

EPOXY BONDING AGENT
Version 1

Revision Date 24-Dec-2015
Supersedes Date: No information available

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product Identifier

Product Name EPOXY BONDING AGENT
Pure substance/mixture mixture

1.2. Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Recommended use Adhesives.
Uses Advised Against No information available.

1.3. Details of the Supplier of the Safety Data Sheet

Company Name

Bostik (Shanghai) Management Co., Ltd
 Building 1, No.968 Guanghai Road, Minhang District
 Shanghai, China
 Tel: 021-60763101
 Fax: 021-60763133

Manufacturer

Bostik India Private Ltd
 124/1 & 124/2A
 Kachanayakanahalli
 Behind Bommasandra Indl.Area
 Off Hosur Road, Hennagara Post,
 Anekal Taluk
 Bangalore - 562106, Karnataka,
 INDIA
 Tel: 0091-80-27833520
 Fax: 00 91-80-27831324
 Email: Bostikinfo.India@bostik.com

Please refer to Section 16 for local affiliate addresses.

1.4. Emergency Telephone Number

Emergency Telephone 0532-8388 9090 (China only)
E-mail address SDS.AP@Bostik.com

Section 2: HAZARD IDENTIFICATION

2.1. Classification of the Substance or Mixture

Acute toxicity - Oral	Category 4 (6.1D)
Acute toxicity - Dermal	Category 4 (6.1D)
Skin Corrosion/Irritation	Category 2 (6.3A)
Serious Eye Damage/Eye Irritation	Category 2 (6.4)
Skin sensitization	Category 1 (6.5B)
Germ Cell Mutagenicity	Category 2 (6.6B)
Carcinogenicity	Category 1B (6.7A)
Reproductive toxicity	Category 1B (6.8A)
STOT - Single Exposure	Category 1 (6.9A)
Specific target organ toxicity (repeated exposure)	Category 2 (6.9B)
Acute aquatic toxicity	Category 2 (9.1D)
Chronic aquatic toxicity	Category 2 (9.1B)

Classification in parenthesis is applicable for New Zealand Hazard Classification

ERMA Group No information available

2.2. Label Elements

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Signal Word

DANGER

Hazard statements

H302 - Harmful if swallowed
H312 - Harmful in contact with skin
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H341 - Suspected of causing genetic defects
H350 - May cause cancer
H360 - May damage fertility or the unborn child
H370 - Causes damage to organs
H373 - May cause damage to organs through prolonged or repeated exposure
H411 - Toxic to aquatic life with long lasting effects

Precautionary Statements - Prevention

P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P281 - Use personal protective equipment as required
P264 - Wash face, hands and any exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P272 - Contaminated work clothing should not be allowed out of the workplace
P280 - Wear protective gloves
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P273 - Avoid release to the environment

Precautionary Statements - Response

P322 - Specific measures (see .? on this label)
P321 - Specific treatment (see .? on this label)
P307 + P311 - IF exposed: Call a POISON CENTER or doctor/physician

Skin

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P312 - Call a POISON CENTER or doctor if you feel unwell
P362 - Take off contaminated clothing and wash before reuse
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention

Eyes

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313 - If eye irritation persists: Get medical advice/attention

Ingestion

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P330 - Rinse mouth

Spill

P391 - Collect spillage

Precautionary Statements - Storage

P405 - Store locked up

Precautionary Statements - Disposal

P501 - Dispose of contents/ container to an approved waste disposal plant

2.3. Other Hazards

2.4. Additional Information

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Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

3.2 Mixtures

Chemical Name	CAS No	Weight-%
Bisphenol-A-Epichlorhydrin Epoxy resin	25068-38-6	50 - 60
Dibutyl phthalate	84-74-2	10 - 20
4,4'-Methylenedianiline	101-77-9	10 - 20

*** Any remaining ingredients are not hazardous

Section 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

General Advice	Remove/Take off immediately all contaminated clothing. If medical advice is needed, have product container or label at hand.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin Contact	Wash off immediately with soap and plenty of water. Get medical attention if symptoms occur.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Hold eyelids apart and consult an physician.
Ingestion	If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label. If swallowed, rinse mouth with water (only if the person is conscious).
Self-protection of the First Aider	First aider: Pay attention to self-protection.

4.2. Most Important Symptoms and Effects, Both Acute and Delayed

Symptoms	None known.
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4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

Note to physicians	None.
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4.4. Reference to Other Sections

Reference to Other Sections	SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION. Section 11: TOXICOLOGY INFORMATION.
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Section 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media	Carbon dioxide (CO ₂). Extinguishing powder. Water spray or fog. Alcohol resistant foam.
Unsuitable Extinguishing Media	No information available.

