

VISTA

MATERIAL SAFETY DATA SHEETVista Chemical Company
P.O. Box 19029
Houston, Texas 77224**1. PRODUCT IDENTIFICATION**

MANUFACTURING SITE	Vista Chemical Company		
ADDRESS	P.O. Box 91, Hwy. 25, Aberdeen, MS 39730		
TRADE NAME	Polyvinyl Chloride, PVC Resin		
SYNONYMS	Vinyl Polymer (PVC), Vinyl, $-(CH-CHCl)_n$		
CAS NUMBER(S)	9002-86-2 Ethene, chloro-, homopolymer		
TELEPHONE NO.	713/588-3491	EMERGENCY TELEPHONE NO.	318/494-5142

2. COMPONENTS AND HAZARD CLASSIFICATION

- PVC Resin contains no more than 8.5 ppm residual vinyl chloride monomer and is typically less than 1.0 ppm. Vinyl chloride is regulated as a carcinogen according to OSHA and listed by NTP and IARC as a carcinogen.
- Contains no chemicals subject to SARA 302 or 313 reporting.
- This MSDS is not subject to 311/312 reporting.

3. PHYSICAL DATA

BOILING POINT (°F)	Decomposes @ >410°F	SPECIFIC GRAVITY (H ₂ O= 1)	1.4
VAPOR PRESSURE (mm Hg.)	None	MELTING POINT	220 - 410°F
SOLUBILITY IN WATER	None	VAPOR DENSITY	Not applicable
APPEARANCE AND ODOR	Fine, white powder; odorless.		

4. FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD)	Not applicable	AUTOIGNITION TEMPERATURE	Not applicable
FLAMMABLE LIMITS IN AIR. % BY VOL.	LOWER	Not applicable	UPPER Not applicable
EXTINGUISHING MEDIA	Water spray, CO ₂ , dry chemical.		
SPECIAL FIRE FIGHTING PROCEDURES	Cool exposed equipment with water spray. Use self-contained breathing apparatus if fighting fire in confined spaces.		
UNUSUAL FIRE AND EXPLOSION HAZARD	PVC evolves hydrogen chloride, carbon monoxide and other toxic gases (i.e., benzene, toluene, vinyl chloride*) when burned. Exposure to combustion products may be fatal and should be avoided.		

*Wooley, Decomposition Products of PVC for Studies of Fires, Br. Poly, J., 1971, Vol 3, July

Polyvinyl Chloride, PVC Resin

5. HEALTH HAZARD INFORMATION**FIRST AID**

- EYES:** Flush eyes with plenty of water for at least 15 minutes. If irritation persists, call a physician.
- SKIN:** Flush with water to remove material from skin.
- INHALATION:** Remove to fresh air.
- INGESTION:** If swallowed, call a physician immediately. ONLY induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

NATURE OF HAZARD

This material may contain a trace amount of vinyl chloride monomer. Under normal processing conditions, no occupational exposure exceeding the established exposure limits for this material is anticipated.

Handling of this material may result in the generation of dust that may cause physical irritation of the eyes, skin, and respiratory tract.

Decomposition of this material (e.g., equipment failures or any condition causing excessive heat) may lead to production of HCl gas that is irritating to the eyes, skin, and upper respiratory tract, and which when breathed in high concentrations may be fatal. Individuals with bronchial asthma or chronic obstructive respiratory diseases may develop constriction of the lung airways.

Employees should take personal protective measures under any conditions in which HCl gas may be released.

Even under normal processing conditions various vapors may be produced that may be odorous, irritating, and in some individuals, produce acute health effects. The concentration and composition of these vapors depends on various factors including the specific formulation in use, processing method and temperature, and the mechanical ventilation procedures employed.

EXPOSURE LIMITS

None established for this specific product. Respirable dust standard would apply to processing dusts.
 OSHA PEL for respirable dust: 10 mg/m³ (total dust) 8-hr. TWA.
 ACGIH TLV for respirable dust: 5 mg/m³.
 Vista recommends controlling dust exposures at or below 5 mg/m³.

