Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 13.11.2020 *Revision date: 13.11.2020*

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

1.1 Product identifier

Trade name: *EPOTEC TH 9253*
UFI: DF91-J0WJ-X00G-DJSE

1.2 Relevant identified uses of the substance or mixture and uses advised against
No further relevant information available.
Application of the substance / the mixture Hardener for composite applications

1.3 Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Aditya Birla Chemicals (Thailand) Limited.
(00004 Advanced Materials), 2, Map Ta Phut Industrial Estate,
I-5 Road, Map Ta Phut Subdistrict, Mueang Rayong District,
Rayong Province, 21150, Thailand.
GRASIM Industries Limited.
Epoxy Division, Plot No. 1,
GIDC Vilayat Industrial Estate,
P. O. Vilayat – 392 012, Taluka: Vagra,
District: Bharuch Gujarat, India

Further information obtainable from:

epoxymktg@adityabirla.com
www.adityabirlachemicals.com
www.epotec.info

1.4 Emergency telephone number:
During normal opening times: Thailand +66-38-685233 - 4
India +918154007544

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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008


GHS08 health hazard

Repr. 2	H361	Suspected of damaging fertility or the unborn child.
STOT RE 1	H372	Causes damage to organs through prolonged or repeated exposure.


GHS05 corrosion

Skin Corr. 1B	H314	Causes severe skin burns and eye damage.
Eye Dam. 1	H318	Causes serious eye damage.


GHS07

Acute Tox. 4	H302	Harmful if swallowed.
Acute Tox. 4	H312	Harmful in contact with skin.
Skin Sens. 1	H317	May cause an allergic skin reaction.
Aquatic Chronic 3	H412	Harmful to aquatic life with long lasting effects.

2.2 Label elements
Labelling according to Regulation (EC) No 1272/2008
The product is classified and labelled according to the CLP regulation.
Hazard pictograms


GHS05 GHS07 GHS08

(Contd. on page 2)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 13.11.2020 *Revision date: 13.11.2020*

Trade name: *EPOTEC TH 9253*

(Contd. of page 1)

Signal word Danger

Hazard-determining components of labelling:
4,4'-methylenebis(cyclohexylamine)
2-piperazin-1-ylethylamine
Tetraethylenepentamine
salicylic acid

Hazard statements
H302+H312 Harmful if swallowed or in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H361 Suspected of damaging fertility or the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P260 Do not breathe dusts or mists.
P264 Wash thoroughly after handling.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P310 Immediately call a POISON CENTER/doctor.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P362+P364 Take off contaminated clothing and wash it before reuse.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P321 Specific treatment (see on this label).
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards
Results of PBT and vPvB assessment Not applicable.
PBT: Not applicable.
vPvB: Not applicable.

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SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures
Description: Mixture: consisting of the following components.

Components:		
CAS: 1761-71-3 EINECS: 217-168-8 Reg.nr.: 01-2119541673-38-XXXX	4,4'-methylenebis(cyclohexylamine) STOT RE 2, H373; Skin Corr. 1B, H314; Eye Dam. 1, H318; Acute Tox. 4, H302; Skin Sens. 1B, H317	50-70%
CAS: 9046-10-0 Reg.nr.: 01-2119557899-12-XXXX	Poly(oxy(methyl-1,2-ethanediyl)), alpha-(2-aminomethylethyl) omega-(2-aminomethylethoxy)- Skin Corr. 1C, H314; Eye Dam. 1, H318; Aquatic Chronic 3, H412	10-30%
CAS: 140-31-8 EINECS: 205-411-0 Reg.nr.: 01-2119471486-30-XXXX	2-piperazin-1-ylethylamine Acute Tox. 3, H311; Repr. 2, H361; STOT RE 1, H372; Skin Corr. 1B, H314; Acute Tox. 4, H302; Skin Sens. 1, H317; Aquatic Chronic 3, H412	10-30%
CAS: 69-72-7 EINECS: 200-712-3 Reg.nr.: 01-2119486984-17-XXXX	salicylic acid Repr. 2, H361d; Eye Dam. 1, H318; Acute Tox. 4, H302	≤5%
CAS: 100-51-6 EINECS: 202-859-9 Reg.nr.: 01-2119492630-38-XXXX	Benzyl alcohol Acute Tox. 4, H302; Acute Tox. 4, H332	≤5%

(Contd. on page 3)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 13.11.2020 *Revision date: 13.11.2020*

Trade name: *EPOTEC TH 9253*

(Contd. of page 2)

CAS: 112-57-2 EINECS: 203-986-2 Reg.nr.: 01-2119487290-37-XXXX	Tetraethylenepentamine Skin Corr. 1B, H314; Aquatic Chronic 2, H411; Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317	≤5%

SECTION 4: First aid measures

4.1 Description of first aid measures
General information:
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
After inhalation:
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
Supply fresh air; consult doctor in case of complaints.
After skin contact: Immediately wash with water and soap and rinse thoroughly.
After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
After swallowing:
Call for a doctor immediately.
Drink plenty of water and provide fresh air. Call for a doctor immediately.
4.2 Most important symptoms and effects, both acute and delayed
No further relevant information available.
4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

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SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents: CO2, powder or water spray. Fight larger fires with water spray.
For safety reasons unsuitable extinguishing agents: Water with full jet
5.2 Special hazards arising from the substance or mixture No further relevant information available.
5.3 Advice for firefighters
Protective equipment: Wear self-contained respiratory protective device.

