



**Globally Proven
 Construction Solutions**

Safety Data Sheet

1. PRODUCT IDENTIFICATION

TRADE NAME (as labeled): Flow EP Part B

CHEMICAL FAMILY: Epoxy Hardener

MANUFACTURER'S/ DISTRIBUTOR'S NAME: LATICRETE South East Asia Pte Ltd
 38 Sungei Kadut,
 Street 2 (Level2 A3),
 Singapore 729245.

Phone number for additional information: (65) 6515 3028

Date prepared or revised: 09/12/2016

2. COMPOSITION INGREDIENTS

Chemical Names	CAS NUMBERS	Percent
Isophoronediamine	2855-13-2	10-30
Phenylcarbinol	100-51-6	30-40
Cycloaliphatic amine	N/A	40-50

3. HEALTH HAZARD INFORMATION

SYMPTOMS OF OVEREXPOSURE for each potential route of exposure. (Possible Longer Term Effects) : N/A

SIGNS AND SYMPTOMS OF EXPOSURE (Acute effects)

Inhaled : Vapors may cause headache, fatigue, dizziness and nausea.
 Contact with skin or eyes : Causes skin and eye burns. May cause an allergic skin reaction.
 Absorbed through skin : N/A
 Swallowed : May cause burns of the gastrointestinal tract if swallowed. May cause nausea, headache, dizziness and intoxication.



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SUSPECTED CANCER AGENT?

NO: This product's ingredients are not found in the lists.

4. FIRST AID: EMERGENCY PROCEDURES

Eye Contact : Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

Skin Contact : Take off immediately all contaminated clothing. Chemical burns must be treated by a physician. Rinse skin with water/shower. Call a physician or poison control center immediately. Wash contaminated clothing before reuse.

Inhaled : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.

Swallowed : Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Call a physician or poison control center immediately.

Most important symptoms/effects, acute and delayed: Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Call a physician or poison control center immediately.

Indication of immediate medical attention and special treatment needed: Provide general supportive measures and treat symptomatically. Symptoms may be delayed. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital.

General information: Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. IF exposed or concerned: Get medical advice/attention.

5. FIRE FIGHTING MEASURES

Flash Point method : N/A

Auto ignition temperature (°C) : N/A



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Flammable limits in air, volume % : N/A

Fire extinguishing materials : Alcohol resistant foam. Water fog. Dry chemical powder.
 Carbon dioxide (CO₂).

Special firefighting procedures : Do not use water jet as an extinguisher, as this will spread the fire. In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Unusual fire and explosion hazards : Heating may cause the release of ammonia vapors.

6. ACCIDENTAL RELEASE MEASURES

Spill response procedures (include employee protection measures) :

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.

Large Spills: Stop the flow of material, if this is without risk. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills in original containers for re-use.

NOTE: Dispose of all wastes in accordance with federal, state and local regulations.

Environmental precautions: Avoid release to the environment. Do not discharge into drains, water courses or onto the ground. Environmental manager must be informed of all major releases.

7. HANDLING AND STORAGE

Precautions for safe handling: Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Do not get in eyes, on



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skin, on clothing. Do not taste or swallow. Avoid contact during pregnancy/while nursing. Use with adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage: Keep container tightly closed. Store in a well-ventilated place. Store away from incompatible materials.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Occupational exposure limits

Bengyl alcohol	Time weighted (TWA) : WEEL	10PPM	44.20 mg/m ³
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Ventilation and engineering controls	: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.
Respiratory protection (type)	: In case of insufficient ventilation, wear suitable respiratory equipment.
Eye protection (type)	: Wear safety glasses with side shields (or goggles). Face-shield. Wear a full-face respirator, if needed.
Gloves (specify material)	: Use impervious gloves, vinyl or rubber.
Other clothing and equipment	: Wear clean, long-sleeved, body-covering clothing.
Work practices, hygienic practices	: When using, do not eat, drink or smoke. Do not get this material on clothing. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.



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Contaminated work clothing should not be allowed out of the workplace.

Other handling and storage requirements : N/A

Protective measures during maintenance of contaminated equipment: See above.

