Tenax	Spa	Revision nr.5 Dated 2/11/2020 Printed on 11/6/2020			
INDURENT	INDURENTE BX35H				
	Safety Data Sheet According to U.S.A. Federal Hazcom 2012				
1. Identification					
1.1. Product identifier					
Product name Chemical name and synonym	INDURENTE BX35H LIQUID POLYAMINO EPOXY HARDENER				
1.2. Relevant identified uses of the substance or n	nixture and uses advised against				
Intended use	LIQUID EPOXY HARDENER.				
Identified Uses ADHESIVE SYSTEM/TREATMENT FOR STONE SECTOR	Industrial Professional	Consumer			
1.3. Details of the supplier of the safety data sheet					
Name Full address District and Country e-mail address of the competent person	Tenax Spa Via I Maggio, 226 37020 Volargne Italy Tel. +39 045 6887593 Fax +39 045 6862456	(VR)			
responsible for the Safety Data Sheet Product distribution by:	msds@tenax.it Tenax Usa 7606 Whitehall Executive Center Drive Suite Tel. 001 7045831173 - Fax 001 7045833166 info@tenaxusa.com	400, 28273 Charlotte NC, US			
1.4. Emergency telephone number					
For urgent inquiries refer to	Infotrac US and Canada: 1-800-535-5053 Int'l: 1-352-323-3500 info@infotrac.net				
2. Hazards identification					
2.1. Classification of the substance or mixture					
The product is classified as hazardous pursuant to 1910.1200). The product thus requires a safety data		ication Standard (HCS) (29 CFR			

Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Classification and Hazard Statement Acute toxicity, category 4 Acute toxicity, category 4 Skin corrosion, category 1 Serious eye damage, category 1 Skin sensitization, category 1

Hazard pictograms:





Danger

Harmful if swallowed. Harmful if inhaled. Causes severe skin burns and eye damage. Causes serious eye damage. May cause an allergic skin reaction.

Revision nr.5 Dated 2/11/2020 Printed on 11/6/2020 Page n. 2 / 12 Replaced revision:4 (Dated 11/18/2019)

2. Hazards identification .../

Hazard statements:				
H302+H332	Harmful if swallowed or if inhaled.			
H314				
H317 May cause an allergic skin reaction.				
Precautionary stateme	nts:			
Prevention:				
P260	Do not breathe dust / fume / gas / mist / vapours / spray.			
P280 P270	Wear protective gloves/ protective clothing / eye protection / face protection. Do not eat, drink or smoke when using this product.			
P270 P271	Use only outdoors or in a well-ventilated area.			
P264	Wash the hands thoroughly after handling.			
P272	Contaminated work clothing should not be allowed out of the workplace.			
Response:				
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.			
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.			
P303+P361+P353 P310	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water / shower.			
P304+P340	Immediately call a POISON CENTER / doctor / IF INHALED: remove person to fresh air and keep comfortable for breathing.			
P330	Rinse mouth.			
P302+P352	IF ON SKIN: wash with plenty of water /			
P301+P312	IF SWALLOWED: Call a POISON CENTER / doctor / / if you feel unwell.			
P363	Wash contaminated clothing before reuse.			
Storage:	Stare leaked up			
P405 Disposal:	Store locked up.			
P501	Dispose of contents / container according to applicable law.			
The mixture contains 6	4.50% of components of unknown acute inhalation toxicity.			
2.2. Other hazards				
Z.Z. Other hazarus				
Environmental classification as for Reg. (EU) 1272/2008 (CLP):				
The product is classifie	d as hazardous for environment pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP).			
Classification and Haza Hazardous to the ac	ard Statement quatic environment, chronic toxicity, category 3 Harmful to aquatic life with long lasting effects.			
Hazard statements: H412	Harmful to aquatic life with long lasting effects.			
Precautionary stateme	nts:			
Prevention:				
P273	Avoid release to the environment.			
Response:				
Storage:	-			
Storage.	-			
Disposal: <b>P501</b>	Dispose of contents / container according to applicable law.			
Additional hazards Corrosive to the res	piratory tract			
s. composition/in	formation on ingredients			
3.2. Mixtures				
Contains:				
Identification	x = Conc. % Classification:			
POLYETHERAMINE				
CAS 9046-1	0-0 52 ≤ x < 54 Skin corrosion, category 1B H314, Serious eye damage, category 1 H318,			
	Hazardous to the aquatic environment, chronic toxicity, category 3 H412			
EC 618-56	1-0			
INDEX				
1				

Revision nr.5 Dated 2/11/2020 Printed on 11/6/2020 Page n. 3 / 12 Replaced revision:4 (Dated 11/18/2019)

