



# MATERIAL SAFETY DATA SHEET

Product Name  
**RIGID VINYL SIDING AND ACCESSORIES**

## Section 1: Chemical Product and Company Information

**COMMON NAME:** Vinyl Siding and Other Accessories  
**PRODUCT USE:** Home and Building Construction Component  
**SYNONYM:** Siding, Vinyl Trim, Poly Vinyl Chloride, PVC, Chloroethylene Polymer  
**BRANDS** Mastic, Variform, NAPCO, Georgia Pacific, Durabuilt

**MANUFACTURER/** Ply Gem Industries 1-800-788-1964  
**SUPPLIER:** 2600 Grand Blvd., Suite 900  
Kansas City, Mo 64108

**EMERGENCY INFORMATION:** USA: Chemtrec: 1-800-424-9300 or 1-703-527-3887

## Section 2: Chemical Composition

Vinyl Siding is manufactured from PVC polymer 9002-86-2, inert fillers, process aids, waxes, colorants, and heat stabilizers. Shipping containers may contain traces of inert dust.

CAS #	Component	Percent
9002-86-2	Polyvinyl chloride	60-80
9003-07-0	Polypropylene: Insulated (Foam Back) Products	0-20
13463-67-7	Titanium dioxide	8-10
Proprietary	Proprietary ingredients	5-10

## Section 3: Hazards Identification

### PHYSICAL STATE AND APPEARANCE:

- Solid, Various Colors, Plastic, Plastic Odor

### EMERGENCY OVERVIEW:

- Not hazardous under recommended conditions of use. If heated to decomposition, toxic fumes may be released. Contact with molten material can cause thermal burns. Combustible at high temperatures. Self extinguishes if flame or heat source is removed.
- This product is considered an article and does not pose any health hazard under normal conditions of use. The health effects listed below are not likely to occur unless processing or combustion of this product generates dust or fumes.

### IF DUSTS OR FUMES ARE GENERATED BY PROCESSING:

**Eyes:** Can cause irritation.

**Skin:** Can cause irritation. Contact with molten material can cause thermal burns.

**Inhalation:** Can cause irritation of upper respiratory tract.

### ROUTES OF ENTRY:

- Inhalation or eye contact.

### POTENTIAL ACUTE HEALTH EFFECTS:

- None expected with normal use.



# MATERIAL SAFETY DATA SHEET

Product Name  
**RIGID VINYL SIDING AND ACCESSORIES**

## CHRONIC HEALTH EFFECTS:

- None expected with normal use. Not classified as a carcinogen by IARC, NTP, OSHA, EU, or ACGIH. No Mutagenic or Teratogenic effects. Fibrotic lung changes and altered pulmonary function may occur with heavy long term PVC dust exposure.

## HEALTH EFFECTS OF INGREDIENTS:

- Titanium dioxide can cause irritation of eyes and respiratory tract. Chronic overexposures: Can cause chronic bronchitis.

## HEALTH EFFECTS OF ADDITIONAL COMPOUNDS THAT MAY BE FORMED DURING PROCESSING:

- Combustion can generate hydrogen chloride gas. **Hydrogen chloride gas** Can cause severe irritation and corrosive burns of eyes, skin and upper respiratory tract. Acute overexposures: Can cause fluid in the lungs (pulmonary edema).

## AGGRAVATED MEDICAL CONDITIONS:

- Repeat or prolonged exposure is not known to aggravate medical conditions with normal usage.

## Section 4: First Aid Measures

### FIRST AID: EYES

- Dust exposures: Flush eyes with plenty of water or saline for at least 15 minutes. Consult a physician.

### FIRST AID: SKIN

- Dust exposures: Wash skin with soap and water for at least 15 minutes. Consult a physician if irritation persists.
- Contact with molten material: If molten material gets on skin, cool rapidly with cold water. Do not attempt to peel material from skin. Get medical treatment for thermal burn. In case of severe burns, get emergency medical care. Call 911 if available in your area.

### FIRST AID: INHALATION

- Dust exposures: Remove to fresh air. If unconscious or severely injured, check for clear airway, breathing and presence of pulse. Perform CPR if there is no pulse or respiration. Consult a physician.

