

**M5113 - EPOKITT - CATALIZZATORE PER RESINA EPOSSIDICA SOLIDA**

**Safety data sheet**

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

**1.1. Product identifier**

Code: **M5113**  
 Product name: **EPOKITT - CATALIZZATORE PER RESINA EPOSSIDICA SOLIDA**

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

Intended use: **Hardener for epoxy resin, Professional use only.**

Uses advised against: no one in particular

**1.3. Details of the supplier of the safety data sheet**

Name  
 Full address  
 District and Country

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

**1.4. Emergency telephone number**

For urgent inquiries refer to

**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 EC Regulation 1907/2006 and subsequent amendments. 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:

Acute toxicity, category 4	H302	Harmful if swallowed.
Skin corrosion, category 1A	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.
Hazardous to the aquatic environment, chronic toxicity, category 3	H412	Harmful to aquatic life with long lasting effects.

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**2.2. Label elements.**

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

Hazard pictograms:



Signal words:                      Danger

Hazard statements:

**H302**                      Harmful if swallowed.  
**H314**                      Causes severe skin burns and eye damage.  
**H317**                      May cause an allergic skin reaction.  
**H412**                      Harmful to aquatic life with long lasting effects.

Precautionary statements:

**P201**                      Obtain special instructions before use.  
**P210**                      Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
**P260**                      Do not breathe dust / fume / gas / mist / vapours / spray.  
**P280**                      Wear protective gloves / eye protection / face protection.  
**P308+P313**              IF exposed or concerned: Get medical advice / attention.  
**P370+P378**              In case of fire: use carbon dioxide, foam, powder and water spray to extinguish.

**Contains:**                      1,3-CYCLOHEXANEDIMETHANAMINE  
    3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE  
    BENZYL ALCOHOL

**2.3. Other hazards.**

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

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

**3.1. Substances.**

Information not relevant.

**3.2. Mixtures.**

Contains:

Identification.	Conc. %.	Classification 1272/2008 (CLP).
<b>1,3-CYCLOHEXANEDIMETHANAMINE</b>		
CAS. 2579-20-6	50 - 54	Acute Tox. 4 H302, Acute Tox. 4 H312, Skin Corr. 1A H314, Aquatic Chronic 3

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SOLIDA**

EC. 219-941-5

H412

INDEX. -

Reg. no. 01-2119543741-41

**BENZYL ALCOHOL**

CAS. 100-51-6

28,5 - 30

Acute Tox. 4 H302, Acute  
Tox. 4 H332

EC. 202-859-9

INDEX. 603-057-00-5

Reg. no. 01-2119492630-38

**3-AMINOMETHYL 3,5,5-  
TRIMETHYLCYCLOHEXYLAMINE**

CAS. 2855-13-2

7 - 8

Acute Tox. 4 H302, Acute  
Tox. 4 H312, Skin Corr. 1B  
H314, Skin Sens. 1 H317,  
Aquatic Chronic 3 H412

EC. 220-666-8

INDEX. 612-067-00-9

Reg. no. 01-2119514687-32

Note: Upper limit is not included into the range.

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.

**PROTECTIVE MEASURES FOR THE FIRST RESCUE WORKERS:** for PPE (personal protection equipment) required for first aid refer to section 8.2 of this safety data sheet.

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

For symptoms and effects caused by the contained substances, see chap. 11.

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

Information not available.

**SECTION 5. Firefighting measures.**

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SOLIDA****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.

**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 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. Check incompatibility for container material in section 7. 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.



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**SECTION 7. Handling and storage.**

**7.1. Precautions for safe handling.**

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.

**7.3. Specific end use(s).**

No use other than specified in Section 1.2 of this safety data sheet.

