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information

14.1. UN number

ADR / RID, IMDG, IATA: 2735

14.2. UN proper shipping name

ADR / RID:	AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S.
IMDG:	AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S.
IATA:	AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S.

SECTION 14. Transport information ... / >>

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: II

14.5. Environmental hazards

ADR / RID:	NO
IMDG:	NO
IATA:	NO

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 80 Special provision: -	Limited Quantities: 1 L	Tunnel restriction code: (E)
IMDG:	EMS: F-A, S-B	Limited Quantities: 1 L	
IATA:	Cargo:	Maximum quantity: 30 L	Packaging instructions: 855
	Pass.:	Maximum quantity: 1 L	Packaging instructions: 851
	Special provision:	A3, A803	

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

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/EC: None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product

Point	3 - 40

Contained substance

Point	75	Calcium Carbonate Reg. no.: Esentato ai sensi dell'allegato V.7
Point	75	2-piperazin-1-iletilamina Reg. no.: 01-2119471486-30-XXXX
Point	75	2,4,6-Tri-(dimetilaminometil) fenolo Reg. no.: 01-2119560597-27-XXXX
Point	75	Black iron oxide Reg. no.: 01-2119457646-28-0015
Point	75	Phosphoric acid Reg. no.: 01-2119485924-24-XXXX
Point	75	2-methoxypropanol

Regulation (EC) No. 2019/1148 - on the marketing and use of explosives precursors
Not applicable

Substances in Candidate List (Art. 59 REACH)
On the basis of available data, the product does not contain any SVHC in percentage ≥ than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

SECTION 15. Regulatory information ... / >>

None

Substances subject to exportation reporting pursuant to (EC) Reg. 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.

15.2. Chemical safety assessment

A chemical safety assessment has been performed for the following contained substances
Formaldehyde, polymer with benzenamine, hydrogenated
Alcol benzilico
4,4 Methylenebis (cyclohexylamine)
Phosphoric acid

SECTION 16. Other information

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

Flam. Liq. 3	Flammable liquid, category 3
Acute Tox. 3	Acute toxicity, category 3
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
Eye Irrit. 2	Eye irritation, category 2
Skin Sens. 1	Skin sensitization, category 1
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H226	Flammable liquid and vapour.
H311	Toxic in contact with skin.
H302	Harmful if swallowed.
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.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H412	Harmful to aquatic life with long lasting effects.

LEGEND:
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 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 NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation

SECTION 16. Other information ... / >>

- PEC: Predicted environmental Concentration- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 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 STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

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) 790/2009 (I Atp. CLP) of the European Parliament
4. Regulation (EU) 2015/830 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) 2018/1480 (XIII Atp. CLP)
16. Regulation (EU) 2019/521 (XII Atp. CLP)
17. Regulation (EU) 2019/1148
18. Regulation (EU) 2020/217 (XIV Atp. CLP)

- 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

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.

CALCULATION METHODS FOR CLASSIFICATION
Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.
Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.
Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

Changes to previous review:
The following sections were modified:
09 / 14.