

SECTION 1: Identification

1.1. Identification

Product name : EP1350 B

1.2. Recommended use and restrictions on use

Recommended use : Epoxy hardener
 Restrictions on use : Product for industrial use only

1.3. Supplier

ResinLab, LLC
 N109 W13300 Ellsworth Drive
 Germantown, WI 53022 - United States
 T 1-877-259-1669
msds@resinlab.com - www.resinlab.com

1.4. Emergency telephone number

Emergency number : CHEMTREC:1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

| | | |
|--|------|--|
| Acute toxicity (inhalation:dust,mist) Category 4 | H332 | Harmful if inhaled |
| Skin corrosion/irritation Category 2 | H315 | Causes skin irritation |
| Serious eye damage/eye irritation Category 1 | H318 | Causes serious eye damage |
| Respiratory sensitization, Category 1 | H334 | May cause an allergy or asthma symptoms or breathing difficulties if inhaled |
| Skin sensitization, Category 1 | H317 | May cause an allergic skin reaction |

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger

Hazard statements (GHS US) : H315 - Causes skin irritation
 H317 - May cause an allergic skin reaction
 H318 - Causes serious eye damage
 H332 - Harmful if inhaled
 H334 - May cause an allergy or asthma symptoms or breathing difficulties if inhaled

Precautionary statements (GHS US) : P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
 P264 - Wash hands, forearms and face thoroughly after handling.
 P271 - Use only outdoors or in a well-ventilated area.
 P272 - Contaminated work clothing must not be allowed out of the workplace.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P284 - [In case of inadequate ventilation] wear respiratory protection.
 P302+P352 - If on skin: Wash with plenty of water.
 P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.
 P304+P341 - If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 - Immediately call a poison center or doctor.
 P312 - Call a poison center or doctor if you feel unwell.
 P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
 P342+P311 - If experiencing respiratory symptoms: Call a poison center or doctor.
 P362+P364 - Take off contaminated clothing and wash it before reuse.
 P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

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2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

| Name | Product identifier | % |
|---|----------------------|---------|
| 1,2,3,6-tetrahydromethyl-3,6-methanophthalicanhydride | (CAS-No.) 25134-21-8 | 75 – 90 |
| 1,2,3,6-tetrahydro-3,6-methanophthalic anhydride | (CAS-No.) 826-62-0 | 10 – 30 |

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

- First-aid measures general : Call a poison center/doctor/physician if you feel unwell.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or a doctor.
- First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
- First-aid measures after eye contact : Immediately rinse with plenty of water (for at least 15 minutes). Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
- First-aid measures after ingestion : If the person is fully conscious, make him/her drink water. Never give an unconscious person anything to drink. Rinse mouth out with water. Do not induce vomiting. Obtain medical attention.

4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/effects after inhalation : May cause an allergy or asthma symptoms or breathing difficulties if inhaled.
- Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.
- Symptoms/effects after eye contact : Serious damage to eyes.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Dry powder. Foam. Carbon dioxide.

5.2. Specific hazards arising from the chemical

- Reactivity in case of fire : Material reacts with water or steam to produce heat and free acid.
- Hazardous decomposition products in case of fire : Toxic fumes may be released, Aldehydes, Acids, Carbon oxides (CO, CO₂)

5.3. Special protective equipment and precautions for fire-fighters

- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

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6.3. Methods and material for containment and cleaning up

- For containment : Cover spill with non combustible material, e.g.: sand, earth, vermiculite.
Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes. Wear personal protective equipment.
Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

1,2,3,6-tetrahydromethyl-3,6-methanophthalicanhydride (25134-21-8)

Not applicable

1,2,3,6-tetrahydro-3,6-methanophthalic anhydride (826-62-0)

Not applicable

8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station, ventilate curing ovens to prevent emissions in the workplace.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves

Eye protection:

Safety glasses with side shields

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of inadequate ventilation, wear respiratory protection.