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

**8.1. Control parameters.**

Regulatory References:

BGR	България	МИНИСТЕРСТВО НА ТРУДА И СОЦИАЛНАТА ПОЛИТИКА МИНИСТЕРСТВО НА ЗДРАВЕОПАЗВАНЕТО НАРЕДБА No 13 от 30 декември 2003 г
CZE	Česká Republika	Nařízení vlády č. 361/2007 Sb. kterým se stanoví podmínky ochrany zdraví při práci
FIN	Suomi	HTP-arvot 2012. Haitallisiksi tunnetut pitoisuudet - Sosiaali- ja terveysministeriön julkaisuja 2012:5
LTU	Lietuva	DĖL LIETUVOS HIGIENOS NORMOS HN 23:2007 CHEMINIŲ MEDŽIAGŲ 2007 m. spalio 15 d. Nr. V-827/A1-287
LVA	Latvija	Ķīmisko vielu aroda ekspozīcijas robežvērtības (AER) darba vides gaisā 2012
POL	Polska	ROZPORZĄDZENIE MINISTRA PRACY I POLITYKI SPOŁECZNEJ z dnia 16 grudnia 2011r

**1,3-CYCLOHEXANEDIMETHANAMINE**

Predicted no-effect concentration - PNEC.

Normal value in fresh water	0,033	mg/l
Normal value in marine water	0,003	mg/l
Normal value for fresh water sediment	NPI	
Normal value for marine water sediment	NPI	
Normal value for water, intermittent release	0,331	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the terrestrial compartment	VND	

**Health - Derived no-effect level - DNEL / DMEL**

Route of exposure	Effects on consumers			Effects on workers		
	Acute local	Acute systemic	Chronic local	Acute local	Chronic local	Chronic systemic
Oral.	VND	NPI	VND	NPI		

**ILPA ADESIVI SRL**

Revision nr. 1

Dated 26/10/2016

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Printed on 26/10/2016

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Inhalation.	NPI	NPI	NPI	NPI	VND	21,2 mg/m3	VND	0,71 mg/m3
Skin.	NPI	NPI	NPI	NPI	VND	6 mg/kg bw/d	VND	6 mg/kg bw/d

**BENZYL ALCOHOL**  
**Threshold Limit Value.**

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	5				
TLV	CZE	40		80		
HTP	FIN	45	10			
RD	LTU	5				SKIN.
RV	LVA	5				
NDS	POL	240				

**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	0,456	mg/kg/d

**Health - Derived no-effect level - DNEL / DMEL**

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

**3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE**

**Predicted no-effect concentration - PNEC.**

Normal value in fresh water	0,06	mg/l
Normal value in marine water	0,006	mg/l
Normal value for fresh water sediment	5,784	mg/kg/d
Normal value for marine water sediment	0,578	mg/kg/d
Normal value for water, intermittent release	0,23	mg/l
Normal value of STP microorganisms	3,18	mg/l
Normal value for the terrestrial compartment	1,121	mg/kg/d

**Health - Derived no-effect level - DNEL / DMEL**

Route of exposure	Effects on consumers. Acute local	Acute systemic	Chronic local	Chronic systemic	Effects on workers Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation.	VND	NPI	VND	NPI	0,073 mg/m3	NPI	0,073 mg/m3	NPI
Skin.	VND	NPI	VND	NPI	VND	NPI	VND	NPI

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.

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



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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 III professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

**EYE PROTECTION**

Wear a hood visor or protective visor combined with airtight goggles (see standard EN 166).

In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.

**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.

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.**

Appearance	pasty
Colour	ice blue
Odour	amino
Odour threshold.	5,5 ppm (PUBCHEM CID244, benzyl alcohol)
pH.	Not applicable.
Melting point / freezing point.	<-25°C (ECHA website, 1,3-Cyclohexanedimethanamine)
Initial boiling point.	240°C (at 1013 Bar) (ECHA website, 1,3-Cyclohexanedimethanamine)
Boiling range.	Not available.
Flash point.	> 60 °C.
Evaporation rate	Not available.
Flammability (solid, gas)	not applicable
Lower inflammability limit.	Not available.
Upper inflammability limit.	Not available.
Lower explosive limit.	1,3 Vol% (ICSC 0833, benzyl alcohol)
Upper explosive limit.	13 Vol% (ICSC 0833, benzyl alcohol)
Vapour pressure.	34Pa (at 25°C) (ECHA website, 1,3-Cyclohexanedimethanamine)
Vapour density	3,7 (air=1) (ICSC 0833, benzyl alcohol)
Relative density.	0,959 Kg/l
Solubility	soluble in water
Partition coefficient: n-octanol/water	Log Pow 0,783 (at 21,5°C)(ECHA website, 1,3-Cyclohexanedimethanamine)

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Auto-ignition temperature.	316°C (at ca. 1010 mBar) (ECHA website, 1,3-Cyclohexanedimethanamine).
Decomposition temperature.	Not available.
Viscosity	260 ± 10 Pas (T=25°C)
Explosive properties	Product does not present an explosion hazard.
Oxidising properties	not applicable

**9.2. Other information.**

VOC (Directive 2010/75/EC) :	29,74 % - 285,23 g/litre.
VOC (volatile carbon) :	23,10 % - 221,56 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.

