Section -1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1. Product Identifier: CS-2727 PT B FLEXIBLE EPOXY JOINT SEALER-CATALYST
- Product Name: FLEXIBLE EPOXY JOINT SEALING COMPOUND
- Product reference: CS-2727-B

1.2. Product Use:
- FLEXIBLE EPOXY JOINT SEALING COMPOUND

1.3. Manufacturer’s Name:
CAGE Code: 14439
Flamemaster Corp.
Chem Seal Division
13576 Desmond Street
Pacoima, CA 91333 – USA

1.3.1 Suppliers Name ( if not manufacturer )

1.4. Emergency Telephone:
Flamemaster Corp.
Tel: 818-890-1401
Fax: 818-890-6001
www.flamemaster.com

Technical Contact:
Flamemaster Corp.
Tel: 818-890-1401
Fax: 818-890-6001
www.flamemaster.com

1.4. Emergency Telephone:
Chemtrec – Chemtrec International
800-424-9300 (North America)
703-527-3887 (Outside North America)

<table>
<thead>
<tr>
<th>Specification :</th>
<th>N/A</th>
<th>CATALYST</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSN:</td>
<td>NONE ISSUED FOR THIS PRODUCT</td>
<td></td>
</tr>
</tbody>
</table>
Section -2. HAZARD (S) IDENTIFICATION

OSHA/HCS STATUS: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

CLASSIFICATION OF THE MIXTURE:
ASPIRATION HAZARD - CATEGORY 1
ACUTE TOXICITY, ORAL - CATEGORY 4
ACUTE TOXICITY (DERMAL) - CATEGORY 4
SKIN CORROSION/IRRITATION - Category 1B
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
RESPIRATORY SENSITIZATION - CATEGORY 1
CARCINOGENICITY - Category 2
TOXIC TO REPRODUCTION (Fertility) - CATEGORY 2
TOXIC TO REPRODUCTION (UNBORN CHILD) - Category 2
SKIN SENSITIZATION, CATEGORY 1
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - CATEGORY 1
SPECIFIC TARGET ORGAN TOXICITY - REPEAT EXPOSURE - CATEGORY 1
AQUATIC TOXICITY - Category 4

GHS LABEL REQUIREMENTS
HAZARD PICTOGRAMS

SIGNAL WORD: DANGER

HAZARD STATEMENTS:
MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS - H304
HARMFUL IF SWALLOWED - (302)
CAUSES SEVERE SKIN BURNS AND EYE DAMAGE - H314
CAUSES SERIOUS EYE DAMAGE - (H318)
MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING DIFFICULTIES IF INHALED - H334
SUSPECTED OF DAMAGING FERTILITY - H361f
SUSPECTED OF DAMAGING THE UNBORN CHILD - (H361d)
CAUSES DAMAGE TO ORGANS - H370
CAUSES DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE - H372
SUSPECTED OF CAUSING CANCER - H351
HARMFUL IN CONTACT WITH SKIN - H312
MAY CAUSE AN ALLERGIC SKIN REACTION - H317
MAY CAUSE LONG LASTING HARMFUL EFFECTS TO AQUATIC LIFE - H413

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PRECAUTIONARY STATEMENTS:

- P101+P102+P103: If medical advice is needed, have product container or label at hand. Keep out of reach of children.
- Read label before use
- P202: Do not handle until all safety precautions have been read and understood
- P210: Keep away from heat/sparks/open flames and hot surfaces-No Smoking
- P240: Ground/bond container and receiving equipment
- P261+P262+P263+P264: Avoid breathing dust/fumes/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Avoid contact during pregnancy/while nursing. Wash thoroughly after handling.
- P270+P271+P273: Do not eat drink or smoke when using this product. Use only outdoors or in a well ventilated area. Avoid release to the environment.
- P281+P280: Use personal protective equipment as required. Wear protective gloves/protective clothing/eye protection/face protection
- P301+P310+P331: If swallowed: Immediately call a POISON CENTER or doctor/physician. Do not induce vomiting.
- P305+P351+P338+P315: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.
- P304+P340+P314: If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell
- P342+P340+P315: If experiencing respiratory symptoms: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get immediate medical advice/attention.
- P302+P352: If on skin (or in hair): Wash with plenty of soap and water. If skin irritation occurs seek medical attention
- P306+P361: If on clothing: Remove/ take off immediately all contaminated clothing
- P342+P340+P314: If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell

SUPPLEMENTAL LABEL ELEMENTS:

Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of concentrations above recommended limits causes headaches, drowsiness and nausea and could lead to unconsciousness or possibly death.

