

GorillaPro® PU5 Part A

Version 1.2 Revision Date 12/12/2022

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name GorillaPro® PU5 Part A

Product code 100000013422

Manufacturer or supplier's details

Company : H.B. Fuller Engineering Adhesives

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 Isocyanate based product

For industrial use only. Restrictions on use

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance	liquid
Color	light yellow
Odor	characteristic

GHS Classification

Acute toxicity (Inhalation) Category 4 Category 2 Skin irritation Eye irritation Category 2A Respiratory sensitization Category 1 Skin sensitization Category 1 Carcinogenicity Category 2

Specific target organ toxicity -

single exposure

Category 3 (Respiratory system)

Specific target organ toxicity -

: Category 2

repeated exposure

Specific target organ toxicity -

: Category 2 (Respiratory Tract)

repeated exposure

(Inhalation)



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GHS label elements

Hazard pictograms





Signal Word : Danger

Hazard Statements:

H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H332 Harmful if inhaled. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335 May cause respiratory irritation. H351 Suspected of causing cancer. H373 May cause damage to organs through prolonged or repeated exposure. H373 May cause damage to organs (Respiratory Tract) through prolonged or repeated exposure if inhaled.

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 mist or vapors. P264 Wash skin 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. P285 In case of inadequate ventilation wear respiratory protection.

Response: P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor 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. 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. P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor. P362 Take off contaminated clothing and wash before reuse.

Storage: P403 + P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up.

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

Potential Health Effects

Aggravated Medical : None known.

Condition

Symptoms of Overexposure : Breathing difficulties

Carcinogenicity:

IARC 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.

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.



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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous ingredients

Chemical name	CAS-No.	Concentration [%]
methylenediphenyl diisocyanate	26447-40-5	30 - 50
4,4'-methylenediphenyl diisocyanate	101-68-8	30 - 50
Proprietary MDI Homopolymer	0-00-0	20 - 30
triethyl phosphate	78-40-0	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 : Get medical attention if irritation develops and persists.

Take off contaminated clothing and shoes immediately.

Wash contaminated clothing before re-use.

In case of eye contact : In the case of contact with eyes, rinse immediately with plenty

of water and seek medical advice.

If swallowed : Do not induce vomiting. If conscious, give 2 glasses of water.

Get immediate medical attention.

Most important symptoms and effects, both acute and

delayed

: Breathing difficulties

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or

carbon dioxide.

Specific hazards during fire

fighting

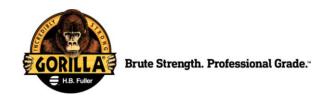
: Burning produces irritant fumes.

Special protective equipment

for fire-fighters

: In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.



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SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Refer to protective measures listed in sections 7 and 8.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material.
 Shovel into suitable container for disposal.
 Neutralize with the following product(s):

Ammonia

SECTION 7. HANDLING AND STORAGE

Local/Total ventilation : Use only with adequate ventilation.

Advice on safe handling : Protect from moisture.

Avoid inhalation, ingestion and contact with skin and eyes.

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

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

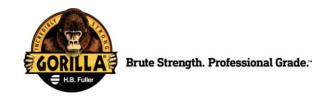
Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
4,4'-methylenediphenyl diisocyanate	101-68-8	TWA	0.005 ppm	ACGIH
		С	0.02 ppm 0.2 mg/m3	OSHA Z-1
		С	0.02 ppm 0.2 mg/m3	OSHA P0
		PEL	0.005 ppm 0.051 mg/m3	CAL PEL

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



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ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

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
Color : light yellow
Odor : characteristic
Odor Threshold : no data available
pH : Not applicable
Melting point/freezing point : is not determined

Initial boiling point and boiling

range

: is not determined

Flash point : Not applicable Evaporation rate : is not determined

Flammability (solid, gas) : Not classified as a flammability hazard

Upper explosion limit : Upper flammability limit

is not determined

Lower explosion limit : Lower flammability limit

is not determined

Vapor pressure : is not determined

Density : 1.11 g/cm3

Solubility(ies)

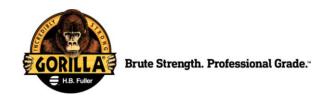
Water solubility : is not determined Partition coefficient: n- : no data available

octanol/water

Autoignition temperature : is not determined

Viscosity

Viscosity, kinematic : is not determined



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SECTION 10. STABILITY AND REACTIVITY

Reactivity : Container can be pressurized by carbon dioxide due to

reaction with humid air and/or water.

Chemical stability : The product is chemically stable.

Possibility of hazardous

reactions

: Hazardous polymerization does not occur.

