Chemicals and Vinyls, LLC

Safety Data Sheet: PVC Suspension Resin

EC No 1907/2006

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product name	**PVC Suspension Resin** **1050 thru 2110M, 5225 thru 5565,** **Pond Resin and Sifter Overflow**
Synonyms	Polyvinyl Chloride resin, PVC resin, chloroethylene polymer, chloroethylene homopolymer.
Chemical formula	$(C_2H_3Cl)_n$
CAS name & no.	Chloroethylene polymer, [9002-86-2]
Identified uses	Industrial raw material for plastics processing
Effective date	May, 2011
Manufacturer	Georgia Gulf Chemicals and Vinyls, LLC P.O. Box 629 Plaquemine, LA USA 70765-0629
Emergency telephone number	For transportation emergencies: CHEMTREC (800) 424-9300 (USA & Canada) For all other emergencies: +1-225-685-2500
SDS contact	Corporate Health & Safety Department P.O. Box 629 Plaquemine, LA 70765 Outside US: +1-225-685-2500 responsiblecare@ggc.com

2. HAZARDS IDENTIFICATION

The product is not classified as dangerous according to Directive 1999/45/EC and its amendments

Classification (DSD): not classified

Classification (GHS): not classified

PRECAUTIONARY INFORMATION

Caution: Eye irritation is possible if solid material enters the eye. HCl can be liberated at elevated temperatures.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	Reg. No. (ECHA)	Index-No.	CAS-No.	Wt %
Polyvinyl Chloride Resin	01-2119458772-30-0049	-	9002-86-2	99.8+%

4. FIRST AID MEASURES

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

Skin Contact
Wash off in flowing water or shower.

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.

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.

5. FIRE FIGHTING MEASURES

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

Extinguishing media which must not be used for safety reasons
None

Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases
Temperatures above 150°C will decompose raw resin and may, depending on conditions, release carbon monoxide, carbon dioxide, hydrogen chloride and small amounts of aromatic and aliphatic hydrocarbons.

Special protective equipment for fire-fighters
Wear full bunker gear including a positive pressure self-contained breathing apparatus in any closed space.

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 fire fighting runoff water to enter streams, rivers or lakes. The water will collect HCl from the by-products of combustion.

Flash Ignition Temperature	>730°F
Flammable Limits (% by Vol.)	
Lower Explosive Limit (LEL)	Not Applicable
Upper Explosive Limit (UEL)	Not Applicable
Autoignition Temperature	Not Applicable

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
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, and is classified as extremely flammable and is a Category 1 Carcinogen in the EU.

When opening truck or railcar for unloading; ventilate before entering.

6. ACCIDENTAL RELEASE MEASURES (cont.)

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

Methods for cleaning 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.

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
There is a slight possibility that PVC dust could propagate a secondary dust explosion. This potential can be further reduced by good housekeeping, prevention of dust from process equipment, preventing accumulation of dust on over head, 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 40°C.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits:

Polyvinyl Chloride (mg/m^3)

ACGIH® TLV®[1] (US)	DFG-MAK[2] (Germany)	OELV-LLV[3] (Sweden)
1 (respirable fraction)	1.5 (respirable fraction)	1 (total dust)
		0.5 (respirable fraction)

1. American Conference of Governmental Industrial Hygienists Threshold Limit Value (ACGIH-TLV) - Time-weighted average concentration for a normal 8 hour workday and a 40 hour workweek to which nearly all workers may be repeatedly exposed, day after day, without adverse effect.
2. Maximum Concentration Value (DGF MAK) - The maximum allowable concentration of a working substance in the workplace atmosphere as a gas, steam or aerosol that, according to current knowledge, does not impair the health of employees exposed during eight-hour working days over the long term.
3. Occupational Exposure Limit Value - Level Limit Value (OELV-LLV) – Maximum acceptable average concentration limit value (time-weighted) of an air contaminant in respiratory air for exposure during one work day
Adapted from: Sweden AFS 2005/17

Engineering Controls
May be necessary to provide general and/or local ventilation to help maintain airborne concentrations below exposure guidelines where dust or vapors may be generated. Ventilation should be adequate to meet the guidelines established by the European Agency for Safety and Health at Work.

