

SAFETY DATA SHEETS

This SDS packet was issued with item:

076708606

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

076708226

The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).

076708598



SAFETY DATA SHEET

Permabond 102

1. Identification

Product identifier

Product name Permabond 102

Recommended use of the chemical and restrictions on use

Application Adhesive.

Details of the supplier of the safety data sheet

Supplier Permabond LLC
14 Robinson Street
Pottstown, PA 19464
USA
Telephone: 732-868-1372 or 800-640-7599
Website: www.permabond.com

Emergency telephone number

Emergency telephone Medical: Poison Control Center 866-827-6282 Transport: 1-800-640-7599

2. Hazard(s) identification

Classification of the substance or mixture

OSHA Regulatory Status This Product is Hazardous under the OSHA Hazard Communication Standard.

Physical hazards Flam. Liq. 4 - H227

Health hazards Skin Irrit. 2 - H315 Eye Irrit. 2A - H319 STOT SE 3 - H335

Label elements

Pictogram



Signal word Warning

Hazard statements H227 Combustible liquid.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

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Precautionary statements

P210 Keep away from heat, sparks, open flames and hot surfaces. No smoking.
 P261 Avoid breathing vapor/ spray.
 P264 Wash contaminated skin thoroughly after handling.
 P271 Use only outdoors or in a well-ventilated area.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face 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.
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P312 Call a poison center/ doctor if you feel unwell.
 P321 Specific treatment (see medical advice on this label).
 P332+P313 If skin irritation occurs: Get medical advice/ attention.
 P337+P313 If eye irritation persists: Get medical advice/ attention.
 P362+P364 Take off contaminated clothing and wash it before reuse.
 P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P403+P235 Store in a well-ventilated place. Keep cool.
 P405 Store locked up.
 Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Contains

ETHYL 2-CYANOACRYLATE

Other hazards

None under normal conditions.

3. Composition/information on ingredients

Mixtures

ETHYL 2-CYANOACRYLATE	60-100%
CAS number: 7085-85-0	
Classification Flam. Liq. 4 - H227 Skin Irrit. 2 - H315 Eye Irrit. 2A - H319 STOT SE 3 - H335	

The full text for all hazard statements is displayed in Section 16.

Composition comments

Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. First-aid measures

Description of first aid measures

Inhalation

Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If symptoms develop and persist, get medical attention.

Ingestion

On contact, immediate bonding of mouth could occur. Do not induce vomiting. Get medical attention.

Skin Contact

On contact, immediate bonding of the skin will occur. No attempt should be made to remove material from skin or to remove contaminated clothing, as the bonded skin can be easily torn. Wash skin thoroughly with soap and water.

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Eye contact Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes. If adhesive bonding occurs, do not force eyelids apart. Apply a pad soaked in warm water and allow the eyelids to separate. Get medical attention. Cured adhesive will not bond well to surface of eye, but corneal damage from abrasion may result.

Most important symptoms and effects, both acute and delayed

Inhalation Irritation of nose, throat and airway.

Ingestion On contact, immediate bonding of mouth could occur.

Skin contact Prolonged skin contact may cause redness and irritation.

Eye contact Irritating and may cause redness and pain.

Indication of immediate medical attention and special treatment needed

Notes for the doctor SKIN BONDING. Prise the skin apart slowly working from the edge of the bonded area. This can be eased by using warm soapy water. EYE BONDING. DO NOT force eyelids apart. Apply a pad soaked in warm water and allow the eye to separate itself.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media Extinguish with foam, carbon dioxide, dry powder or water fog.

Special hazards arising from the substance or mixture

Specific hazards Cloths used to wipe up spills may cause rapid polymerization that could generate sufficient heat to ignite the cloth.

Hazardous combustion products Trace amounts of toxic and/or irritating organic vapors may be generated. The use of breathing apparatus is recommended.

Advice for firefighters

Protective actions during firefighting Avoid breathing fire gases or vapors.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions For personal protection, see Section 8. Provide adequate ventilation.

Environmental precautions

Environmental precautions Ventilate area. Prevent product from entering drains or waterways.

