

SAFETY DATA SHEET**Foster® 81-33**

Version 1.1

Revision Date 03/31/2022

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Foster® 81-33
Product code : 100000014632

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 : Solvent based adhesive
Restrictions on use : For industrial use only.



SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Appearance	liquid
Color	off-white
Odor	solvent

GHS Classification

Flammable liquids : Category 3
Respiratory sensitization : Category 1
Skin sensitization : Category 1
Carcinogenicity : Category 2
Reproductive toxicity : Category 2

GHS label elements

Hazard pictograms :  

Signal Word : Danger

Hazard Statements:

H226 Flammable liquid and vapor. H317 May cause an allergic skin reaction. H334 May cause

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allergy or asthma symptoms or breathing difficulties if inhaled. H351 Suspected of causing cancer. H361 Suspected of damaging fertility or the unborn child.

Precautionary Statements:

Prevention: P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking. P233 Keep container tightly closed. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray. P272 Contaminated work clothing must not be allowed out of the workplace. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P285 In case of inadequate ventilation wear respiratory protection.

Response: P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. P304 + P341 IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. P308 + P313 IF exposed or concerned: Get medical advice/ attention. P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention. P363 Wash contaminated clothing before reuse. P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage: P403 + P235 Store in a well-ventilated place. Keep cool. P405 Store locked up.

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

Potential Health Effects
Carcinogenicity:
IARC

Group 1: Carcinogenic to humans During normal handling of the product, this substance is encapsulated within the product and will not present a cancer exposure risk.

Quartz (SiO₂) 14808-60-7

crystalite 14464-46-1

Group 2B: Possibly carcinogenic to humans During normal handling of the product, this substance is encapsulated within the product and will not present a cancer exposure risk.

Paraffin waxes and 63449-39-8

Hydrocarbon waxes, chloro

Alkanes, chloro 61788-76-9

cumene 98-82-8

titanium dioxide 13463-67-7

diantimony trioxide 1309-64-4

ethylbenzene 100-41-4

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

Known to be human carcinogen During normal handling of the product, this substance is encapsulated within the product and will not present a cancer exposure risk.

Quartz (SiO₂) 14808-60-7

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cristobalite 14464-46-1

Reasonably anticipated to be a human carcinogen During normal handling of the product, this substance is encapsulated within the product and will not present a cancer exposure risk.

Paraffin waxes and Hydrocarbon waxes, chloro 63449-39-8

cumene 98-82-8

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous ingredients

Chemical name	CAS-No.	Concentration [%]
kaolin	1332-58-7	20 - 30
calcium carbonate	471-34-1	20 - 30
1,2,4-trimethylbenzene	95-63-6	5 - 10
Mica	12001-26-2	5 - 10
Paraffin waxes and Hydrocarbon waxes, chloro	63449-39-8	5 - 10
Alkanes, chloro	61788-76-9	5 - 10
Zinc oxide	1314-13-2	1 - 5
Distillates (petroleum), hydrotreated light	64742-47-8	1 - 5
mesitylene	108-67-8	1 - 5
xylene	1330-20-7	1 - 5
Quartz (SiO ₂)	14808-60-7	0.1 - 1
cumene	98-82-8	0.1 - 1
titanium dioxide	13463-67-7	0.1 - 1
cristobalite	14464-46-1	0.1 - 1
bismuth tris(2-ethylhexanoate)	67874-71-9	0.1 - 1
6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol	119-47-1	0.1 - 1
diantimony trioxide	1309-64-4	0.1 - 1
ethylbenzene	100-41-4	0.1 - 1
calcium bis(2-ethylhexanoate)	136-51-6	0.1 - 1
2-ethylhexanoic acid	149-57-5	0.1 - 1

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.

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- | | |
|-------------------------|---|
| In case of skin contact | : Wash off with soap and water.
Get medical attention if irritation develops and persists. |
| 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. |
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SECTION 5. FIRE-FIGHTING MEASURES

- | | |
|--|--|
| Suitable extinguishing media | : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. |
| Specific hazards during fire fighting | : Cool closed containers exposed to fire with water spray. |
| 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 | : Remove all sources of ignition.
Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
Refer to protective measures listed in sections 7 and 8. |
| Environmental precautions | : Prevent spreading over a wide area (e.g., by containment or oil barriers). |
| Methods and materials for containment and cleaning up | : Soak up with inert absorbent material.
Sweep up and shovel into suitable containers for disposal.
Non-sparking tools should be used. |
-

