

Product Name : SWANCOR 901

## 1 · IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

PRODUCT NAME : SWANCOR 901

PRODUCT NO : UN1866

SUPPLIER: SWANCOR IND. CO., LTD.  
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## 2 · HAZARDS IDENTIFIATION

HAZARDS TO CLASSIFY : INFLAMMABLE TO THIRD CLASS · CORRODE/ SKIN CONTACT TO SECOND CLASS · EYE CONTACT TO SECOND CLASS · CANCER TO SECOND CLASS · BIOLOGY SYSTEM OF TOXICITY SUBSTANCE TO SECOND CLASS · ENVIRONMENT TO THIRD CLASS · INHALATION OF TOXICITY SUBSTANCE TO FIRST

LABELLING :



WARN : DANGER

WARN INFORMATION :

EMERGENCY OVERVIEW:

Straw-yellow viscous liquid. Pungent styrene odor. Flammable. Reactive. Causes eye irritation. Highly toxic to fish and/or other aquatic organisms

POTENTIAL HEALTH EFFECTS:

Refer to Section XI for toxicological data, Effects of Overexposure: for styrene

EYE CONTACT:

May cause moderate eye irritation. May cause slight corneal injury. Vapors may irritate eyes. Vapors may cause lacrimation (tears).

SKIN CONTACT:

Prolonged or repeated exposure may cause skin irritation. Material may stick to skin causing irritation upon removal. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts.

INGESTION:

Single dose oral toxicity is considered to be low. If aspirated (liquid enters the lung), may be rapidly absorbed through the lungs and result in injury to other body systems.

INHALATION:

Excessive vapor concentrations are attainable and could be hazardous on single exposure. Signs and symptoms of excessive exposure may be anesthetic or narcotic effects and result in injury to other body systems.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS:

Contains styrene, which, in animals, has been reported to cause effects on the following organs; central nervous system, kidney, liver and reparatory tract. Lung effects have been observed in mice following repeated exposure to styrene. Styrene is reported to have caused hearing loss in laboratory animals upon exposure to high concentrations (>600 ppm); however, the relevance of this to humans is unknown. Some studies in humans allege that repeated exposure to styrene may result in minor subclinical decreases in the ability to discriminate between colors.

CANCER INFORMATION:

This mixture contains a component (s) which are listed as potential carcinogens for hazard communication purposes under OSHA Standard 29 CFR 1910.1200. Component(s) listed by IARC; styrene. An increased incidence of lung tumors was observed in mice from a recent inhalation study on styrene. The relevance of this finding to humans is uncertain since data from other long-term animal studies and from epidemiology studies of workers exposed to styrene do not provide a basis to conclude that styrene is carcinogenic.

TERATOLOGY:

In laboratory animals, styrene did not produce birth defects or any other effects on the fetus even at exposure concentrations having an adverse effect on the mother.

REPRODUCTIVE EFFECTS:

Contains component(s) which did not interfere with reproduction in animal studies. The component(s) is/are: styrene.

OTHER :

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### 3 · COMPOSITION ON INGREDIENTS

NAME : SWANCOR 901 Vinyl Ester Resin

INGREDIENTS (%) :

POLYMER : 51-59 %(036425-16-8)

STYRENE : 41-49 %(00100-42-5)

### 4 · FIRST AIDS MEASURES

SKIN CONTACT:

Thoroughly wash exposed area with soap and water immediately. Remove contaminated clothing. Launder contaminated clothing before re-use.

EYE CONTACT:

Flush with large amount of water immediately and continuously for 20 minutes, lifting upper and lower lids occasionally. Get medical attention.

INGESTION:

Do not induce vomiting. Keep person warm, quiet and get medical attention. Aspiration of material into the lungs can cause chemical pneumonitis which can be fatal.

