

| | |
|---------------------|---|
| HEALTH | 0 |
| FLAMMABILITY | 0 |
| PHYSICAL HAZARD | 0 |
| PERSONAL PROTECTION | |

(Material) Safety Data Sheet

Section 1 - Product and Company Identification

| | |
|----------------------------|---|
| Material Name | ▪ Tygon S³™B-44-4X I.B. |
| Product Description | ▪ Clear solid, slight odor. |
| Product Use | ▪ Tubing, closures, seals. |
| Synonyms | ▪ Polyvinyl chloride/Compounded organic polymer |
| Manufacturer | ▪ Saint-Gobain Performance Plastics 2664 Gilchrist Road Akron, OH 44305 United States http://www.plastics.saint-gobain.com/ |
| Telephone | |
| <u>Emergency</u> | ▪ 1-800-255-3924 - CHEMTEL |
| General | ▪ (330) 798-9240 |
| <u>Emergency</u> | ▪ +1 813-248-0585 - CHEMTEL International |
| Preparation Date | ▪ 2/14/2013 |
| Last Revision Date | ▪ 2/14/2013 |

Key to abbreviations

‡ = HMIS is a registered trademark of the American Coatings Association

Section 2 - Hazards Identification

EMERGENCY OVERVIEW

Storage/Disposal Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

| | |
|--|---|
| Physical Form | ▪ Solid |
| Color | ▪ Clear |
| Odor | ▪ Slight odor. |
| OSHA | ▪ None |
| WHMIS | ▪ None |
| EU | ▪ None |
| GHS | ▪ None |
| Medical Conditions Aggravated by Exposure | ▪ Material is an article - none expected. |

Potential Health Effects

Inhalation

Acute (Immediate) ▪ Under normal conditions of use, no health effects are expected.

Chronic (Delayed) ▪ No chronic effects expected.

Skin

Acute (Immediate) ▪ Under normal conditions of use, no health effects are expected.

Chronic (Delayed) ▪ No chronic effects expected.

- Eye**
- Acute (Immediate)**
 - Under normal conditions of use, no health effects are expected. If heated, exposure to vapors may cause eye irritation.
 - Chronic (Delayed)**
 - No chronic effects expected.
- Ingestion**
- Acute (Immediate)**
 - Under normal conditions of use, no health effects are expected. May cause intestinal blockage if swallowed.
 - Chronic (Delayed)**
 - No chronic effects expected.
- Potential Environmental Effects**
- No environmental effects expected.

See Section 12 for Ecological Information.

Section 3 - Composition/Information on Ingredients

These shaped articles are not a regulated chemical as they do not release or otherwise result in exposure to hazardous chemicals under normal conditions of use. Under United States Regulations (29 CFR 1900.1200 - Hazard Communication Standard) this product is exempt as an article under stated normal conditions of use. Under Canadian regulations (Workplace Hazardous Materials Information System (WHMIS) - Hazardous Products Act (HPA), Section 11(1)), these product(s) are exempt and considered manufactured article(s) under stated normal conditions of use. According to European Directive 1999/45/EC this preparation is not considered dangerous. Under United Nations Globally Harmonized System for the Classification and Labeling of Hazardous Chemicals (GHS) this product is exempt from regulation as a manufactured article.

See Section 11 for Toxicological Information.

Section 4 - First Aid Measures

- Inhalation**
- First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. If signs/symptoms develop, move person to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. If signs/symptoms continue, get medical attention.
- Skin**
- First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. Wash skin with soap and water. If signs/symptoms develop, get medical attention.
- Eye**
- First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. If contact with material occurs flush eyes with water. If signs/symptoms develop, get medical attention.
- Ingestion**
- First aid is not expected to be necessary if material is used under ordinary conditions and as recommended.

See Section 2 for Potential Health Effects.

Section 5 - Fire Fighting Measures

- Extinguishing Media**
- LARGE FIRE: Water spray, fog or regular foam.
 - SMALL FIRES: Dry chemical, CO₂, water spray or regular foam.
- Unsuitable Extinguishing Media**
- None known.
- Firefighting Procedures**
- Keep unauthorized personnel away.
 - Stay upwind.
- Unusual Fire and Explosion Hazards**
- Toxic and irritating gases/fumes may be given off during burning or thermal decomposition.
- Hazardous Combustion Products**
- Thermal decomposition or combustion products may include hydrochloric acid, oxides or carbon, small amounts of benzene and aromatic and aliphatic hydrocarbons.

Protection of Firefighters

- Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6 - Accidental Release Measures**Personal Precautions**

- No special precautions expected to be necessary if material is used under ordinary conditions and as recommended

Emergency Procedures

- No emergency procedures are expected to be necessary if material is used under ordinary conditions and as recommended.

Environmental Precautions

- Prevent entry into waterways and sewers.

Containment/Clean-up Measures

- Carefully shovel or sweep up spilled material and place in suitable container.

Section 7 - Handling and Storage**Handling**

- No special handling instructions are necessary. Avoid incompatible materials.

Storage

- Store in a cool, dry place.

Special Packaging Materials

- No data available.