#### 3. Composition/information on ingredients

#### 

	DIAMINE		
CAS	1477-55-0	14.5 ≤ x < 15.5	Acute toxicity, category 4 H302, Acute toxicity, category 4 H332, Skin corrosion, category 1B H314, Serious eye damage, category 1 H318, Skin sensitization, category 1 H317, Hazardous to the aquatic environment, chronic toxicity, category 3 H412
EC	216-032-5		
INDEX			
BENZYL ALC	COHOL		
CAS	100-51-6	9.5 ≤ x < 10.5	Acute toxicity, category 4 H302, Acute toxicity, category 4 H332
EC	202-859-9		
INDEX	603-057-00-	-5	
3-AMINOME	THYL 3,5,5-TR	IMETHYLCYCLOH	EXYLAMINE
CAS	2855-13-2	9.5 ≤ x < 10.5	Acute toxicity, category 4 H302, Acute toxicity, category 4 H312, Skin corrosion, category 1B H314, Serious eye damage, category 1 H318, Skin sensitization, category 1 H317, Hazardous to the aquatic environment, chronic toxicity, category 3 H412
EC	220-666-8		
INDEX	612-067-00-	-9	
AMINOETHY	L AMINOPRO	PYL TRIMETHOXY	SILANE
CAS	1760-24-3	1.5 ≤ x < 2	Acute toxicity, category 4 H302, Acute toxicity, category 4 H332,
			Serious eye damage, category 1 H318, Skin irritation, category 2 H315, Skin sensitization, category 1 H317
EC INDEX	217-164-6		

\* There is a batch to batch variation.

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

#### 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

#### 5. Fire-fighting 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.

#### 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.

Revision nr.5 Dated 2/11/2020 Printed on 11/6/2020 Page n. 4 / 12 Replaced revision:4 (Dated 11/18/2019)

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERSNormal 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).

#### 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. 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.

#### 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)

Information not available

#### 8. Exposure controls/personal protection

#### 8.1. Control parameters

**Regulatory References:** 

USA	NIOSH-REL	NIOSH publication No. 2005-149, 3th printing, 2007.
USA	CAL/OSHA-PEL	California Division of Occupational Safety and Health (Cal-OSHA) Permissible Exposure Limits
		(PELs).
	TLV-ACGIH	ACGIH 2019

уре	Country	TWA/8h		STEL/15	min	Remarks / Observations	
		mg/m3	ppm	mg/m3	ppm		
LV-ACGIH	-	-		0.1			
AL/OSHA	USA	0.1				SKIN	
IOSH	USA			0.1 (C)		SKIN	

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

# Tenax Spa

Revision nr.5 Dated 2/11/2020 Printed on 11/6/2020 Page n. 5 / 12 Replaced revision:4 (Dated 11/18/2019)

#### 8. Exposure controls/personal protection ..../

#### 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 comply with current regulations. HAND PROTECTION

Protect hands with category III work gloves (OSHA 29 CFR 1910.138).

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 I professional long-sleeved overalls and safety footwear. Wash body with soap and water after removing protective clothing. EYE PROTECTION

Wear airtight protective goggles (OSHA 29 CFR 1910.133).

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, wear a mask with a NIOSH certified filter, whose class must be chosen according to the limit of use concentration (NIOSH 42 CFR 84, OSHA 29 CFR 1910.134). 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 or external air-intake breathing apparatus. For a correct choice of respiratory protection device, see standard NIOSH 42 CFR 84, OSHA 29 CFR 1910.134.

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.

#### 9. Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Properties Appearance Colour Odour Odour threshold pH Melting point / freezing point Initial boiling point Boiling range Flash point Evaporation Rate Flammability of solids and gases Lower inflammability limit Upper inflammability limit Lower explosive limit Upper explosive limit Upper explosive limit Vapour pressure Vapour density Relative density Solubility Partition coefficient: n-octanol/water Auto-ignition temperature	>	Value liquid colourless amino Not available Not available 1 g/cc partially soluble in water Not available Not available Not available Not available Not available	(212 °F)	Information
		. ,		
Decomposition temperature		Not available		
Viscosity		Not available		
Explosive properties		Not available		
Oxidising properties		Not available		
9.2. Other information				

Information not available

Revision nr.5 Dated 2/11/2020 Printed on 11/6/2020 Page n. 6 / 12 Replaced revision:4 (Dated 11/18/2019)

#### 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 above 870°C/1598°F.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.

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

May react dangerously with: strong oxidising agents, concentrated inorganic acids.

**BENZYL ALCOHOL** 

May react dangerously with: hydrobromic acid, iron, oxidising agents, sulphuric acid. Risk of explosion on contact with: phosphorus trichloride.