BENZYL ALCOHOL: decomposes at temperatures higher than 870°C/1598°F with possibility of explosion.

**10.2. Chemical stability.**

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

**10.3. Possibility of hazardous reactions.**

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

BENZYL ALCOHOL: may react dangerously with: hydrobromic acid and iron in the presence of heat, oxidising agents and sulphuric acid. Risk of explosion on contact with: phosphorus trichloride.

3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE: can react dangerously with strong oxidising agents and concentrated acids.

**10.4. Conditions to avoid.**

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

BENZYL ALCOHOL: avoid exposure to the air, sources of heat and naked flames.

3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE: avoid contact with strong oxidising agents and acids.

**10.5. Incompatible materials.**

BENZYL ALCOHOL: sulphuric acid, oxidising substances and aluminium.

**10.6. Hazardous decomposition products.**

Information not available.



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**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.

Acute effects: ingestion of this product is harmful. Even small amounts of product may cause serious health problems (stomach pain, nausea, sickness, diarrhoea).

This product is corrosive and causes serious burns and vesicles on the skin, which can arise even after exposure. Burns are very stinging and painful. Upon contact with eyes, it may cause serious harm, such as cornea opacity, iris lesions, irreversible eye coloration. The vapors and/or powders are caustic for the respiratory system and may cause pulmonary edema, whose symptoms sometimes arise only after some hours. Exposure symptoms may include: sling, cough, asthma, laryngitis, respiratory disorders, headache, nausea and sickness. If swallowed, it may cause mouth, throat and oesophagus burns, sickness, diarrhoea, edema, larynx swelling and, consequently, asphyxia. Perforation of the gastro-intestinal tract is also possible. This product may cause serious ocular lesions, cornea opacity, iris lesions, irreversible eye coloration.

Upon contact with skin, this product causes sensitization (dermatitis). Dermatitis derives from skin irritation on the areas which repeatedly come into contact with the sensitizing agent. Cutaneous lesions may include: erythemas, edemas, papules, vesicles, pustules, scurvies, ulcerations and exudative phenomena, whose intensity varies according to illness seriousness and affected areas. Erythemas, edemas and exudative phenomena prevail during the acute phase. Scurfy skin, dryness, ulcerations and skin thickening prevail during the chronic phase.

**11.1. Information on toxicological effects.**

**Data refers to the mix:**

- ACUTE TOXICITY: Harmful if swallowed. (section 3.2 of the safety data sheet)
- SKIN CORROSION/IRRITATION: Causes severe skin burns and eye damage. (section 3.2 of the safety data sheet)
- SERIOUS EYE DAMAGE/IRRITATION: Causes severe skin burns and eye damage. (section 3.2 of the safety data sheet)
- RESPIRATORY OR SKIN SENSITISATION: May cause an allergic skin reaction. (section 3.2 of the safety data sheet)
- GERM CELL MUTAGENICITY: No data available
- CARCINOGENICITY: No data available
- REPRODUCTIVE TOXICITY: No data available
- STOT-SINGLE EXPOSURE: No data available
- STOT-REPEATED EXPOSURE: No data available
- ASPIRATION HAZARD: not relevant to viscosity values (section 9 of the safety data sheet)