1-component mixtures: formaldehyde is released during the curing phase. Formaldehyde may cause irreversible effects, is irritating to the mucous membranes and may cause the skin to become sensitized.

Avoid any contact with skin or clothing and wash thoroughly after handling.

Emits toxic fumes when heated.

HAZARDS NOT OTHERWISE CLASSIFIED:

Prolonged or repeated exposure may dry skin and/or cause skin irritation.

Sanding and grinding dust may be harmful if inhaled. Sanding and grinding dust may form combustible concentrations in air.

In the event of sanding, grinding, or abrading:

H372 Causes damage to organs through prolonged or repeated exposure.

Section -3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Product</th>
<th>CAS#</th>
<th>% Weight in Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRIETHYLENETETRAMINE</td>
<td>112-24-3</td>
<td>&lt;70%</td>
</tr>
</tbody>
</table>

GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS):

- HARMFUL IF SWALLOWED - (302)
- HARMFUL IN CONTACT WITH SKIN - H312
- CAUSES SEVERE SKIN BURNS AND EYE DAMAGE - H314
- CAUSES SERIOUS EYE DAMAGE - (H318)
- MAY CAUSE AN ALLERGIC SKIN REACTION - H317

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Section -4. FIRST-AID MEASURES

**General:** When in doubt or symptoms persist, seek medical attention. Have Safety Data Sheet information available. Never give anything by mouth to an unconscious person.

**Inhalation:** Remove to fresh air, if breathing has stopped, administer artificial respiration. Give nothing by mouth, seek immediate medical attention.

**Eye contact:** Remove any contact lenses if present and easy to do. Irrigate with clean, fresh water for at least 15 minutes, holding the eye lids apart, and seek immediate medical attention.

**Skin contact:** Remove contaminated clothing. Wash skin thoroughly with soap and water or use recognized skin cleaners. Do NOT use aromatic solvents, thinners or petroleum products.

**Ingestion:** If accidentally swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting. May be fatal if swallowed or vomited and enters lungs and/or airways. Never give anything by mouth to an unconscious person.

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Section -5. FIRE-FIGHTING MEASURES

**Extinguishing agents**

**Recommended:** Universal resistant foam, CO2, water, powder.

**Agents to avoid:** None known

**Attention**

Promptly remove all persons in the event of a fire from the fire area. If safe to do so, remove all containers from fire area as well.

Fire will produce dense black smoke. Exposure to decomposition products may cause a Health Hazard. Fire fighters should wear self-contained breathing apparatus.

Water mist may be used to cool closed containers to prevent pressure build-up and possible auto-ignition and explosion when exposed to extreme heat.

Do not weld, flame cut or expose to extreme heat or ignition sources, empty containers which have contained flammable products.

Do not allow run-off from fire fighting to enter drains or water courses.

Emits toxic fumes when heated.

In case of inhalation of decomposition products released in a fire, symptoms may be delayed. Exposed persons may need to be kept under medical surveillance for at least 48 hours.

**HAZARDOUS DECOMPOSITION PRODUCTS INCLUDE:**

- Carbon Monoxide
- Sulfur Oxides
- Carbon Dioxide
- Formaldehyde
- Oxides of Nitrogen
- Nitric Acid
- Ammonia
- Nitrogen Oxides can react with water vapors to form corrosive nitric acid

- Halogenated Compounds
- Oxides of Carbon, Sulfur Dioxide, Hydrogen Sulfide
- Metal Oxide / Oxides
- Smoke
- Other Organic Compounds
- Nitrosamines
- Toxic Fumes

---

Section -6. ACCIDENTAL RELEASE MEASURES

Eliminate sources of ignition, ventilate the area. Avoid breathing vapors by using appropriate respiratory protective equipment. Refer to protective measures listed in sections 7 & 8.

Collect spill with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in a suitable container for disposal in accordance with local regulations (see section 13). Do not allow to enter drains or watercourses.