Incompatible materials : Amines

Strong acids and strong bases

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 : 1.78 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: Calculation method

Components:

methylenediphenyl diisocyanate:

Acute inhalation toxicity : LC50 Rat: 0.369 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

4,4'-methylenediphenyl diisocyanate:

Acute inhalation toxicity : LC50 : 1.5 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available



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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

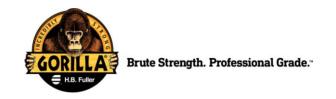
No data available

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



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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 : Acute toxicity (any route of exposure)

Respiratory or skin sensitization

Carcinogenicity

Specific target organ toxicity (single or repeated exposure)

Skin corrosion or irritation

Serious eye damage or eye irritation

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

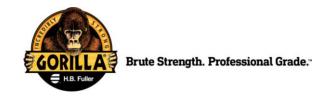
EHS TPQ.

SARA 313 : The following components are subject to reporting levels established

by SARA Title III, Section 313:

4,4'-methylenediphenyl diisocyanate 101-68-8

Clean Air Act



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

4,4'-methylenediphenyl diisocyanate 101-68-8

US State Regulations

California Prop 65 : Please contact Supplier for more information.

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

TCSI On the inventory, or in compliance with the inventory

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

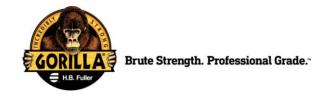
PICCS On the inventory, or in compliance with the inventory

IECSC On the inventory, or in compliance with the inventory

Inventories LegendTSCA (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

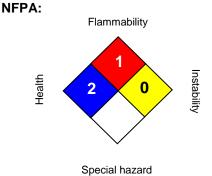


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Further information



HMIS III:

HEALTH	2*
FLAMMABILITY	1
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.



GorillaPro® PU5 Part B

Version 1.1 Revision Date 12/06/2022

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : GorillaPro® PU5 Part B

Product code : 100000013423

Manufacturer or supplier's details

Company : H.B. Fuller Engineering Adhesives

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.

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance	liquid
Color	white
Odor	characteristic

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Potential Health Effects

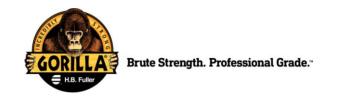
Carcinogenicity:

IARC 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.

OSHA No component of this product present at levels greater than or



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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 [%]
calcium carbonate	471-34-1	50 - 70
kaolin	1332-58-7	20 - 30

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

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

attendance.

If inhaled : Move to fresh air.

If not breathing, give artificial respiration.

Keep patient warm and at rest.

Consult a physician after significant exposure.

Take off all contaminated clothing immediately. In case of skin contact

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.

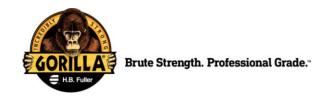
If victim is fully conscious, give a cupful of water.

If possible drink milk afterwards.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or

carbon dioxide.



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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 Environmental precautions : Refer to protective measures listed in sections 7 and 8.

: 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.

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

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
calcium carbonate	471-34-1	PEL (Total dust)	10 mg/m3	CAL PEL



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		PEL (respirable dust fraction)	5 mg/m3	CAL PEL
kaolin	1332-58-7	TWA (Respirable particulate matter)	2 mg/m3	ACGIH
		TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA (respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (Total)	10 mg/m3	OSHA P0
		TWA (Respirable fraction)	5 mg/m3	OSHA P0
		TWA (Total dust)	10 mg/m3	OSHA P0
		TWA (respirable dust fraction)	5 mg/m3	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

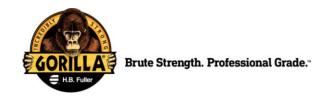
the workstation location.

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 : liquid Color : white

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

Upper explosion limit : Upper flammability limit

is not determined

Lower explosion limit : Lower flammability limit

is not determined

Vapor pressure : is not determined

Density : 1.47 g/cm3

Solubility(ies)

Water solubility : is not determined Partition coefficient: n- : no data available

octanol/water

Autoignition temperature : is not determined

Viscosity

Viscosity, kinematic : is not determined

SECTION 10. STABILITY AND REACTIVITY

Chemical stability : The product is chemically stable.

Hazardous decomposition

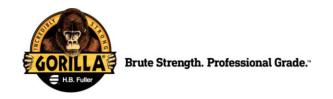
products

: Stable under normal conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

No data available



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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 : No SARA Hazards

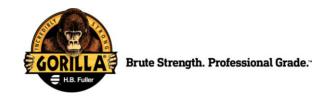
SARA 302 : This material does not contain any components with a section 302

EHS TPQ.

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.



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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:

TCSI On the inventory, or in compliance with the inventory

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

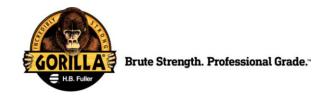
IECSC On the inventory, or in compliance with the inventory

CHINV On the inventory, or in compliance with the inventory

Inventories LegendTSCA (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

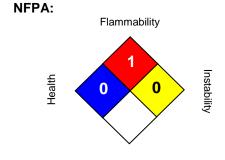


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Version 1.1

Revision Date 12/06/2022

Further information



Special hazard

HMIS III:

HEALTH	0
FLAMMABILITY	1
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.