

SAFETY DATA SHEET OPTICAL EPOXY RESIN**H.B. Fuller® FH-5313-A**

Version 1.0

Revision Date 12/12/2022

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : H.B. Fuller® FH-5313-A
Product code : 100000023637

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 resin
Restrictions on use : For industrial use only.

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Appearance	liquid
Color	light yellow
Odor	characteristic

GHS Classification

Skin irritation : Category 2
Eye irritation : Category 2A
Skin sensitization : Category 1
Germ cell mutagenicity : Category 2
Carcinogenicity : Category 2

GHS label elements

Hazard pictograms :



Signal Word : Warning

Hazard Statements:

H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye

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irritation. H341 Suspected of causing genetic defects. H351 Suspected of causing cancer.

Precautionary Statements:

Prevention: P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P261 Avoid breathing mist or vapors. P264 Wash skin thoroughly after handling. P272 Contaminated work clothing must not be allowed out of the workplace. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response: P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308 + P313 IF exposed or concerned: Get medical advice/ attention. 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:****IARC**

Group 2B: Possibly carcinogenic to humans
butyl 2,3-epoxypropyl ether 2426-08-6

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

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 [%]
Epoxy resin	25036-25-3	70 - 90
1,4-bis(2,3-epoxypropoxy)butane	2425-79-8	10 - 20
butyl 2,3-epoxypropyl ether	2426-08-6	1 - 5

Actual concentration is withheld as a trade secret

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 symptoms persist, call a physician.

In case of skin contact : Wash off with soap and water.
Get medical attention immediately if irritation develops and

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- persists.
Remove contaminated clothing and shoes.
Wash contaminated clothing before reuse.
- In case of eye contact : Flush eyes with water at least 15 minutes. Get medical attention if eye irritation develops or persists.
- If swallowed : Do NOT induce vomiting.
If victim is fully conscious, give a cupful of water.
Never give anything by mouth to an unconscious person.
Obtain medical attention.

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 : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

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

- Technical measures : Not applicable
- Advice on safe handling : No special precautions required.
- Conditions for safe storage : Keep in a dry, cool place.
- Materials to avoid : No special restrictions on storage with other products.

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

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
butyl 2,3-epoxypropyl ether	2426-08-6	TWA	3 ppm	ACGIH
		TWA	50 ppm 270 mg/m3	OSHA Z-1
		TWA	25 ppm 135 mg/m3	OSHA P0
		PEL	25 ppm 135 mg/m3	CAL PEL

Personal protective equipment

- Respiratory protection : No personal respiratory protective equipment normally required.
- Hand protection
Material : Nitrile rubber
- Eye protection : Safety glasses
- Skin and body protection : Remove and wash contaminated clothing before re-use.
- Protective measures : Avoid contact with skin.
- Hygiene measures : Avoid contact with skin, eyes and clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : liquid
- Color : light yellow
- Odor : characteristic
- Odor Threshold : no data available
- pH : Not applicable
- Melting point/freezing point : is not determined
- Boiling point/boiling range : is not determined
- Flash point : Not applicable
- Evaporation rate : is not determined
- Flammability (solid, gas) : Not classified as a flammability hazard



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Upper explosion limit	: Upper flammability limit is not determined
Lower explosion limit	: Lower flammability limit is not determined
Vapor pressure	: is not determined
Density	: 9.48 lb/gal
Solubility(ies)	
Water solubility	: is not determined
Partition coefficient: n-octanol/water	: no data available
Autoignition temperature	: is not determined
Viscosity	
Viscosity, kinematic	: is not determined

SECTION 10. STABILITY AND REACTIVITY

Chemical stability	: The product is chemically stable.
Conditions to avoid	: Not applicable
Hazardous decomposition products	: Stable under normal conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity	: Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method
Acute inhalation toxicity	: Acute toxicity estimate : 73.33 mg/l Exposure time: 4 h Test atmosphere: vapor Method: Calculation method
Acute dermal toxicity	: Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method

Components:

butyl 2,3-epoxypropyl ether:



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Acute inhalation toxicity : LC50 Rat: 24 mg/l
Exposure time: 4 h
Test atmosphere: vapor

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

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

No data available

Persistence and degradability

No data available

Bioaccumulative potential

Mobility in soil

No data available

Other adverse effects

No data available

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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

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

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

Not applicable for product as supplied.

Domestic regulation

49 CFR

Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

SARA 311/312 Hazards

: Respiratory or skin sensitization
Germ cell mutagenicity
Carcinogenicity
Skin corrosion or irritation
Serious eye damage or eye irritation

SARA 302

: This material does not contain any components with a section 302 EHS TPQ.



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SARA 313

: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

US State Regulations

California Prop 65

Please contact Supplier for more information.

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

TSCA

All substances listed as active on the TSCA inventory

AIIC

On the inventory, or in compliance with the inventory

DSL

All components of this product are on the Canadian DSL

KECI

On the inventory, or in compliance with the inventory

PICCS

On the inventory, or in compliance with the inventory

IECSC

On the inventory, or in compliance with the inventory

Inventories Legend TSCA (USA), DSL (Canada), REACH(Europe), AIIC (Australia), NZIoC (New Zealand), ENCS (Japan), KECI (Korea), PICCS (Philippines), IECSC (China), TWINV (Taiwan)

SECTION 16. OTHER INFORMATION

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

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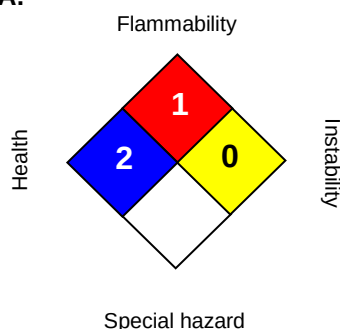
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Further information

NFPA:



HMIS III:

HEALTH	2*
FLAMMABILITY	1
PHYSICAL HAZARD	0

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

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