TOXICITY DATA

While PVC is generally considered an inert polymer, exposure to PVC dusts has been reported to cause lung changes in animals and humans including decreased respiratory capacity and inflammation. However, exposures approaching the nuisance dust standard are not anticipated to pose any significant health risk.

Rodents exposed to PVC by the dietary or inhalation routes for 6 to 24 months have shown no significant toxicological effects.

SPECIAL PRECAUTIONS Avoid inhalation of combustion products and unnecessary exposure of eyes and skin to resin.

Poly(vinyl Chloride), PVC Resin

6. REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY:

Do not allow this product to come in contact with acetal or acetal copolymers within the extruder or molding machine. At processing conditions, the two materials are mutually destructive and involve rapid degradation of the products. Equipment should be purged with acrylic, ABS, polystyrene, or other purge compound to avoid even trace amounts of this product and acetals from coming in contact with each other.

INCOMPATIBILITY:

Acetal or acetal copolymers.

HAZARDOUS DECOMPOSITION PRODUCTS:

Hydrogen chloride, carbon monoxide, and other toxic fumes generated with combustion.

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION:

Not applicable.

7. SPILL OR LEAK PROCEDURES

In case of spill, sweep, scoop, or vacuum and remove. Dispose of only in accordance with local, state, and federal regulations.

WASTE CLASSIFICATION: If discarded in its purchased form, this product is not a RCRA hazardous waste. Re-evaluation of the product may be required by the user at the time of disposal, since the product uses, transformations, and mixtures may change the classification.

8. SPECIAL PROTECTION INFORMATION

VENTILATION RECOMMENDATIONS

General ventilation for control of thermal processing vapors and nuisance dust is generally sufficient. However, local exhaust ventilation may be necessary depending on processing conditions.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION:

If dust is produced during handling, an approved particulate filter air-purifying respirator should be used.

EYES:

Chemical safety glasses or goggles.

GLOVES:

Necessary when handling hot or molten resins.

OTHER CLOTHING AND EQUIPMENT:

As necessary when handling hot or molten resins.

Poly(vinyl Chloride), PVC Resin

9. SHIPPING, TRANSFER AND STORAGE**SHIPPING INFORMATION**

This product is not a hazardous material or hazardous substance as defined by the Department of Transportation, nor is it a dangerous good as defined by IATA for air transportation, or IMO for water transportation.

TRANSPORTATION AND STORAGE**ELECTROSTATIC ACCUMULATION HAZARD:**

Yes - Ground transfer lines.

USUAL SHIPPING CONTAINERS:

Polylined steel tank cars or trucks, 1,400 lb. Gaylords and 50 lb. bags in vans.

STORAGE/TRANSPORT TEMPERATURE:

Extended storage or transport at temperatures above 150°F should be avoided to prevent potential degradation or discoloration.

STORAGE/TRANSPORT PRESSURE:

Ambient

LOADING/UNLOADING TEMPERATURE:

Ambient

HANDLING AND STORAGE MATERIALS AND COATINGS**SUITABLE:** Stainless or Polylined

THE ABOVE DATA IS BASED ON TESTS AND EXPERIENCE WHICH VISTA BELIEVES RELIABLE AND ARE SUPPLIED FOR INFORMATIONAL PURPOSES ONLY. VISTA'S PRODUCTS ARE INTENDED FOR SALE TO INDUSTRIAL AND COMMERCIAL CUSTOMERS. VISTA REQUESTS THAT CUSTOMERS INSPECT AND TEST OUR PRODUCTS BEFORE USE AND SATISFY THEMSELVES AS TO CONTENTS AND SUITABILITY. VISTA DISCLAIMS ANY LIABILITY FOR DAMAGE OR INJURY WHICH RESULTS FROM THE USE OF THE ABOVE DATA AND NOTHING CONTAINED THEREIN SHALL CONSTITUTE A GUARANTEE, WARRANTY (INCLUDING WARRANTY OF MERCHANTABILITY) OR REPRESENTATION (INCLUDING FREEDOM FROM PATENT LIABILITY) BY VISTA WITH RESPECT TO THE DATA, THE PRODUCT DESCRIBED, OR THEIR USE FOR ANY SPECIFIC PURPOSE, EVEN IF THAT PURPOSE IS KNOWN TO VISTA.

