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Material Safety Data Sheet

PVC Resin

Section 1: Chemical Product and Company Identification

Product Name : PVC Resin (China Origin)

Chemical Formula : $(C_2H_3Cl)_n$

Company Identification : Tradeasia International Pte Ltd

Email : contact@chemtradeasia.com

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS#	% by Weight
Polyvinyl Chloride Resin	9002-86-2	99.8 (min)

Section 3: Hazards Identification

POTENTIAL HEALTH EFFECTS

Primary Routes of Exposure: Inhalation of process emissions during periods of elevated temperature.

Eye: Solids or dust may cause irritation or scratch the surface of the eye.

Skin Contact: Not considered hazardous by this route.

Skin Absorption: This material is a dry solid powder; absorption is unlikely.

Ingestion: No effect expected. If a large amount is ingested get medical attention.

Inhalation: Inhalation of process emissions can cause throat and lung irritation. Exposure to low levels of PVC dust is not expected to present a hazard.

CHRONIC EFFECTS/CARCINOGENIC:

Chronic exposure to fumes and vapors from thermally decomposed plastics may cause an asthma-like syndrome due to the inhalation of HCl vapors or fumes. IARC has determined that there is

inadequate evidence of carcinogenicity of PVC in both animals and humans. The overall evaluation of this chemical is Group 3, meaning that it is not classified as a carcinogen (IARC Vol. 19, 1979) PVC is not listed as a carcinogen by OSHA, NIOSH, NTP, or EPA.

Section 4: First Aid Measures

Inhalation:

No adverse effects anticipated by breathing small amounts during proper industrial handling. If high dust exposure occurs remove victim to fresh air and get medical attention.

Skin Contact:

Wash off in flowing water or shower.

Eye Contact:

Immediately flush with water for at least 15 minutes. Do not rub the eyes. Obtain medical attention if eye irritation occurs.

Ingestion:

This material is practically inert. If, however, ingestion does occur vomiting can be induced after diluting gastric fluids with water or milk. Call a physician for additional medical advice.

Section 5: Fire and Explosion Data

Flash Ignition Temperature: >730°F

Flammable Limits (% by Vol.)

Lower Explosive Limit (LEL): Not Applicable

Upper Explosive Limit (UEL): Not Applicable

Auto ignition Temperature: Not Applicable

Fire Fighting Procedures/Fire Extinguishing Media:

Carbon dioxide or water. Use extinguishing measures that are appropriate to the local circumstances and the surrounding environment.

Unusual Fire and Explosion Hazards:

Dense smoke emitted when burned without sufficient oxygen. PVC will not continue to burn after ignition without an external fire source. There is a limited risk of dust explosion when mixed with air, but only under particular conditions. A strong energy source is necessary for ignition. Avoid dispersing

the dust into clouds when extinguishing. Do not allow firefighting runoff water to enter streams, rivers or lakes. The water will collect HCl from the by-products of combustion.

Fire-Fighting Equipment:

Wear full bunker gear including a positive pressure self-contained breathing apparatus in any closed space.

Section 6: Accidental Release Measures

Protect People:

Signs/symptoms of overexposure: Chronic exposure to fumes and vapors from thermally decomposed plastics may cause an asthma-like syndrome due to the inhalation of HCl vapors or fumes. Check OSHA 29 CFR 1910.1017. Material contains vinyl chloride, which is a cancer suspect agent in the US. When opening truck or railcar for unloading, ventilate before entering.

Protect the Environment:

Prevent material from entering the public sewer systems or any waterways. Do not flush to drains. Dispose of waste in accordance with applicable environmental laws and regulations.

Clean Up:

Cleanup uncontaminated material and recycle into process. Clean spills in a manner that does not disperse dust into the air. Spill area can be washed with water. Place unusable material into a closed, properly labeled container compatible with the product. See MSDS Section 15 for Regulatory Information.

Section 7: Handling and Storage

Advice on safe handling:

Avoid contact with eyes. Avoid breathing dust. Minimize dust generation and accumulation. Store in dry protected area. Employees working with dried polymer should wear respiratory protective equipment.

Protective measures:

Use methods to minimize generation of dust. Wash thoroughly after handling. PVC resin processing may result in the release of low levels of vinyl chloride. Use only in well-ventilated areas.

Technical measures:

Precautions against fire and explosion:

PVC dust is capable of propagating a secondary dust explosion. This potential can be reduced by good housekeeping, prevention of dust from process equipment, preventing accumulation of dust on overhead horizontal surfaces and eliminating potential ignition sources. Avoid heat, flames, sparks, and other sources of ignition. Use properly grounded electrically conductive materials for piping circuits and equipment.

Storage:

Store in a dry place away from direct sunlight, heat, and incompatible materials. Store away from food and beverages. Reseal containers immediately after use. Store in a well-ventilated, cool area equipped with high volume sprinkler heads. To maintain product quality, do not store in heat or direct sunlight, keep only in the original container at a temperature not exceeding 40ºC.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

May be necessary to provide general and/or local ventilation to help maintain airborne concentrations below exposure guidelines. Local exhaust ventilation should comply with OSHA regulations and the American Conference of Industrial Hygienists, Industrial Ventilation - A Manual of Recommended Practice.

