



**Material Safety
Data Sheet
ninth review
of 30.09.2009**

Xepox 226.4 component A

Floor

Material Safety Data Sheet complying with Regulation (EC) no. 1907/2006 of 18.12.2006

1. SUBSTANCE/PREPARATION AND COMPANY IDENTIFICATION

1.1. Substance/preparation and Company identification:

Code: **XEPOX 226.4 (comp. A)**
Name: **XEPOX 226.4 component A**

1.2. Substance/preparation use: resin for a structural epoxy adhesive preparation for professional use in the building sector. Recommended for gluing together timber, metal, concrete, and brick structural elements.

1.3. Company identification:

Company name: **Cenci Legno s.a.s.**
Address: piazza Alessandro Volta, 33
Town and State: 22100 – COMO - ITALIA
Telephone and fax: Tel. (031) 26.78.13 - Fax (031) 26.78.16
E-mail of the person in charge of the material safety data sheet: cencilegno@cenci.com

1.4. Telephone number for emergency calls: (348) 79.063.70

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance/preparation:

The preparation is classified as hazardous pursuant to the provisions of Directives 67/548/EEC and 1999/45/EC and subsequent amendments and adjustments. This preparation therefore requires a material safety data sheet complying with the provisions of Regulation (EC) 1907/2006 and subsequent amendments. Any additional information on health and/or environmental hazards is described in sections 11 and 12 of this sheet.

Hazard symbols: Xi-N

R Phrases..... : 36/38-43-51/53

2.2 Identification of hazards:

IRRITATING TO EYES AND SKIN.
MAY CAUSE SENSITIZATION BY SKIN CONTACT.
TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.

The product contains epoxy resin. The manufacturer's information is as follows: on the basis of the epoxy component properties and taking into account toxicological data of similar products, this preparation may cause sensitization to the skin and respiratory tract and irritation. It contains low molecular weight epoxy components, which are irritating to eyes, mucosa and skin. Repeated contact with skin may cause sensitization, which may

Cenci Legno sas

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extend to other epoxy components (cross-sensitization). It is therefore necessary to avoid skin contact with the product and exposure to its vapours and aerosols.

3. COMPOSITION/INFORMATION ON INGREDIENTS

The product contains:

Name	C.A.S. Number	EC Number	INDEX Number	Concentration	Classification
Oxirane, mono (C12-14-alkyloxy) methyl derivatives	68609-97-2	271-846-8	603-103-00-4	$3 \leq C < 5$	Xi R 36/38 Xi R 43
1,4-Bis (2,3-epoxypropoxy) butane	2425-79-8	219-371-7	603-072-00-7	$1 \leq C < 3$	Xn R 20/21 Xi R 36/38 Xi R 43
Epoxy Resin from bisphenol A (average MW < 700)	25068-38-6	500-033-5	603-074-00-8	$50 \leq C < 75$	Xi R 36/38 Xi R 43 N R 51/53

R 20/21: Harmful by inhalation and skin contact.

R 36/38: Irritating to eyes and skin.

R 43: May cause sensitization by skin contact.

R 51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. 4. FIRST AID MEASURES

EYE CONTACT: Rinse immediately with plenty of water for at least 15 minutes. Seek medical advice immediately.

SKIN CONTACT: Wash immediately with plenty of water. Take off immediately all contaminated clothing. If irritation persists, seek medical advice. Wash contaminated clothing before reuse.

INHALATION: Remove casualty to fresh air. If breathing is difficult, seek medical advice immediately.

INGESTION: Seek medical advice immediately. Induce vomiting only if instructed by the physician. Never give anything by mouth to an unconscious person and if not authorized by the physician.

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5. FIRE FIGHTING MEASURES

Protection of fire fighters: Wear positive pressure respirators and fire fighter protective clothing.
COOL CONTAINERS EXPOSED TO FIRE WITH WATER .

Non flammable product.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions:

Keep away from open flame or spark. No smoking. Avoid contact with skin, eyes and clothing. Do not breathe vapour or dust. Wear protective clothing (see section 8).