5.2. Special Hazards Arising from the Substance or Mixture

Specific Hazards Arising from the Chemical	Thermal decomposition can lead to release of toxic/corrosive gases and vapors. Carbon monoxide. Carbon dioxide (CO ₂). Nitrogen oxides (NO _x).
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5.3. Advice for Firefighters

Special Protective Equipment for	In case of fire: Wear self-contained breathing apparatus. Do not allow run-off from
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Fire-fighters fire-fighting to enter drains or water courses.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions Use personal protection equipment. Avoid contact with skin, eyes or clothing.

6.2. Environmental Precautions

Environmental Precautions Prevent entry into waterways, sewers, basements or confined areas. Do not allow to enter into soil/subsoil.

6.3. Methods and Material for Containment and Cleaning up

Methods for Containment Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

Methods for Cleaning up Cover liquid spill with sand, earth or other non-combustible absorbent material. Cover powder spill with plastic sheet or tarp to minimize spreading. Sweep up and shovel into suitable containers for disposal. Soak up with inert absorbent material. Dam up. Pick up and transfer to properly labeled containers.

6.4. Reference to other sections

Reference to Other Sections Section 7: HANDLING AND STORAGE. SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION. Section 13: DISPOSAL CONSIDERATIONS.

Section 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Advice on Safe Handling Use only in well-ventilated areas. Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Special Precautions. Please refer also to Safety Data Sheet of Part B. For application method and dose rate, refer to the technical data sheet. Important: Do not leave mixed material in the container - curing in bulk can lead to excessive heat. Fire prevention measures. No special measures are necessary.

7.2. Conditions for Safe Storage, including any Incompatibilities

General Hygiene Considerations Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling. Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Storage Conditions Keep away from food, drink and animal feeding stuffs. Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible Materials Exothermic reaction with Amines Alcohols

7.3. Specific End Use(s)

Specific Use(s) Binder. Observe technical data sheet.

Other Information No information available.

7.4. References to Other Sections

Reference to Other Sections Section 13: DISPOSAL CONSIDERATIONS. Section 10: STABILITY AND REACTIVITY.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

Exposure Limits

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Chemical Name	ACGIH TLV	NIOSH IDLH	OSHA PEL	European Union
Dibutyl phthalate 84-74-2	TWA: 5 mg/m ³	IDLH: 4000 mg/m ³ TWA: 5 mg/m ³	TWA: 5 mg/m ³	-
4,4'-Methylenedianiline 101-77-9	TWA: 0.1 ppm S*	-	-	-

Chemical Name	Australia	China	Japan	Korea	New Zealand
Dibutyl phthalate 84-74-2	5 mg/m ³	TWA: 2.5 mg/m ³ STEL: 6.25 mg/m ³	TWA: 5 mg/m ³	TWA: 5 mg/m ³	TWA: 5 mg/m ³
4,4'-Methylenedianiline 101-77-9	0.1 ppm 0.81 mg/m ³ Skin	-	TWA: 0.4 mg/m ³ Skin	Skin TWA: 0.1 ppm TWA: 0.8 mg/m ³	TWA: 0.01 ppm TWA: 0.08 mg/m ³ Skin

Derived No Effect Level (DNEL) No information available

Predicted No Effect Concentration (PNEC) No information available

Other Information No information available

8.2. Exposure Controls

Engineering Controls Provide local exhaust ventilation. in the case of spray application. Please refer also to Safety Data Sheet of Part B.

Personal Protective Equipment (PPE)

Eye/Face Protection	Wear safety glasses with side shields (or goggles).
Skin and Body Protection	Wear suitable protective clothing. No special technical protective measures are necessary under normal conditions.
Hand Protection	Wear suitable chemical resistant gloves. The selection of suitable gloves does not only depend on the material, but also on further marks of quality and various manufacturers.
Respiratory Protection	No protective equipment is needed under normal use conditions. Respiratory protection required in insufficiently ventilated working areas and during spraying. An air-fed mask, or for short periods of work, a combination of professional filter is recommended.
General Hygiene Considerations	Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Avoid contact with skin, eyes or clothing. Take off contaminated clothing and wash before reuse.