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Liquid
Color : Brown

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| | |
|---|--------------------------|
| Odor | : mild |
| Odor threshold | : No data available |
| pH | : No data available |
| Melting point | : Not applicable |
| Freezing point | : No data available |
| Boiling point | : 120 °C |
| Flash point | : 150 °C |
| Relative evaporation rate (butyl acetate=1) | : No data available |
| Flammability | : Not applicable. |
| Vapor pressure | : No data available |
| Relative vapor density at 20°C | : No data available |
| Relative density | : No data available |
| Density | : 1.18 g/cm ³ |
| Solubility | : No data available |
| Partition coefficient n-octanol/water (Log Pow) | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Viscosity, dynamic | : No data available |
| Explosion limits | : No data available |
| Explosive properties | : No data available |
| Oxidizing properties | : No data available |
| VOC content | No data available |

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Material reacts with water or steam to produce heat and free acid. Polymerizes at 200 °C or higher.

10.4. Conditions to avoid

Avoid high temperatures. Water, humidity. Moisture. Incompatible materials.

10.5. Incompatible materials

Strong acids. Strong bases. Oxidizing agent. Water.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

| | |
|-----------------------------|-----------------------|
| Acute toxicity (oral) | : Not classified |
| Acute toxicity (dermal) | : Not classified |
| Acute toxicity (inhalation) | : Harmful if inhaled. |

| EP1350 B | |
|--|---|
| LD50 oral rat | > 2100 mg/kg estimated |
| LD50 dermal rat | > 3300 mg/kg estimated |
| LC50 Inhalation - Rat | > 1.2 mg/l estimated(dusts/mists) |
| ATE US (dust, mist) | 1.5 mg/l/4h |
| 1,2,3,6-tetrahydromethyl-3,6-methanophthalicanhydride (25134-21-8) | |
| LD50 oral rat | 1300 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s)) |

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| 1,2,3,6-tetrahydromethyl-3,6-methanophthalicanhydride (25134-21-8) | |
|---|---|
| LD50 dermal rat | 4920 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rat, Male / female, Experimental value, Dermal) |
| LC50 Inhalation - Rat | < 0.75 mg/l air (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation (aerosol), 14 day(s)) |
| ATE US (oral) | 1300 mg/kg body weight |
| ATE US (dermal) | 4920 mg/kg body weight |
| ATE US (gases) | 700 ppmV/4h |
| ATE US (vapors) | 3 mg/l/4h |
| ATE US (dust, mist) | 0.5 mg/l/4h |

| | |
|-----------------------------------|--|
| Skin corrosion/irritation | : Causes skin irritation. |
| Serious eye damage/irritation | : Causes serious eye damage. |
| Respiratory or skin sensitization | : May cause an allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Not classified |
| STOT-single exposure | : Not classified |
| STOT-repeated exposure | : Not classified |

| 1,2,3,6-tetrahydromethyl-3,6-methanophthalicanhydride (25134-21-8) | |
|---|---|
| NOAEL (oral, rat, 90 days) | 20 mg/kg body weight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) |

| | |
|-------------------------------------|---|
| Aspiration hazard | : Not classified |
| Symptoms/effects after inhalation | : May cause an allergy or asthma symptoms or breathing difficulties if inhaled. |
| Symptoms/effects after skin contact | : Irritation. May cause an allergic skin reaction. |
| Symptoms/effects after eye contact | : Serious damage to eyes. |

SECTION 12: Ecological information

12.1. Toxicity

| | |
|-------------------|--|
| Ecology - general | : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment. |
|-------------------|--|

| 1,2,3,6-tetrahydromethyl-3,6-methanophthalicanhydride (25134-21-8) | |
|---|---|
| LC50 - Fish [1] | 359 mg/l (OECD 203: Fish, Acute Toxicity Test, 48 h, Oryzias latipes, Semi-static system, Fresh water, Experimental value) |
| EC50 - Crustacea [1] | > 100 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP) |
| ErC50 algae | > 100 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP) |
| LOEC (chronic) | 40 mg/l Test organisms (species): Daphnia magna Duration: '21 d' |
| NOEC (chronic) | 20 mg/l Test organisms (species): Daphnia magna Duration: '21 d' |

| 1,2,3,6-tetrahydro-3,6-methanophthalic anhydride (826-62-0) | |
|--|-------------------------------|
| LC50 - Fish [1] | 172.259 mg/l Source: EPISUITE |
| EC50 - Crustacea [1] | 94.974 mg/l Source: EPISUITE |