6.2. Environmental precautions:

Do not empty the product into drains. Do not contaminate surface water. Prevent penetration into soil.

6.3. Clean-up procedures:

Soak up with inert absorbent material (sand, sawdust, diatomite, universal binder, vermiculite) and dispose of residual spillage as indicated in section 13 below.

7. HANDLING AND STORAGE

7.1. Handling:

Comply with precautionary measures normally adopted when handling chemical products. Ensure sufficient air exchange and/or exhaust in working areas. Wear mask with an organic vapour combination filter type A2/P2 (particulate, solid/gas and organic vapour). Open and handle the container with care.

7.2. Storage class VCI: 10 (liquids dangerous for the environment).

8. EXPOSURE CONTROL / PERSONAL PROTECTION

8.1 Exposure limit values:

Description	Type	State	TWA/8h mg/m ³	ppm	STEL/15 min mg/m ³	Ppm	
Titanium Dioxide	TLV-ACGIH		10				

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8.2. Exposure control:

As the use of adequate technical measures must always take priority over the use of personal protection equipment, make sure that the workplace is well aired through effective local aspiration or bad air vent. If such operations do not make it possible to keep product concentration below the permitted workplace exposure limit values, a suitable respiratory tract protection equipment must be used. When using the product refer to the chemical hazard label for details. Ask your chemical substance suppliers for advice when choosing personal protection equipment. Personal protection devices must comply with the rules in force indicated below.

HAND PROTECTION

Protect hands with category II (ref. Directive 89/686/EEC and standard EN 374) work gloves, such as those in PVC, neoprene, nitrile or equivalent. The following should be considered when making the final choice of work glove material: degradation, breakage times and permeation. Work glove resistance to preparation should be checked before use, as it can be unpredictable. Gloves tear and wear limit depends on the duration of exposure.

EYE PROTECTION

Wear protective air-tight goggles (ref. Standard EN 166).

SKIN PROTECTION

Wear category II professional long-sleeved overalls and safety footwear (ref. Directive 89/686/EEC and standard EN 344). Wash with soap and water after removing protective clothing.

RESPIRATORY PROTECTION

If the threshold value for one or more of the substances present in the preparation for daily exposure in the workplace or to a fraction established by the company's prevention and protection service is exceeded, wear a mask with a B or universal filter, the class (1,2 or 3) whereof must be chosen according to the limit concentration of use (ref. standard EN 141). The use of respiratory protection equipment, such as masks with organic vapour and dust/mist cartridges, is necessary in the absence of technical measures limiting worker exposure. The protection provided by masks is in any case limited. If the substance is odourless or its olfactory threshold is higher than the relevant exposure limit and in the event of an emergency, or when exposure levels are unknown or the concentration of oxygen in the workplace is less than 17% volume, wear self-contained, open-circuit compressed air breathing apparatus (ref. standard EN 137) or fresh air hose breathing apparatus for use with full face mask, half mask or mouthpiece (ref. standard EN 138). An emergency eye washing and shower system must be provided.

9. PHYSICAL AND CHEMICAL PROPERTIES

Colour	white
Odour	mildly aromatic
Appearance	viscous liquid
Solubility	not available
Viscosity	not available
Vapour density	not applicable
Viscosity at 25°C (mPa.s)	approx. 14.000 mPas
Combustion properties	none
Partition coefficient: n-octanol/water	not available
pH	approx. 7 (1 kg/1.1 of water)
Boiling point	not available
Flashpoint	> 80°C
Explosive properties	none

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Vapour tension	< 0,1 hPa a 20°C
Specific gravity	1,45 g/cm ³
VOC (Directive 199/13/EC)	0.53%
VOC (volatile carbon)	0.41%

10. STABILITY AND REACTIVITY

Thermal decomposition and combustion release carbon oxides and other toxic and vapours. Exothermic reactions are possible after contact with strong oxidizers, reducers, acids or bases.

Referred to Oxiran, mono (C12-14-alkyloxy) methyl derivatives:

Partially violent reactions with organic products and/or bases such as amines and alcohols.

Polymerization with heat release.

