

WIRELOCK ROPE CAPPING KIT (RESIN)

ST-R-ROP

MSDS Revision Date (mm/dd/yyyy): 11/30/2010

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MATERIAL SAFETY DATA SHEET

SECTION 1: IDENTIFICATION

Product identifier : **WIRELOCK ROPE CAPPING KIT (RESIN)**

Product Use : Resin used for attaching wire rope to a socket.

Chemical Family : Mixture.

Manufacturer part no. : ST-R-ROP

Supplier's name and address:

**STRIDER-RESOURCE A Division of the
O'Rourke Marketing Corporation Ltd.**

5667 King Road
Box 370
Nobleton, ON, Canada
LOG 1N0

Manufacturer's name and address:

Millfield Enterprises Limited
16 Shelley Road
Newburn Industrial Estate, Newburn
Newcastle Upon Tyne NE15 9RT
England

Information Telephone # : (905) 859-3901

24 Hr. Emergency Tel # : Not available.

SECTION 2 - HAZARDS IDENTIFICATION

Classification : WHMIS information: This product is a WHMIS Controlled Product. It meets one or more of the criteria for a controlled product provided in Part IV of the Canadian Controlled Products Regulations (CPR).

WHMIS classification:

Class B2 (Flammable Liquids);

Class D2A (Materials Causing Other Toxic Effects, Very Toxic Material);

Class D2B (Materials Causing Other Toxic Effects, Toxic Material).

Labelling: Phrases recommended to appear on a supplier label, can be found in Section 15.

WHMIS symbols required on a supplier label:



Emergency Overview : Pale coloured, viscous liquid. Styrene odour.
WARNING! Flammable liquid and vapour. Vapour may cause flash fire! Harmful if inhaled. Harmful or fatal if swallowed. May be an aspiration hazard. May cause nausea, vomiting, headache and other central nervous system effects. May cause respiratory irritation. Causes eye irritation. May cause skin irritation. Possible cancer hazard - contains material which may cause cancer.

POTENTIAL HEALTH EFFECTS:

Signs and symptoms of short-term (acute) exposure

Inhalation : May cause irritation to the nose, throat and upper respiratory tract. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects.

Skin : May cause mild skin irritation. Prolonged contact, may be more irritating.

Eyes : Causes severe eye irritation. May cause burning sensation, redness and tearing (watering). Possible tissue damage will result from direct contact.

Ingestion : Ingestion may cause symptoms similar to inhalation. May be an aspiration hazard. Aspiration into the lungs during swallowing or subsequent vomiting may cause chemical pneumonitis, which can be fatal.

Effects of long-term (chronic) exposure

: Prolonged or repeated contact may cause drying, cracking and defatting of the skin.

Carcinogenic status : Cancer hazard. See TOXICOLOGICAL INFORMATION, Section 11.

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Additional health hazards : See TOXICOLOGICAL INFORMATION, Section 11.

Potential environmental effects
: See ECOLOGICAL INFORMATION, Section 12.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

| <u>Ingredients</u> | <u>CAS #</u> | <u>Wt.%</u> |
|--------------------|--------------|---------------|
| Styrene | 100-42-5 | 30.00 - 40.00 |
| Dibenzoyl peroxide | 94-36-0 | 0.10 - 1.00 |

SECTION 4 - FIRST AID MEASURES

Inhalation : Immediately remove person to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Get medical attention.

Skin contact : Remove/Take off immediately all contaminated clothing. Wash off immediately with soap and plenty of water. If irritation persists, seek prompt medical attention.

Eye contact : Immediately flush eyes with plenty of water for at least 15 minutes. Seek immediate medical attention/advice.

Ingestion : Seek immediate medical attention/advice. Do not induce vomiting. Never give anything by mouth to an unconscious person.

Notes For Physician : Treat symptomatically.

SECTION 5 - FIRE FIGHTING MEASURES

Fire hazards/conditions of flammability

: Flammable liquid and vapour. Vapours are heavier than air and collect in confined and low-lying areas. Vapour can travel to ignition source and flash back. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. Violent polymerization may be caused by: Fire.

Oxidizing properties : None known.

Explosion data: Sensitivity to mechanical impact / static discharge

: Not expected to be sensitive to mechanical impact. May be sensitive to static discharge. This product will accumulate static charge by flow, splashing or agitation.

Suitable extinguishing media : Dry powder; Foam.

Special fire-fighting procedures/equipment

: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame.

Hazardous combustion products

: Fire will produce dense black smoke containing harmful products of combustion. In the event of fire the following can be released: Carbon oxides; Aldehydes; Peroxides.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions : All persons dealing with the clean-up should wear the appropriate chemically protective equipment. Keep all other personnel upwind and away from the spill/release. Restrict access to area until completion of clean-up. For personal protection see section 8.

Environmental precautions : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces.

Spill response/cleanup : Ventilate area of release. Remove all sources of ignition. Use only non-sparking tools and equipment in the clean-up process. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). Notify the appropriate authorities as required.

Prohibited materials : Do not use combustible absorbents, such as sawdust.

