Material Safety Data Sheet

LA4274
Polyester Resin 713-6684

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Id: LA4274
Product Name: Polyester Resin 713-6684
Synonyms: None
Chemical Family: None Known
Application: General purpose, Resin.

Distributed By:
Univar Canada Ltd.
9800 Van Horne Way
Richmond, BC
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Prepared By: The Safety, Health and Environment Department of Univar Canada Ltd.
Preparation date of MSDS: 02/09/2005
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24-Hour Emergency Telephone Number (CHEMTREC): (800) 424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS

Ingredients	Percentage (W/W)	LD50s and LC50s Route & Species:
Styrene 100-42-5	30-60	Oral LD50 Rat : 2650 mg/kg Oral LD50 Mouse : 316 mg/kg Inhalation LC50 Rat : 12 gm/m^3/4H Inhalation LC50 Mouse : 9500 mg/m^3/4H

Notes: No additional remark.

3. HAZARDS IDENTIFICATION

Potential Acute Health Effects:
Eye Contact: Causes severe eye irritation. Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision.
Skin Contact: Causes skin irritation. Frequent or prolonged contact may irritate the skin and cause a skin rash (dermatitis). May cause sensitization by skin contact.
Inhalation: Harmful if inhaled. Excessive inhalation may cause mucous and superior respiratory tract irritation, headache, nausea, Central Nervous System (CNS) damages.
Ingestion: Harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration into the lungs may occur during ingestion or vomiting, resulting in lung injury.

4. FIRST AID MEASURES

Eye Contact: In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.
Skin Contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Get medical attention. Remove contaminated clothing and launder before reuse.
Inhalation: Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention.
Ingestion: Do NOT induce vomiting. Never give anything by mouth to an unconscious or convulsing person. Seek immediate medical attention. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.
Notes to Physician: Treatment based on sound judgment of physician and individual reactions of patient. The main hazard following accidental ingestion is aspiration of the liquid into the lungs producing chemical pneumonitis.

5. FIRE FIGHTING MEASURES

Flash Point: 33 °C / 91.4 °F
Flash Point Method: Setaflash. Closed cup.
Autoignition Temperature: Not Available.
Flammable Limits in Air (%): Lower: 2 Upper: 12
Extinguishing Media: Carbon Dioxide, Dry Chemicals, Foam.
Special Exposure Hazards: Isolate and restrict area access. Closed containers may explode in fire. Use water spray to cool fire-exposed containers and structures. Avoid spreading burning liquid with water used for cooling.
Hazardous Decomposition Materials (under fire conditions): Carbon monoxide. Carbon dioxide.
Special Protective Equipment: Fire fighters should wear full protective clothing, including self-contained breathing equipment.
NFPA RATINGS FOR THIS PRODUCT ARE: HEALTH 2, FLAMMABILITY 3, REACTIVITY 1
HMIS RATINGS FOR THIS PRODUCT ARE: HEALTH 2, FLAMMABILITY 3 , REACTIVITY 1

6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures: Wear appropriate protective equipment.
Environmental Precautionary Measures: Prevent entry into sewers or streams, dike if needed. Consult local authorities.
Procedure for Clean Up: Isolate hazard area and restrict access. Eliminate all ignition sources. Remove sources of ignition and ventilate area. Dike area to prevent spill from spreading. Absorb with an inert dry material and place in an appropriate waste disposal container. Use clean non-sparking tools to collect absorbed material.

7. HANDLING AND STORAGE

Handling: For industrial use only. Handle and open containers with care. Avoid contact with eyes, skin and clothing. Do not ingest. Avoid inhalation of chemical. DO NOT handle or store near an open flame, heat, or other sources of ignition. Fixed equipment as well as transfer containers and equipment should be grounded to prevent accumulation of static charge. DO NOT pressurize, cut, heat, or weld containers. Empty containers may contain hazardous product residues. Keep the containers closed when not in use. Launder contaminated clothing prior to reuse. Protect against physical damage. Use appropriate personnel protective equipment. Wash thoroughly after handling.
Storage: Store in a cool, dry, well ventilated area, away from heat and ignition sources. Store in accordance with good industrial practices. Place away from incompatible materials. Keep away from direct sunlight.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

Respiratory Protection: If exposure exceeds occupational exposure limits, use an appropriate NIOSH approved respirator. In case of spill or leak resulting in unknown concentration, use NIOSH approved supplied air respirator.
Gloves: Polyvinyl alcohol gloves.
Skin Protection: Skin contact should be prevented through the use of suitable protective clothing, gloves and footwear, selected for conditions of use and exposure potential. Consideration must be given both to durability as well as permeation resistance.
Eyes: Chemical goggles; also wear a face shield if splashing hazard exists.
Other Personal Protection Data: Ensure that eyewash stations and safety showers are proximal to the work-station location.

Ingredients	Exposure Limit - ACGIH	Exposure Limit - OSHA	Immediately Dangerous to Life or Health - IDLH
Styrene	20 ppm TLV-TWA 40 ppm STEL	100 ppm STEL 215 mg/m³ TWA 425 mg/m³ STEL 50 ppm TWA	700 ppm

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
Color: Light Straw coloured
Odor: Styrene odour
pH Not Available.
Specific Gravity: 1.08 (25 deg. C)
Boiling Point: 64.4-212.7°C / 148-415°F
Freezing/Melting Point: Not Available.
Vapor Pressure: 3.64 mm Hg
Vapor Density: 3.01
% Volatile by Volume: 51.96%
Evaporation Rate: 0.43
Solubility: Negligible.
VOCs: Not Available.
Viscosity: Not Available.
Molecular Weight: Not Available.