Exothermic reaction with amines/epoxy resin catalysts.

Conditions to avoid: Stable under normal circumstances.

Substances to avoid: Acids, amines, bases and oxidizers with which it reacts with considerable heat release (exothermic reaction).

Decomposition hazards: Incomplete combustion generates carbon oxide and/or phenol oxides, it decomposes prior to boiling point.

Other chemical reactivity: Strong exothermic reaction with amines.

11. TOXICOLOGICAL INFORMATION

Acute effects: skin contact causes irritation; symptoms may include: erythema, oedema, pain or lacrimation. Skin contact causes irritation with erythema, oedema, dryness and scaling. Vapour inhalation may cause minor irritation of the upper respiratory tract. Ingestion may cause health problems, including abdominal pain with burning, nausea and vomiting.

Skin contact with the product causes sensitization (contact dermatitis). Dermatitis originates from skin inflammation, which starts in areas that are repeatedly in contact with the sensitization agent. Skin lesions may include erythema, oedema, papules, vesicles, pustules, scales, fissures and exudation, varying according to the stages of the illness and of the areas concerned. In the acute stage, erythema, oedema and exudation are the prevailing symptoms. When illness is chronic, scales, dryness, fissures and skin thickness prevail.

Referred to: 1,4-Bis (2,3-epoxypropoxy) butane

LD50 (oral, rat) > 3.000 mg/Kg

Irritability: irritating to eyes, skin and mucosa

May cause sensitization by skin contact.

Referred to Diisononyl phthalate: LD 50 oral (rat): > 10 g/Kg

Data referred to epoxy resin from bisphenol A epichlorhydrin (average MW ≤ 700)

LD50 (oral, rat) : 2,000 mg/Kg

LD50 (dermal, rabbit) : 2,000 mg/Kg

No foreseeable hazard by occasionally ingesting small quantities

Primary irritability:

Skin: Repeated exposure may cause irritation to skin.

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Eyes: Mild, transient irritation.

Sensitization: May cause sensitization by skin contact.

TITANIUM DIOXIDE: oral LD50 (mg/Kg) >10.000 (RAT).

CALCIUM CARBONATE: oral LD50 (mg/Kg) 6.450 (RAT).

12. ECOLOGICAL INFORMATION

The product is to be considered environmentally hazardous and toxic to aquatic organisms, and may cause long-term adverse effects in the aquatic environment.

Data referred to epoxy resin from bisphenol A epichlorhydrin (average MW ≤ 700)

The expected log octanol/water partition coefficient (Log Pow) is 2.8-4.

The product may cause long-term adverse effects in the aquatic environment (Log Pow > 3.0)

The degradation achieved after 20 days with the Closed Bottle Test is 0% ;
after 28 days ("closed bottle" test (OECD Test 301 D)) the result is 2-3%.

13. DISPOSAL CONSIDERATIONS

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 authorized waste management firm, in compliance with national and local regulations.

13.1 Contaminated packaging:

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

14. TRANSPORT INFORMATION

Transport is to be provided with vehicles authorized to carry hazardous goods, in accordance with the provisions of the A.D.R. agreement edition in force and applicable national regulations.

Transport must be carried out with the original packaging or with invulnerable packaging materials, incapable of generating dangerous reactions with the content. Workers in charge of loading and unloading of hazardous goods must have had appropriate training on risks connected to the preparation and any procedures to be adopted in the event of emergencies.

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14.1. Road or rail transport:

ADR/RID Class: 9
UN: 3082
Packing Group: III
Label: 9
N. Kemler: 90
Limited Quality: LQ07
Tunnel restriction code: (E)
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.A.S.
(Epoxy Resin from Bisphenol A (average MW < 700);
(Oxiran, mono (C12-14-alkyloxy) methyl derivs).



14.2. Sea transport:

IMO Class: 9
UN: 3082
Packing Group: III
Label: 9
EMS: F-A, S-F
Marine Pollutant: YES
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(reaction product: bisphenol-A-epichlorhydrin);
(Oxiran, mono (C12-14-alkyloxy) methyl derivs).