Clean-up with a detergent/ water mix ; avoid use of aromatic solvents. If the product enters drains or watercourses, inform authority with jurisdiction in accordance with state / local regulations.

Never allow this material, any solutions, or any by-products, as well as any run-off, to come into contact with soil, waterways, wildlife habitats, drains, sewers, and / or the ocean. Avoid release into environment.

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Section -7. HANDLING AND STORAGE

7.1 Handling:
No smoking, eating and drinking during handling. Wash hands and face before eating, drinking, or smoking.
Avoid exposure during pregnancy/while nursing.
Keep containers tightly closed. Prior to movement containers which are opened should be carefully resealed.
Avoid skin and eye contact. Avoid inhalation in case of exposure to vapor and spray mist.
Handle and open containers with care to avoid spilling of contents. Never use pressure to empty; container is not a
pressure vessel. Clean or discard contaminated clothing and shoes.
Preparation may charge electrostatically; always use grounding/ bonding/ earthing leads when transferring contents of
containers. Operators should wear antistatic footwear and clothing, and floors should be electrically conductive.
Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation
of flammable or explosive concentrations of vapor in air, and avoid vapor concentration higher than the Occupational
Exposure Limits.
Use in areas from which local sources of ignition have been excluded. Electrical equipment including lighting should be
protected to the appropriate standard. Isolate from sources of heat, sparks and open flame. Non-sparking tools are
recommended.

7.2 Storage:
Observe label precautions. Store between 32/F and 95/F ( 0/C and 35/C ) in a dry, clean and well ventilated place, away
from sources of heat, ignition, and direct sunlight. For flash points below 23 °C store in an area constructed to the
appropriate standard

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Engineering measures:
Avoid the inhalation of vapors, spray mist and particulates. Achieve by local exhaust ventilation providing good general
extraction as to keep air-borne concentration below the Occupational Exposure Limits (OEL).
If local / area ventilation is not sufficient to comply with OEL, suitable (NIOSH) respiratory protection to be provided. Always
provide suitable (NIOSH) respiratory protection when sanding, grinding or otherwise abrading cured material.

8.2 Exposure limits

<table>
<thead>
<tr>
<th>Compound</th>
<th>Work place exposure limits (8 hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRIETHYLENETETRAMINE</td>
<td>TIME WEIGHTED AVERAGE (TWA): WEEL 1 ppm 6mg/m³</td>
</tr>
<tr>
<td></td>
<td>* can be absorbed through skin</td>
</tr>
</tbody>
</table>

8.3 Personal protection
All Personal Protective Equipment, including Respiratory Protection, used to control exposure to hazardous substances
must be selected to meet the requirements of OSHA Regulations.

Respiratory protection:
Appropriate respiratory protection equipment should be selected according to the type of contaminants, following
regulatory (OSHA / NIOSH) and manufacturers instructions including proper fitting of devices.
Hand protection:
For prolonged or repeated contact, recommend gloves type: polyvinyl alcohol, nitrile rubber, latex rubber (some people may exhibit sensitivity to Latex). Barrier creams may help to protect exposed areas of the skin. However, they should not be applied post exposure.

Eye protection:
Use safety glasses with side shields to protect against splashes. Face shields may also be worn.

Skin protection:
Protective clothing made of antistatic and fire resistant fibers. All parts of the body should be washed after contact. Use good hygiene and industrial practices, keep working clothes clean.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state at: 68 ° F (20 ° C) PASTE
- Flash point: > 200 ° F (> 93 ° C) Method: TCC
- Specific gravity at: 68 ° F (20 ° C) N/A
- Vapor Density: N/A
- Lower Explosive Limit (% vol.): N/A
- Upper Explosive Limit (% vol.): N/A
- Miscibility in water at 20 ° C: INSOLUBLE
- VOC: N/A

- Ph : N/A
- Volatile by weight: N/A
- Vapor pressure at: 68 ° F (20 ° C) N/A
- Color: Off white to grey
- Appearance: PASTE
- Odor: SLIGHT AMMONIA ODOR
- Boiling Point: N/A
- Material Supports Combustion: Yes

