Safety data sheet

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

1.1. Product identifier

Code:	**EP450 PART B**
Product name	**POLYPRIME EP450 HARDENER PART B**
Chemical name and synonym	**EPOXY RESIN HARDENING AGENT**

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

Intended use	**EPOXY RESIN HARDENING AGENT**

1.3. Details of the supplier of the safety data sheet

Name	**NCI Chemical Industry Ltd**
Full address	**8 Ipponaktos**
District and Country	**1016 Nicosia** **Cyprus**
	Tel. 22 430805
	Fax 22 435308
e-mail address of the competent person responsible for the Safety Data Sheet	**ncichemicals@cytanet.com.cy**

1.4. Emergency telephone number

For urgent inquiries refer to	**99 623708**

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 Directives 67/548/EEC and 1999/45/EC and/or 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.

2.1.1. Regulation 1272/2008 (CLP) and following amendments and adjustments.

Hazard classification and indication:

Acute Tox. 4	H302
Skin Corr. 1A	H314
Skin Sens. 1A	H317
Aquatic Chronic 2	H411

2.1.2. 67/548/EEC and 1999/45/EC Directives and following amendments and adjustments.

Danger Symbols:
C
R phrases:
10-22-34-43

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

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.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements:

P264	Wash . . . thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves / protective clothing / eye protection / face protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor / physician if you feel unwell.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Contains:

Amines, coco alkyl
3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE
m-phenylenebis(methylamine)
3-AMINOPROPYLDIMETHYLAMINE
FETTSAURE, C18-UNGES., DIMERE, POLYMERE MIT TALLOLFETTSAUREN UND THIETHYLENTETRAMIN
Penol, styrolisiert
2,4,6-TRIS(DIMETHYLAMINOMETHYL) PHENOL

2.3. Other hazards.

Information not available.

SECTION 3. Composition/information on ingredients.

3.1. Substances.

Information not relevant.

3.2. Mixtures.

Contains:

Identification.	**Conc. %.**	**Classification 67/548/EEC.**	**Classification 1272/2008 (CLP).**
FETTSAURE, C18-UNGES., DIMERE, POLYMERE MIT TALLOLFETTSAUREN UND THIETHYLENTETRAMIN			
CAS. 68082-29-1 EC. - INDEX. -	47.5 - 50		Eye Dam. 1 H318, Skin Irrit. 2 H315, Skin Sens. 1A H317, Aquatic Chronic 2 H411
2,4,6-TRIS(DIMETHYLAMINOMETHYL) PHENOL			
CAS. 90-72-2	7 - 8	Xn R22, Xi R36/38	Acute Tox. 4 H302, Eye Irrit. 2 H319, Skin Irrit. 2

			H315
EC. 202-013-9			
INDEX. 603-069-00-0			
3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE			
CAS. 2855-13-2	7 - 8	R52/53, C R34, Xn R21/22, Xi R43	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			
3-AMINOPROPYLDIMETHYLAMINE			
CAS. 109-55-7	7 - 8	R10, C R34, Xn R22, Xi R43	Acute Tox. 4 H302, Acute Tox. 4 H312, Skin Corr. 1C H314, Skin Sens. 1 H317, Aquatic Chronic 3 H412
EC. -			
INDEX. 612-061-00-6			
m-phenylenebis(methylamine)			
CAS. 1477-55-0	7 - 8	R52/53, C R34, Xn R22, Xi R43	Acute Tox. 4 H302, Acute Tox. 4 H332, Skin Corr. 1B H314, Skin Sens. 1 H317, Aquatic Chronic 3 H412
EC. 216-032-5			
INDEX. -			
Naphthalene, bis(1-methylethyl)-			
CAS. 38640-62-9	7 - 8		Asp. Tox. 1 H304, Aquatic Chronic 4 H413
EC. 254-052-6			
INDEX. -			
Reg. no. 01-2119565150-48-xxxx			
Penol, styrolisiert			
CAS. 61788-44-1	7 - 8		Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Chronic 2 H411
EC. 262-975-0			
INDEX. -			
Amines, coco alkyl			
CAS. 61788-46-3	7 - 8		Acute Tox. 4 H302, STOT RE 2 H373, Skin Corr. 1A H314, STOT SE 3 H335
EC. 262-977-1			
INDEX. -			

Note: Upper limit is not included into the range.
The full wording of the Risk (R) and hazard (H) phrases is given in section 16 of the sheet.

