



SHINTECH INC.

MATERIAL SAFETY DATA SHEET
POLYVINYL CHLORIDE RESIN

FILE NUMBER: SHINTECH 02
MSDS DATE: September 22, 2011

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Shintech PVC, All Grades
SYNONYMS: PVC, Vinyl Resin

MANUFACTURER: Shintech, Inc.
ADDRESS: 5618 East Hwy Highway 332
Freeport, Texas 77541

EMERGENCY PHONE: (979) 233-7861 (Ext. 300)

CHEMICAL NAME: Polyvinyl Chloride
CHEMICAL FAMILY: Organic Polymer
CHEMICAL FORMULA: $(CH_2-CHCl)_n$

PRODUCT USE: Polyvinyl Chloride (PVC) Fabrication
PREPARED BY: Shintech Safety Department

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS#	EINECS#	Hazard Symbol	Risk and Safety Phrases	%
Polyvinyl Chloride Resin	9002-86-2	N/A	N/A	N/A	> 99.8

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: This product is considered to be non-hazardous under normal conditions. However, mechanical operations associated with the use of PVC material can produce elevated concentrations of airborne PVC particulates. Contact with PVC particulates can be irritating to the eyes and respiratory tract. Avoid contact with the eyes and wear appropriate eye protection when necessary. Operations that produce airborne dusts should be conducted in well ventilated areas. Appropriate respiratory protection should be worn to protect workers from exposures to airborne PVC particulates.

PRIMARY ROUTES OF ENTRY: Inhalation (process emission from elevated temperature or process particulates), skin and/or eye contact

TARGET ORGANS: Eyes, skin, and respiratory system

SIGNS AND SYMPTOMS OF EXPOSURE: Irritation to the eyes skin, throat and upper respiratory system.

POTENTIAL HEALTH EFFECTS:

EYES: PVC particles may cause irritation of the eyes.

SKIN: PVC particles may cause mechanical irritation or moderate allergic dermatitis.

INGESTION: Ingestion of this product under normal conditions does not contribute to any known adverse health effects.

INHALATION: Inhalation of high concentrations of PVC particles (process emission from elevated temperature or process particulates) may cause respiratory irritation.

CARCINOGEN STATUS: This product is not considered carcinogenic by OSHA, NTP, or IARC.

CONDITIONS GENERALLY RECOGNIZED: PVC particulates may aggravate any pre-existing respiratory conditions or allergies.

SECTION 4: FIRST AID MEASURES

EYES: Immediately flush the eyes with large amounts of room temperature water for a minimum of 15 minutes. Hold the eyelids apart during the flushing operation. Get immediate medical attention if irritation persists.

SKIN: Wash affected area with soap and water. Get immediate medical attention if irritation persists.

INGESTION: Ingestion of this product under normal conditions does not contribute to any known adverse health effects. If large amounts are ingested get medical attention.

INHALATION: Remove the person from the exposure and move to fresh air. Get immediate medical attention if severe coughing or breathing difficulty occurs.

SECTION 5: FIRE-FIGHTING MEASURES

FLASHPOINT: > 700°F

FLAMMABLE LIMITS (% VOLUME IN AIR)

Lower Explosive Limit (LEL):	Not Applicable
Upper Explosive Limit (UEL):	Not Applicable

AUTOIGNITION TEMPERATURE: 945°F

EXTINGUISHING MEDIA: Water, dry powder, foam, carbon dioxide, or sand is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide inside confined spaces. Collect contaminated fire-fighting water separately.

FIRE FIGHTING PROCEDURES: Avoid inhalation of material or combustion by-products. Wear fire fighter's protective clothing and a NIOSH-approved self-contained breathing apparatus (SCBA).

UNUSUAL FIRE AND EXPLOSIVE HAZARDS: Exposure to fire or explosions can produce hydrogen chloride.

NFPA: Health = 0 (Normal)	HMIS: Health = 0 (Insignificant)
Fire = 1 (Above 200°F)	Flammability = 1 (Slight)
Reactivity = 0 (Stable)	Reactivity = 0 (Insignificant)
Special = None	PPE = A (safety glasses)

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PROTECTIVE EQUIPMENT: Use the personal protective equipment recommended in Section 8.

