

**SAFETY DATA SHEET**
**H.B. Fuller® FH-2330-B**

Version 1.1

Revision Date 03/17/2016

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : H.B. Fuller® FH-2330-B  
 Product code : 10000002497

**Manufacturer or supplier's details**

Company : H.B. Fuller Company  
 Address : 1200 Willow Lake Boulevard  
 Vadnais Heights, MN 55110  
 Telephone : 1-888-423-8553

Medical Emergency Phone Number (24 Hours): 1-888-853-1758

Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

**Recommended use of the chemical and restrictions on use**

Recommended use : Epoxy curing agent  
 Restrictions on use : For industrial use only.

**Authorized Distributor**


1-800-375-0605 www.rudolpbros.com

**SECTION 2. HAZARDS IDENTIFICATION**
**Emergency Overview**

|            |            |
|------------|------------|
| Appearance | Solid form |
| Color      | amber      |
| Odor       | ammoniacal |

**GHS Classification**

Acute toxicity (Oral) : Category 4  
 Acute toxicity (Inhalation) : Category 4  
 Acute toxicity (Dermal) : Category 3  
 Eye irritation : Category 2A  
 Skin sensitization : Category 1  
 Germ cell mutagenicity : Category 2  
 Specific target organ systemic toxicity - single exposure : Category 1

**GHS Label element**

Hazard pictograms : 

Signal Word : Danger

**Hazard Statements:**

H302 + H332 Harmful if swallowed or if inhaled. H311 Toxic in contact with skin. H317 May cause

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an allergic skin reaction. H319 Causes serious eye irritation. H341 Suspected of causing genetic defects. H370 Causes damage to organs.

**Precautionary Statements:**

**Prevention:** P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing should not be allowed out of the workplace. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:** P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth. P302 + P352 + P312 IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/ physician if you feel unwell. P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician. P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention. P337 + P313 If eye irritation persists: Get medical advice/ attention. P362 Take off contaminated clothing and wash before reuse.

**Storage:** P405 Store locked up.

**Disposal:** P501 Dispose of contents/ container to an approved waste disposal plant.

**Potential Health Effects****Carcinogenicity:**

|             |  |
|-------------|--|
| <b>IARC</b> | No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. |
| <b>OSHA</b> | No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.             |
| <b>NTP</b>  | No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.                 |

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

**Hazardous ingredients**

| Chemical Name                                 | CAS-No.    | Concentration [%] |
|---|------------|-------------------|
| Formaldehyde, polymer with 1,3-benzenediamine | 26936-95-8 | 30 - 50           |
| m-phenylenediamine                            | 108-45-2   | 30 - 50           |
| methanol                                      | 67-56-1    | 1 - 5             |

**SECTION 4. FIRST AID MEASURES**

General advice : Show this material safety data sheet to the doctor in attendance.

If inhaled : Move to fresh air.  
If not breathing, give artificial respiration.

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- Keep patient warm and at rest.  
Consult a physician after significant exposure.
- In case of skin contact : Take off all contaminated clothing immediately.  
Wash off immediately with soap and plenty of water.  
Call a physician if irritation develops or persists.  
Wash contaminated clothing before re-use.
- In case of eye contact : Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention.  
Protect unharmed eye.
- If swallowed : If swallowed, call a poison control center or doctor immediately.  
Do NOT induce vomiting.  
If victim is fully conscious, give a cupful of water.  
If possible drink milk afterwards.

**SECTION 5. FIRE-FIGHTING MEASURES**

- Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- Specific extinguishing methods :
- Further information : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Special protective equipment for fire-fighters : Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment and emergency procedures : Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : Prevent product from entering drains.  
Do not flush into surface water or sanitary sewer system.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material.  
Shovel into suitable container for disposal.

**SECTION 7. HANDLING AND STORAGE**

- Local/Total ventilation : Use only with adequate ventilation.
- Advice on safe handling : Wear personal protective equipment.  
Do not get on skin or clothing.

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Use only in an area equipped with a safety shower.