#### 10.4. Conditions to avoid

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

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE Avoid contact with: strong acids,strong oxidants.

BENZYL ALCOHOL

Avoid exposure to: air, sources of heat, naked flames.

10.5. Incompatible materials

BENZYL ALCOHOL

Incompatible with: sulphuric acid,oxidising substances,aluminium. 10.6. Hazardous decomposition products

Information not available

### **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.

#### 11.1. Information on toxicological effects

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

Corrosive to the respiratory tract.

@EPY 9.11.3 - SDS 1004.13

Revision nr.5 Dated 2/11/2020 Printed on 11/6/2020 Page n. 7 / 12 Replaced revision:4 (Dated 11/18/2019)

#### 11. Toxicological information ... / :

BENZYL ALCOHOL LD50 (Oral) LD50 (Dermal) LC50 (Inhalation)

POLYETHERAMINE LD50 (Oral) LD50 (Dermal)

METAXYLENDIAMINE LD50 (Oral) LD50 (Dermal) LC50 (Inhalation)

SKIN CORROSION / IRRITATION

Corrosive for the skin

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

#### GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

#### CARCINOGENICITY

Does not meet the classification criteria for this hazard class

#### REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

#### STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

#### ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

#### 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	770 mg/l/96h Pimephales promelas
EC50 - for Crustacea	230 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	770 mg/l/72h Pseudokirchneriella subcapitata
Chronic NOEC for Crustacea	51 mg/l Daphnia magna

1230 mg/kg Rat 2000 mg/kg Rabbit > 4.1 mg/l/4h Rat

> 480 mg/kg rat> 1560 mg/kg rabbit

930 mg/kg rat > 3100 mg/kg rabbit 1.34 mg/l rat (fog)

# Tenax Spa

Revision nr.5 Dated 2/11/2020 Printed on 11/6/2020 Page n. 8 / 12 Replaced revision:4 (Dated 11/18/2019)

### 12. Ecological information ...

POLYETHERAMINE				
LC50 - for Fish	> 464 mg/l/96h Leuciscus idus			
EC50 - for Crustacea	15 mg/l/48h Daphnia magna			
EC10 for Algae / Aquatic Plants	450 mg/l/72h Pseudomonas putida			
METAXYLENDIAMINE				
LC50 - for Fish	87.6 mg/l/96h oryzias latipes			
EC50 - for Crustacea	15.2 mg/l/48h daphnia magna			
EC50 - for Algae / Aquatic Plants	20.3 mg/l/72h selenastrum capricornutum			
Chronic NOEC for Crustacea	4.7 mg/l 21d			
Chronic NOEC for Algae / Aquatic Plants	10.5 mg/l 72 h			
12.2. Persistence and degradability				

BENZYL ALCOHOL Rapidly degradable

#### 3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

Solubility in water NOT rapidly degradable 1000 - 10000 mg/l

POLYETHERAMINE NOT rapidly degradable

METAXYLENDIAMINE Entirely degradable

#### 12.3. Bioaccumulative potential

#### **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  $\geq$  than 0,1%.

#### 12.6. Other adverse effects

Information not available

#### 13. Disposal considerations

#### 13.1. Waste treatment methods

Reuse, when possible. Neat product residues should be considered special non-hazardous waste. 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.

Revision nr.5 Dated 2/11/2020 Printed on 11/6/2020 Page n. 9 / 12 Replaced revision:4 (Dated 11/18/2019)

#### 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. (POLYOXYPROPYLENEDIAMINE; METAXYLENDIAMINE)IMDG:AMINES, LIQUID, CORROSIVE, N.O.S. (POLYOXYPROPYLENEDIAMINE; METAXYLENDIAMINE)IATA:AMINES, LIQUID, CORROSIVE, N.O.S. (POLYOXYPROPYLENEDIAMINE; METAXYLENDIAMINE)

#### 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	Limited Quantities: 1 L	Tunnel restriction code: (E)
	Special Provision: -		
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 Instructions:	A3, A803	

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

Information not relevant

### **15. Regulatory information**

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Federal Regulations

TSCA: All components are listed on TSCA Inventory.

Clean Air Act Section 112(b): No component(s) listed.

Clean Air Act Section 602 Class I Substances: No component(s) listed.

Revision nr.5 Dated 2/11/2020 Printed on 11/6/2020 Page n. 10 / 12 Replaced revision:4 (Dated 11/18/2019)

15. Regulatory information ... />

Clean Air Act Section 602 Class II Substances: No component(s) listed.

Clean Water Act – Priority Pollutants: No component(s) listed.

Clean Water Act – Toxic Pollutants: No component(s) listed.

DEA List I Chemicals (Precursor Chemicals): No component(s) listed.