Incompatible Materials or

- May react with strong acids and oxidizing agents.

Ignition Sources**Section 8 - Exposure Controls/Personal Protection****Personal Protective Equipment****Respiratory**

- Under normal conditions of use, respiratory protection is not required.

Eye/Face

- Under normal conditions of use, eye protection is not required.

Hands

- No special protection is required.

Skin/Body

- No special protection is required.

Engineering

- No special ventilation systems are required under normal conditions of use. Use adequate ventilation and/or engineering controls in high temperature processing to prevent exposure to vapors.

Measures/Controls**Exposure Limits/Guidelines**

- None expected under normal conditions of use.

Section 9 - Physical and Chemical Properties**Physical Form**

- Solid

Appearance/Description

- Clear solid, slight odor.

| | | | |
|---|-------------------------------|----------------------------|-----|
| Color: Clear | | Odor: Slight odor. | |
| Taste: No data available. | | Odor Threshold: NDA | |
| Boiling Point: | NDA | Vapor Pressure: | NDA |
| Melting Point: | 280 to 320 C(536 to 608 F) | Vapor Density: | NDA |
| Specific Gravity/Relative Density: | 1.21 Water=1 | Evaporation Rate: | NDA |
| Density: | 75.5378 lb(s)/ft ³ | VOC (Wt.): | NDA |
| Bulk Density: | NDA | VOC (Vol.): | NDA |
| pH: | NDA | Volatiles (Wt.): | NDA |

| | | | |
|---|-----|---------------------------------|-----|
| Water Solubility: | NDA | Volatiles (Vol.): | NDA |
| Solvent Solubility: | NDA | Flash Point: | NDA |
| Viscosity: | NDA | Flash Point Test Type: | NDA |
| Half-Life: | NDA | UEL: | NDA |
| Octanol/Water Partition coefficient: | NDA | LEL: | NDA |
| Coefficient of water/oil distribution: | NDA | Autoignition: | NDA |
| Bioaccumulation Factor: | NDA | Bioconcentration Factor: | NDA |
| Biochemical Oxygen Demand BOD/BOD5: | NDA | Chemical Oxygen Demand: | NDA |
| Persistence: | NDA | Degradation: | NDA |

Section 10 - Stability and Reactivity

- | | |
|---|---|
| Stability | <ul style="list-style-type: none"> Stable |
| Hazardous Polymerization Conditions to Avoid | <ul style="list-style-type: none"> Hazardous polymerization will not occur. Extreme heat, fire and incompatible materials. |
| Incompatible Materials | <ul style="list-style-type: none"> Strong oxidizing agents, acids, acetal or acetal copolymers and amine containing materials. |
| Hazardous Decomposition Products | <ul style="list-style-type: none"> Under normal conditions of storage and use, hazardous decomposition products should not be produced. By fire and thermal decomposition hydrochloric acid, oxides of carbon, oxides of nitrogen and small amounts of benzene and aromatic and aliphatic hydrocarbons may be generated. |

Section 11 - Toxicological Information

This product is a contained article and not known to cause any toxicological effects.

Section 12 - Ecological Information

- | | |
|----------------------------------|---|
| Ecological Fate | <ul style="list-style-type: none"> No information available for the product. |
| Persistence/Degradability | <ul style="list-style-type: none"> No information available for the product. |
| Bioaccumulation Potential | <ul style="list-style-type: none"> No information available for the product. |
| Mobility in Soil | <ul style="list-style-type: none"> No information available for the product. |

Section 13 - Disposal Considerations

- | | |
|----------------|--|
| Product | <ul style="list-style-type: none"> The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental and waste disposal legislation and any regional local authority requirements. |
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Section 14 - Transportation Information

DOT - United States - Department of Transportation

Shipping Name: Not Regulated

TDG - Canada - Transport of Dangerous Goods

Shipping Name: Not Regulated

IMO/IMDG –International Maritime Transport

Shipping Name: Not Regulated

ADN - Europe Transport of Dangerous Goods by Road/Inland Waterway

Shipping Name: Not Regulated

IATA - International Air Transport Association

Shipping Name: Not Regulated

ADR - Europe Transport of Dangerous Goods by Road/Inland Waterway

Shipping Name: Not Regulated

RID - Europe Transport of Dangerous Goods by Railways

Shipping Name: Not Regulated

Section 15 - Regulatory Information

SARA Hazard Classifications

- None

Additional Regulatory Information

- All the components of this substance are listed on or are exempt from the U.S. TSCA Inventory. All components of this product are listed on the Canadian DSL Inventory. All of the components in this product are listed on the EINECS Inventory.

Section 16 - Other Information

Last Revision Date

- 2/14/2013

Preparation Date

- 2/14/2013

Disclaimer/Statement of Liability

- Reasonable care has been taken in the preparation of this information, but the supplier gives no warranty of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the purchaser will make his own tests to determine the quality and suitability of the product. Supplier expressly disclaims any and all liability for incidental and/or consequential property damage arising out of the use of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights. Read the Material Safety Data Sheet before handling product.

Key to abbreviations

NDA = No Data Available