14.2. Air transport:

IATA: 9
UN: 3082
Packing Group: III
Label: 9
Cargo: Packing instructions: 914 Maximum quantity: 450 L
Pass.: Packing instructions: 914 Maximum quantity: 450 L
Specific instructions: A97, A158
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(reaction product: bisphenol-A-epichlorhydrin);
(Oxiran, mono (C12-14-alkyloxy) methyl derivs).



15. REGULATORY INFORMATION



IRRITANTE



PERICOLOSO PER L'AMBIENTE

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R 36/38	IRRITATING TO EYES AND SKIN.
R 43	MAY CAUSE SENSITIZATION BY SKIN CONTACT.
R 51/53	TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.
S 24/25	AVOID CONTACT WITH EYES AND SKIN.
S 26	IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.
S 29	DO NOT EMPTY INTO DRAINS.
S 37	WEAR SUITABLE GLOVES.
S 61	AVOID RELEASE TO THE ENVIRONMENT. REFER TO SPECIAL INSTRUCTIONS/SAFETY DATA SHEETS.

Contains epoxy resins. Please read manufacturers' information.

Contains: Oxiran, mono (C12-14-alkyloxy) methyl derivs
1,4-Bis (2,3-epoxypropoxy) butane
Epoxy Resin from Bisphenol A (average MW < 700)

Danger labelling under Directives 67/548/EEC and 1999/45/EC and subsequent amendments and adjustments.

Workers exposed to this hazardous chemical agent must undergo health checks provided for by art. 41 of Legislative Decree 81 of 9 April 2008, unless the health and safety hazard for the worker has been valued modest, according to the provisions of art. 224, sub-paragraph 2.

16. OTHER INFORMATION

16.1. Text of Risk (R) Phrases quoted in section 3 of the sheet:

R 20/21	HARMFUL BY INHALATION AND SKIN CONTACT.
R 36/38	IRRITATING TO EYES AND SKIN.
R 43	MAY CAUSE SENSITIZATION BY SKIN CONTACT.
R 51/53	TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.

16.2. General bibliography:

1. Directive 1999/45/EC and subsequent amendments
2. Directive 67/548/EEC and subsequent amendments and adjustments (technical adjustment XXIX)
3. Regulation (EC) 1272/2008 (CLP) of the European Parliament
4. Regulation (EC) 1907/2006 (REACH) of the European Parliament
5. The Merck Index. Ed. 10
6. Handling Chemical Safety
7. Niosh – Registry of Toxic Effects of Chemical Substances
8. INRS – Fiche Toxicologique
9. Patty – Industrial Hygiene and Toxicology
10. N.I. Sax – Dangerous properties of Industrial Materials-7 Ed., 1989

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16.3. Note for users:

The information contained in this sheet is based on our own knowledge at the date of the last review. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

The document must not be regarded as a guarantee on any specific product property.

The use of this product is not under our direct control; therefore, users must comply, under their own responsibility, with the current health and safety laws and regulations. The manufacturer is relieved of any liability arising from improper use.

16.4. Changes from previous review:

All sections of the previous safety data sheet have been modified.

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1. SUBSTANCE/PREPARATION AND COMPANY IDENTIFICATION

1.1. Substance/preparation and Company identification:

Code: **XEPOX 226.4 (comp. B)**
Name: **XEPOX 226.4 component B**

1.2. Substance/preparation use: hardener for a structural epoxy adhesive preparation for professional use in the building sector. Recommended for gluing together timber, metal, concrete, and brick structural elements.

Company identification:

Company name: **Cenci Legno s.a.s.**
Address: piazza Alessandro Volta, 33
Town and State: 22100 – COMO - ITALIA
Telephone and fax: Tel. (031) 26.78.13 - Fax (031) 26.78.16
E-mail of the person in charge
of the material safety data sheet: cencilegno@cenci.com

1.4. Telephone number for emergency calls: (348) 79.063.70

2. HAZARDS IDENTIFICATION

2.1. The preparation is classified as hazardous pursuant to the provisions of Directives 67/548/EEC and 1999/45/EC and subsequent amendments and adjustments. This preparation therefore requires a material safety data sheet complying with the provisions of Regulation (EC) 1907/2006 and subsequent amendments. Any additional information on health and/or environmental hazards is described in sections 11 and 12 of this sheet.