Methods and material for containment and cleaning up

Methods for cleaning up Small spills: wipe up with cloth. Immediately soak cloth with water to polymerize the adhesive. Caution! Cloth containing adhesive may undergo autoignition if not soaked with water. Large spills: flood area with water. When cured, remove film with a scraper.

Reference to other sections For personal protection, see Section 8. For waste disposal, see Section 13.

7. Handling and storage

Precautions for safe handling

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Usage precautions Ensure adequate ventilation of the working area. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Keep away from fabric and paper goods. Contact with these materials may cause rapid polymerization which can generate smoke and strong irritating vapors and cause thermal burns.

Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry and cool place. Keep away from heat, sparks and open flame. Keep container closed when not in use.

Specific end uses(s)

Specific end use(s) Adhesive.

8. Exposure controls/Personal protection

Control parameters

Occupational exposure limits

ETHYL 2-CYANOACRYLATE

Long-term exposure limit (8-hour TWA): ACGIH 0.2 ppm 1 mg/m³

ACGIH = American Conference of Governmental Industrial Hygienists.

Exposure controls

Appropriate engineering controls Use positive down draft exhaust ventilation if general ventilation is insufficient to maintain vapor concentrations below established exposure limits.

Eye/face protection Wear approved safety goggles. Use face shield in case of splash risk.

Hand protection Nitrile rubber or Viton™ gloves are recommended. Cotton or other absorbent gloves should not be worn.

Other skin and body protection Uniforms, coveralls, or a lab coat should be worn

Respiratory protection Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. Ensure all respiratory protective equipment is suitable for its intended use and is NIOSH approved.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Clear liquid.
Color	Colorless.
Odor	Irritating.
Odor threshold	1 - 2 ppm
pH	Not available.
Melting point	Not available.
Initial boiling point and range	>149°C (300°F)
Flash point	80°C – 93°C (176°F - 199.94°F)
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	Not available.

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Vapor pressure	<0.3 mm Hg at 25°C
Vapor density	Approximately 3
Relative density	1.1
Bulk density	Not applicable.
Solubility(ies)	Hardens in contact with water.
Auto-ignition temperature	905°F
Decomposition Temperature	Not available.
Viscosity	1 - 3 cP @ 25°C
Oxidizing properties	Not applicable.
Volatile organic compound	<2 %, 20 grams/liter (Estimated)

10. Stability and reactivity

Reactivity	The product reacts with water and will generate heat.
Stability	Stable at normal ambient temperatures and when used as recommended.
Possibility of hazardous reactions	Reactions with the following materials may generate heat: water Alcohols. Alkalis. Amines.
Conditions to avoid	Do not add water directly to the product. It may cause a violent reaction.
Materials to avoid	Water. Amines. Alkalis. Alcohols.
Hazardous decomposition products	Toxic/Irritating fumes

11. Toxicological information

Information on toxicological effects

Toxicological effects	The toxicological properties of this product have not been fully evaluated. Avoid direct contact with skin or eyes. Do not ingest or inhale.
<u>Skin corrosion/irritation</u>	
Skin corrosion/irritation	Irritating to skin.
<u>Respiratory sensitization</u>	
Respiratory sensitization	Based on available data the classification criteria are not met.
<u>Skin sensitization</u>	
Skin sensitization	Based on available data the classification criteria are not met.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Based on available data the classification criteria are not met.
<u>Carcinogenicity</u>	
Carcinogenicity	Does not contain any substances known to be carcinogenic.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Based on available data the classification criteria are not met.

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Reproductive toxicity - development Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure STOT SE 3 - H335

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not classified as a specific target organ toxicant after a single exposure.

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met.

Target Organs Respiratory system, lungs

Toxicological information on ingredients.

ETHYL 2-CYANOACRYLATE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 5,000.0

Species Rat

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 2,000.1

Species Rabbit

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Not available.

Skin corrosion/irritation

Animal data Dose: 0.5g, 24 hours, Rabbit Slightly irritating.

Serious eye damage/irritation

Serious eye damage/irritation Method: OECD 405, Rabbit Irritating to eyes.