*
SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
6.2 Environmental precautions:
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
6.3 Methods and material for containment and cleaning up:
Use neutralising agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
6.4 Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

*
SECTION 7: Handling and storage

7.1 Precautions for safe handling
Ensure good ventilation/exhaustion at the workplace.

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 13.11.2020 *Revision date: 13.11.2020*

Trade name: *EPOTEC TH 9253*

(Contd. of page 3)

Prevent formation of aerosols.
Information about fire - and explosion protection: Keep ignition sources away - Do not smoke.

7.2 Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: Store in a cool location.
Information about storage in one common storage facility:
Do not store together with oxidising and acidic materials as well as heavy-metal compounds.
Further information about storage conditions:
Keep container tightly sealed.
Store receptacle in a well ventilated area.
7.3 Specific end use(s) No further relevant information available.

*
SECTION 8: Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see item 7.

8.1 Control parameters
Ingredients with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls
Personal protective equipment:
General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Respiratory protection:
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
Use suitable respiratory protective device in case of insufficient ventilation.
Protection of hands:


Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
Eye protection:
Safety glasses


Tightly sealed goggles

Body protection: Protective work clothing

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 13.11.2020 *Revision date: 13.11.2020*

Trade name: *EPOTEC TH 9253*

(Contd. of page 4)

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form:	Liquid
Colour:	Light yellow
Odour:	Characteristic ammonical
pH-value:	Not determined.
Change in condition	
Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	201 °C
Flash point:	92 °C
Ignition temperature:	315 °C
Explosive properties:	Product does not present an explosion hazard.
Vapour pressure at 20 °C:	1 hPa
Density:	Not determined.
Solubility in / Miscibility with water:	Insoluble.
9.2 Other information	No further relevant information available.

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SECTION 10: Stability and reactivity

10.1 Reactivity No further relevant information available.

10.2 Chemical stability

Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions Reacts with alcohols, amines, aqueous acids and alkalis.

10.4 Conditions to avoid No further relevant information available.

10.6 Hazardous decomposition products: Carbon monoxide and carbon dioxide

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SECTION 11: Toxicological information

CAS: 1761-71-3 4,4'-methylenebis(cyclohexylamine)		
Oral	LD50	625 mg/kg (rat)
Dermal	LD50	2,110 mg/kg (rabbit)
CAS: 9046-10-0 Poly(oxy(methyl-1,2-ethanediyl)), alpha-(2-aminomethylethyl)omega-(2-aminomethylethoxy)-		
Oral	LD50	2,885 mg/kg (rat)
Dermal	LD50	2,980 mg/kg (rabbit)
CAS: 140-31-8 2-piperazin-1-ylethylamine		
Oral	LD50	2,140 mg/kg (rat)
Dermal	LD50	880 mg/kg (rabbit)
CAS: 69-72-7 salicylic acid		
Oral	LD50	891 mg/kg (rat)
CAS: 100-51-6 Benzyl alcohol		
Oral	LD50	1,230 mg/kg (rat)
Dermal	LD50	2,000 mg/kg (rabbit)

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 13.11.2020 *Revision date: 13.11.2020*

Trade name: *EPOTEC TH 9253*

(Contd. of page 5)

CAS: 112-57-2 Tetraethylenepentamine		
Dermal	LD50	660 mg/kg (rabbit)

11.1 Information on toxicological effects
Acute toxicity
Harmful if swallowed or in contact with skin.
LD/LC50 values relevant for classification: Acute dermal toxicity: LD50, rat, intravenous, 115 mg/kg
Primary irritant effect:
Skin corrosion/irritation
Causes severe skin burns and eye damage.
Serious eye damage/irritation
Causes serious eye damage.
Respiratory or skin sensitisation
May cause an allergic skin reaction.
CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
Germ cell mutagenicity Based on available data, the classification criteria are not met.
Carcinogenicity Based on available data, the classification criteria are not met.
Reproductive toxicity
Suspected of damaging fertility or the unborn child.
STOT-single exposure Based on available data, the classification criteria are not met.
STOT-repeated exposure
Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard Based on available data, the classification criteria are not met.

*
SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:		
CAS: 1761-71-3 4,4'-methylenebis(cyclohexylamine)		
EC50	200 mg/kg (daphnia)	

12.2 Persistence and degradability No further relevant information available.
12.3 Bioaccumulative potential No further relevant information available.
12.4 Mobility in soil No further relevant information available.
Ecotoxical effects:
Remark: Toxic for fish
Additional ecological information:
General notes:
Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Danger to drinking water if even extremely small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
12.5 Results of PBT and vPvB assessment Not applicable.
PBT: Not applicable.
vPvB: Not applicable.
12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Recommendation
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 13.11.2020 *Revision date: 13.11.2020*

Trade name: *EPOTEC TH 9253*

(Contd. of page 6)

Uncleaned packaging:
Recommendation: Disposal must be made according to official regulations.