Hazard symbols: C

R Phrases..... : 20/21/22-34-43-52/53

2.2 Identification of hazards:

HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
CAUSES BURNS.

MAY CAUSE SENSITIZATION BY SKIN CONTACT.

HARMFUL TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.

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3. COMPOSITION/INFORMATION ON INGREDIENTS

The product contains:

Name	C.A.S. Number	EC Number	INDEX Number	Concentration	Classification
2-piperazin-1-ylethylamine	140-31-8	205-411-0	612-105-00-4	$1 \leq C < 3$	N R 52/53 C R 34 XN R 21/22 Xi R 43
Benzyl alcohol	100-51-6	202-859-9	603-057-00-5	$15 \leq C < 20$	Xn R 20/22
1-methoxy-2-propanol	107-98-2	203-539-1	603-064-00-3	$0,1 \leq C < 0,2$	R 10 R 67
3-aminomethyl-3,5,5-trimethylcyclohexylamine	2855-13-2	220-666-8	612-067-00-9	$25 \leq C < 30$	R 52/53 C R 34 Xn R 21/22 Xi R 43

R 10: Flammable.
R 20/22: Harmful by inhalation and if swallowed.
R 21/22: Harmful in contact with skin and if swallowed.
R 34: Causes burns.
R 43: May cause sensitization by skin contact.
R 52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R 67: Vapours may cause drowsiness and dizziness.

4. FIRST AID MEASURES

EYE CONTACT: Rinse immediately with plenty of water for at least 15 minutes. Seek medical advice immediately.

SKIN CONTACT : Remove contaminated clothing and shower. Seek medical advice immediately. Wash contaminated clothing separately before reuse.

INHALATION: Remove casualty to fresh air; if breathing stops or is difficult, give artificial respiration. Seek medical advice immediately.

INGESTION: Seek medical advice immediately. Do not induce vomiting, nor give anything to the casualty if not authorized by the physician.

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5. FIRE FIGHTING MEASURES

5.1. General information:

Cool containers with water spray jet to avoid decomposition of the product and release of potentially hazardous substances. Always wear full protective fire fighter equipment. Collect waters used to extinguish the fire, which must not be emptied into drains. Dispose of water used to extinguish the fire and any fire debris according to applicable regulations.

5.2. Suitable extinguishing media:

Extinguishing media should be of the conventional kind: carbon dioxide, foam, powder and water spray.

5.3. Unsuitable extinguishing media:

None in particular.

5.4. Hazards caused by exposure in the event of fire:

Do not breathe combustion products (carbon oxides, toxic pyrolysis products etc.).

5.5. Equipment:

Protective helmet with face mask, fireproof clothing (fireproof jacket and trousers with straps around arms, legs and waist), work gloves (fireproof, cut resistant and dielectric), a full face overpressure mask or a self contained breathing apparatus in the event of large amounts of smoke.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions:

Remove all possible sources of ignition (cigarettes, open flames, sparks etc.) from the area of leak or spill. In the event of a solid product avoid the formation of dust by spraying the product with water, unless spraying is liable to cause adverse effects. If dust or fumes are released in the air wear respiratory protection. Stop leak or spill provided there is no danger in doing so. Do not handle damaged containers or spilled product before wearing suitable protective clothing. Keep unprotected persons away. For information on environmental and health hazards, respiratory tract protection, ventilation and personal protection equipment please refer to the other sections of this sheet.

6.2. Environmental protection:

Do not allow product to enter drains, surface waters, ground waters and confined areas.

6.3. Clean-up procedures:

Soak up with inert absorbent material (sand, vermiculite, diatomite, Kieselguhr etc.). Collect as much material as possible and place it into containers for disposal. Eliminate residual material with water jets provided there is no danger in doing so. Provide sufficient ventilation to the leak or spill area. Contaminated material should be disposed of in compliance with the provisions set forth in section 13 below.