DEA List II Chemicals (Essential Chemicals): No component(s) listed.

EPA List of Lists: 313 Category Code: No component(s) listed.

EPCRA 302 EHS TPQ: No component(s) listed.

EPCRA 304 EHS RQ: No component(s) listed.

CERCLA RQ: No component(s) listed.

EPCRA 313 TRI: No component(s) listed.

RCRA Code: No component(s) listed.

CAA 112 (r) RMP TQ: No component(s) listed.

State Regulations

#### Massachussetts: 1477-55-0

1477-55-0	METAXYLENDIAMINE
100-51-6	BENZYL ALCOHOL

## Minnesota:

5-0	METAXYLENDIAMINE
-6	BENZYL ALCOHOL

### New Jersey:

100-51

1477-55-0METAXYLENDIAMINE2855-13-23-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

New York: No component(s) listed.

Pennsylvania:

1477-55-0	METAXYLENDIAMINE
100-51-6	BENZYL ALCOHOL

#### California: 1477-55-0

0 METAXYLENDIAMINE

#### Proposition 65:

This product does not contain any substances know to the State of California to cause cancer, reproductive harm or birth defects.

#### International Regulations

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None

Substances subject to the Rotterdam Convention:

# Tenax Spa

Revision nr.5 Dated 2/11/2020 Printed on 11/6/2020 Page n. 11 / 12 Replaced revision:4 (Dated 11/18/2019)

15. Regulatory information ... / >>

#### None

Substances subject to the Stockholm Convention: None

Candadian WHMIS Information not available

#### 16. Other information

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

H302	Harmful if swallowed.
H302+H332	Harmful if swallowed or if inhaled.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H412	Harmful to aquatic life with long lasting effects.

LEGEND:

- 313 CATEGORY CODE: Emergency Planning and Community Right-to Know Act Section 313 Category Code
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAA 112 ® RMP TQ: Risk Management Plan Threshold Quantity (Clean Air Act Section 112®)
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CERCLA RQ: Reportable Quantity (Comprehensive Environment Response, Compensation, and Liability Act)
- CLP: EC Regulation 1272/2008
- DEA: Drug Enforcement Administration
- EmS: Emergency Schedule
- EPA: US Environmental Protection Agency
- EPCRA: Emergency Planning and Community Right-to Know Act
- EPCRA 302 EHS TPQ: Extremely Hazardous Substance Threshold Planning Quantity (Section 302 Category Code)
- EPCRA 304 EHS RQ: Extremely Hazardous Substance Reportable Quantity (Section 304 Category Code)
- EPCRA 313 TRI: Toxics Release Inventory (Section 313 Category Code)
- 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
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PEL: Predicted exposure level
- RCRA Code: Resource Conservation and Recovery Act Code
- REL: Recommended exposure limit
- 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.
- TSCA: Toxic Substances Control Act
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- WHMIS: Workplace Hazardous Materials Information System.

#### GENERAL BIBLIOGRAPHY:

- GHS rev. 3
- The Merck Index. 10th Edition
- Handling Chemical Safety
- Niosh Registry of Toxic Effects of Chemical Substances
- INRS Fiche Toxicologique (toxicological sheet)
- Patty Industrial Hygiene and Toxicology
- N.I. Sax Dangerous properties of Industrial Materials-7, 1989 Edition
- ECHA website

- 6 NYCRR part 597

- Database of SDS models for chemicals Ministry of Health and ISS (Istituto Superiore di Sanità) Italy
- Cal/OSHA website

Revision nr.5 Dated 2/11/2020 Printed on 11/6/2020 Page n. 12 / 12 Replaced revision:4 (Dated 11/18/2019)

#### 16. Other information ....

- California Safe Drinking Water and Toxic Enforcement Act- EPA website
- Hazard Comunication Standard (HCS 2012)
- IARC website
- List Of Lists EPA: Consolidated List of Chemicals Subject to EPCRA, CERCLA and Section 112® of the Clean Air Act
- Massachussetts 105 CMR Department of public health 670.000: "Right to Know"
- Minensota Chapter 5206 Departemnt Of Labor and Industry Hazardous Substances, Employee "Right to Know".
- New Jersey Worker and Community Right to know Act N.J.S.A.
- NTP. 2011. Report on Carcinogens, 12th Edition.
- OSHA website
- Pennsylvania, Hazardous Substance List, Chapter 323

#### 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

Product classification derives from criteria established by the OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200), unless determined otherwise in Section 11 and 12. The data for evaluation of chemical-physical properties are reported in section 9.

Changes to previous review: The following sections were modified: 08 / 12. Changed TLVs in section 8.1 for following countries: USA,