SPILL PROCEDURES: Contain spill immediately. Non-recoverable product, contaminated soil, debris and other materials should be placed in proper containers for reclamation or disposal.

DISPOSAL: Follow the procedures recommended in Section 13.

SECTION 7: HANDLING AND STORAGE

HANDLING: Wear personal protective equipment and follow the exposure control measures recommended in Section 8. Avoid contact with eyes and prolonged breathing of airborne PVC. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment. Use explosion-proof electrical equipment and keep away from heat, spark, flames and other ignition sources. Use good housekeeping practices to minimize PVC particulates from accumulating.

STORAGE: Store in a cool, dry place and keep isolated from open flames and other sources of ignition.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINES:

<u>COMPONENT</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>NIOSH IDLH</u>
PVC Dust (total)	15 mg/m ³ (TWA)	Not Established	Not Established
PVC Dust (respirable)	5 mg/m ³ (TWA)	1 mg/m ³ (TWA)	Not Established

ENGINEERING CONTROLS: Provide general and/or local exhaust ventilation to control airborne levels of PVC dust below the exposure standards and guidelines. Local exhaust ventilation is preferred because it is capable of controlling contaminant emissions at the source and preventing dispersion into the general work area. For additional information on ventilation, refer to the ACGIH text, *Industrial Ventilation, a Manual of Recommended Practices*.

EYE PROTECTION: Wear ANSI approved safety glasses with side shields and/or an appropriate full-face shield. All eye protection should be selected and worn in accordance with the OSHA eye and face protection guidelines outlined in 29 CFR 1910.132 and 1910.133.

SKIN PROTECTION: Under normal conditions, the use of additional PPE is not necessary to protect the skin. However, protective clothing, including gloves, aprons, and other outer garments may be desirable in extremely dusty areas. All PPE should be selected and worn in accordance with 29 CFR 1910.132 and 1910.138.

RESPIRATORY PROTECTION: A NIOSH-approved air purifying respirator with a N95 cartridge may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. All respirators should be selected and worn in accordance with 29 CFR 1910.132 and 1910.134.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	Granulate Solid (free flowing)
COLOR:	White
ODOR:	Odorless
PH:	Not Applicable
BOILING POINT	Not Applicable
MELTING/FREEZING POINT:	Not Applicable
WATER SOLUBILITY:	Not Soluble
SPECIFIC GRAVITY:	1.4
VAPOR DENSITY (AIR):	Not Applicable
VAPOR PRESSURE:	Not Applicable
MOLECULAR FORMULA:	(CH ₂ -CHCl) _n
MOLECULAR WEIGHT:	20,000 – 150,000 g/mole

SECTION 10: STABILITY AND REACTIVITY

STABILITY:	Stable at normal temperatures and pressures
CONDITIONS TO AVOID:	Avoid all possible sources of ignition, heat and flames.
INCOMPATIBLE MATERIALS:	Avoid contact with acetal or acetal copolymers and amines (derivates of ammonia).
HAZARDOUS DECOMPOSITION PRODUCTS:	Mostly Hydrogen Chloride.
HAZARDOUS POLYMERIZATION:	Has not been reported.

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICITY DATA:	There is limited toxicity information available for this product. However, exposures to PVC dust have been reported to cause lung changes in both animals and humans
CARCINOGENICITY:	This product is not considered carcinogenic by OSHA, NTP, or IARC.
REPRODUCTIVE EFFECTS:	Has not been reported
MUTAGENICITY:	Has not been reported
TERATOGENICITY:	Has not been reported

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY: There is limited information available for this product.

ENVIRONMENTAL FATE: There is limited information available for this product.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Do not dump this product into any sewers, on the ground, or into any body of water. Dispose of in accordance with all applicable federal, state, and local regulations. Waste characterization and compliance with applicable laws are the responsibility of the waste generator.

RCRA P-Series:	Not Listed
RCRA U-Series:	Not Listed
NPRI:	Not Listed

SECTION 14: TRANSPORT INFORMATION

SHIPPING NAME:	Polyvinyl Chloride	IATA HAZARD CLASS:	Not Regulated
DOT HAZARD CLASS:	Not Regulated	IMGD CLASS:	Not Regulated
DOT SHIPPING ID:	Not Required	RID/ADR CODES:	Not Required
PACKING GROUP:	Not Required	PACKING GROUP:	Not Required
LABEL:	Not Required	HAZARD ID:	Not Required

* This product is not regulated as a hazardous material by the U.S. Department of Transportation (DOT), IMGD, EU, United Nations, IATA or the Canadian Transportation of Dangerous Goods (TDG) regulations.