## Section 5: Fire Fighting Measures

### FLASH POINT:

- 850°F (454°C)

### FLAMMABLE/COMBUSTIBLE PROPERTIES

- While not considered "flammable" or "combustible" as defined by OSHA or DOT, the material will burn if exposed to a strong ignition source.

### FIRE/EXPLOSION

- Dust or fines dispersed in the air can be explosive if subjected to a strong ignition source.

### Extinguishing Media

- Use dry chemical, water spray (fog) or foam.



# MATERIAL SAFETY DATA SHEET

Product Name  
**RIGID VINYL SIDING AND ACCESSORIES**

## FIRE FIGHTING EQUIPMENT/INSTRUCTIONS

- Fire fighters should wear NIOSH approved, positive pressure, self-contained breathing apparatus and full protective clothing when appropriate.

## PRODUCTS OF COMBUSTION:

- Carbon Monoxide, hydrochloric acid, and phosgene are the major pyrolysis product of concern. Other combustion products from incomplete combustion of organic compounds should be anticipated.

## OTHER EXPLOSION HAZARDS:

- May generate static discharge spark when handled. Not sensitive to impact or spark .

## Section 6: Accidental Release Measures

### SMALL OR LARGE SPILL

- Remove all open flames and sources of ignition. Product is stable solid. Spilled materials may be picked up and discarded. Vacuuming or wet methods preferred if dusts are present.

## Section 7: Handling and Storage

### HANDLING STORAGE

- Product is stable at ambient temperatures. Keep away from heat, flame chemicals. Avoid generating dust.

## Section 8 Exposure Controls / Personal Protection

### EXPOSURE LIMITS: OSHA PEL – NUISANCE DUST

OSHA PEL	<ul style="list-style-type: none"><li>• 5 mg/m<sup>3</sup> respirable</li><li>• 15 mg/m<sup>3</sup>total dust</li></ul>
ACGIH TLV	<ul style="list-style-type: none"><li>• 3 mg/m<sup>3</sup> respirable</li><li>• 10 mg/m<sup>3</sup> inhalable</li></ul>
DFG MAK	<ul style="list-style-type: none"><li>• 1.5 mg/m<sup>3</sup> total</li></ul>

### ENGINEERING CONTROLS:

- Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, use ventilation to keep exposure to airborne contaminants below the exposure limit.

### PERSONAL PROTECTIVE EQUIPMENT

#### RESPIRATORY PROTECTION

- Exposures that can not be controlled with engineering or work practices may be controlled with respiratory protection. Depending on the severity of the exposure, respirator protection is recommended as in the table below.

U to 1.5 mg/m <sup>3</sup>	<ul style="list-style-type: none"><li>• 5 mg/m<sup>3</sup> respirable</li><li>• 15 mg/m<sup>3</sup> total dust</li></ul>
1.5 mg/m <sup>3</sup>	<ul style="list-style-type: none"><li>• N-95 Dust Mask</li></ul>
Greater than 15 mg/m <sup>3</sup>	<ul style="list-style-type: none"><li>• Supplied Air</li></ul>
If hydrogen chloride is generated	<ul style="list-style-type: none"><li>• N95, acid gas cartridge</li></ul>



# MATERIAL SAFETY DATA SHEET

Product Name  
**RIGID VINYL SIDING AND ACCESSORIES**

## EYE PROTECTION

- When cutting, wear safety glasses and/or goggles to prevent foreign particles from being projected in the eyes.

## SKIN PROTECTION

- Wear appropriate gloves to avoid any skin injury.

## GENERAL

- During the melting of polyvinyl chloride plastics, monitoring for employee exposures to formaldehyde and residual vinyl chloride monomer is recommended.