Respiratory Protection:

For most conditions, no respiratory protection should be needed. However, if dust is produced during handling, a NIOSH-approved air purifying filter respirator that meets the requirements of 29 CFR 1910.134 should be used. Full-face self-contained breathing apparatus may be needed when dealing with vapors from combustion of product. Respirators must be selected based on the airborne levels found in the workplace and must not exceed the working limits of the respirator.

Eye Protection:

Use safety glasses. If there is a potential for exposure to particles that could cause mechanical injury to the eye, wear chemical or dust proof goggles.

Skin Protection:

No precautions other than clean clothing should be needed.

Exposure Guidelines:

OSHA has not established an exposure limit for this material. However it is recommended that airborne exposures should, at a minimum, be kept below the limits for Particulates Not Otherwise Classified (PNOC): OSHA-PEL: 15 mg/m3 8-hr TWA (Total Dust) 10 mg/m3 8-hr TWA (Respirable Dust) The American Conference of Governmental Industrial Hygienist (ACGIH) has established a Threshold Limit Value (TLV) (based on an 8-HR TWA exposure) of 1 mg/m3 for the respirable fraction. This TLV applies only to the polymerized form of vinyl chloride and not the vinyl chloride monomer.

Section 9: Physical and Chemical Properties

Physical Form : Powder

Color : White

Odor : Odorless

Molecular Weight : Ranging from 30,000 –150,000

Boiling Point : Not determined

Melting Point : Not determined

Solubility in Water : Insoluble

Specific Gravity : 1.4 (water = 1)

Vapor Density : Not determined (air = 1)

Evaporation Rate : None (butyl acetate =1)

Vapor Pressure : Not determined

% Volatile : Negligible

Section 10: Stability and Reactivity Data

Stability: Stable under normal conditions

Polymerization: Hazardous polymerization does not occur.

Hazardous Decomposition Products:

Temperatures of 300ºF (150ºC) or greater over an extended period of time may cause thermal degradation of PVC resin. The formation of hydrogen chloride, HCl, may be generated during this thermal degradation. HCl vapors may cause irritation of the eyes, mucous membrane and respiratory tract.

Incompatible Materials:

Polyvinyl chloride materials should not come into contact with acetal or acetal copolymers in elevated temperature processing equipment. The two materials are not compatible and will react in a violent decomposition when mixed under conditions of heat or pressure. Strong oxidizing agents.

Section 11: Toxicological Information

Animal Toxicity:

Oral: Rat, TDLO 210g/kg/30W-C: Equivocal tumorigenic agent

Implant: Rat, TDLO 75 mg/kg: Equivocal tumorigenic agent

TDLO= Lowest toxic dose in a given species by a given route of exposure.

While PVC is generally considered an inert polymer, exposure to PVC dust has been reported to cause lung changes in animals and humans, including decreased respiratory capacity and inflammation.

Section 12: Ecological Information

Environmental Fate:

Aquatic: No data available

Biodegradation: Not subject to biodegradation

Eco toxicity:

Based on the high molecular weight of this polymeric material, transport of this compound across biological membranes is unlikely. Accordingly, the probability of environmental toxicity or bioaccumulation in organisms is remote. Due caution should be exercised to prevent the accidental release of this material to the environment.

Section 13: Disposal Considerations

Waste Management Information:

Do not dump into any sewers, on the ground, or into any body of water. Any disposal practice must be in compliance with local, state and federal laws and regulations (contact local or state environmental agency for specific rules). Waste characterization and compliance with applicable laws are the responsibility of the waste generator.

Section 14: Transport Information

Proper Shipping Name : Polyvinyl Chloride

DOT - Hazard Class : None

DOT - Shipping ID No. : None

DOT – Labeling : None

Section 15: Other Regulatory Information

OSHA 29 CFR 1910.1017:

This resin may contain trace levels, <0.001% of VCM. Under normal working conditions with adequate ventilation, neither the OSHA's 8-hour TWA, PEL of 1.0 ppm, the 0.5 ppm action level or C/STEL of 5.0 ppm should be exceeded. The workplace should be monitored, and if the level exceeds the PELs or action levels, or C/STEL refer to 29 CFR 1910.1017. In addition, containers of PVC Resin should be legibly labeled with the following warning: Polyvinyl Chloride contains Vinyl Chloride. Vinyl Chloride is a Cancer Suspect -Agent.

EPA 40 CFR 372:

Unless a cover letter is attached to this MSDS explicitly stating otherwise, this product contains no SARA 313 listed compounds at or above the de minimis quantities.

TSCA

Polyvinyl Chloride is listed on the TSCA inventory.

CERCLA

Not Applicable

RCRA

Not Applicable

California Proposition 65

This resin may contain trace levels, <0.001% of VCM. VCM is a chemical known to the state of California to cause cancer.

Canadian Regulations

This product has been classified according to the hazard criteria of the Canadian Controlled Products Regulations, Section 33 and the MSDS contains all information required by this regulation.

WHMIS Classification- Not a Controlled Product

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall Tradeasia International Pte. Ltd. Be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Tradeasia International Pte. Ltd. has been advised of the possibility of such damages.