



Formosa Plastics Corporation, U.S.A.
Material Safety Data Sheet

1. PRODUCT IDENTIFICATION

Product Name: Formolon® PVC Compound (AF0-, APW0-, APWB-, APWOT, APURG, H988-NRC)
Synonyms: PVC, suspension polyvinyl chloride compound, chloroethylene polymer
Manufacturer: Formosa Plastics Corp., Texas
201 Formosa Drive
Point Comfort, TX 77978
Telephone: +1 (361) 987-7000
Fax: +1 (361) 987-2363
E-Mail: MSDS@fpcusa.com
Emergency Contact: CHEMTREC (24 hrs) at +1 (800) 424-9300 (United States, Canada, Puerto Rico, Virgin Islands) or +1 (202) 483-7616 (Other Countries)
Product Code: AF0-, APW0-, APWB-, APWOT, APURG, H988-NRC
Product Use: Rigid PVC compound resin for extrusion applications
Physical Description: White powder. Color may occasionally vary based product specification.
Formula: (C₂H₃Cl)_n plus functional additives

2. HAZARD IDENTIFICATION

Emergency Overview:
WARNING!

- Causes serious eye irritation.
- Causes skin irritation.
- May cause an allergic skin reaction.
- May cause respiratory irritation.
- May cause damage to organs through prolonged or repeated exposure.
- Suspected of causing genetic defects.
- Suspected of damaging fertility or unborn child.
- Dust may form an explosive atmosphere when dispersed in air.
- Harmful to aquatic life with long-lasting effects (APURG & H988-NRC Grades Only)



3. PRODUCT INGREDIENTS

Components	Percent (%)
PVC Resins	75 – 99
CAS Number:	9002-86-2
GHS Classification:	Not hazardous according to GHS criteria.



Table listing chemical products: Calcium Carbonate, Acrylic Polymer Impact Modifier, Acrylic Polymer Processing Aid, and Tin Heat Stabilizer, with their respective CAS numbers and GHS classifications.

4. FIRST AID MEASURES

Table detailing first aid measures for Eye Contact, Skin Contact, Inhalation, Ingestion, and Other Instructions.

5. FIRE-FIGHTING MEASURES

Table detailing fire-fighting measures: Flash Point, Kst Value, Max. Rate of Pressure Rise, Min. Ignition Energy, Min. Ignition Temperature, Min. Explosible Concentration, and Dust Combustibility Rating.



* - Combustibility data represent an approximate value based on internal testing. Actual values may vary depending on the composition/product grade.



Extinguishing Media:	Dry chemical, foam, water or carbon dioxide.
Special Fire Fighting Procedure:	In the event of a fire, wear a NIOSH (US) or CEN (EU) approved, positive pressure, self-contained breathing apparatus (SCBA) and full protective clothing. Evacuate all non-essential personnel from the danger area.
Unusual Fire & Explosion Hazards:	Dust may form an explosive atmosphere when dispersed in air.
Hazardous Combustion Products	When forced to burn, the major gaseous products of the combustion of PVC resin are carbon monoxide, carbon dioxide and hydrogen chloride.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Restrict access to keep out unauthorized or unprotected personnel. Wear appropriate personal protective equipment during all clean-up activities. Avoid inhalation and direct contact.
Environmental Precautions:	Keep spilled material away from heat, sparks and open flames. Ensure adequate ventilation.
Methods for Clean-Up:	Collect spilled material using a method that minimizes dust generation (e.g., wet methods, HEPA vacuum). Place waste in an appropriate container for disposal. Use care during clean-up to avoid exposure to the material and injury from broken containers.

7. HANDLING AND STORAGE

Handling:	Use with adequate ventilation. Avoid dust generation. Avoid contact with eyes and skin. Accumulations of dust should be removed from settling areas. Take precautions against static discharge. Grounding of equipment and transfer containers is recommended.
Storage:	Store in a cool, dry, well-ventilated area or silo away from sources of heat, flame and sparks. Ventilate enclosed storage areas before entering. Have emergency equipment for fires and spills readily available.