SECTION 15: REGULATORY INFORMATION

CERCLA Sections 102a/103 (40 CFR 302.4):	Not Regulated
SARA Title III Section 302 (40 CFR 355.30):	Not Regulated
SARA Title III Section 304 (40 CFR 355.40):	Not Regulated
SARA Title III Section 313 (40 CFR 372.65):	Not Regulated
SARA Title III Section 311/312 Hazardous Categories (40 CFR 370.21):	
Acute:	No
Chronic:	No
Fire:	No
Reactive:	No
Sudden Release:	No
California Proposition 65:	Not Regulated (see label requirements below)
TSCA:	Listed on the Inventory
WHMIS (Canada):	Not Classified
CPR (Canada):	Not Regulated
IDL (Canada):	Not Regulated
DSL (Canada):	Listed on the Inventory
ESIS (Europe):	Not Regulated

OSHA 29 CFR 1910.1017

Polyvinyl Chloride contains Vinyl Chloride Monomer in the order of 0.1 to 10 PPM by weight. Vinyl Chloride Monomer is a Cancer Suspect Agent. The U.S. Department of Labor, Occupational Safety and Health Administration specifically regulate manufacturing, handling, and processing of Polyvinyl Chloride. Such regulations have been published as 29 CFR 1910.1017. It is necessary that handlers and processors of Polyvinyl Chloride be familiar with these regulations. None of the information presented in this material safety data sheet should be construed to contradict or supersede these regulations.

PVC Labeling Requirements:

Containers of PVC resin shall be labeled as follows (per 29 CFR 1910.1017):

POLYVINYL CHLORIDE CONTAINS VINYL CHLORIDE. VINYL CHLORIDE IS A CANCER SUSPECT AGENT.

SECTION 16: OTHER INFORMATION

As the conditions or methods of use are beyond our control, we do not assume any responsibility for and expressly disclaim any liability for any use of this material. Information contained herein is believed to be true and accurate, but all statements or suggestions are made without warranty, express or implied, regarding accuracy of the information, the hazards connected with use of the material or the results to be obtained from the use thereof. Compliance with all applicable federal, state, and local laws and regulations remains the responsibility of the user.

ACGIH:	American Conference of Governmental Industrial Hygienists
ANSI	American National Standards Institute
C:	Ceiling Limit
CAS#:	Chemical Abstracts System Number
CERCLA:	Comprehensive Environmental Response, Compensation, & Liability Act
DOT:	Department of Transportation
DSL:	Domestic Substance List
EC ₅₀ :	Effective concentration that inhibits the endpoint to 50% of control population
EINECS:	European List of Notified Chemical Substances
EPA:	U.S. Environmental Protection Agency
ESIS:	European Chemical Substances Information System
HMIS:	Hazardous Materials Identification System
IARC:	International Agency for Research on Cancer
IDLH:	Immediately Dangerous to Life and Health
IATA:	International Air Transport Association
IMDG:	International Maritime Dangerous Goods
LC ₅₀ :	Concentration of air resulting in death to 50% of experimental animals
LD ₅₀ :	Administered dose resulting in death to 50% of experimental animals
LEL:	Lower Explosive Limit
MSHA:	Mine Safety and Health Administration
NFPA:	National Fire Protection Association
NIOSH:	National Institute for Occupational Safety and Health
NTP:	National Toxicology Program
OSHA:	Occupational Safety and Health Administration
PEL:	Permissible Exposure Limit
PPE :	Personal Protective Equipment
RCRA:	Resource Conservation and Recovery Act
SARA:	Superfund Amendments and Reauthorization Act
STEL:	Short Term Exposure Limit
STP:	Standard Temperature and Pressure
TLV:	Threshold Limit Value
TSCA:	Toxic Substances Control Act
TWA:	Time Weighted Average
UEL:	Upper Explosive Limit
WHMIS:	Workplace Hazardous Materials Information System