**Data relating to substances hazardous mixture:**

**BENZYL ALCOHOL**

- ACUTE TOXICITY:
  - LD50 (Oral).1620 mg/kg Rat, according to standard acute method ECHA website
  - LD50 (Dermal).2000 mg/kg Rabbit, Raw Mater. Data Handb. Vol. 1 (Organic Solvents), 6
  - LC50 (Inhalation).> 4,1 mg/l/4h Rat, according to (OECD Guideline 403)
- SKIN CORROSION/IRRITATION: In a study for skin irritation/corrosion on rabbits according to OECD TG 404 benzyl alcohol showed only slight effects to the skin in one animal (exposure period: 4 hours, 2 rabbits without any irritant effects)
- SERIOUS EYE DAMAGE/IRRITATION: According to OECD TG 405, Benzyl alcohol was irritating to the eyes of rabbits.
- GERM CELL MUTAGENICITY: Positive (OECD 476 in vitro); Negative (OECD 474) (from SDS supplier).
- CARCINOGENICITY: In a study equivalent to OECD TG 451, there was no evidence of carcinogenic activity of benzyl alcohol for male or female mice.
- REPRODUCTIVE TOXICITY: Positive, mouse 192h via oral 750 mg/kg; Negative, mouse 240h via oral 550 mg/kg; (from SDS supplier).
- STOT-REPEATED EXPOSURE: ORAL: In a study equivalent to OECD TG 451 (male and female rats). Gross necropsy and histopathology revealed no apparent compound-related non-neoplastic responses. INHALATION: In a study according to OECD TG 412, NOAEC: 1 072 mg/m<sup>3</sup> air; benzyl alcohol was well-tolerated with no adverse effects at any exposure.

**3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE**

- ACUTE TOXICITY:
  - LD50 (Oral).1030 mg/kg rat, equivalent or similar to (OECD Guideline 401)
  - LD50 (Dermal).> 2000 mg/kg rat, according to (OECD Guideline 402)
  - LC50 (Inhalation).> 5,01 mg/l/4h rat, according to (EPA OPPTS 870.1300)
- SKIN CORROSION/IRRITATION: Isophorone diamine has to be considered to be corrosive to the skin of rabbits, method in according to "Appraisal of the safety of chemicals in foods, drugs and cosmetics".
- SERIOUS EYE DAMAGE/IRRITATION: Isophorone diamine showed a strongly irritant and corrosive effect on the eye and on the mucosa of the rabbit, according to (OECD Guideline 405).
- RESPIRATORY OR SKIN SENSITISATION: Isophorone diamine has to be considered to be sensitizing to the skin of guinea pigs, according to (OECD Guideline 406).
- GERM CELL MUTAGENICITY: The test substance Isophorone diamine is considered to be non-clastogenic to CHO cells in vitro, in according to (OECD Guideline 473). Isophorone diamine is not a mutagenic substance under the in vivo, in according to (OECD Guideline 474).

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**1,3-CYCLOHEXANEDIMETHANAMINE**

**ACUTE TOXICITY:**

LD50 (Oral) > 300 mg/kg rat, according to (OECD Guideline 423)

LD50 (Dermal) 1700 mg/kg rat, SDS supplier

ORAL: 1,3-BAC was classified into Category 4 (>300-2000 mg/kg b.w.) in accordance with the Globally Harmonized Classification System (GHS), according to (OECD Guideline 423). DERMAL: The dermal LD50 was calculated to be 1700 mg/kg of body weight. According to Directive 67/548/EEC 1,3-BAC is harmful.

SKIN CORROSION/IRRITATION: The test material, according to (OECD Guideline 404), was classified as CORROSIVE to rabbit skin according to EU labeling regulations.

SERIOUS EYE DAMAGE/IRRITATION: Causes severe eye damage. (Annex VI, REGULATION (EC) No 1272/2008).

**SECTION 12. Ecological information.**

This product is dangerous for the environment and the aquatic organisms. In the long term, it have negative effects on aquatic environment.

**12.1. Toxicity.**

**BENZYL ALCOHOL**

LC50 - for Fish.

460 mg/l/96h Pimephales promelas, equivalent or similar to (EPA OPP 72-1)

EC50 - for Crustacea.

230 mg/l/48h Daphnia magna, according to (OECD Guideline 202)

EC50 - for Algae / Aquatic Plants.

500 mg/l/72h Pseudokirchnerella subcapitata, according to (OECD Guideline 201)

Chronic NOEC for Crustacea.

66 mg/l Daphnia magna, 21d according to (OECD Guideline 211)

**3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE**

LC50 - for Fish.

110 mg/l/96h Leuciscus idus, according to (EU Method C.1 )

EC50 - for Crustacea.

23 mg/l/48h Daphnia magna, according to (OECD Guideline 202)

EC50 - for Algae / Aquatic Plants.

37 mg/l/72h Scenedesmus subspicatus, according to (EU Method C.3)

Chronic NOEC for Crustacea.

3 mg/l Daphnia magna, 21d according to (other guideline: OECD 202, part 2 (1984))

**1,3-CYCLOHEXANEDIMETHANAMINE**

LC50 - for Fish.