INHALATION:

If affected, remove individual to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, give artificial respiration. Keep person warm, quiet, and get medical attention

NOTE TO PHYSICIAN:

Because rapid absorption may occur through lungs if aspirated and cause systemic effects, the decision of whether to induce vomiting or not should be made by an attending physician. If lavage is performed, suggest endotracheal and/or exophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. No Specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

### 5 · FIRE FIGHTING MEASURES

HAZARDOUS DECOMPOSITION PRODUCT:

May form toxic materials: carbon dioxide and carbon monoxide, various hydrocarbons.

OTHER FLAMMABILITY INFORMATION:

Dense smoke is produced when product burns. Violent steam generation or eruption may occur upon application of direct water stream. Vapors are heavier than air and may travel a long distance and accumulate in low areas. Ignition and/or flash back may occur. Flammable mixtures may exist within the vapor space of containers at room temperature. Flammable concentrations of vapor can accumulate at temperatures above 74°F. Spills of these organic liquids on hot fibrous insulations may lead to lowering of the auto-ignition temperatures possibly resulting in spontaneous combustion.

EXTINUISHING MEDIA:

Water fog or fine spray, carbon dioxide, dry chemical, foam. Water fog, applied gently may be used as a blanket for fire extinguishments. General purpose synthetic foams (including AFFF type) or protein foams are preferred if available. Alcohol resistant foams (ATC type) may function. Do not use direct water stream, straight or direct water. Stream may not be effective to extinguish fire.

MEDIA TO BE AVOIDED:

Do not use direct water stream.

FIRE FIGHTING INSTRUCTIONS:

Keep people away. Isolate fire area and deny unnecessary entry. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Water fog, applied gently may be used as a blanket for fire extinguishments. Eliminate ignition sources. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Do not use direct water stream. May spread fire. Water may not be effective in extinguishing fire. Move container from fire area if this is possible without hazard.

PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS:

Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

### 6 · ACCIDENTAL RELEASE MEASURES

PROTECT PEOPLE:

Do not breathe vapors. Vapor explosion hazard, keep out of sewers. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. For large spills, warn public of downwind explosion hazard. Check area with explosion meter before reentering area. Ground and bond all containers and handling equipment

PROTECT THE ENVIRONMENT:

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For large spills, evacuate upwind of spills and contain with dike.

**CLEANUP:**

Pump with explosion-proof equipment. If available use foam to smother and suppress. Remove residual with hot soapy water. Residual can be removed with solvent. Solvents are not recommended for cleanup unless the recommended exposure guide-lines and safe handling practices for the specific solvent are followed. Consult appropriate solvent MSDS for handling information and exposure guidelines.

## 7 - HANDLING AND STORAGE

**HANDLING INFORMATION:**

Avoid inhalation and contact with eyes, skin, and clothing. Wash hands thoroughly after handling and before eating or drinking. Remove and wash contaminated clothing before reuse. Use with adequate ventilation. Ground and bond containers when transferring the material to prevent static electricity sparks which could ignite the vapor. Use spark-proof tools and explosion-proof equipment. Consult your supplier or promoters and catalysts for additional instructions on proper mixing and usage.

Empty containers may retain product residue (liquid and/or vapor). Do not pressurize, cut, weld, braze, solder, drill, grind, or expose these containers to heat, flame, sparks, static electricity, or other sources of ignition as the container may explode and may cause injury or death. Empty drums should be completely drained and properly bunged. Empty drums should be promptly returned to a drum re-conditioner or properly disposed.

**STORAGE INFORMATION:**

Keep away from ignition sources; flames, pilot lights, electrical sparks, and sparking tools. NO SMOKING. Do not store in direct sunlight. Store separate from oxidizing materials, peroxides, and metal salts. Keep container closed when not in use. To ensure maximum stability and maintain optimum resin properties, resins should be stored in closed containers at temperatures below 75 degrees F (25 degrees C). Copper or copper containing alloys should be avoided as containers.

## 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

**E EXPOSURE GUIDELINE(S) :**

Styrene, monomer : ACGIH TLV is 20ppm TWA, 40 ppm STEL, skin. ACGIH classifies as A4. OSHA PEL is 50 ppm TWA, 100 ppm STEL. The styrene PEL and STEL are in accordance with the OSHA-industry agreement dated March, 1996.