The full wording of the Risk (R) and hazard (H) phrases is given in section 16 of the sheet.
T+ = Very Toxic(T+), T = Toxic(T), Xn = Harmful(Xn), C = Corrosive(C), Xi = Irritant(Xi), O = Oxidizing(O), E = Explosive(E), F+ = Extremely Flammable(F+), F = Highly Flammable(F), N = Dangerous for the Environment(N)

SECTION 4. First aid measures.

4.1. Description of first aid measures.

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

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

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.

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.

FOR LIQUID PRODUCTS:
Block the leakage if there is no hazard.
FOR SOLID PRODUCTS:
If there are no contraindications, spray powder with water to prevent the formation of dust. Avoid breathing vapours/mists/gases.
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.

FOR LIQUID PRODUCTS: 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.
FOR SOLID PRODUCTS: Use spark-proof mechanical equipment to collect the leaked product and place it in containers for recovery or disposal. If there are no contraindications, use jets of water to eliminate product residues.
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.

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).

Information not available.

SECTION 8. Exposure controls/personal protection.

8.1. Control parameters.

Information not available.

8.2. Exposure controls.

As the use of adequate technical equipment must always take priority over personal protection equipment, make sure that the workplace is well aired through effective local aspiration.
HAND PROTECTION
Protect hands with category I (ref. Directive 89/686/EEC and standard EN 374) work gloves, such as those in latex, PVC or equivalent. The following should be considered when choosing work glove material: degradation, breakage times and permeation. Work glove resistance to preparations should be checked before use, as it can be unpredictable. Gloves` limit depends on the duration of exposure.
SKIN PROTECTION
Wear category I professional long-sleeved overalls and safety footwear (ref. Directive 89/686/CEE and standard EN 344). Wash body with soap and water after removing overalls.
RESPIRATORY PROTECTION
If the threshold value (if available) 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 an A or universal filter, the class (1, 2 or 3) of which must be chosen according to the limit concentration of use (ref. standard EN 141).
The use of respiratory tract protection equipment, such as masks like that indicated above, is necessary to reduce worker exposure in the absence of technical measures. The protection provided by masks is in any case limited.
If the substance in question is odourless or its olfactory threshold is higher than the relative 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).
EYE PROTECTION
Use of protective airtight goggles (ref. standard EN 166) recommended.

ENVIRONMENTAL EXPOSURE CONTROLS.

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

SECTION 9. Physical and chemical properties.

9.1. Information on basic physical and chemical properties.

Appearance	Not available.
Colour	Not available.
Odour	Not available.
Odour threshold.	Not available.
pH.	Not available.
Melting or freezing point.	Not available.
Initial boiling point.	Not available.
Boiling range.	Not available.
Flash point.	> 100 °C.
Evaporation Rate	Not available.
Flammability of solids and gases	Not available.
Lower inflammability limit.	Not available.
Upper inflammability limit.	Not available.
Lower explosive limit.	Not available.
Upper explosive limit.	Not available.
Vapour pressure.	Not available.
Vapour density	Not available.
Specific gravity.	1,02gr/cm3
Solubility	Not available.
Partition coefficient: n-octanol/water	Not available.
Ignition temperature.	Not available.
Decomposition temperature.	Not available.
Viscosity	1000 mPas
Explosive properties	Not available.
Oxidising properties	Not available.

9.2. Other information.

VOC (Directive 1999/13/EC) :	7.50 %
VOC (volatile carbon) :	5.09 %

SECTION 10. Stability and reactivity.

10.1. Reactivity.

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

10.2. Chemical stability.

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

10.3. Possibility of hazardous reactions.

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

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.

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

10.5. Incompatible materials.

Information not available.

10.6. Hazardous decomposition products.

Information not available.

SECTION 11. Toxicological information.

11.1. Information on toxicological effects.

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. Possible vapours are caustic for the respiratory system and may cause pulmonary edema, whose symptoms sometimes arise only after some hours.
Exposure symptoms may include: sting, 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.
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.

SECTION 12. Ecological information.

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

This product is dangerous for the environment and is toxic for aquatic organisms. In the long term, it have negative effects on acquatic environment.
12.1. Toxicity.
Information not available.

12.2. Persistence and degradability.

Information not available.

12.3. Bioaccumulative potential.

Information not available.

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

SECTION 14. Transport information.