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

Eye Protection:	Wear safety glasses with side shields, goggles or face shield for protection against dust.
Skin Protection:	Minimize contact with product. Wear gloves and/or suitable long-sleeved clothing.
Respiratory Protection:	An industrial hygiene risk assessment is required to determine the appropriate respiratory protection. A NIOSH (US) or CEN (EU) approved half-face, air-purifying cartridge respirator may be appropriate under limited exposure conditions.
Engineering Controls:	Use local exhaust ventilation during dust producing operations.



Required Work/Hygiene Procedure: Wash hands thoroughly after handling. Do not eat, drink or smoke in work area. Dusty clothing and shoes should be thoroughly cleaned before reuse. If unusual exposures are expected, an industrial hygiene review of work practices, engineering controls and personal protective equipment is recommended.

Table with 3 columns: Exposure Guidelines, Concentration, and Percent (%). Rows include PVC Resins, Calcium Carbonate, Acrylic Polymers, and Tin Heat Stabilizer with their respective OSHA and ACGIH exposure limits.

9. PHYSICAL / CHEMICAL PROPERTIES

Table listing physical and chemical properties: Physical Form (Powder), Color (White), Odor (Odorless), Molecular Weight (60,000 - 150,000), Boiling Point (Not determined), Melting Point (Not determined), Solubility in Water (Insoluble), Bulk Density (1.3 - 1.4), Vapor Density (Not determined), Evaporation Rate (None), Vapor Pressure (Not determined), % Volatile (Negligible), pH (Not determined).

The physical data included above are typical values and should not be construed as a specification.

10. STABILITY & REACTIVITY

Table listing stability and reactivity information: Stability (Stable under recommended storage conditions), Conditions to Avoid (Avoid elevated temperature above 250°C), Hazardous Decomposition (Not expected to occur).



Hazardous Polymerization: Not expected to occur.

11. TOXICOLOGY INFORMATION

Primary Route(s) of Exposure: Inhalation; eye, skin contact.

Potential Health Effects:

Eye Contact: May cause serious eye irritation.
Skin Contact: May cause skin irritation. May cause an allergic skin reaction.
Inhalation: May irritate and cause discomfort in nose and throat. Prolonged exposure may cause adverse effects on lungs.
Ingestion: Ingestion may cause nausea, dizziness, and abdominal pain.

Target Organ Effects: This product contains an ingredient that has been shown to cause adverse effects to the blood, kidneys and liver.

Developmental Effects: This product contains an ingredient that has been shown to cause adverse developmental effects.

Mutagenicity: This product contains an ingredient that is suspected of causing genetic defects.

Carcinogenicity: This product contains trace amounts of vinyl chloride. Vinyl chloride is a suspect cancer agent.

Medical Conditions Aggravated by Overexposure: Exposure may aggravate disorders of the eyes, skin, gastrointestinal tract, respiratory system, blood, kidneys and liver.

Toxicological Data:

PVC Resins

Oral TDLo (Rat): 20 g/kg

Calcium Carbonate

Oral LD50 (Rat): 6450 mg/kg
24 Hour Draize Test (Rabbit): Severe Eye Irritant, Moderate Skin Irritant

12. ECOLOGICAL INFORMATION

Ecotoxicity: This product contains an ingredient that is harmful to aquatic life with long-lasting effects (APURG & H988-NRC Grades Only).

13. DISPOSAL CONSIDERATIONS

Disposal Method: This product must be disposed of in accordance with Federal, state and local environmental regulations.

Recycling/Reclamation: Recycling or reclamation of PVC resins should be encouraged where possible.

14. TRANSPORTATION INFORMATION



This product is not regulated as a hazardous material/dangerous good for all forms of transportation.

15. REGULATORY INFORMATION

U.N. GHS Classification & Labeling Information:

Classification: Eye Irritation 2A, Skin Irritation 2, Skin Sensitizer 1, Mutagen 2, Specific Target Organ Toxicity (STOT) - Single Exposure 3, Specific Target Organ Toxicity (STOT) - Repeated Exposure 2, Reproductive Effects 2, Acute Aquatic 3, Chronic Aquatic 3 (APURG & H988-NRC Grades Only)



Signal Word: WARNING

H Statements: H319: Causes serious eye irritation. H315: Causes skin irritation. H317: May cause an allergic skin reaction. H335: May cause respiratory irritation. H341: Suspected of causing genetic defects. H361: Suspected of damaging fertility or the unborn child. H373: May cause damage to organs through prolonged or repeated exposure. H412: Harmful to aquatic life with long-lasting effects (APURG & H988-NRC Grades Only)

P Statements: P307+313: If exposed, get medical attention. P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P281: Use personal protective equipment as required. P264: Wash thoroughly after handling. P243: Take precautionary measures against static discharge.