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7. HANDLING AND STORAGE

7.1. Handling:

Comply with precautionary measures normally adopted when handling chemical products. Avoid contact with skin.

Mechanical or local exhaust ventilation is required.

Air flow must be in the opposite direction to persons. Efficiency of the systems must be checked at regular intervals.

7.2. Storage:

Keep container tightly closed and away from humidity. Keep away from food. Avoid cooling below 5°C and heating above 35°C. Avoid contact with copper and copper alloys.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

8.1 Exposure limit values:

Description	Type	State	TWA/8h mg/m ³	ppm	STEL/15 min mg/m ³	ppm	
2-piperazin-1-ylethylamine	TLV-ACGIH		4,2	0	0	0	
1-methoxy-2-propanol	TLV-ACGIH OEL	EU	369 375	100	553 568	150	Skin Skin

8.2. Exposure control:

As the use of adequate technical measures must always take priority over the use of personal protection equipment, make sure that the workplace is well aired through effective local aspiration or bad air vent. If such operations do not make it possible to keep product concentration below the permitted workplace exposure limit values, a suitable respiratory tract protection equipment must be used. When using the product refer to the chemical hazard label for details. Ask your chemical substance suppliers for advice when choosing personal protection equipment. Personal protection devices must comply with the rules in force indicated below.

HAND PROTECTION

Protect hands with category II (ref. Directive 89/686/EEC and standard EN 374) work gloves, such as those in PVC, butyl, fluoroelastomer or equivalent. The following should be considered when making the final choice of work glove material: degradation, breakage times and permeation. Work glove resistance to preparation should be checked before use, as it can be unpredictable. Gloves tear and wear limit depends on the duration of exposure.

EYE PROTECTION

Wear protective air-tight goggles (ref. standard EN 166).

SKIN PROTECTION

Wear category II professional long-sleeved overalls and safety footwear (ref. Directive 89/686/EEC and standard EN 344). Wash with soap and water after removing protective clothing.

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tel. (031) 26.78.13 - fax (031) 26.78.16 - E-mail: cencilegno@cenci.com



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Xepox 226.4 component B

Floor

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RESPIRATORY PROTECTION

If the threshold value for one or more of the substances present in the preparation for daily exposure in the workplace or to a fraction established by the company's prevention and protection service is exceeded, wear a mask with a B or universal filter, the class (1,2 or 3) whereof must be chosen according to the limit concentration of use (ref. standard EN 141). The use of respiratory protection equipment, such as masks with organic vapour and dust/mist cartridges, is necessary in the absence of technical measures limiting worker exposure. The protection provided by masks is in any case limited. If the substance is odourless or its olfactory threshold is higher than the relevant exposure limit and in the event of an emergency, or when exposure levels are unknown or the concentration of oxygen in the workplace is less than 17% volume, wear self-contained, open-circuit compressed air breathing apparatus (ref. standard EN 137) or fresh air hose breathing apparatus for use with full face mask, half mask or mouthpiece (ref. standard EN 138). An emergency eye washing and shower system must be provided. In the presence of risks of exposure to splashes or squirts during work, adequate protection of the mucosa (mouth, nose, eyes) should be used to avoid accidental absorption.

9. PHYSICAL AND CHEMICAL PROPERTIES

Colour	brown to yellow
Odour	typical of amines
Appearance	viscous liquid
Solubility	not available
Viscosity	not available
Vapour density	not applicable
Viscosity at 25°C (mPa.s)	approx. 11,000 mPa.s
Combustion properties	none
Partition coefficient: n-octanol/water	not available
pH	approx. 12 (1 kg/1.1 of water)
Boiling point	not available
Flashpoint	> 80°C
Explosive properties	none
Vapour tension	< 0,1 hPa a 20°C
Specific gravity	1.45 g/cm ³
VOC (Directive 199/13/EC)	17.13%
VOC (volatile carbon)	13.27%

10. STABILITY AND REACTIVITY

Thermal decomposition and combustion release carbon oxides and other toxic and vapours. Exothermic reactions are possible after contact with strong oxidizers, reducers, acids or bases.

