

1. IDENTIFICATION OF PREPARATION

Product Code and Names:

67411 – Epirok EP1 (Component A)	67441 – Epirok HDS (Component A)	67462 – Epirok CPC (Component A)
67481 – Epirok DSC (Component A)		

Chemical Name: Blend of liquid epoxy resin(s) and reactive diluents.

Identification of Company:

<p>CHINA: Terraco Architectural Coatings China Co., Ltd. Tel: +86 (0)20 8759 4742 Fax: +86 (0)20 8526 8056 E-mail: sales@terraco.com.cn Web: www.terraco.com.cn</p> <p>Terraco Chemical (Shanghai) Co., Ltd. Tel: +86 (0)21 621020 48 / 18 Fax: +86 (0)21 625205 47 Email: sales@terraco.com.cn Web: www.terraco.com.cn</p> <p>EGYPT: Terraco Egypt Chemical Industries S.A.E. Tel: +20 (0)22 29184 53 / 57 / 58 Fax: +20 (0)22 29184 80 E-mail: terraco@terraco.com.eg Web: www.terraco.com.eg</p> <p>JORDAN: Jordan Swedish Polymers Industrial Corp. Tel: +962 (0)6 553 8751 Fax: +962 (0)6 553 6560 E-mail: terraco@nol.com.jo Web: www.terraco.jo</p> <p>IRELAND: Terraco Technical Centre, Ireland Tel: +353 (0) 404 66555 Fax: +353 (0) 404 66654 E-mail: technical-centre@terraco.com Web: www.terraco.com</p>	<p>PAKISTAN: Terraco Pakistan Pvt. Ltd. Tel: +92 (0)42 3529 70 56-8 Fax: +92 (0)42 3529 70 55 Email: terraco@terraco.pk Web: www.terraco.com</p> <p>ROMANIA: Terraco Romania SRL Tel: +40 (0)749 203 133 Fax: +40 (0)318 148 810 E-mail: ahaque@terraco.com Web: www.terraco.com</p> <p>RUSSIA: OOO Terraco Sweden Ltd, Russia Tel: +7 (0)495 9212 237 Fax: +7 (0)495 6273 881 E-mail: adm@terraco.ru Web: www.terraco.ru</p> <p>OOO Terraco Vostok Ltd Tel: +7 (0)4212 410563 Fax: +7 (0)4212 410591 E-mail: terracovostok@terraco.khn.ru Web: www.terraco.com</p> <p>SOUTH KOREA: Terraco Korea Co., Ltd Tel: +82 (0) 2 5611 551 Fax: +82 (0)2 5671 771 E-mail: terraco@terraco.co.kr Web: www.terraco.co.kr</p>	<p>THAILAND: Terraco Industry (Thailand) Limited Tel: +66 (0)2 946 68 56 / 58 Fax: +66 (0)2 946 68 59 E-mail: terraco@terraco.co.th Web: www.terraco.com</p> <p>TURKEY: Terraco Yapi Malzemeleri Sanayi Ve Ticaret AS Tel: +90 (0)222 236 0423 Fax: +90 (0)222 236 0425 E-mail: terraco@terraco.com.tr Web: www.terraco.com.tr</p> <p>UAE: Terraco UAE Ltd Tel: +971 (0)4 326 2699 Fax: +971 (0)4 326 2733 E-mail: terraco@terraco.ae Web: www.terraco.com</p> <p>UK: ADDAGRIP Tel: +44 (0)1825 761 333 Fax: +44 (0)1825 768 566 E-mail: sales@addagrip.co.uk Web: www.addagrip.co.uk / www.terraco.com</p> <p>VIETNAM: Terraco Vietnam Co., Ltd Tel: +84 (0)650 3 820 100 Fax: +84 (0)650 3 820101 E-mail: terraco@terraco.com.vn Web: www.terraco.com</p>
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2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Amount	CAS Number
Bisphenol A-epichlorohydrin	100%	25068-38-6

3. HAZARDS IDENTIFICATION

Potential Health Effects

Human health hazards	Irritating to eyes and skin. May cause sensitization by skin contact.
Safety hazards	Not classified as flammable but will burn.
Environmental hazards	Toxic to aquatic organisms. May cause long term adverse effects in the aquatic environment.

4. FIRST AID MEASURES

Symptoms and effects	Irritation of the skin and eyes.
First Aid - Inhalation	No specific measures.
First Aid - Skin	DO NOT DELAY. Remove contaminated clothing. Wash skin with water using soap if available. If persistent irritation occurs, obtain medical attention.
First Aid - Eye	DO NOT DELAY. Flush eye with water. If persistent irritation occurs, obtain medical attention.
First Aid - Ingestion	Do not induce vomiting. In the unlikely event of ingestion, obtain medical attention immediately.
Advice to physicians	If skin sensitization has developed and a causal relationship has been confirmed, further exposure should not be allowed.

5. FIRE FIGHTING MEASURES

Specific hazards	Not classified as flammable but will burn. Carbon monoxide may be evolved if incomplete combustion occurs.
Extinguishing media - small fires	Dry chemical powder, carbon dioxide, foam, water spray or fog, sand or earth.
Extinguishing media - large fires	Foam, water spray or fog.
Unsuitable extinguishing media	Water in a jet.
Protective equipment	Full protective clothing and self-contained breathing apparatus.
Other information	Keep adjacent containers cool by spraying with water.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Avoid contact with skin, eyes and clothing.
Personal protection	Wear protective clothing specified for normal operations (see Section 8).
Environmental precautions	Prevent contamination of soil and water. Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers. If material enters drains, it should be pumped out into an open vessel. Emergency services may need to be called to assist in this operation.
Clean-up methods - small spillage	Absorb or contain liquid with sand, earth or spill control material. Shovel up and place in a labeled, sealable container for subsequent safe disposal. Scrub contaminated surfaces with detergent solution. Retain washings as contaminated waste. Put leaking containers in a labeled drum or over-drum.
Clean-up methods - large spillage	Transfer to a labeled container for product recovery or safe disposal. Otherwise treat as for small spillage.
Other information	See Section 13 for information on disposal.