NFPA 704 Information:

Health Rating: 1
Flammability Rating: 1
Reactivity Rating: 0
Other Hazards: Not applicable



U.S. Federal Regulatory Information:

EPA Clean Air Act: Not listed
EPA Clean Water Act: Not listed
TSCA: The ingredients of this product are listed on TSCA inventory (40 CFR 710).
RCRA: This product does not meet the EPA criteria for ignitability, corrosivity or reactivity. The toxicity characteristic has not been evaluated by the Toxicity Characteristic Leaching Procedure (TCLP).
CERCLA RQ: Not listed
SARA Title III § 302*: None



SARA Title III § 311/312**: Acute Health Hazard, Chronic Health Hazard
SARA Title III § 313***: Not listed
Container Labeling: Containers of PVC resin shall be labeled with the following statement as required by 29 CFR 1910.1017:
POLYVINYL CHLORIDE – CONTAINS VINYL CHLORIDE
VINYL CHLORIDE IS A CANCER-SUSPECT AGENT

U.S. State Regulatory Information:

Texas Effects Screening Level: Short-term 50 ug/m³; Long-term 5 ug/m³ (PVC)
California: Proposition 65: Warning – this product contains a chemical known to the State of California to cause cancer. (Vinyl Chloride)
New Jersey: NJ Worker & Community RTK Act (NJSA 34:5A1 et seq.) (Vinyl Chloride)
Pennsylvania: PA Worker & Community RTK Act (PA. Act 1984-1159) (Vinyl Chloride)

European Union Dangerous Substances/Preparations Directive: Information:

Risk Phrases: R36/37/38: Irritating to eyes, respiratory system and skin
R43: May cause sensitization by skin contact
R68/22: Possible risk of irreversible effects if swallowed
R63: Possible risk of harm to the unborn child.
R52/53: Harmful to aquatic organisms, may cause long-term effects in the aquatic environment (APURG & H988-NRC Grades Only)



Hazard Pictogram: Xn: Harmful

Safety Phrases: S24/25: Avoid any inhalation, contact with skin and eyes.
S36/37: Wear suitable protective clothing and gloves.
S33: Take precautionary measures against static discharge.

Canadian Regulatory Information:

WHMIS Category: Class D, Division 2, Subdivision B
Ingredient Disclosure List: Not Listed
Domestic Substances List (DSL): Listed



Other Regulatory Information:

China: Listed on Inventory of Existing Chemical Substances in China (IECSC)

16. OTHER INFORMATION

European Union Compliance: This MSDS conforms to regulations 1907/2006/EC (REACH). This product has been classified in accordance with 67/548/EEC, 1999/45/EC, 1272/2008 (CLP) and amendments.

Prepared By: Formosa Plastics Corporation USA
Corporate Environment, Safety & Communications Department

Revision History: The February 16, 2011 version of this MSDS contains revisions to the following sections:
• Section 1 – Product Identification
• Section 2 – Hazard Identification
• Section 3 – Product Ingredients



- Section 8 – Exposure Controls & Personal Protection
- Section 11 – Toxicological Information
- Section 12 – Ecological Information
- Section 15 – Regulatory Information

Disclaimer & Copyright Notice

This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Formosa Plastics Corporation U.S.A. at the time it was prepared. Neither Formosa Plastics Corporation U.S.A., nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, Formosa Plastics Corporation U.S.A. and its subsidiaries cannot guarantee that these are the only hazards that exist. Formosa Plastics Corporation U.S.A. assumes no legal responsibility for loss, damage or expense arising out of, or in any way connected with, the handling, storage, use or disposal of this product.

Copyright © Formosa Plastics Corporation, U.S.A. All rights reserved.