SECTION 7. HANDLING AND STORAGE

- | | |
|-------------------------|---|
| Local/Total ventilation | : Use only with adequate ventilation. |
| Advice on safe handling | : Avoid inhalation of vapor or mist.
Do not use in areas without adequate ventilation.
Keep away from fire, sparks and heated surfaces.
Keep container closed when not in use.
Take precautionary measures against static discharges. |
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- Conditions for safe storage : Take measures to prevent the build up of electrostatic charge.
 Use explosion-proof equipment.
 Keep containers tightly closed in a dry, cool and well-ventilated place.
 Keep away from sources of ignition - No smoking.
 Solvent vapors are heavier than air and may spread along floors.
- Materials to avoid : Strong oxidizing agents

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

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
kaolin	1332-58-7	TWA (Respirable particulate matter)	2 mg/m ³	ACGIH
		TWA (total dust)	15 mg/m ³	OSHA Z-1
		TWA (respirable fraction)	5 mg/m ³	OSHA Z-1
		TWA (Total)	10 mg/m ³	OSHA P0
		TWA (Respirable fraction)	5 mg/m ³	OSHA P0
		TWA (Total dust)	10 mg/m ³	OSHA P0
		TWA (respirable dust fraction)	5 mg/m ³	OSHA P0
calcium carbonate	471-34-1	PEL (Total dust)	10 mg/m ³	CAL PEL
		PEL (respirable dust fraction)	5 mg/m ³	CAL PEL
Mica	12001-26-2	TWA (Respirable particulate matter)	0.1 mg/m ³	ACGIH
		TWA (Dust)	20 Million particles per cubic foot	OSHA Z-3

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		TWA (Respirable fraction)	3 mg/m ³	OSHA P0
		TWA (Respirable)	3 mg/m ³	NIOSH REL
Zinc oxide	1314-13-2	TWA (Respirable particulate matter)	2 mg/m ³	ACGIH
		STEL (Respirable particulate matter)	10 mg/m ³	ACGIH
		TWA (Fumes)	5 mg/m ³	OSHA Z-1
		TWA (total dust)	15 mg/m ³	OSHA Z-1
		TWA (respirable fraction)	5 mg/m ³	OSHA Z-1
		TWA (Total)	10 mg/m ³	OSHA P0
		TWA (Respirable fraction)	5 mg/m ³	OSHA P0
		TWA	5 mg/m ³	OSHA P0
		STEL	10 mg/m ³	OSHA P0
		TWA (Total dust)	10 mg/m ³	OSHA P0
		TWA (respirable dust fraction)	5 mg/m ³	OSHA P0
		TWA (Fumes)	5 mg/m ³	OSHA P0
		STEL (Fumes)	10 mg/m ³	OSHA P0
Distillates (petroleum), hydrotreated light	64742-47-8	TWA	500 ppm 2,000 mg/m ³	OSHA Z-1
		TWA	200 mg/m ³	ACGIH
		TWA	400 ppm 1,600 mg/m ³	OSHA P0
xylene	1330-20-7	TWA	100 ppm	ACGIH
		STEL	150 ppm	ACGIH
		STEL	150 ppm 655 mg/m ³	OSHA P0
		TWA	100 ppm 435 mg/m ³	OSHA P0
		TWA	100 ppm 435 mg/m ³	OSHA Z-1
		STEL	150 ppm 655 mg/m ³	CAL PEL
		C	300 ppm	CAL PEL

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		PEL	100 ppm 435 mg/m ³	CAL PEL
Quartz (SiO ₂)	14808-60-7	TWA (Respirable particulate matter)	0.025 mg/m ³	ACGIH
		TWA (total dust)	30 mg/m ³ / %SiO ₂ +2	OSHA Z-3
		TWA (respirable)	10 mg/m ³ / %SiO ₂ +2	OSHA Z-3
		TWA (respirable)	250 mppcf / %SiO ₂ +5	OSHA Z-3
		TWA (Respirable fraction)	0.1 mg/m ³	OSHA P0
		TWA (Respirable dust)	0.05 mg/m ³	OSHA Z-1
		PEL (Respirable dust)	0.05 mg/m ³	CAL PEL
		TWA (respirable dust fraction)	0.1 mg/m ³	OSHA P0
cumene	98-82-8	TWA	5 ppm	ACGIH
		TWA	50 ppm 245 mg/m ³	NIOSH REL
		TWA	50 ppm 245 mg/m ³	OSHA Z-1
		TWA	50 ppm 245 mg/m ³	OSHA P0
		PEL	50 ppm 245 mg/m ³	CAL PEL
titanium dioxide	13463-67-7	TWA	10 mg/m ³	ACGIH
		TWA (total dust)	15 mg/m ³	OSHA Z-1
		TWA (Total)	10 mg/m ³	OSHA P0
		TWA (Total dust)	10 mg/m ³	OSHA P0
cristobalite	14464-46-1	TWA (Respirable particulate matter)	0.025 mg/m ³	ACGIH
		TWA (Respirable fraction)	0.05 mg/m ³	OSHA P0
		TWA (Respirable dust)	0.05 mg/m ³	OSHA Z-1
		PEL (Respirable)	0.05 mg/m ³	CAL PEL