Respiratory Protection

For most conditions, no respiratory protection should be needed. In the EU the following respiratory protection should be taken if dust is produced during handling: A respirator must be worn if exposed to dust. The respirator should be a half-mask with a particle filter P2 (EN 143). In the case of decomposition, a face mask should be combined with Type B-P2 cartridge. Use only respiratory protection that conforms to International/ National Standards.

Hand Protection
No hand protection is necessary.

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
Exposure limits shall meet the requirements for the EU Member States for which this product is placed on the market.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White powder
Odour: Odourless

Parameter	Value	Unit	Remark
pH (at 20 °C):	N/A - solid		
Melting point/range:	N/A	°C	
Boiling point/range:	N/A	°C	
Flash point:	N/A	°C	
Ignition temperature:	>387	°C	
Vapour pressure:	<1	mm Hg	
Density:	1.39	g/cm3	
Bulk Density:	300-650	kg/m3	
Vapour density (air = 1.0):	N/A		
Specific Gravity (water = 1.0)	1.39		
Solubility:	Insoluble in water		Soluble in: ketones and THF
Partition coefficient n-Octanol/Water:	No data available	Log Po/w	
Viscosity, dynamic:	N/A - solid	mPa·s	
Flammability:	N/A		Product resists ignition and does not promote flame spread
Dust explosion hazard:			Explosion Class: St1 (weakly combustible)
Explosion limits			Class of combustion: BZ1 (no ignition)
lower:	N/A	% By Vol.	
Upper:	N/A	% By Vol.	
Molecular Weight	30,000 - 150,000	g/mole	

10. STABILITY AND REACTIVITY

Stability
Stable under normal conditions.

Polymerization
Hazardous polymerization does not occur.

Materials to Avoid
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.

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.

11. TOXICOLOGICAL INFORMATION

Animal Toxicity

Oral:	Rat, TD_{LO}	210g/kg/30W-C: Equivocal tumorigenic agent
Implant:	Rat, TD_{LO}	75 mg/kg: Equivocal tumorigenic agent

TD_{LO} = 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.

POTENTIAL HEALTH EFFECTS

Primary Exposure Routes: 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 not likely.

Ingestion: No effect expected. If 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.

11. TOXICOLOGICAL INFORMATION (cont.)

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 classifiable as a carcinogen (IARC Vol. 19, 1979) PVC is not listed as a carcinogen by OSHA, NIOSH, NTP or EPA.

12. ECOLOGICAL INFORMATION

Environmental Fate
Aquatic: No data available

Biodegradation: Not subject to biodegradation

Ecotoxicity: 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.

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.

14. TRANSPORTATION INFORMATION

Proper Shipping Name: Polyvinyl Chloride

Maritime Transport IMDG:	Not restricted
Air Transport ICAO-TI and IATA-DGR:	Not restricted
Land Transport ADR/RID (cross-border):	Not restricted
Inland Waterway Transportation AND/ADNR:	Not restricted

15. REGULATORY INFORMATION

Label: not subject to classification according to Directive 67/548/EEC (Dangerous Substances Directive)

European Inventory of Existing Commercial Chemical Substances (EINECS) Listing:

Chemical Name	EINECS Number
Polymers are not required to be listed on the EINECS	

Additional statements to be shown on labels:
REACH Registration Number: 01-2119458772-30-0049

16. OTHER INFORMATION

IMPORTANT: The information and data herein are believed to be accurate and have been compiled from sources believed to be reliable. It is offered for your consideration, investigation and verification. Buyer assumes all risk of use, storage, handling and disposal of the product in compliance with applicable federal, state, and local laws and regulations. **GEORGIA GULF CHEMICALS AND VINYLS, LLC MAKES NO WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, CONCERNING THE ACCURACY OR COMPLETENESS OF THE INFORMATION AND DATA HEREIN.** Georgia Gulf Chemicals and Vinyls, LLC will not be liable for claims relating to any party's use of or reliance on information and data contained herein regardless of whether it is claimed that the information and data are inaccurate, incomplete or otherwise misleading. This information relates to the material designated and may not be valid for such material used in combination with any other materials nor in any process.

SDS Status: Revision: 5/3/2011 Supersedes: 03/22/2010