

901-PT-VE-30

SANCO, INCORPORATED

Specializing in Non-Ferrous Minerals



MATERIAL SAFETY DATA SHEET

SECTION I - IDENTITY INFORMATION

Manufacturer's Name: SANCO Polymer Group.
SPG Resins
Address: 207 Brookhollow Industrial Blvd.
Dalton, Georgia 30721
Telephone Number: 800-536-5725
Emergency Telephone Number: 800-424-9300 (CHEMTREC)
Chemical Name/Synonyms: Vinyl Ester Resin in Styrene Monomer
CAS Number: None (Mixture)
Trade Name: Vinyl Ester 901
Shipping Description: Resin Solution, 3, UN 1866, PGIII, Marine Pollutant. Contains Styrene

SECTION II - COMPOSITION ON INGREDIENTS

<u>HMIS RATING</u>		<u>NFPA Hazard Classification</u>	
Health Hazard	2	Health Hazard	2
Flammability Hazard	3	Flammability Hazard	3
Reactivity Hazard	1	Reactivity Hazard	1

Ingredient	Percent	CAS Index No.
Vinyl Ester Resin	48-58	036425-16-8
Styrene	42-52	000100-42-5

SECTION III - HAZARDS IDENTIFICATION

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.

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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.

SECTION IV - FIRST AIDS PROCEDURES

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.

SECTION V - FIRE FIGHTING MEASURES

Flash Point 88°F (31°C) for Styrene

Flammable Limits Lower : 1.1% (For Styrene) Upper : 6.1% (For Styrene)

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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 74oF. 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.

SECTION VI - 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:

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.

STEP TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Small Spill : Absorb liquid on paper, vermiculite, floor absorbent, or other absorbent material and transfer to hood.

Large Spill : Eliminate all ignition sources (flares, flames, including pilot lights electrical sparks). Persons not wearing protective

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equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source, dike area of spill to prevent spreading, pump liquid to salvage tank. Remaining liquid may be taken up on sand, clay, earth, floor absorbent or other absorbent material and shoveled into containers.

WASTE DISPOSAL METHOD:

Small Spill : Allow volatile portion to evaporate in hood. Allow sufficient time for vapor to completely clear hood duct work. Dispose of remaining material in accordance with applicable regulations.

Large Spill : Destroy by liquid incineration in accordance with applicable regulation.

Contaminated absorbent should be disposed of in accordance with government regulations.

SECTION VII - 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.

SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION:

If TLV of the product or any component is exceeded, a NIOSH/MSHA jointly approved air supplied respirator is advised in absence of proper environmental control. OSHA regulation also permits other NIOSH/MSHA respirators under specified conditions. (See your safety equipment supplier). Engineering or administrative controls should be implemented to reduce exposure. When respiratory protection is required, use an approved air purifying or positive-pressure supplied-air respirator depending on the potential airborne concentration.

VENTILATION:

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

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.

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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.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

Properties		Measurement
Initial Boiling Point	For Styrene	293.4oF/@ 760.0 mmHg
Vapor Pressure	For Styrene	4.3 mmHg / 25oC
Vapor Density	Air=1	3.6
Specific Gravity		1.04 +/- 0.02 / 25oC
Percent Non-volatile		53 +/- 1
Evaporation Rate		Slow than Ether
Solubility in water		Very slight

SECTION X - 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 38oC (100oF). Contamination with oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS:

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

SECTION XI - TOXICOLOGICAL INFORMATION

(See Section III for Potential Health Effects)

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.

SECTION XII - ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE

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MOVEMENT & PARTITIONING:

Based on information for styrene. Bio-concentration potential is low (BCF less than 100 or Log Pow less than 3). Potential for mobility in soil is low (Koc between 500 and 2,000).

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.

ECOTOXICITY:

Based on information for styrene. Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in most sensitive species).

SECTION XIII - DISPOSAL CONSIDERATIONS

(See Section XV for Regulatory Information)

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.

SECTION XIV - TRANSPORT INFORMATION

D.O.T.: Bulk; ITAT: Non Bulk

Proper Shipping Name: Resin Solution

Hazard Class: 3

ID: UN1866

PG: III

Placard: Flammable

EM Guidebook: 127

SECTION XV - REGULATORY INFORMATION

(Not meant to be all-inclusive--selected regulations represented)

OSHA STATUS:

This material is classified as a hazardous chemical under the criteria of the US Occupational Safety and Health Administration (OSHA)

Hazard Communication Standard, 29 CFR 1910.1200.

TSCA EXPORT NOTIFICATION:

This material does not contain any components that are subject to the US Toxic Substances Control Act (TSCA) Section 12(b) Export Notification requirements.

TSCA INVENTORY STATUS:

All components of this material are listed on the US the Toxic Substances Control Act (TSCA) inventory.

EUROPEAN/INTERNATIONAL REGULATIONS:

European Labeling in Accordance with EC Directives

Hazard Symbols: XN

Risk Phrases:

R 10: Flammable

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R 36/38: Irritating to eyes and skin.

R 20: Harmful by inhalation.

Safety Phrases:

S 23: Do not inhale gas/fumes/vapor/spray.

CALIFORNIA PROPOSITION 65:

WARNING: This product contains a chemical(s) known to the State of California to cause cancer. Styrene Oxide.

CAA:

Styrene (100-42-5) is listed as a Hazardous Air Pollutant (HAP) under Section 112 of the Clean Air Act.

CWA:

Styrene (100-42-5) is listed under Section 311 as a Hazardous Substance.

CANADA WHMIS:

This material is classified by the Canadian Workplace Hazardous Material Information System as: B2 (flammable liquid) D2A (materials causing other toxic effects, very toxic material) D2B (materials causing other toxic effects, toxic material)

CANADA CEPA:

All components of this material are listed on the Canadian Domestic Substances List (DSL).

ADDITIONAL CANADIAN REGULATORY INFORMATION:

Under the Transportation of Dangerous Goods regulations, the following Chemicals have been assigned Regulated Limits (RL): Styrene Monomer (CAS # 100-42-5): RL=50 KG.

The following chemicals are listed on the WHMIS Ingredient Disclosure List: Styrene Monomer (CAS # 100-42-5)

The following chemical (s) are listed on the Canadian National Pollutant Release Inventory (NPRI): Styrene Monomer (CAS # 100-42-5)

This material safety data sheet and the information it contains is offered to customers in good faith as accurate. We have reviewed any information contained in this data sheet which we received from sources outside our company. We believe that information to be correct but cannot guarantee its accuracy or completeness. Health and safety precautions in this data sheet may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. No statement made in this data sheet shall be construed as a permission or recommendation for the use of any product in a manner that might infringe existing patents. No warranty is made, either express or implied.

Section XVI - DISCLAIMER

The information contained in this Material Safety Data Sheet is believed to be reliable. No guarantee is implied or expressed regarding the accuracy of this information. No warranty (whether for fitness for use or for merchant ability or otherwise) is given. Nothing contained herein should be construed as a recommendation to use this product in conflict with existing patents covering any material or its use. Regulatory requirements are subject to change and may differ from one location to another. It is the buyer's responsibility to ensure that all activities comply with Federal, State, and Local laws. The conditions of handling, storage, use, and disposal of the product are beyond our control and may be beyond our knowledge. For this reason and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage or disposal of the product.

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