10. STABILITY AND REACTIVITY

Stable under recommended storage and handling conditions (see SDS section 7). In case of combustion, may produce hazardous decomposition products such as:

- Carbon Monoxide
- Sulfur Oxides
- Carbon Dioxide
- Formaldehyde
- Oxides of Nitrogen
- Nitric Acid
- Ammonia
- Nitrogen Oxides can react with water vapors to form corrosive nitric acid

- Halogenated Compounds
- Oxides of Carbon, Sulfur Dioxide, Hydrogen Sulfide
- Metal Oxide / Oxides
- Smoke
- Other Organic Compounds
- Nitrosamines
- Toxic Fumes

11. TOXICOLOGICAL INFORMATION

There are no data available on the preparation itself. See (SDS Sections 3 and 15) for details.

Exposure to component solvents vapors at concentrations in excess of the stated Occupational Exposure Limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system.

Symptoms and signs of overexposure include headache, dizziness, fatigue, muscular weakness, drowsiness, reduced fetal weight, increase in fetal deaths, skeletal malformations, and in extreme cases loss of consciousness.

Repeated or prolonged contact with the preparation may cause Defatting of the skin resulting in non-allergic dermatitis and absorption through the skin.

The liquid splashed in the eyes causes serious eye irritation and damage.

Irritating to mouth, throat and stomach. Ingestion causes reduced fetal weight, increased fetal deaths and skeletal malformations.

Formaldehyde is released during curing.
ACUTE TOXICITY:

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>RESULT</th>
<th>SPECIES</th>
<th>DOSE</th>
<th>EXPOSURE</th>
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</thead>
<tbody>
<tr>
<td>TRIETHYLENETETRAMINE</td>
<td>LD50 ORAL</td>
<td>Rat</td>
<td>1716 mg/kg</td>
<td>-</td>
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<td></td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>1465 mg/kg</td>
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CARCINOGENICITY:

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<tr>
<th>INGREDIENT</th>
<th>IARC</th>
<th>OSHA</th>
<th>NTP</th>
<th>CAS#</th>
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<tbody>
<tr>
<td>No data Available</td>
<td></td>
<td></td>
<td></td>
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</table>

TARGET ORGANS: BRAIN, BLOOD, KIDNEYS, LUNGS, REPRODUCTIVE SYSTEM, LIVER, HEART, PERIPHERAL NERVOUS SYSTEM, GASTROINTESTINAL TRACT, UPPER RESPIRATORY TRACT, SKIN, CENTRAL NERVOUS SYSTEM, EYE, LENS AND/OR CORNEA.

ASPIRATION HAZARD:

MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS - (H304)

HAZARD STATEMENTS ASSOCIATED WITH THIS PRODUCT:

HARMFUL IF SWALLOWED - (302)
CAUSES SEVERE SKIN BURNS AND EYE DAMAGE - H314
CAUSES SERIOUS EYE DAMAGE - (H318)
MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING DIFFICULTIES IF INHALED - H334
SUSPECTED OF DAMAGING FERTILITY - H361f
SUSPECTED OF DAMAGING THE UNBORN CHILD - (H361d)
CAUSES DAMAGE TO ORGANS - H370
CAUSES DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE - H372
SUSPECTED OF CAUSING CANCER - H351
HARMFUL IN CONTACT WITH SKIN - H312
MAY CAUSE AN ALLERGIC SKIN REACTION - H317

12. ECOLOGICAL INFORMATION

There is no data available on the preparation itself. Do not allow the product to enter drains or water ways. See (SDS Sections 3 and 15)

Empty containers and/or liners may contain material residue. Empty contaminated packagings thoroughly. Dispose in accordance with all Federal, State, and local health and environmental regulations.

Never allow this material, any solutions, or any by-products, as well as any run-off, to come into contact with soil, waterways, wildlife habitats, drains, sewers, and/or the ocean. Avoid release into environment.