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SECTION 7 - HANDLING AND STORAGE

- Safe Handling procedures** : To prevent the creation of flammable concentrations of vapour in air, good natural ventilation and if necessary local exhaust should be provided. The product should only be used in areas from which all naked lights and other sources of ignition, including unprotected electrical equipment, have been excluded. In order to prevent the risk of fire with all resins, good housekeeping standards must be maintained and the accumulation of dry residues, contaminated rags, etc. should be avoided. Wear suitable protective equipment during handling. Avoid breathing vapour or mist. Avoid contact with skin, eyes and clothing. Use proper bonding and grounding techniques when transferring liquid. Avoid contact with incompatible materials. Keep containers tightly closed when not in use. Wash thoroughly after handling.
- Storage requirements** : Store in a cool, dry, well-ventilated area. This product must not be stored at temperatures exceeding 20°C. Store away from incompatibles and out of direct sunlight. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. No smoking in the area.
- Incompatible materials** : Strong oxidizing agents; Acids; Alkalies; Metal salts.
- Special packaging materials** : Always keep in containers made of the same materials as the supply container.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits

| <u>Ingredients</u> | <u>ACGIH TLV</u> | | <u>OSHA PEL</u> | |
|--------------------|---------------------|-------------|---------------------|-------------------|
| | <u>TWA</u> | <u>STEL</u> | <u>PEL</u> | <u>STEL</u> |
| Styrene | 20 ppm | 40 ppm | 100 ppm | 200 ppm (Ceiling) |
| Dibenzoyl peroxide | 5 mg/m ³ | N/Av | 5 mg/m ³ | N/Av |

- Ventilation and engineering measures** : Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits.
- Respiratory protection** : If the TLV is exceeded, a NIOSH/MSHA-approved respirator is advised. Advice should be sought from respiratory protection specialists.
- Skin protection** : Impervious gloves must be worn when using this product. Advice should be sought from glove suppliers.
- Eye / face protection** : Chemical splash goggles are recommended. A full face shield may also be necessary.
- Other protective equipment** : Where extensive exposure to product is possible, use resistant coveralls, apron and boots to prevent contact. An eyewash station and safety shower should be made available in the immediate working area.
- General hygiene considerations** : Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink, smoke or use cosmetics while working with this product. Remove and wash contaminated clothing before re-use. Wash thoroughly after handling.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

- | | |
|--|---|
| Physical state : liquid | Appearance : Pale colour. |
| Odour : Styrene odour. | Odour threshold : N/Av |
| pH : N/Av | |
| Boiling point : N/Av | Specific gravity : 1.1 |
| Melting/Freezing point : N/Av | Coefficient of water/oil distribution : N/Av |
| Vapour pressure (mmHg @ 20° C / 68° F) : N/Av | Solubility in water : Insoluble.Soluble in organic solvents. |
| Vapour density (Air = 1) : > 1 | Evaporation rate (n-Butyl acetate = 1) : < 1 |

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| | | |
|---|--|------------------------------|
| Volatile organic Compounds (VOC's) | Volatiles (% by weight) | : 11.7 |
| : N/Av | | |
| Flash point | | : 31°C |
| Flash point Method | | : closed cup |
| Lower flammable limit (% by vol.) | Auto-ignition temperature | : N/Av |
| : N/Av | Upper flammable limit (% by vol.) | : N/Av |
| Flame Projection Length | Flashback observed | : N/Av |
| : N/Av | Viscosity | : N/Av |
| Absolute pressure of container | | : N/Av |
| : N/Av | | |
| General Information | | : No additional information. |

Section 10: STABILITY AND REACTIVITY

| | |
|---|--|
| Stability and reactivity | : Stable under the recommended storage and handling conditions prescribed. |
| Hazardous polymerization | : The product is supplied with the addition of inhibitors to prevent premature polymerization, provided the recommended storage conditions are adhered to. The product is designed to polymerize under controlled conditions upon the addition of recommended catalysts and accelerators. Uncontrolled exothermic polymerization can occur under certain circumstances. In sealed containers, this could result in build-up of pressure and risk of subsequent explosion and fire. |
| Conditions to avoid | : Avoid heat and open flame. Ensure adequate ventilation, especially in confined areas. Prevent exposure to UV radiation (e.g. from fluorescent tubes) as this may initiate slow polymerization which can continue in re-sealed containers. |
| Materials To Avoid And Incompatibility | : See Section 7 (Handling and Storage) for further details. |
| Hazardous decomposition products | : Styrene oxide; Carbon dioxide. Refer to Section 5 for additional 'Hazardous combustion products'. |