Conditions for safe storage : Keep containers tightly closed in a dry, cool and well-ventilated place.

Materials to avoid : No special restrictions on storage with other products.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**
**Ingredients with workplace control parameters**

| Ingredients        | CAS-No.  | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis    |
|--------------------|----------|-------------------------------|--|----------|
| m-phenylenediamine | 108-45-2 | TWA                           | 0.1 mg/m <sup>3</sup>                          | ACGIH    |
| methanol           | 67-56-1  | TWA                           | 200 ppm  | ACGIH    |
|                    |          | STEL                          | 250 ppm  | ACGIH    |
|                    |          | TWA                           | 200 ppm<br>260 mg/m <sup>3</sup>               | OSHA Z-1 |
|                    |          | STEL                          | 250 ppm<br>325 mg/m <sup>3</sup>               | OSHA P0  |
|                    |          | TWA                           | 200 ppm<br>260 mg/m <sup>3</sup>               | OSHA P0  |

**Personal protective equipment**

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Filter type : Combined particulates and organic vapor type

 Hand protection  
 Material

: butyl-rubber

Eye protection

 : Safety goggles  
 Face-shield  
 Ensure that eyewash stations and safety showers are close to the workstation location.

Skin and body protection

 : Long sleeved clothing  
 Chemical resistant apron

Protective measures

: Avoid contact with skin.

Hygiene measures

: Avoid contact with skin, eyes and clothing.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

|  |  |
|--|--|
| Appearance                             | : Solid form                                 |
| Color                                  | : amber                                      |
| Odor                                   | : ammoniacal                                 |
| Odor Threshold                         | : No data available                          |
| Melting point/freezing point           | : not determined                             |
| Boiling point/boiling range            | : not determined                             |
| Flash point                            | : 450 °F                                     |
| Evaporation rate                       | : not determined                             |
| Flammability (solid, gas)              | : Not classified as a flammability hazard    |
| Upper explosion limit                  | : upper flammability limit<br>not determined |
| Lower explosion limit                  | : lower flammability limit<br>not determined |
| Density                                | : 9.65 - 9.75 lb/gal                         |
| Solubility(ies)                        |  |
| Water solubility                       | : not determined                             |
| Partition coefficient: n-octanol/water | : No data available                          |
| Autoignition temperature               | : not determined                             |
| Viscosity                              |  |
| Viscosity, kinematic                   | : not determined                             |
| Solid Content, % by weight:            | : 99.5                                       |

**SECTION 10. STABILITY AND REACTIVITY**

|                                  |                                     |
|----------------------------------|-------------------------------------|
| Chemical stability               | : The product is chemically stable. |
| Hazardous decomposition products | : Stable under normal conditions.   |

**SECTION 11. TOXICOLOGICAL INFORMATION****Acute toxicity****Product:**

|                           |   |
|---------------------------|---|
| Acute oral toxicity       | : Acute toxicity estimate : 454.89 mg/kg<br>Method: Calculation method                    |
| Acute inhalation toxicity | : Acute toxicity estimate : 1.16 mg/l<br>Exposure time: 4 h<br>Test atmosphere: dust/mist |

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Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate : 669.99 mg/kg  
Method: Calculation method

**Ingredients:****m-phenylenediamine:**

Acute oral toxicity : LD50 Oral rat: 204 mg/kg

**Skin corrosion/irritation**

No data available

**Serious eye damage/eye irritation**

No data available

**Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**STOT-single exposure**

No data available

**STOT-repeated exposure**

No data available

**Aspiration toxicity**

No data available

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**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity****Ingredients:****m-phenylenediamine :**

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 5.9 mg/l  
Exposure time: 48 h  
Test Method: static test

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata): 2.4 mg/l  
Exposure time: 96 h

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Test Type: flow-through test

**Persistence and degradability**

No data available

**Bioaccumulative potential****Mobility in soil**

No data available

**Other adverse effects**

No data available

**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

Waste from residues : To the best of our knowledge, this product does not meet the definition of hazardous waste under the U.S. EPA Hazardous Waste Regulations 40 CFR 261. Disposal via incineration at an approved facility is recommended, as industry best practice. Consult state, local or provincial authorities for more restrictive requirements.