Revised:	8/15/94
Supersedes:	8/2/94
ABD.013	

MATERIAL SAFETY DATA SHEETVista Chemical Company
P.O. Box 19029
Houston, Texas 77224**1. PRODUCT IDENTIFICATION**

MANUFACTURING SITE	Vista Polymers Aberdeen Plant		
ADDRESS	P.O. Box 91, Highway 25, Aberdeen, MS 39730		
TRADE NAME	Polyvinyl Chloride, PVC Dryblend		
SYNONYMS	Vinyl Polymers		
CAS NUMBER(S)	9002-86-2		
TELEPHONE NO.	(713) 588-3491	EMERGENCY TELEPHONE NO.	(318) 494-5142

2. COMPONENTS AND HAZARD CLASSIFICATION

PVC Polymer	70-95%	CaCO ₃ , TiO ₂
Inert Fillers	0-30%	Organotin Compounds
Heat Stabilizer	0-2%	Calcium Stearate; Paraffin, Polyethylene, Polyamide Compounds, or Esters
Lubricants	0-4%	Acrylic Compounds
Process Aids	0-2%	CPE, ABS, MBS or Acrylic Compounds
Impact Modifiers	0-10%	Organic and Inorganic Colorants (may contain heavy metals in the form of mixed metal oxides)
Colorants	0-2%	Azo Compounds or Sodium Bicarbonate
Chemical blowing agents	0-1%	

- PVC Dryblend contains less than or equal to 1.0 ppm residual vinyl chloride monomer.
- Contains no chemicals subject to SARA 302 or SARA 311/312 reporting.
- Contains a maximum of 2% Chromium Compounds, 2% Lead Compounds, and 1% Antimony Compounds which are chemicals subject to SARA 313 reporting.

3. PHYSICAL DATA

BOILING POINT (°F)	Solid	SPECIFIC GRAVITY (H ₂ O= 1)	1.4
VAPOR PRESSURE (mm Hg.)	Solid	MELTING POINT	Decomposes before melting
SOLUBILITY IN WATER	None	VAPOR DENSITY	Solid
APPEARANCE AND ODOR	Fine, White Powder		

4. FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD)	Not applicable	AUTOIGNITION TEMPERATURE	Not applicable
FLAMMABLE LIMITS IN AIR. % BY VOL.	LOWER	Not applicable	UPPER Not applicable
EXTINGUISHING MEDIA	Water spray (fog), foam, dry chemical, or CO ₂ .		
SPECIAL FIRE FIGHTING PROCEDURES	Cool exposed equipment with water spray. Use self-contained breathing apparatus if fighting fire in confined spaces.		
UNUSUAL FIRE AND EXPLOSION HAZARD	PVC evolves hydrogen chloride, carbon monoxide, and other toxic gases when burned. Exposure to combustion products may be fatal and should be avoided.		

Polyvinyl Chloride, PVC Dryblend

5. HEALTH HAZARD INFORMATION

FIRST AID

- EYES:** Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately. Call a physician.
- SKIN:** Flush with water to remove material from skin.
- INHALATION:** Remove to fresh air.
- INGESTION:** If swallowed, call a physician immediately. ONLY induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

NATURE OF HAZARD

Handling of PVC Compound may result in the generation of dust. The dust is classed as a nuisance dust. Exposure to the dust may cause physical irritation of contacted areas.

Under burning condition, HCL gas will be produced. HCL gas is irritating to the upper respiratory tract. Exposure to high concentrations of HCL gas may be fatal.

PVC Compound may contain trace amounts of vinyl chloride monomer. VCM is regulated as a carcinogen by OSHA, and is listed by NTP and IARC as a carcinogen. Under normal processing conditions, significant exposure to VCM should not occur.

Other processing vapors may produce irritation or acute health effects in some individuals.