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		dust)		
		TWA (respirable dust fraction)	0.05 mg/m ³	OSHA P0
diantimony trioxide	1309-64-4	TWA	0.5 mg/m ³	OSHA Z-1
		TWA	0.5 mg/m ³	OSHA P0
		TWA (Inhalable particulate matter)	0.02 mg/m ³	ACGIH
ethylbenzene	100-41-4	TWA	20 ppm	ACGIH
		STEL	125 ppm	ACGIH
		TWA	100 ppm 435 mg/m ³	OSHA Z-1
		TWA	100 ppm 435 mg/m ³	OSHA P0
		STEL	125 ppm 545 mg/m ³	OSHA P0
		PEL	5 ppm 22 mg/m ³	CAL PEL
		STEL	30 ppm 130 mg/m ³	CAL PEL
2-ethylhexanoic acid	149-57-5	TWA (Inhalable fraction and vapor)	5 mg/m ³	ACGIH

Engineering measures : Use local exhaust ventilation or other engineering controls to minimize exposures.

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 : Organic vapor Type

Hand protection
Material : Nitrile rubber

Eye protection : Safety glasses with side-shields

Hygiene measures : Avoid contact with skin, eyes and clothing.
Provide adequate ventilation.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

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Color	: off-white
Odor	: solvent
Odor Threshold	: no data available
pH	: not applicable
Melting point/freezing point	: is not determined
Boiling point/boiling range	: is not determined
Evaporation rate	: is not determined
Upper explosion limit	: Upper flammability limit is not determined
Lower explosion limit	: Lower flammability limit is not determined
Vapor pressure	: is not determined
Density	: 13.0 - 13.6 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
VOC, less water, in g/l	: 300

SECTION 10. STABILITY AND REACTIVITY

Chemical stability	: The product is chemically stable.
Possibility of hazardous reactions	: Hazardous polymerization does not occur.
Conditions to avoid	: Heat, flames and sparks.
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 : 102.13 mg/l

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Exposure time: 4 h
Test atmosphere: vapor
Method: Calculation methodAcute dermal toxicity : Acute toxicity estimate : > 5,000 mg/kg
Method: Calculation method**Components:****1,2,4-trimethylbenzene:**

Acute oral toxicity : LD50 Oral Rat: 3,400 mg/kg

Acute inhalation toxicity : LC50 Rat: 18 mg/l
Exposure time: 4 h
Test atmosphere: vapor

Acute dermal toxicity : LD50 Dermal Rabbit: > 3,160 mg/kg

Distillates (petroleum), hydrotreated light:Acute inhalation toxicity : LC50 Rat: > 5.2 mg/l
Exposure time: 4 h
Test atmosphere: vapor**xylene:**

Acute oral toxicity : LD50 Oral Rat: 4,300 mg/kg

Acute inhalation toxicity : LC50 Rat: 47,635 mg/l
Exposure time: 4 h
Test atmosphere: vapor**cumene:**

Acute oral toxicity : LD50 Oral Rat: 1,400 mg/kg

ethylbenzene:

Acute oral toxicity : LD50 Oral Rat: 3,500 mg/kg

Acute inhalation toxicity : LC50 Rat: 17.2 mg/l
Exposure time: 4 h
Test atmosphere: vapor**2-ethylhexanoic acid:**

Acute oral toxicity : LD50 Oral Rat: 3,000 mg/kg

Acute dermal toxicity : LD50 Dermal Rabbit: 1,260 mg/kg

Skin corrosion/irritation

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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****Components:****1,2,4-trimethylbenzene :**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 7.19 - 8.28 mg/l
Exposure time: 96 h
Test Method: flow-through test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 6.14 mg/l
Exposure time: 48 h
Test Method: static test

Paraffin waxes and Hydrocarbon waxes, chloro :

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 0.0109 mg/l
Exposure time: 96 h
Test Method: flow-through test

Distillates (petroleum), hydrotreated light :