Environmental Exposure Controls Do not allow uncontrolled discharge of product into the environment.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Appearance	Very viscous Liquid
Color	Colorless
Odor	Slight
Odor Threshold	No information available

Property	Values	Remarks • Method
pH	No information available	
Melting Point/Freezing Point	No information available	
Boiling Point	No information available	
Flash Point	No information available	
Evaporation Rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper Flammability Limit	No information available	
Lower Flammability Limit	No information available	
Vapor Pressure	No information available	
Vapor Density	No information available	
Specific Gravity	No information available	

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Water Solubility	No information available
Solubility in Other Solvents	No information available
Partition Coefficient	No information available
Autoignition Temperature	No information available
Decomposition Temperature	No information available
Kinematic Viscosity	No information available
Dynamic Viscosity	No information available
Explosive Properties	No information available
Oxidizing Properties	No information available

9.2. Other Information

Softening Point	No information available
Molecular Weight	No information available
Solvent Content (%)	No information available
Solid Content (%)	No information available
Density	No information available
Bulk Density	No information available

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

Reactivity	None under normal use conditions.
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10.2. Chemical Stability

Stability	Stable under normal conditions
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10.3. Possibility of Hazardous Reactions

Possibility of Hazardous Reactions After mixing the two components, the curing reaction starts. In bulk this reaction can be vigorous.

Hazardous Polymerization	None under normal processing.
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10.4. Conditions to Avoid

Conditions to Avoid	None known based on information supplied.
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10.5. Incompatible Materials

Incompatible Materials	Exothermic reaction with. Amines. Alcohols.
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10.6. Hazardous Decomposition Products

Hazardous Decomposition Products	None under normal use and recommended storage conditions.
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Section 11: TOXICOLOGY INFORMATION

11.1. Information on Toxicological Effects

Acute Toxicity

Product Information	Product does not present an acute toxicity hazard based on known or supplied information
Inhalation	No Data Available.
Eye contact	No Data Available.
Skin Contact	No Data Available.
Ingestion	No Data Available.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Bisphenol-A-Epichlorhydrin Epoxy resin	= 11400 mg/kg (Rat)	-	-

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25068-38-6			
Dibutyl phthalate 84-74-2	= 7499 mg/kg (Rat)	> 20 mL/kg (Rabbit)	> 15.68 mg/L (Rat) 4 h
4,4'-Methylenedianiline 101-77-9	= 264 mg/kg (Rat)	= 200 mg/kg (Rabbit)	> 0.85 mg/L (Rat) 4 h

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-term Exposure

Skin Corrosion/Irritation	Irritant effect on the skin.
Serious Eye Damage/Eye Irritation	Irritant effect on the eyes.
Sensitization	May cause sensitization by skin contact. People who suffer from skin sensitization problems, asthma, allergies, chronic or recurring respiratory illnesses should not be deployed in any process using this preparation.
Germ Cell Mutagenicity	No information available.
Reproductive Toxicity	No information available.
STOT - Single Exposure	No information available.
STOT - Repeated Exposure	No information available.
Target Organ Effects	No information available.
Aspiration Hazard	Not applicable.
Carcinogenicity	The following substance(s) are classified in Annex VI CLP (1272/2008) as carcinogenic.

Chemical Name	IARC	China	Japan
4,4'-Methylenedianiline	Group 2B	-	Group 2B

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity

Product Information

Toxic to aquatic life with long lasting effects.

Component Information

Data obtained on the component(s) include

Chemical Name	Algae/Aquatic Plants	Fish	Crustacea
Dibutyl phthalate 84-74-2	EC50 72 h = 1.2 mg/L (Desmodesmus subspicatus) EC50 96 h = 0.4 mg/L (Pseudokirchneriella subcapitata)	LC50 96 h 0.71 - 1.2 mg/L (Pimephales promelas flow-through) LC50 96 h 0.31 - 5.45 mg/L (Pimephales promelas static) LC50 96 h > 1.24 mg/L (Oncorhynchus mykiss flow-through) LC50 96 h 1.24 - 5.3 mg/L (Oncorhynchus mykiss static) LC50 96 h 1.38 - 1.74 mg/L (Lepomis macrochirus flow-through) LC50 96 h 0.42 - 1.28 mg/L (Lepomis macrochirus static)	EC50 48 h = 2.99 mg/L (Daphnia magna Static) EC50 48 h = 3.4 mg/L (Daphnia magna)
4,4'-Methylenedianiline 101-77-9	EC50 72 h = 21 mg/L (Desmodesmus subspicatus)	LC50 96 h = 42 mg/L (Brachydanio rerio static) LC50 96 h = 50 mg/L (Leuciscus idus static)	-

12.2. Persistence and Degradability

No information available.

12.3. Bioaccumulative Potential

No information available.

12.4. Mobility in Soil

No information available.

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12.5. Results of PBT and vPvB Assessment

No information available.