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SECTION 14: Transport information

14.1 UN-Number
ADR/RID/ADN, IMDG, IATA UN2735

14.2 UN proper shipping name
ADR/RID/ADN UN2735 AMINES, LIQUID, CORROSIVE, N.O.S. (4,4'-methylenebis(cyclohexylamine), Poly(oxy(methyl-1,2-ethanediyl)), alpha-(2-aminomethylethyl)omega-(2-aminomethylethoxy)-), ENVIRONMENTALLY HAZARDOUS
IMDG, IATA AMINES, LIQUID, CORROSIVE, N.O.S. (4,4'-methylenebis(cyclohexylamine), Poly(oxy(methyl-1,2-ethanediyl)), alpha-(2-aminomethylethyl)omega-(2-aminomethylethoxy)-)

14.3 Transport hazard class(es)
ADR/RID/ADN, IMDG, IATA

Class 8 Corrosive substances.
Label 8

14.4 Packing group
ADR/RID/ADN, IMDG, IATA II

14.5 Environmental hazards:
Marine pollutant: No
Yes (P)

14.6 Special precautions for user Warning: Corrosive substances.
Hazard identification number (Kemler code): 80
EMS Number: F-A,S-B
Segregation groups Alkalis
Stowage Category A
Segregation Code SG35 Stow "separated from" SGG1-acids

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code Not applicable.

UN "Model Regulation": UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (4,4'-METHYLENEBIS(CYCLOHEXYLAMINE), POLY(OXY(METHYL-1,2-ETHANEDIYL)), ALPHA-(2-AMINOMETHYLETHYL)OMEGA-(2-AMINOMETHYLETHOXY)-), 8, II, ENVIRONMENTALLY HAZARDOUS

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SECTION 15: Regulatory information

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

TSCA (Toxic Substances Control Act):
All substances have the value ACTIVE.

(Contd. on page 8)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 13.11.2020 *Revision date: 13.11.2020*

Trade name: *EPOTEC TH 9253*

(Contd. of page 7)

Canadian Domestic Substances List (DSL)
All ingredients are listed.

Chinese Chemical Inventory of Existing Chemical Substances
All ingredients are listed.

Australian Inventory of Chemical Substances
All ingredients are listed.

Korean Existing Chemical Inventory		
CAS: 1761-71-3	4,4'-methylenebis(cyclohexylamine)	KE-23815
CAS: 9046-10-0	Poly(oxy(methyl-1,2-ethanediyl)), alpha-(2-aminomethylethyl)omega-(2-aminomethylethoxy)-	KE-01457
CAS: 140-31-8	2-piperazin-1-ylethylamine	KE-28762
CAS: 69-72-7	salicylic acid	KE-20367
CAS: 100-51-6	Benzyl alcohol	KE-02570
CAS: 112-57-2	Tetraethylenepentamine	KE-01347

New Zealand Inventory of Chemicals
All ingredients are listed.

Existing Chemical Substances		
CAS: 1761-71-3	4,4'-methylenebis(cyclohexylamine)	3-2272, 4-101
CAS: 140-31-8	2-piperazin-1-ylethylamine	5-961
CAS: 69-72-7	salicylic acid	3-1640
CAS: 100-51-6	Benzyl alcohol	3-1011
CAS: 112-57-2	Tetraethylenepentamine	2-162, 7-5

Labelling according to Regulation (EC) No 1272/2008
The product is classified and labelled according to the CLP regulation.
Hazard pictograms

GHS05 GHS07 GHS08

Signal word Danger

Hazard-determining components of labelling:
4,4'-methylenebis(cyclohexylamine)
2-piperazin-1-ylethylamine
Tetraethylenepentamine
salicylic acid
Hazard statements
H302+H312 Harmful if swallowed or in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H361 Suspected of damaging fertility or the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.
Precautionary statements
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P260 Do not breathe dusts or mists.
P264 Wash thoroughly after handling.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P310 Immediately call a POISON CENTER/doctor.

(Contd. on page 9)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 13.11.2020 *Revision date: 13.11.2020*

Trade name: *EPOTEC TH 9253*

(Contd. of page 8)

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P362+P364 Take off contaminated clothing and wash it before reuse.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P321 Specific treatment (see on this label).
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. The msds has been generated using the DR-Software product ChemGes.

Abbreviations and acronyms:
RID: Reglement internationale concernent le transport des merchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord européen sur le transport des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
P: Marine Pollutant
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 4: Acute toxicity - oral – Category 4
Acute Tox. 3: Acute toxicity - dermal – Category 3
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Skin Corr. 1C: Skin corrosion/irritation – Category 1C
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Skin Sens. 1B: Skin sensitisation – Category 1B
Repr. 2: Reproductive toxicity – Category 2
Repr. 2: Reproductive toxicity – Category 2
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3