130 mg/l/96h Leuciscus idus, according to (OECD Guideline 203)

EC50 - for Crustacea.

33,1 mg/l/48h Daphnia magna, according to (OECD Guideline 202)

EC50 - for Algae / Aquatic Plants.

29,7 mg/l/72h Pseudokirchnerella subcapitata, according to (OECD Guideline 201)

**12.2. Persistence and degradability.**

**BENZYL ALCOHOL**

Rapidly biodegradable.

equivalent or similar to (OECD Guideline 301)

**3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE**

Solubility in water.

mg/l 1000 - 10000

NOT rapidly biodegradable.

**12.3. Bioaccumulative potential.**



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BENZYL ALCOHOL

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

**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 greater 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. MIXTURE (Contens: 1,3-Cyclohexanedimethanamine, 3-aminometil-3,5,5-trimetilcicloesilamina)

IMDG: AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S. MIXTURE (Contens: 1,3-Cyclohexanedimethanamine, 3-aminometil-3,5,5-trimetilcicloesilamina)

IATA: AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S. MIXTURE (Contens: 1,3-Cyclohexanedimethanamine, 3-aminometil-3,5,5-trimetilcicloesilamina)

**14.3. Transport hazard class(es).**

ADR / RID: Class: 8 Label: 8

IMDG: Class: 8 Label: 8



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IATA: Class: 8 Label: 8



**14.4. Packing group.**

ADR / RID, IMDG, IATA: I

**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: 88	Limited Quantities: -	Tunnel restriction code: (E)
	Special Provision: -		
IMDG:	EMS: F-A, S-B	Limited Quantities: -	
IATA:	Cargo:	Maximum quantity: 2,5 L	Packaging instructions: 854
	Pass.:	Maximum quantity: 0,5 L	Packaging instructions: 850
	Special Instructions:	A3, A803	

**14.7. Transport in bulk according to Annex II of MARPOL73/78 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. None.

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

Product Point

3. Liquid substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/ 2008:  
 (a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F;  
 (b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10;  
 (c) hazard class 4.1;  
 (d) hazard class 5.1.

Substances in Candidate List (Art. 59 REACH).



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None.

Substances subject to authorisation (Annex XIV REACH).

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.

Product not intended for uses provided for by Dir. 2004/42/CE.

German regulation on the classification of substances hazardous to water (VwVwS 2005).

WGK 2: Hazard to waters

**15.2. Chemical safety assessment.**

No chemical safety assessment has been processed for the mixture and the substances it contains.

**SECTION 16. Other information.**

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

<b>Acute Tox. 4</b>	Acute toxicity, category 4
<b>Skin Corr. 1A</b>	Skin corrosion, category 1A
<b>Skin Corr. 1B</b>	Skin corrosion, category 1B
<b>Eye Dam. 1</b>	Serious eye damage, category 1
<b>Skin Sens. 1</b>	Skin sensitization, category 1
<b>Aquatic Chronic 3</b>	Hazardous to the aquatic environment, chronic toxicity, category 3
<b>H302</b>	Harmful if swallowed.
<b>H312</b>	Harmful in contact with skin.
<b>H332</b>	Harmful if inhaled.
<b>H314</b>	Causes severe skin burns and eye damage.

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- H318** Causes serious eye damage.  
**H317** May cause an allergic skin reaction.  
**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
- 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 (EU) 1907/2006 (REACH) of the European Parliament
  2. Regulation (EU) 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
- 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
  - ECHA website

**Istituto Superiore di Sanità (ISS) – Archivio Preparati Pericolosi**

Codice azienda: IT00465900728  
Ragione sociale: Ilpa Adesivi Srl  
Nome prodotto ISS: EPOKITT - CATALIZZATORE PER RESINA EPOSSIDICA  
SOLIDA  
Codice prodotto ISS: M5113

**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.

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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.

Training for workers:

Worker training should include content, updates and duration depending on the risk profiles assigned to the business sectors they belong.

**Classification according to Regulation (EC) Nr. 1272/2008**

Acute Tox. 4, H302  
Skin Sens. 1, H317  
Acute Tox. 2, H314  
Aquatic Chronic 3, H412

**Classification procedure**

Calculation method  
Calculation method  
Calculation method  
Calculation method