**SECTION 14. TRANSPORT INFORMATION****Special precautions for user**

Not applicable

**Domestic regulation****49 CFR**

UN/ID/NA number : 2810  
Proper shipping name : Toxic, liquids, organic, n.o.s.  
(1,3-BENZENEDIAMINE)  
Class : 6.1  
Packing group : III  
Labels : 6.1  
ERG Code : 153  
Marine pollutant : no

**International Regulation****IATA-DGR**

UN/ID No. : 2810  
Proper shipping name : Toxic liquid, organic, n.o.s.  
(1,3-BENZENEDIAMINE)  
Class : 6.1

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Packing group : III  
 Labels : 6.1  
 Packing instruction (cargo aircraft) : 663  
 Packing instruction (passenger aircraft) : 655

**IMDG-Code**

UN number : 2810  
 Proper shipping name : TOXIC LIQUID, ORGANIC, N.O.S.  
 Class : 6.1  
 Packing group : III  
 Labels : 6.1  
 EmS Code : F-A, S-A  
 Marine pollutant : no

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

**SECTION 15. REGULATORY INFORMATION**

**SARA 311/312 Hazards** : Acute Health Hazard  
 Chronic Health Hazard

**SARA 302** : SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313** : The following components are subject to reporting levels established by SARA Title III, Section 313:

|                    |          |
|--------------------|----------|
| m-phenylenediamine | 108-45-2 |
| methanol           | 67-56-1  |

**Clean Air Act**

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

|          |         |
|----------|---------|
| methanol | 67-56-1 |
|----------|---------|

**US State Regulations**

**California Prop 65** WARNING: This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

|          |         |
|----------|---------|
| methanol | 67-56-1 |
|----------|---------|

**The ingredients of this product are reported in the following inventories:**

**TSCA** On TSCA Inventory



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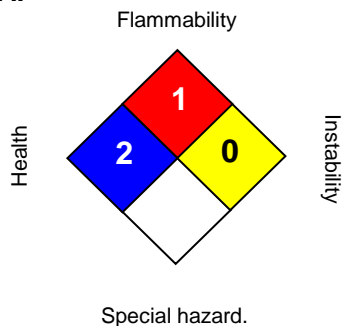
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|  |   |
|--|---|
| <b>DSL</b><br><br><b>REACH</b><br><b>AICS</b><br><b>NZIoC</b><br><b>ENCS</b><br><b>KECI</b><br><b>PICCS</b><br><b>IECSC</b><br><b>TWINV</b><br><b>Inventories Legend</b> | This product contains the following components listed on the Canadian NDSL. All other components are on the Canadian DSL.<br><br>Not in compliance with the inventory<br>Not in compliance with the inventory<br>Not in compliance with the inventory<br>Not in compliance with the inventory<br>Not in compliance with the inventory<br>Not in compliance with the inventory<br>Not in compliance with the inventory<br>Not in compliance with the inventory<br>Not in compliance with the inventory<br>TSCA (USA), DSL (Canada), REACH(Europe), AICS (Australia), NZIoC (New Zealand), ENCS (Japan), KECI (Korea), PICCS (Philippines), IECSC (China), TWINV (Taiwan) |
|--|---|

**SECTION 16. OTHER INFORMATION**

Prepared by: Global Regulatory Department - phone: 1-651-236-5842 - email: msds.request@hbfuller.com

**Further information**
**NFPA:**

**HMIS III:**

|                        |           |
|------------------------|-----------|
| <b>HEALTH</b>          | <b>2*</b> |
| <b>FLAMMABILITY</b>    | <b>1</b>  |
| <b>PHYSICAL HAZARD</b> | <b>0</b>  |

 0 = not significant, 1 =Slight,  
 2 = Moderate, 3 = High  
 4 = Extreme, \* = Chronic

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