EXPOSURE LIMITS

- NUISANCE DUST:** OSHA PEL of 15 mg/m³ TWA* for 8 hours.
ACGIH TLV of 10 mg/m³ TWA for 8 hours
- VINYL CHLORIDE:** OSHA PEL of 1.0 ppm TWA for 8 hours; 5 ppm for 15-minute TWA.
ACGIH TLV of 5.0 ppm for 8 hours.

* TWA = Time Weighted Average

TOXICITY DATA

- SKIN CONTACT:** A review of the pertinent literature did not reveal specific information for PVC.
- EYE CONTACT:** A review of the pertinent literature did not reveal specific information for PVC.
- INHALATION:** Rodents exposed by the dietary or inhalation route for 6 to 24 months have shown no significant toxicological effects.
- INGESTION:** See above.

SPECIAL PRECAUTIONS AVOID INHALATION OF COMBUSTION PRODUCTS.

Polyvinyl Chloride, PVC Dryblend

6. REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY:

Not applicable.

INCOMPATIBILITY:

Not applicable.

HAZARDOUS DECOMPOSITION PRODUCTS:

Hydrogen chloride and other toxic fumes generated with combustion.

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION:

Not applicable.

7. SPILL OR LEAK PROCEDURES

In case of spill, sweep, scoop, or vacuum and remove. Dispose of only in accordance with local, state, and federal regulations.

WASTE CLASSIFICATION: Certain dryblends contain heavy metals which may cause the product to display characteristics of EP toxicity. Re-evaluation of the product may be required by the user at the time of disposal, since the product uses, transformations, and mixtures may change the classification.

8. SPECIAL PROTECTION INFORMATION

VENTILATION RECOMMENDATIONS

General ventilation for thermal processing and nuisance dust control.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION:

If dust is produced during handling, an approved particulate filter respirator should be used.

EYES: Safety glasses or goggles.

GLOVES:

Necessary when handling hot or molten compound.

OTHER CLOTHING AND EQUIPMENT:

As necessary when handling hot or molten compound.

VISTA

Polyvinyl Chloride, PVC Dryblend

9. SHIPPING, TRANSFER AND STORAGE**SHIPPING INFORMATION**

Non-hazardous for transportation purposes.

TRANSPORTATION AND STORAGE**USUAL SHIPPING CONTAINERS:**

Polylined steel tank cars or trucks

STORAGE TRANSPORT TEMPERATURE:

Temperatures above 150°F may cause slow degradation.

ELECTROSTATIC ACCUMULATION HAZARD:

Yes - ground transfer lines.

HANDLING AND STORAGE MATERIALS AND COATINGS

Stainless or Polylined are suitable.

THE ABOVE DATA IS BASED ON TESTS AND EXPERIENCE WHICH VISTA BELIEVES RELIABLE AND ARE SUPPLIED FOR INFORMATIONAL PURPOSES ONLY. VISTA'S PRODUCTS ARE INTENDED FOR SALE TO INDUSTRIAL AND COMMERCIAL CUSTOMERS. VISTA REQUESTS THAT CUSTOMERS INSPECT AND TEST OUR PRODUCTS BEFORE USE AND SATISFY THEMSELVES AS TO CONTENTS AND SUITABILITY. VISTA DISCLAIMS ANY LIABILITY FOR DAMAGE OR INJURY WHICH RESULTS FROM THE USE OF THE ABOVE DATA AND NOTHING CONTAINED THEREIN SHALL CONSTITUTE A GUARANTEE, WARRANTY (INCLUDING WARRANTY OF MERCHANTABILITY) OR REPRESENTATION (INCLUDING FREEDOM FROM PATENT LIABILITY) BY VISTA WITH RESPECT TO THE DATA, THE PRODUCT DESCRIBED, OR THEIR USE FOR ANY SPECIFIC PURPOSE, EVEN IF THAT PURPOSE IS KNOWN TO VISTA.

Preparation date: 10/18/89
Revision date: 3/05/90
MSDS2\MSDS\ABD.002