These goods must be transported by vehicles authorized to the carriage of dangerous goods according to the provisions set out in the current edition of the Code of International Carriage of Dangerous Goods by Road (ADR) and in all the applicable national regulations.These goods must be packed in their original packagings or in packagings made of materials resistant to their content and not reacting dangerously with it. People loading and unloading dangerous goods must be trained on all the risks deriving from these substances and on all actions that must be taken in case of emergency situations.

Road and rail transport:

ADR/RID Class:	3	UN:	2924
Packing Group:	III		
Label:	3,8		
Nr. Kemler:	38		
Limited Quantity.	5 L		
Tunnel restriction code.	(D/E)		
Proper Shipping Name:	FLAMMABLE LIQUID, CORROSIVE, N.O.S. (3-AMINOPROPYLDIMETHYLAMINE; FETTSAURE, C18-UNGES., DIMERE, POLYMERE MIT TALLOLFETTSAUREN UND THIETHYLENTETRAMIN)		

Carriage by sea (shipping):

IMO Class:	3	UN:	2924
Packing Group:	III		
Label:	3,8		
EMS:	F-E, S-C		
Marine Pollutant.	NO		
Proper Shipping Name:	FLAMMABLE LIQUID, CORROSIVE, N.O.S. (3-AMINOPROPYLDIMETHYLAMINE; FETTSAURE, C18-UNGES., DIMERE, POLYMERE MIT TALLOLFETTSAUREN UND THIETHYLENTETRAMIN)		

Transport by air:

IATA:	3	UN:	2924
Packing Group:	III		
Label:	3,8		
Cargo:			
Packaging instructions:	365	Maximum quantity:	60 L
Pass.:			
Packaging instructions:	354	Maximum quantity:	5 L
Special Instructions:	A3		
Proper Shipping Name:	FLAMMABLE LIQUID, CORROSIVE, N.O.S. (3-AMINOPROPYLDIMETHYLAMINE; FETTSAURE, C18-UNGES., DIMERE, POLYMERE MIT TALLOLFETTSAUREN UND THIETHYLENTETRAMIN)		

SECTION 15. Regulatory information.

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

Seveso category. 6

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

Product.
Point. 3 - 40

Substances in Candidate List (Art. 59 REACH).

None.

Substances subject to authorisarion (Annex XIV REACH).

None.

Substances subject to exportation reporting pursuant to (EC) Reg. 689/2008:

None.

Substances subject to the Rotterdam Convention:

None.

Substances subject to the Stockholm Convention:

None.

Healthcare controls.

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

15.2. Chemical safety assessment.

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:

Acute Tox. 4	Acute toxicity, category 4
Asp. Tox. 1	Aspiration hazard, category 1
STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
Skin Corr. 1A	Skin corrosion, category 1A
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Skin Sens. 1A	Respiratory / skin sensitization, category 1A
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
H302	Harmful if swallowed.
H312	Harmful in contact with skin.

H332	Harmful if inhaled.
H304	May be fatal if swallowed and enters airways.
H373	May cause damage to organs through prolonged or repeated exposure.
H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.

Text of risk (R) phrases mentioned in section 2-3 of the sheet:

R10	FLAMMABLE.
R21/22	HARMFUL IN CONTACT WITH SKIN AND IF SWALLOWED.
R22	HARMFUL IF SWALLOWED.
R34	CAUSES BURNS.
R36/38	IRRITATING TO EYES AND SKIN.
R43	MAY CAUSE SENSITISATION BY SKIN CONTACT.
R52/53	HARMFUL TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.

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
- 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.

GENERAL BIBLIOGRAPHY
1. Directive 1999/45/EC and following amendments
2. Directive 67/548/EEC and following amendments and adjustments
3. Regulation (EC) 1907/2006 (REACH) of the European Parliament
4. Regulation (EC) 1272/2008 (CLP) of the European Parliament
5. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
6. Regulation (EC) 453/2010 of the European Parliament
7. Regulation (EC) 286/2011 (II Atp. CLP) of the European Parliament
8. The Merck Index. - 10th Edition
9. Handling Chemical Safety

10. Niosh - Registry of Toxic Effects of Chemical Substances
11. INRS - Fiche Toxicologique (toxicological sheet)
12. Patty - Industrial Hygiene and Toxicology
13. N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
14. ECHA website

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.

Changes to previous review:
The following sections were modified:
02 / 03.