Toxicity:
No Data Available

Persistance and Degradability:

<table>
<thead>
<tr>
<th>Product / Ingredient</th>
<th>PERIOD</th>
<th>RESULT</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Data Available</td>
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</tr>
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</table>

Bioaccumulative Potential:

<table>
<thead>
<tr>
<th>Product / Ingredient</th>
<th>LogP(ow)</th>
<th>BCF</th>
<th>Potential</th>
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<tbody>
<tr>
<td>No Data Available</td>
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</tr>
</tbody>
</table>

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13. DISPOSAL CONSIDERATIONS
Recommended incineration or land fill as hazardous waste per Federal, State and local regulations.
React with curing agent and dispose of as hazardous waste per Federal, State and local regulations. Recommended incineration or land fill.
Empty containers and/or liners may contain material residue. Empty contaminated packagings thoroughly. Dispose in accordance with all Federal, State, and local health and environmental regulations.
Never allow this material, any solutions, or any by-products, as well as any run-off, to come into contact with soil, waterways, wildlife habitats, drains, sewers, and/or the ocean. Avoid release into environment.

14. TRANSPORT INFORMATION
DOT PROPER SHIPPING NAME: CORROSIVE LIQUID, N.O.S. (TRIETHYLENE TETRAMINE)
UN Number: UN 1760
HAZARD CLASS: 8
PACKING GROUP: II
HAZARD LABEL REQUIRED: CORROSIVE
NMFC: 4620 SUB.5 – CL.60
Schedule B # 3506.91.0000
ERG# 154

15. REGULATORY INFORMATION
US Regulations Federal

<table>
<thead>
<tr>
<th>Chemical (s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372 (SARA)</th>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight %</th>
<th>Threshold limit (Reporting Value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRIETHYLENE TETRAMINE</td>
<td>112-24-3</td>
<td>&lt;70%</td>
<td>Unknown</td>
<td></td>
</tr>
</tbody>
</table>

SARA notifications must remain attached to this SDS. Any copies and/or distribution of this SDS must include all SARA notifications.

All remaining Constituents are non-hazardous per FED-STD-313 All Constituents are listed in TSCA inventory; complete mixture is excluded Per TSCA Par. 710.4 (d) 95 (6) (7) Constituents are not listed in TSCA 12b CORR. LIST

**United States:** Sara 302/304 (Sara 304 RQ):
Not Available
Sara 311/312

**Information On Ingredients:**
TRIETHYLENETETRAMINE Acute Health Hazard, Chronic Health Hazard

**Sudden Release Of Pressure:** No Products

**Reactivity:** No Products

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TOXIC SUBSTANCE CONTROL ACT (TSCA) COMPONENTS:

- TRIETHYLENETETRAMINE : Included on Inventory
- FORMALDEHYDE, POLYMER WITH 3-CHLORO-1-PROPENE AND PHENOL : Included on Inventory
- BENZENETRIMETHANOL, AR-(2-PROPENYLOXY) : Included on Inventory
- BENZENEDIMETHANOL, AR-(2-PROPENYLOXY) : Included on Inventory
- BENZENEMETHANOL, (2-PROPENYLOXY) : Included on Inventory
- FORMALDEHYDE : Included on Inventory

California Prop. 65 : Warning
This product contains a chemical or chemicals known by the State of California to cause cancer, birth defects, or other reproductive harm.

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FLAMMABILITY</th>
<th>REACTIVITY</th>
<th>CHRONIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1</td>
<td>0</td>
<td>*</td>
</tr>
<tr>
<td>*</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Customer and / or end user is responsible for determining PPE.

NFPA

Preparer: Flamemaster / Compliance
Rev-A 4/02/2015
Supersedes (conversion)

HMIS

Containers:
- plastic jars, metal cans
- cartridge kits

Limited Quantity
See SDS Section 14

Maximum container size 50 Gallons / 190 Liters

Revision Notes: A
Conversion to ANSI format

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Notice to reader:
This SDS is provided without any warranty expressed or implied regarding its correctness or suitability for specific situations. The conditions of handling, storage, use and disposal are beyond our control and may be beyond our knowledge.
In all cases, the user must determine the applicability of all information and recommendations contained herein as well as the suitability of this product for their own particular needs or purposes.
This product may be hazardous and should always be used with care and discretion. Every effort has been made to describe all known hazards, but this in no way guarantees the above mentioned hazards are the only hazards present.
Flamemaster Corporation, its Affiliates and its Agents, shall in no way be held liable for any damages resulting from handling, using, storing, disposing of, or from contact with this product. User assumes all risk.

End of Safety Data Sheet