10. STABILITY AND REACTIVITY

Chemical Stability: Stable.
Hazardous Polymerization: May occur. Avoid initiators, heat, acids, extended storage period.
Conditions to Avoid: Keep away from heat, sparks and flame. Do not expose to air as this will accelerate peroxide formation.
Materials to Avoid: Oxidizing materials. Strong oxidizers. Metals. Strong acids.
Hazardous Decomposition Products: Carbon monoxide. Carbon dioxide.
Additional Information: No additional remark.

11. TOXICOLOGICAL INFORMATION

Principle Routes of Exposure

Ingestion: Harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration into the lungs may occur during ingestion or vomiting, resulting in lung injury.
Skin Contact: Causes skin irritation. Frequent or prolonged contact may irritate the skin and cause a skin rash (dermatitis). May cause sensitization by skin contact.
Inhalation: Harmful if inhaled. Excessive inhalation may cause mucous and superior respiratory tract irritation, headache, nausea, Central Nervous System (CNS) damages.
Eye Contact: Causes severe eye irritation. Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision.

Additional Information: Chronic exposure may cause damage to the central nervous system, respiratory system, lungs eyes, skin, gastrointestinal tract, liver, spleen and kidneys
Acute Test of Product:
Acute Oral LD50: Not Available.
Acute Dermal LD50: Not Available.
Acute Inhalation LC50: Not Available.

Carcinogenicity:

Ingredients	IARC - Carcinogens	ACGIH - Carcinogens
Styrene	Group 2B	A4 - Not Classifiable as a Human Carcinogen

Carcinogenicity Comment: Contains styrene. Possible cancer hazard - may cause cancer based on animal data.

Reproductive Toxicity/ Teratogenicity/ Embryotoxicity/ Mutagenicity: For styrene - the limited information available indicates that styrene does not cause birth defects nor toxic effects to the human fetus.There have been several studies on rats and mice, none of which has demonstrated teratogenicity. Many of the studies were deficient in experimental design and reporting. However, embryotoxicity and fetotoxicity appear to be related to maternal toxicity. No adverse effects on the female reproductive system have been observed. In general, the few studies on the male reproductive system are not reliable because of factors such as poor reporting and exposure to other chemicals. Some reports have claimed an effect of styrene on testicular sperm morphology. However, the existing data do not support this claim.There is some evidence that high exposures to styrene can affect the male reproductive system. Chromosome damage in peripheral lymphocytes (white blood cells) and other cellular effects have been studied in workers. Both positive and negative results have been reported. Most of these studies are not reliable due to factors such as small sample size and exposures to other chemicals. A recent, comprehensive study analyzed chromosome aberrations, sister chromatid exchanges and micronuclei in peripheral lymphocytes. There were no effects on these parameters. Styrene has caused sister chromatid exchanges (SCE) in somatic cells. Styrene was not mutagenic in a mouse sperm morphology test. In general, it appears that styrene does not induce chromosome aberrations in mouse, rat or Chinese hamster bone marrow cells. In bacteria and in mammalian cell cultures, styrene is not mutagenic in in vitro assays without metabolic activation. Styrene is either weakly mutagenic or non- mutagenic with metabolic activation.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information:

Ingredients	Ecotoxicity - Fish Species Data	Acute Crustaceans Toxicity:	Ecotoxicity - Freshwater Algae Data
Styrene	LC50 (bluegill) 25.05 mg/L LC50 (fathead minnow) 4.02 mg/L LC50 (goldfish) 64.74 mg/L	Not Available.	Not Available.

Other Information:
No additional remark.

13. DISPOSAL CONSIDERATIONS

Disposal of Waste Method: Disposal of all wastes must be done in accordance with municipal, provincial and federal regulations.
Contaminated Packaging: Empty containers should be recycled or disposed of through an approved waste management facility.

14. TRANSPORT INFORMATION

DOT (U.S.):
DOT Shipping Name: RESIN SOLUTION
DOT Hazardous Class 3
DOT UN Number: UN1866
DOT Packing Group: III
DOT Reportable Quantity (lbs): Not Applicable.

Notes: No additional remark.
Marine Pollutant: No.

ICAO/IATA:
IATA Proper Shipping Name: RESIN SOLUTION
IATA Hazard Class: 3
UN Number: UN1866
Packing Group: III
IATA Label: Flammable liquid.
IATA Remarks: No additional remark.

IMDG:
IMDG Proper Shipping Name: RESIN SOLUTION
Hazard Class: 3
UN Number: UN1866
Packing Group: III
Marine Pollutant: No.
IMDG Label: Flammable liquid.
Remarks: No additional remark.

TDG (Canada):
TDG Proper Shipping Name: RESIN SOLUTION
Hazard Class: 3
UN Number: UN1866
Packing Group: III
Note: No additional remark.
Marine Pollutant: No.

15. REGULATORY INFORMATION

U.S. TSCA Inventory Status: All components of this product are either on theToxic Substances Control Act (TSCA) Inventory List or exempt.

Canadian DSL Inventory Status: All components of this product are either on the Domestic Substances List (DSL), the Non-Domestic Substances List (NDSL) or exempt.

U.S. Regulatory Rules

Ingredients	CERCLA/SARA - Section 302:	SARA (311, 312) Hazard Class:	CERCLA/SARA - Section 313:
Styrene	Not Listed.	Listed Listed	Listed

California Proposition 65: Not Listed.
MA Right to Know List: Listed.
New Jersey Right-to-Know List: Listed.
Pennsylvania Right to Know List: Listed.

WHMIS Hazardous Class:
B2 FLAMMABLE LIQUIDS
D2A VERY TOXIC MATERIALS
D2B TOXIC MATERIALS

16. OTHER INFORMATION

Additional Information:

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Disclaimer:

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