7. HANDLING AND STORAGE

Handling	Avoid contact with skin, eyes and clothing.
Storage	Keep containers tightly closed and dry. Palletized loads should be stacked to a maximum of 4 high.
Storage temperatures	Ambient.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure standards	
None established.	
Personal protective equipment	
Respiratory protection:	Not normally required. In a confined space, wear half mask respirator with organic vapour cartridge and built-in particulate filter NPF 20 (gas only). If product is applied by spraying, wear self-contained breathing apparatus.
Hand protection:	Nitrile rubber gloves or butyl rubber gloves, gauntlet type.
Eye protection:	Mono-goggles.
Body protection:	Standard issue work clothes. Safety boots – chemical resistant without lace holes.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid.
Colour	Pale yellow.
Odour	Slight.
Density	1130 kg/m ³ @ 25°C (typical).
Dynamic viscosity	1.5 – 2.1 Pa.s @ 25°C.
Flash point	110 °C.
Water solubility	Negligible.
n-octanol / water partition coefficient	Data not available.

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions. Reacts with strong oxidising agents. Polymerises exothermically with amines, mercaptans and Lewis acids at ambient temperature and above. Polymerises in contact with caustic soda. Reacts exothermically with bases (e.g. caustic soda), ammonia, primary and secondary amines, alcohols and acids.
Conditions to avoid	Caustic soda can induce a vigorous polymerisation at temperatures around 200°C.
Materials to avoid	Strong oxidising agents. Caustic soda.
Hazardous decomposition products	Hazardous decomposition products are not expected to form during normal storage.

11. TOXICOLOGICAL INFORMATION

Acute Health Hazards	
Basis for assessment	Information given is based on data on the components and the toxicology of similar products.
Acute toxicity - oral	LD50 > 2000 mg/kg.
Acute toxicity - dermal	LD50 > 2000 mg/kg.
Eye irritation	Irritant.
Skin irritation	Irritant.
Respiratory irritation	Not irritating.
Skin sensitization	Skin sensitizer.
Carcinogenicity	A recent review of the available data by the International Agency for Research on Cancer (IARC) has concluded that DGEBA is not classifiable as to its carcinogenicity.
Mutagenicity	Positive in in-vitro, but negative in in-vivo assays.

12. ECOLOGICAL INFORMATION

Basis for assessment	Information given is based on data on the components and the ecotoxicology of similar products.
Mobility	Sinks in water.
Bioaccumulation	Has the potential to bio-accumulate.
Persistence / Degradability	Not readily biodegradable.
Acute toxicity - fish	Toxic, $1 < LC50 \leq 10$ mg/l.
Sewage treatment	Toxic, $EC_{50} > 1 - 10$ mg/l, to organisms in sewage treatment plants.

13. DISPOSAL CONSIDERATIONS

Precautions:	Refer to Sections 7 and 8 before handling the product or containers.
Waste disposal:	Recover or recycle if possible. Otherwise incineration or dispose to licensed disposal contractor.
Product disposal:	Recover or recycle if possible. Otherwise incineration or dispose to licensed disposal contractor.
Container disposal:	Drain container thoroughly. Rinse three times with suitable solvent. Treat rinsing as for product disposal. After draining, vent in a safe place away from sparks and fire. Send to drum recovery or metal reclaimer.
Local legislation:	Dispose of container and unused contents in accordance with federal, state and local requirements.

14. TRANSPORT INFORMATION

ADR/RID Class/Item	9/II (C). UN No: 3082 Class: 9
ADR/RID Symbol	Miscellaneous dangerous substances.
ADR/RID Kemler Number	90. 3082.
ADR/RID Proper Shipping Name	Environmentally Hazardous Substance, Liquid, N.O.S. (Contains Epoxy Resin).
Not dangerous for conveyance under UN, IMO and IATA/ICAO codes.	

15. REGULATORY INFORMATION

EC Label name	Epoxy resin (Number Average Molecular Weight < 700)
EC Classification	Irritant. Dangerous for the environment.
EC Symbols	Xi, N.
EC Risk phrases	R36/38 - Irritating to eyes and skin. R43 – May cause sensitization by skin contact. R51/53 – Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
EC Safety phrases	S24 – Avoid contact with skin. S26 – In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S28 – After contact with skin; wash immediately with plenty of soap and water. S37/39 – Wear suitable gloves and eye/face protection. S61 – Avoid release to the environment.
EINECS (EC)	All components listed or polymer exempt.
MITI (Japan)	All components listed.
TSCA (USA)	All components listed.
AICS (Australia)	All components listed.
DSL (Canada)	All components listed.

16. OTHER INFORMATION

The products should not be used for purposes other than those shown on the manufacturer's product labels and technical data sheets. As the specific conditions of use are outside the supplier's control; the user is responsible for ensuring compliance with the relevant legislation in the territory of use.

The information contained in this Material Safety Data Sheet, is based on the current state of knowledge and current state of Legislation. It provides guidance on Health Safety and Environmental aspects of the products, and should not be taken as a guarantee of technical performance or suitability for particular applications.

Approved by:	J. Carey - Group Technical Director.
Approval date:	04/11/2011
Supersedes:	12/07/2010
Number:	MSDS No. 1048

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