9. PHYSICAL AND CHEMICAL PROPERTIES

Relative density : 1.01

Melting point or range, °C : N/A

Boiling point or range, °C : 205 °C

PH : 9

Viscosity : 400 cP (21 °C)

Flash point : 96 °C

Solubility in water : < 0.1g/l

Bulk density : 1.03

Vapor pressure, mmHg at 20°C : < 10.34 mm Hg (21 °C)

Appearance and odor : Light yellow liquid, ammoniacal odor.

HOW TO DETECT THIS SUBSTANCE (warning properties of substance as a gas, vapor, dust, or mist)

10. STABILITY AND REACTIVITY

Stability : The product is stable and non-reactive under normal conditions of use, storage and transport.

Conditions to avoid : Avoid temperatures exceeding the flash point. Contact with incompatible materials.

Incompatibility (materials to avoid) : Alkaline metals. Oxidizing agents. Strong acids. A reaction accompanied by large heat release occurs when the



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product is mixed with acids. Heat generated may be sufficient to cause vigorous boiling creating splash hazard.

Hazardous decomposition products : Carbon dioxide (CO₂). Carbon monoxide. Ammonia. By heating and fire, irritating vapors/gases may be formed.

Hazardous polymerization : No dangerous reaction known under conditions of normal use.

11. TOXICOLOGY INFORMATION

Symptoms related to the physical, chemical and toxicological characteristics Rash. Corrosive effects. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Vapors may irritate throat and respiratory system and cause coughing.

Information on toxicological effects

Acute toxicity

May cause discomfort if swallowed.

Components

Species

Test Results

Acute

Ingestion

LD50

Rat

2,369 mg/kg

Inhalation – Component Phenylcarbinol

Acute

Dermal

LD50

Rabbit

2000 mg/kg

Inhalation

LC50

Rat

>4,178 mg/l, 4 Hours

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitization

Respiratory sensitization

No data available.

Skin sensitization

May cause an allergic skin reaction.

Germ cell mutagenicity

No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity

This product is not considered to be a carcinogen by IARC,



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ACGIH, NTP, or OSHA.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity	Suspected of damaging fertility or the unborn child.
Specific target organ toxicity - single exposure	No data available.
Specific target organ toxicity - repeated exposure	No data available.
Aspiration hazard	Not classified, however droplets of the product may be aspirated into the lungs through ingestion or vomiting and may cause a serious chemical pneumonia.
Chronic effects	Prolonged exposure may cause chronic effects.

12. ECOLOGICAL INFORMATION

Ecotoxicity No data is available on the product itself in aquatic toxicity.

Components

Species

Test Results

Aquatic

Crustacea	EC50	Water flea (<i>Daphnia magna</i>)	10 mg/l, 96 hours
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>)	460 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available for this product.

Mobility in soil Not available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. DISPOSAL CONSIDERATIONS

Disposal instructions : Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with



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chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazardous waste code : The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products: Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION

DOT

UN number	UN2289
UN proper shipping name	Isophoronediamine Mixture
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Label(s)	8
Packing group	III
Environmental hazards	
Marine pollutant	No

IATA

UN number	UN2289
UN proper shipping name	Isophoronediamine Mixture
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Label(s)	8
Packing group	III



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Pressure Hazard - No

Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

Yes

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)

Not regulated.

US state regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region

Inventory name

On inventory (yes/no)*

Australia

Australian Inventory of Chemical Substances (AICS)

Yes

Canada

Domestic Substances List (DSL)

Yes

Canada

Non-Domestic Substances List (NDSL)

No

China

Inventory of Existing Chemical Substances in China (IECSC)

No

Europe

European Inventory of Existing Commercial Chemical Substances (EINECS)

Yes

Europe

European List of Notified Chemical Substances (ELINCS)

No

Japan

Inventory of Existing and New Chemical Substances (ENCS)

Yes

Korea

Existing Chemicals List (ECL)

Yes

Philippines

Philippine Inventory of Chemicals and

Yes



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	Chemical Substances (PICCS)	
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. OTHER INFORMATION

This information is furnished without warranty, representation, inducement or license of any kind; except that it is accurate to the best of our knowledge, or obtained from sources believed by us to be accurate.