Skin sensitization

Skin sensitization - Guinea pig: Not sensitizing.

Germ cell mutagenicity

Genotoxicity - in vitro Gene mutation: Negative. Chromosome aberration: Negative. Bacterial reverse mutation test: Negative.

Carcinogenicity

Carcinogenicity No evidence of carcinogenicity in animal studies.

Reproductive toxicity

Reproductive toxicity - fertility Technically not feasible.

Reproductive toxicity - development Technically not feasible.

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Specific target organ toxicity - single exposure

STOT - single exposure No information available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure No information available.

Aspiration hazard

Aspiration hazard Not available.

12. Ecological information

Ecotoxicity There are no data on the ecotoxicity of this product.

13. Disposal considerations

Waste treatment methods

General information Empty containers may contain product residue; follow SDS and label warnings even after they have been emptied.

Disposal methods Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations

14. Transport information

Sea transport notes Not classified.

Air transport notes Applies only to inner containers > 500ml. Inner packaging containing less than 500ml are unregulated for air transportation and may be shipped unrestricted. But inner packages containing more than 500ml meet the criteria of IATA 3.9.2.1 and are regulated. The "inner package" is the individual bottle, tube or drum, not the outer packaging such as a fiberboard box or carton containing many bottles.
Permabond 3g, 20gr, 1 ounce (28.4 gr), 1 pound (454gr) and 500ml, are not restricted for air transportation.

DOT transport notes This product is not regulated for road transportation in accordance with 49 CFR Exceptions. Please note that Cyanoacrylates are not restricted for domestic ground transportation in non bulk containers (The DOT defines a bulk container as a "Package" containing more than 450 liters. The "Package" is the individual bottle, tube or drum, not a carton containing many bottles

UN Number

UN No. (IMDG) Not applicable

UN No. (ICAO) 3334

UN No. (DOT) NA1993

UN proper shipping name

Proper shipping name (IMDG) Not applicable

Proper shipping name (ICAO) AVIATION REGULATED LIQUID, N.O.S (Cyanoacrylate ester)

Proper shipping name (DOT) COMBUSTIBLE LIQUID, N.O.S. (Cyanoacrylate ester)

Transport hazard class(es)

IMDG Class Not applicable

ICAO class/division 9

Packing group

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IMDG packing group Not applicable

ICAO packing group III

DOT packing group III

Environmental hazards

Environmentally Hazardous Substance

No.

15. Regulatory information

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities

None of the ingredients are listed or exempt.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

None of the ingredients are listed or exempt.

SARA Extremely Hazardous Substances EPCRA Reportable Quantities

Not listed.

SARA 313 Emission Reporting

None of the ingredients are listed or exempt.

SARA (311/312) Hazard Categories

Acute
Chronic
Fire
Reactivity

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm

Inventories

Canada - DSL/NDSL

All the ingredients are listed or exempt.

US - TSCA

All the ingredients are listed or exempt.

16. Other information

Classification abbreviations and acronyms

Eye Irrit. = Eye irritation
Flam. Liq. = Flammable liquid
Skin Irrit. = Skin irritation
STOT SE = Specific target organ toxicity-single exposure

Revision date 11/16/2018

Revision 5

Supersedes date 10/1/2018

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Hazard statements in full	H227 Combustible liquid. H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation.
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This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.

MSDS
Material Safety Data Sheet
PERMABOND® 102



READ MATERIAL SAFETY DATA SHEET BEFORE HANDLING PRODUCT!

Issue Date 02/11/05

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

PRODUCT NAME

Manufacturer

PERMABOND® 102

PERMABOND LLC

20 World's Fair Drive

Somerset, NJ 08873

EMERGENCY PHONES:

MEDICAL – 1-866-827-6282

TRANSPORT - (CHEMTREC) – 1-800-424-9300

MSDS REQUESTS: HELP LINE: 1-800-640-7599

SYNONYMS

SUPER GLUE

2. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL FAMILY

COMPONENT

Ethyl cyanoacrylate

Cyanoacrylate Adhesive

CAS NUMBER

7085-85-0

CONCENTRATION (%)

60 - 100

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING.