**PEOPLE P :**

**PROTECTIVE GLOVES:**

Wear resistant gloves such as: neoprene, nitrile rubber.

**EYE PROTECTION:**

Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses (consult your safety equipment supplier).

**OTHER PROTECTIVE EQUIPMENT:**

Normal work clothing covering arms and legs.

## 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: BROWN-YELLOW VISCOUS LIQUID	ODOR : The low concentration has sugariness · The high concentration has to irritate the nose.
ODOR THRESHOLD : 0.017-1.9ppm(DETECT)	MELTING POINT : -23.08°F/-30.6°C
pH :	BOILING POINT : 293.4°F/145.2°C
FLAMMABILITY :	FLASH POINT : 87.8 °F / 31°C
DECOMPOSITION TEMPERATURE :	
AUTOIGNITION TEMPERATURE : 914°F/490°C	EXPLOSIVE LIMITS : 1.1%~7.0%
VAPOR PRESSURE : 4.3 mmHg@20°C	VAPOR DENSITY : 3.6 g/l
SPECIFIC GRAVITY : 1.04 ± 0.02 / 25°C	SOLUBILITY :
PARTITION COEFFICIENT N-OCTANOL/WATER :	EVAPORATION RATE : slow than ether

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## 10 · STABILITY AND REACTIVITY

### HAZARDOUS POLYMERIZATION:

May occur.

### STABILITY:

Stable at room temperature.

### INCOMPATIBILITY:

Strong alkalis, strong mineral acids and oxidizing agents.

### CONDITIONS TO AVOID:

Exposure to excessive heat or direct sunshine or open flame; storage in open containers; storage above 38°C (100°F). Contamination with oxidizing agents.

### HAZARDOUS DECOMPOSITION PRODUCTS:

Carbon Monoxide, Carbon Dioxide, Low Molecular Weight Hydrocarbon, Organic Acids.

## 11 · TOXICOLOGICAL INFORMATION

### SKIN CONTACT:

The LD50 for skin absorption in rabbits is >2,000 mg/kg.

### INGESTION:

The oral LD50 for rats is >4,000 mg/kg

The oral LC50 for rats is >5,000 ppm/4H

### MUTAGENICITY (EFFECTS ON GENETIC MATERIAL):

For styrene: In vitro mutagenicity studies were inconclusive. Animal mutagenicity studies were inconclusive

## 12 · ECOLOGICAL INFORMATION

### ENVIRONMENTAL FATE :

LC50 : 25.1-74.8mg/1/96H

EC50 : ----

BCF : 13.5

### DEGRADATION & PERSISTENCE :

Based on information for styrene. Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable. Reaches more than 70% mineralization in OECD test(s) for inherent biodegradability.

## 13 · DISPOSAL CONSIDERATIONS

### DISPOSAL:

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator

## 14 · TRANSPORT INFORMATION

UN NO : 1866

UN TRANSPORT NAME : RESIN SOLUTION

Hazard Class: 3

PG : III

SEA POLLUTANTS: (YES / NO) : NO

## 15 · REGULATORY INFORMATION

EC label/EC number : 202-851-5

EC Label name: STYRENE

EC classification : Harmful. Flammable.

EC symbols: (Xn) Harmful.

EC Risk Phrases: (R10) Flammable.

(R20) Harmful by inhalation.

(R36/38) Irritating to eyes and skin.

EC Safety Phrases: (S23) Do not breathe vapour.

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TSCA (USA): Listed.  
AICS (Australia): Listed.  
DSL (Canada): Listed.  
EC Annex I number: 601-026-00-0  
EINECS (EC): 202-851-5  
METI(JAPAN):3-4

## 16 · OTHER INFORMATION

REVISION : R & D	NAME : SWANCOR 901
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PREPARED BY: MONICA HSIES	SDS NO. : NT27-127-E
DATE : 2013.05.15	HAZARD RATING: Health 2 / Flammability 3 / Reactivity 2