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Toxicity to fish : LC50 (*Lepomis macrochirus* (Bluegill sunfish)): 2.2 mg/l
Exposure time: 96 h
Test Method: static test

mesitylene :

Toxicity to fish : LC50 (*Pimephales promelas* (fathead minnow)): 3.48 mg/l
Exposure time: 96 h
Test Method: static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 50 mg/l
Exposure time: 24 h
Test Method: static test

cumene :

Toxicity to fish : LC50 (*Oncorhynchus mykiss* (rainbow trout)): 2.7 mg/l
Exposure time: 96 h
Test Method: semi-static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 0.6 mg/l
Exposure time: 48 h
Test Method: static test

Toxicity to algae : EC50 (*Pseudokirchneriella subcapitata* (microalgae)): 2.6 mg/l
Exposure time: 72 h
Test Type: flow-through test

diantimony trioxide :

Toxicity to fish : LC50 (*Pimephales promelas* (fathead minnow)): > 80 mg/l
Exposure time: 96 h
Test Method: static test

Toxicity to algae : EC50 (*Pseudokirchneriella subcapitata* (microalgae)): 0.63 - 0.8 mg/l
Exposure time: 72 h
Test Type: flow-through test

2-ethylhexanoic acid :

Toxicity to fish : LC50 (*Pimephales promelas* (fathead minnow)): 70 mg/l
Exposure time: 96 h
Test Method: static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 85.4 mg/l
Exposure time: 48 h
Test Method: static test

Toxicity to algae : EC50 (*Desmodesmus subspicatus* (green algae)): 41 mg/l
Exposure time: 96 h
Test Type: flow-through test

Persistence and degradability

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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 : This product meets the definition of hazardous waste under the U.S. EPA Hazardous Waste Regulations 40 CFR 261. It is ignitable waste class D001. Disposal via incineration is recommended. Consult your state, local, or provincial authorities for more restrictive requirements. The hazard and precautionary statements displayed on the label also apply to any residues left in the container.

SECTION 14. TRANSPORT INFORMATION**International Regulations****IATA-DGR**

UN/ID No. : UN 1133
Proper shipping name : Adhesives
(ALKANES, C14-17, CHLORO)
Class : 3
Packing group : III
Labels : Flammable Liquids
Packing instruction (cargo aircraft) : 366
Packing instruction (passenger aircraft) : 355

IMDG-Code

UN number : UN 1133
Proper shipping name : ADHESIVES
(ALKANES, C14-17, CHLORO)
Class : 3
Packing group : III
Labels : 3
EmS Code : F-E, S-D
Marine pollutant : yes

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

Not applicable for product as supplied.

Domestic regulation

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49 CFR

UN/ID/NA number : UN 1133
Proper shipping name : Adhesives
(ALKANES, C14-17, CHLORO)
Class : 3
Packing group : III
Labels : FLAMMABLE LIQUID
ERG Code : 128
Marine pollutant : no

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)
Respiratory or skin sensitization
Reproductive toxicity
Carcinogenicity

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

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

1,2,4-trimethylbenzene	95-63-6
Zinc oxide	1314-13-2
xylene	1330-20-7
cumene	98-82-8
ethylbenzene	100-41-4

Clean Air Act

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 112 (40 CFR 61):

xylene	1330-20-7
cumene	98-82-8
diantimony trioxide	1309-64-4
ethylbenzene	100-41-4

US State Regulations

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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

DSL All components of this product are on the Canadian DSL

AIIC On the inventory, or in compliance with the inventory

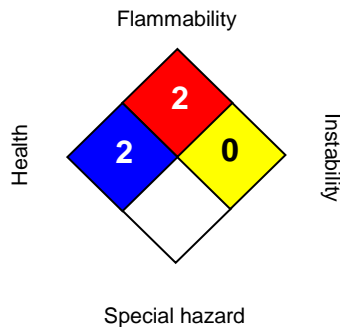
KECI On the inventory, or in compliance with the inventory

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

Further information
NFPA:

HMIS III:

HEALTH	2*
FLAMMABILITY	2
PHYSICAL HAZARD	0

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

The information and recommendations set forth herein are believed to be accurate. Because some of the information is derived from information provided to the H.B. Fuller Company from its suppliers, and because the H.B. Fuller Company has no control over the conditions of handling and use, the H.B. Fuller Company makes no warranty, expressed or implied, regarding the accuracy of the data or the results to be obtained from the use thereof. The information is supplied solely for your information and consideration, and the H.B. Fuller Company assumes no responsibility for use or reliance thereon. It is the responsibility of the user of H.B. Fuller Company products to comply with all applicable federal, state and local laws and regulations.