ON CONTACT, WILL BOND EYELIDS TOGETHER

SKIN IRRITANT. ON CONTACT WILL BOND SKIN

Colorless Liquid Pungent odor

EYE

On contact, will bond eyelids together.

SKIN CONTACT

Repeated or prolonged skin contact may result in moderate irritation. On contact, immediate bonding of the skin will occur.

INHALATION

Vapor may be irritant to the respiratory tract.

INGESTION

On contact, immediate bonding of mouth could occur.

4. FIRST-AID MEASURES

EYE

Flush with large amounts of water while holding eyelids open. Get medical attention immediately. Cured adhesive will not bond well to surface of eye, but corneal damage from abrasion may result. Do not wear contact lenses when working with this material.

SKIN CONTACT

No attempt should be made to remove material from skin or to remove contaminated clothing, as the bonded skin can be easily torn. Wash with large volumes of soap and water while flexing bonded skin parts. This procedure will slowly release bonded areas. DO NOT mechanically remove cured adhesive or attempt to pull skin apart.

INHALATION

Remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Get medical attention.

INGESTION

Immediate bonding of mouth will occur. Get medical attention.

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5. FIREFIGHTING MEASURES

FLASH POINT	167 °F (Setaflash Closed Tester)
EXTINGUISHING MEDIA	CO2; Dry Chemical; Foam
SPECIAL FIREFIGHTING PROCEDURES	Fire fighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes.
FIRE & EXPLOSION HAZARDS	Cloths used to wipe up spills may cause rapid polymerization that could generate sufficient heat to ignite the cloth.
FLAMMABILITY HAZARD CLASS	Combustion will evolve toxic and irritant vapors. 2 = Moderate.

6. ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK PROCEDURES	SMALL SPILLS: wipe up with cloth. Immediately soak cloth with water to polymerize the adhesive. Caution! Cloth containing adhesive may undergo autoignition if not soaked with water. LARGE SPILLS: flood area with water. When cured, remove film with a scraper. Wear NIOSH approved respirator for organic vapors if needed, and protective clothing.
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For safety and environmental precautions, please review entire Material Safety Data Sheet for necessary information.

7. HANDLING AND STORAGE

STORAGE TEMPERATURE	= 35 - 45 °F = 2 - 7 °C
HANDLING/STORAGE	Keep away from heat, sources of ignition and direct sunlight. Keep material refrigerated at the storage temperature referenced above.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

COMPONENT	EXPOSURE LIMITS	
Ethyl cyanoacrylate	ACGIH-TWA: 0.2 ppm	OSHA-PEL: 2 ppm OSHA-STEL: 4 ppm
VENTILATION REQUIREMENTS	Local.	
EYE PROTECTION REQUIREMENTS	Safety glasses, goggles or face shield to protect against splashing.	
GLOVE REQUIREMENTS	Wear polyethylene gloves. Do not wear rubber or cloth gloves.	
CLOTHING REQUIREMENTS	No special clothing required for low volume activity.	
WASH REQUIREMENTS	Wash before eating, drinking, or using toilet facilities.	
RESPIRATOR REQUIREMENTS	Avoid prolonged or repeated breathing of vapor or mists. If exposure may or does exceed occupational exposure limits, use a NIOSH approved respirator to prevent overexposure.	

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9. PHYSICAL AND CHEMICAL PROPERTIES

PURE SUBSTANCE OR MIXTURE	Mixture
PHYSICAL FORM	Liquid
COLOR	Colorless
ODOR	Pungent
PH AS IS	Not applicable
pH IN (1%) SOLUTION	Not applicable
OXIDIZING PROPERTIES	Not applicable
BOILING POINT	1403 °F
MELTING/FREEZING POINT	Not available
SOLUBILITY IN WATER	Insoluble
VISCOSITY	100 cPs
SPECIFIC GRAVITY (WATER=1)	1.05
BULK DENSITY	8.75 lb/gal
VAPOR PRESSURE (mmHg)	0.3
VAPOR DENSITY (air = 1)	>1
VOLATILES	Nil
VOLATILE ORGANIC COMPOUNDS	Nil
FLASH POINT	167 °F (Setaflash Closed Tester)

10. STABILITY AND REACTIVITY

STABILITY	Stable
REACTIVITY HAZARD CLASS	2 = Reactive material.
HAZARDOUS DECOMPOSITION PRODUCTS	Decomposes upon heating to release toxic fumes of nitrogen oxides, carbon monoxide and carbon dioxide.