SECTION 11 - TOXICOLOGICAL INFORMATION

| | |
|---------------------------|---|
| Target organs | : Eyes, skin, respiratory system, digestive system, central nervous system. |
| Routes of exposure | : <i>Inhalation</i> : YES <i>Skin Absorption</i> : YES <i>Skin & Eyes</i> : YES <i>Ingestion</i> : YES |
| Irritancy | : Severe eye irritant. Mild skin irritant. |
| Toxicological data | : There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data. |

| Ingredients | LC₅₀(4hr) | LD₅₀ | |
|--------------------|-----------------------------|------------------------|-------------------------|
| | inh, rat | (Oral, rat) | (Rabbit, dermal) |
| Styrene | 2800 ppm | 2650 mg/kg | N/Av |
| Dibenzoyl peroxide | > 24,300 mg/m ³ | 7710 mg/kg | N/Av |

| | |
|--|--|
| Carcinogenic status | : This product contains styrene, which is listed as an IARC Group 2B carcinogen. |
| Reproductive effects | : Not expected to cause reproductive effects. |
| Teratogenicity | : Not expected to be a teratogen. |
| Mutagenicity | : Contains: Styrene. Animal data shows that Styrene is weakly mutagenic but only at exposure levels producing other toxic effects in the adult animal. |
| Epidemiology | : None known or reported by the manufacturer. |
| Sensitization to material | : Not expected to be a skin or respiratory sensitizer. |
| Synergistic materials | : None known or reported by the manufacturer. |
| other important hazards | : CNS depression may result from extreme exposures. |
| Conditions aggravated by overexposure | : Pre-existing skin, eye, respiratory and central nervous system disorders. |

SECTION 12 - ECOLOGICAL INFORMATION

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- Ecotoxicity** : The ecological characteristics of this product have not been fully investigated. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.
- Mobility** : No data is available on the product itself.
- Persistence** : No data is available on the product itself.
- Bioaccumulation potential** : No data is available on the product itself.
- Other Adverse Environmental effects** : No data is available on the product itself.

SECTION 13 - DISPOSAL CONSIDERATIONS

- Handling for Disposal** : Handle waste according to recommendations in Section 7. Empty containers retain residue (liquid and/or vapour) and can be dangerous. Do not cut, weld, drill or grind on or near this container.
- Methods of Disposal** : Dispose of in accordance with federal, provincial and local hazardous waste laws.

SECTION 14: TRANSPORT INFORMATION

| Regulatory Information | UN Number | Shipping Name | Class | Packing Group | Label |
|-----------------------------------|--|---------------------|-------|---------------|---|
| TDG | UN3269 | POLYESTER RESIN KIT | 3 | III |  |
| TDG Additional information | Polyester Resin Kit Exemption may apply for shipments within Canada. Under the TDG, refer to Section 1.38 for the Resin Kit Exemption Information, if shipping under this exemption. | | | | |

SECTION 15 - REGULATORY INFORMATION

Labelling:

WARNING! Flammable liquid and vapour. Vapour may cause flash fire! Harmful if inhaled. Harmful or fatal if swallowed. May be an aspiration hazard. May cause nausea, vomiting, headache and other central nervous system effects. May cause respiratory irritation. Causes eye irritation. May cause skin irritation. Possible cancer hazard - contains material which may cause cancer.

PRECAUTIONS: Use in a well-ventilated area. Wear suitable protective equipment during handling. Avoid breathing vapors or mists. Avoid contact with skin, eyes and clothing. Use proper bonding and grounding techniques when transferring liquid. Keep away from heat, sparks, and open flames. Avoid contact with incompatible materials. Keep containers closed when not in use. Wash thoroughly after handling. Store in a cool, dry, well ventilated area, away from heat and ignition sources.

FIRST AID: If inhaled, move to fresh air. If breathing stopped, begin artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Get medical attention. For skin contact, wash with soap and water while removing contaminated clothing. If irritation persists, seek prompt medical attention. For eye contact, flush with running water for at least 15 minutes. Seek immediate medical attention/advice. If ingested, do not induce vomiting. Seek immediate medical attention/advice. Never give anything by mouth to an unconscious person.

Refer To Material Safety Data Sheet for further information.

Canadian Information:

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

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US Federal Information:

TSCA: All listed ingredients appear on the Toxic Substances Control Act (TSCA) inventory.

SECTION 16 - OTHER INFORMATION

Legend : ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstract Services
CNS: Central Nervous System
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
Inh: Inhalation
LC: Lethal Concentration
LD: Lethal Dose
MSHA: Mine Safety and Health Administration
N/Ap: Not Applicable
N/Av: Not Available
NIOSH: National Institute of Occupational Safety and Health
OSHA: Occupational Safety and Health Administration
PEL: Permissible exposure limit
RTECS: Registry of Toxic Effects of Chemical Substances
STEL: Short Term Exposure Limit
TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Identification System

References : 1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2010.
2. International Agency for Research on Cancer Monographs, searched 2010.
3. Canadian Centre for Occupational Health and Safety, CCIInfoWeb databases, 2010 (Chempendium, HSDB and RTECs).
4. Material Safety Data Sheets from manufacturer (Millfield Enterprises Limited, England - March 2010).

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Revision No. : 2

Revision Information : Sections 2 and 3, switched.
(M)SDS sections updated:
2. HAZARDS IDENTIFICATION;
3. COMPOSITION/INFORMATION ON INGREDIENTS;
5. FIRE-FIGHTING MEASURES;
9. PHYSICAL AND CHEMICAL PROPERTIES;
10. STABILITY AND REACTIVITY;
11. TOXICOLOGICAL INFORMATION;
12. ECOLOGICAL INFORMATION;
15. REGULATORY INFORMATION.

END OF DOCUMENT