Stable under normal storage conditions.

Reacts violently with concentrated acids, hydrocarbons and oxidants. Corrodes copper and copper alloys.

BENZYL ALCOHOL: reacts violently with strong oxidants and may attack hot aluminium.

3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE: avoid contact with strong oxidants and acids. The formation of toxic nitrous vapours is possible in the event of fire.

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11. TOXICOLOGICAL INFORMATION

Acute effects: the product is harmful if absorbed through the skin and if swallowed. May cause irritation to mucosa and the upper respiratory tract, and to eyes.

Exposure symptoms may include: burning and irritation to eyes, mouth, nose and throat, cough, difficult breathing, dizziness, headache, nausea and vomiting. In serious cases, product inhalation may cause inflammation and oedema of the larynx and bronchi, chemical pneumonia and pulmonary oedema.

The product may cause irritation to the contact area, usually accompanied by an increase in skin temperature, swelling, itch. If swallowed, even a minimum quantity may cause serious damages to health (abdominal pain, nausea, vomiting, diarrhoea).

The product is corrosive and causes burns to the superficial layer of skin, with redness, burning and heat sensation. In serious cases vesiculation may appear, causing strong burning sensation and pain. Contact with eyes causes serious damage, including the possibility of: corneal opacity, iris lesion, irreversible eye pigmentation.

Possible vapours are caustic for the respiratory system and may cause pulmonary oedema, the symptoms whereof may sometimes appear only after a few hours.

Exposure symptoms may include burning sensation, cough, asthma, laryngitis, shortness of breath, headache, nausea and vomiting.

If swallowed, it may cause mouth, throat and oesophagus burns; vomiting, diarrhoea, oedema, larynx swelling, and, consequently, asphyxia. Perforation of the gastrointestinal tract is also possible.

Skin contact with the product causes sensitization (contact dermatitis). Dermatitis originates from skin inflammation, which starts in areas that are repeatedly in contact with the sensitization agent. Skin lesions may include erythema, oedema, papules, vesicles, pustules, scales, fissures and exudation, varying according to the stages of the illness and of the areas concerned. In the acute stage, erythema, oedema and exudation are the prevailing symptoms. When illness is chronic, scales, dryness, fissures and skin thickness prevail.

Data referred to 2-piperazin-1-ylethylamine:

LD50 Oral (Rat): 1.470-2.140 mg/Kg

LD50 Dermal (Rabbit): 880-1,260 mg/Kg

Irritation: Skin (Rabbit) = Corrosive; Eyes (Rabbit) = Corrosive

Sensitizer: YES

Genotoxicity: Negative, no evidence of in vivo genotoxic effects.

Inhalation: May cause irritation to nose, throat and respiratory tract..

Skin: Irritating, risk of chemical burns.

Repeated contact may cause sensitization.

Eyes: Causes burns, risk of serious damage to eyes.

BENZYL ALCOHOL: oral LD50 (mg/Kg) 1,230 (RAT); dermal LD50 (mg/Kg) 2,000 (RABBIT).

CALCIUM CARBONATE: oral LD50 (mg/Kg) 6,450 (RAT).

12. ECOLOGICAL INFORMATION

The product is to be considered environmentally hazardous and toxic to aquatic organisms, and may cause long-term adverse effects in the aquatic environment.

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Data referred to 2-piperazin-1-ylethylamine:

LC50 (96h) : Oncorhynchus mykiss > 100 mg/l

EC50 (48h) : Daphnia magna 32 mg/l

EC50 (72h) : Algae > 300 mg/l

Not readily biodegradable. < 60% BOD, 28 gg, Closed bottle test (OECD 301D)

Bioaccumulation: not expected, given that log Pow = - 1.48.

BENZYL ALCOHOL

EC50 (48h) > 10 mg/l Daphnia magna

IC50 (72h) > 100 mg/l algae

LC50 (96h) > 10 mg/l fish

13. DISPOSAL CONSIDERATIONS

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 authorized waste management firm, in compliance with national and local regulations.