11. TOXICOLOGICAL INFORMATION

ROUTE OF ENTRY	Inhalation; Skin Contact; Eye Contact; Ingestion
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CHRONIC (LONG TERM) EFFECTS OF EXPOSURE

TARGET ORGANS	Skin; Eyes; Respiratory system
CARCINOGEN	No.

COMPONENT	ORAL TOXICITY	NOTES ON ORAL TOXICITY
Ethyl cyanoacrylate	Oral LD50: Rat 180 mg/kg	Ingestion may cause irritation of the gastrointestinal tract. On contact, immediate bonding of mouth could occur.

COMPONENT	DERMAL TOXICITY	NOTES ON DERMAL TOXICITY
Ethyl cyanoacrylate	Dermal LD50: Rabbit 220 ml/kg	Irritating to the skin. On contact, immediate bonding of the skin will occur.

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11. TOXICOLOGICAL INFORMATION – CONT'D

COMPONENT	INHALATION TOXICITY	NOTES ON INHALATION TOXICITY
Ethyl cyanoacrylate		Vapor, if generated, can cause irritation of the eyes, nose and respiratory tract. Avoid breathing vapors or mists.
COMPONENT		NOTES ON EYE IRRITATION
Ethyl cyanoacrylate		On contact, will bond eyelids together. Vapors are lachrymatory. Will cause eye irritation. Cyanoacrylates will not bond to the eye but may cause corneal scratching.

12. ECOLOGICAL INFORMATION

POTENTIAL TO BIOACCUMULATE	Unknown.
AQUATIC TOXICITY	None Established

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHODS	Disposal should be in accordance with local, state or national legislation.
EMPTY CONTAINER WARNINGS	Empty containers may contain product residue; follow MSDS and label warnings even after they have been emptied.

14. TRANSPORTATION INFORMATION

This section provided for general information only.

FOR NON-BULK SHIPMENTS.

FOR MORE COMPLETE TRANSPORTATION REGULATORY INFORMATION PLEASE REFER TO THE SHIPPING DOCUMENTS ACCOMPANYING THE SHIPMENT OF THIS PRODUCT.

DOT CLASSIFICATION

PROPER SHIPPING NAME	COMBUSTIBLE LIQUID, N.O.S.
TECHNICAL NAME	(ETHYL CYANOACRYLATE)
HAZARD CLASS	N
U.N. NUMBER	NA1993
PACKING GROUP	III

The information provided herein may not include the impact of additional regulatory requirements (eg, for materials meeting the definition of a hazardous waste under RCRA, hazardous substances under CERCLA, and/of marine pollutants under CWA or other similar federal, state or local laws) or any associated exceptions or exemptions under regulations applicable to the transport of this material.

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15. REGULATORY INFORMATION

USA

TSCA

All components are on the TSCA inventory.

SARA/TITLE III

Contains no substances at or above the reporting threshold under Section 313.

CAS NUMBER

CONCENTRATION (%)

16. OTHER INFORMATION

MSDS DATE

02/11/05

This MSDS contains changes from the previous one in section 1; the medical emergency phone number was changed.

FOR INFORMATION CONTACT:

Permabond LLC
HELP Line: 1-800-640-7599

ADDITIONAL INFORMATION: The information given and the recommendations made herein apply to our product(s) alone and are not combined with other product(s). Such are based on our research and on data from other reliable sources and are believed to be accurate. No guaranty of accuracy is made. It is the purchaser's responsibility before using any product to verify this data under their own operating conditions and to determine whether the product is suitable for their purposes.