12.2. Persistence and degradability

| 1,2,3,6-tetrahydromethyl-3,6-methanophthalicanhydride (25134-21-8) | |
|---|-------------------------------------|
| Persistence and degradability | Not readily biodegradable in water. |

| 1,2,3,6-tetrahydro-3,6-methanophthalic anhydride (826-62-0) | |
|--|---|
| Persistence and degradability | Biodegradability in water: no data available. |

12.3. Bioaccumulative potential

| 1,2,3,6-tetrahydromethyl-3,6-methanophthalicanhydride (25134-21-8) | |
|---|--|
| BCF - Fish [1] | 0.4 – 5.5 (OECD 305: Bioconcentration: Flow-Through Fish Test, 6 week(s), Cyprinus carpio, Flow-through system, Fresh water, Experimental value) |

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| 1,2,3,6-tetrahydromethyl-3,6-methanophthalicanhydride (25134-21-8) | |
|---|--|
| Partition coefficient n-octanol/water (Log Pow) | -4.03 (Calculated, 20 °C) |
| Bioaccumulative potential | Low potential for bioaccumulation (BCF < 500). |
| 1,2,3,6-tetrahydro-3,6-methanophthalic anhydride (826-62-0) | |
| Partition coefficient n-octanol/water (Log Pow) | 1.85 Source: EPISUITE, estimate |
| Bioaccumulative potential | No bioaccumulation data available. |

12.4. Mobility in soil

| 1,2,3,6-tetrahydromethyl-3,6-methanophthalicanhydride (25134-21-8) | |
|---|---|
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 1 (log Koc, SRC PCKOCWIN v2.0, QSAR) |
| Ecology - soil | No straightforward conclusion can be drawn based upon the available numerical values. |
| 1,2,3,6-tetrahydro-3,6-methanophthalic anhydride (826-62-0) | |
| Mobility in soil | 30.89 |

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated

Transportation of Dangerous Goods

Not applicable

Transport by sea

Not regulated

Air transport

Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

| 1,2,3,6-tetrahydromethyl-3,6-methanophthalicanhydride (25134-21-8) |
|---|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory |
| 1,2,3,6-tetrahydro-3,6-methanophthalic anhydride (826-62-0) |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory |

15.2. International regulations

CANADA

| 1,2,3,6-tetrahydromethyl-3,6-methanophthalicanhydride (25134-21-8) |
|---|
| Listed on the Canadian DSL (Domestic Substances List) |
| 1,2,3,6-tetrahydro-3,6-methanophthalic anhydride (826-62-0) |
| Listed on the Canadian DSL (Domestic Substances List) |

EU-Regulations

Contains no REACH candidate substance

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1,2,3,6-tetrahydromethyl-3,6-methanophthalicanhydride (25134-21-8)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

1,2,3,6-tetrahydro-3,6-methanophthalic anhydride (826-62-0)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

1,2,3,6-tetrahydromethyl-3,6-methanophthalicanhydride (25134-21-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)

1,2,3,6-tetrahydro-3,6-methanophthalic anhydride (826-62-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Full text of H-phrases:

| | |
|------|--|
| H315 | Causes skin irritation |
| H317 | May cause an allergic skin reaction |
| H318 | Causes serious eye damage |
| H332 | Harmful if inhaled |
| H334 | May cause an allergy or asthma symptoms or breathing difficulties if inhaled |

SDS US - ResinLab

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.