13.1 Contaminated packaging:

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

14. TRANSPORT INFORMATION

Transport is to be provided with vehicles authorized to carry hazardous goods, in accordance with the provisions of the A.D.R. agreement edition in force and applicable national regulations.

Transport must be carried out with the original packaging or with invulnerable packaging materials, incapable of generating dangerous reactions with the content. Workers in charge of loading and unloading of hazardous goods must have had appropriate training on risks connected to the preparation and any procedures to be adopted in the event of emergencies.

14.1. Road or rail transport:

ADR/RID Class: 8

UN: 2735

Packing Group: III

Label: 8

Kemler No.: 80

Limited Quality: LQ07

Tunnel restriction code: (E)

Proper shipping name: AMINES LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S.
(3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE)
(2-piperazin-1-ylethylamine)



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14.2. Sea transport:

IMO Class: 8
UN: 2735
Packing Group: III
Label: 8
EMS: F-A, S-B
Marine Pollutant: NO
Proper Shipping Name: AMINES LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID,
CORROSIVE, N.O.S.
(3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE)
(2-piperazin-1-ylethylamine)



14.2. Air transport:

IATA: 8
UN: 2735
Packing Group: III
Label: 8
Cargo: Packing instructions: 820
Pass.: Packing instructions: 818
Specific instructions: A3
Proper Shipping Name: AMINES LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID,
CORROSIVE, N.O.S.
(3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE)
(2-piperazin-1-ylethylamine)



Maximum quantity: 60 L
Maximum quantity: 5 L

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15. REGULATORY INFORMATION



- R 20/21/22** HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
R 34 CAUSES BURNS.
R 43 MAY CAUSE SENSITIZATION BY SKIN CONTACT.
R 52/53 HARMFUL TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.
- S 26** IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE
S 36/37/39 WEAR SUITABLE PROTECTIVE CLOTHING AND GLOVES AND WEAR EYE/FACE PROTECTION
S 45 IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL SEEK MEDICAL ADVICE IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE)
- Contains: 2-piperazin-1-ylethylamine
3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE

Danger labelling under Directives 67/548/EEC and 1999/45/EC and subsequent amendments and adjustments.

Workers exposed to this hazardous chemical agent must undergo health checks provided for by art. 41 of Legislative Decree 81 of 9 April 2008, unless the health and safety hazard for the worker has been valued modest, according to the provisions of art. 224, sub-paragraph 2.

16. OTHER INFORMATION

16.1. Text of Risk (R) Phrases quoted in section 3 of the sheet:

- R 10** FLAMMABLE.
R 20/22 HARMFUL BY INHALATION AND IF SWALLOWED.
R 21/22 HARMFUL IN CONTACT WITH SKIN AND IF SWALLOWED.
R 34 CAUSES BURNS.
R 43 MAY CAUSE SENSITIZATION BY SKIN CONTACT.
R 52/53 HARMFUL TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.
R 67 VAPOURS MAY CAUSE DROWSINESS AND DIZZINESS.

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16.2. General bibliography:

1. Directive 1999/45/EC and subsequent amendments
2. Directive 67/548/EEC and subsequent amendments and adjustments (technical adjustment XXIX)
3. Regulation (EC) 1272/2008 (CLP) of the European Parliament
4. Regulation (EC) 1907/2006 (REACH) of the European Parliament
5. The Merck Index. Ed. 10
6. Handling Chemical Safety
7. Niosh – Registry of Toxic Effects of Chemical Substances
8. INRS – Fiche Toxicologique
9. Patty – Industrial Hygiene and Toxicology
10. N.I. Sax – Dangerous properties of Industrial Materials-7 Ed., 1989

16.3. Note for users:

The information contained in this sheet is based on our own knowledge at the date of the last review. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

The document must not be regarded as a guarantee on any specific product property.

The use of this product is not under our direct control; therefore, users must comply, under their own responsibility, with the current health and safety laws and regulations. The manufacturer is relieved of any liability arising from improper use.

16.4. Changes from previous review:

All sections of the previous safety data sheet have been modified.

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