12.6. Other Adverse Effects

No information available.

Endocrine Disruptor Information

Chemical Name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Endocrine disrupting potential
Bisphenol-A-Epichlorhydrin Epoxy resin	Group III Chemical	-	-
Dibutyl phthalate	Group I Chemical Group III Chemical	High Exposure Concern	Industrial chemical

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste Treatment Methods

Waste from Residues/Unused Products

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

Handle contaminated packaging in the same way as substance itself.

Section 14: TRANSPORT INFORMATION

IMDG

Marine Pollutant

Not regulated

This product contains a chemical which is listed as a marine pollutant according to IMDG/IMO

IATA

Not regulated

ADR

Not regulated

Section 15: REGULATORY INFORMATION

National Regulations

China

This product contains the following substance(s)

Chemical Name	Weight-%	China - Catalog of Hazardous Chemicals - Hazardous Chemicals
4,4'-Methylenedianiline 101-77-9	10 - 20	X

Japan

This product contains the following Class 1 and Class 2 Designated Chemical Substances per Japan PRTR Law.

Chemical Name	Weight-%	Japan - Pollutant Release Transfer Register (PRTR) - Class 1 Substances
Dibutyl phthalate 84-74-2	10 - 20	X
4,4'-Methylenedianiline 101-77-9	10 - 20	X

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Korea

K-REACH/chemical control act(CCA)

This product contains the following substance(s)

Chemical Name	Weight-%	Korea - MOE - K-REACH/CCA - Toxic Substances	Korea - MOE - K-REACH/CCA - Prohibited Substances	Korea - MOE - K-REACH/CCA - Restricted Substances	Korea - MOE - Chemicals Control Act (CCA) - Accident Precaution Chemicals	Korea - MOE - K-REACH - Existing Substances Subject to Registration
Bisphenol-A-Epichlorhydrin Epoxy resin 25068-38-6	50 - 60					X
Dibutyl phthalate 84-74-2	10 - 20	X				X
4,4'-Methylenedianiline 101-77-9	10 - 20	X				X

Legend

X - Present

International Regulations

Europe

Restrictions of Use of Hazardous Substances (RoHS) Directive 2011/65/EU

This product does not contain Lead (7439-92-1), Cadmium (7440-43-9), Mercury (7439-97-6), Hexavalent chromium (7440-47-3), Polybrominated biphenyls (PBB), and Polybrominated diphenyl ethers (PBDE) above the regulated limit mentioned in this regulation.

EU-REACH (1907/2006) - Candidate List of Substances of Very High Concern (SVHC) for Authorization in accordance with Article 59

This product contains one or more candidate substance(s) of very high concern (Regulation (EC) No. 1907/2006 (REACH), Article 59)

Section 16: OTHER INFORMATION

Local Contacts

Bostik Korea, Ltd.
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Gyeonggi-do, South Korea
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Fax: 031-725-6699

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Yao, Osaka
Japan
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Fax: 81-72-948-8273

Bostik India Private Ltd
124/1 & 124/2A
Kachanayakanahalli
Behind Bommasandra Indl.Area
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Bostik Findley (Malaysia) Sdn. Bhd
Lot 112 & 113,
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Fax: 606-6789766

Bostik Findley (Malaysia) S/B
(Singapore Branch)
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Fax: 65-6863-4077

Bostik (Thailand) Co., Ltd
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Thomastown Victoria, Australia
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Fax: 613 9279-9342
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Bostik New Zealand Limited
19 Eastern Hutt Road Wingate,
Lower Hutt, New Zealand
Tel: 04-567 5119
Fax: 04-567 5412
24-hr Emergency: 0800 243 622

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Jiangsu Bositk Adhesive Co.,Ltd
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Enconomic Development Zone
Jiangsu Province 215536
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Fax: 0086-512-52266020

Bostik Vietnam Company Limited
10 Doc Lap Avenue,
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BinhDuong Province. Viet Nam.
Tel: 84 650 3765105
Fax: 84 650 3765109

Bostik Findley (China) Adhesive Ltd
No.75, Xin Zhuang 2 Road, Yong He
District, GETDD
Guangzhou, China 511356
Tel: 020-8297 5266
Fax: 020-8297 5277

Key or Legend to Abbreviations and Acronyms Used in the Safety Data Sheet
No information available

Key Literature References and Sources for Data
No information available

Prepared By	Product Safety & Regulatory Affairs
Revision Date	24-Dec-2015
Revision Note	Not applicable.
Training Advice	When working with hazardous materials, regular training of operators is required by law
Further information	No information available

Disclaimer

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End of Safety Data Sheet