## COMPONENT EXPOSURE LIMITS

- TITANIUM DIOXIDE (13463-67-7)
  - ACGIH 10 mg/m<sup>3</sup> TWA
  - OSHA 15 mg/m<sup>3</sup> TWA (total dust)
  - Proprietary ingredients (Proprietary)
  - ACGIH 10 mg/m<sup>3</sup> TWA (particulate matter containing no asbestos and < 1% crystalline silica)
  - OSHA 15 mg/m<sup>3</sup> TWA (total dust); 5 mg/m<sup>3</sup> TWA (respirable fraction)

## ADDITIONAL COMPOUNDS WHICH MAY BE FORMED DURING PROCESSING

- HYDROGEN CHLORIDE (7647-01-0)
  - ACGIH 2 ppm Ceiling
  - OSHA 5 ppm Ceiling; 7 mg/m<sup>3</sup> Ceiling

## Section 9: Physical & Chemical Properties

<b>PHYSICAL STATE:</b>	Solid Plastic	<b>APPEARANCE:</b>	Various colors
<b>BOILING POINT:</b>	Not applicable	<b>MELTING POINT:</b>	Not determined
<b>VAPOR PRESSURE:</b>	Not applicable	<b>VAPOR DENSITY:</b>	Not applicable
<b>SOLUBILITY IN WATER:</b>	None	<b>SPECIFIC GRAVITY:</b>	Approximately 1.5
<b>DENSITY:</b>	See Specific Gravity	<b>pH LEVEL:</b>	Not applicable
<b>ODOR:</b>	Plastic, resin odor	<b>ODOR THRESHOLD:</b>	Not determined
<b>OCTANOL-WATER COEFFICIENT</b>	Not applicable		
<b>PHYSICAL PROPERTIES: Additional information</b>	Heat deflection temp: 160°F (71°C)		

## Section 10: Chemical Stability & reactivity Information

### STABILITY AND REACTIVITY

- Stable and inert

### CONDITIONS OF INSTABILITY

- Not known

### INCOMPABILITY WITH OTHER SUBSTANCES

- The product can dissolve in hydrocarbon solvents; especially ketones, esters, aromatic hydrocarbons and halogenated organic solvents.

### HAZARDOUS DECOMPOSITION PRODUCTS

- Carbon Monoxide, Carbon dioxide, hydrochloric acid, and phosgene are the major pyrolysis products of concern. Other combustion products from incomplete combustion of organic compounds and smoke particulate should be anticipated.



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Product Name  
**RIGID VINYL SIDING AND ACCESSORIES**

## HAZARDOUS POLYMERIZATION

- Will not occur.

## Section 11: Toxicological Information

### A) HEALTH EFFECTS OF INGREDIENTS

- **General Product Information**
  - No information available for product
- **Component Analysis - LD50/LC50**
  - **Proprietary ingredients (Proprietary)**
    - Oral LD50 Rat: 6450 mg/kg

### B) CARCINOGENICITY

- **General Product Information**
  - No information available for product.
- **Component Carcinogenicity**
  - **Polyvinyl chloride (9002-86-2)**
    - IARC Supplement 7, 1987; Monograph 19, 1979
  - **Polypropylene (9003-07-0)**
    - ARC Supplement 7, 1987; Monograph 19, 1979
  - **Titanium dioxide (13463-67-7)**
    - ACGIH A4 - Not Classifiable as a Human Carcinogen
    - IARC Monograph 47, 1989

## Section 12: Ecological Information

### ECOTOXICITY:

- No data indicating toxicity to aquatic or terrestrial life.

### FATE AND TRANSPORT:

- Polyvinyl chloride discharged into the environment may occur as particulate in air emissions and suspended solids in water and as components of solid wastes.

### PERSISTENCE:

- Product persists in the environment indefinitely. Product disintegrates slowly with exposure to heat and light. Product may degrade in anaerobic conditions.

### BIOACCUMULATION:

- Product does not bioaccumulate.

## Section 13 - Disposal Considerations

### US EPA WASTE NUMBER AND DESCRIPTIONS

#### A: General Product Information

- RCRA Status: Not federally regulated in the U.S. if disposed of "as is". Otherwise, characterize in accordance with applicable regulations (40 CFR 261 or state equivalent in the U.S.)

#### B: Component Waste Numbers

- RCRA waste codes other than described under Section A may apply depending on use of product. Refer to 40 CFR 261 or state equivalent in the U.S.



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## Section 14 - Transportation Information

### SPECIAL TRANSPORTATION

	PSN #1	PSN #2	PSN #3	PSN #4
Notes:	(1)			
Proper Shipping Name	Not regulated			
Hazard Class				
UN NA Number				
Packing Group				
RQ				
Other - Tech Name				
Other - Marine Pollutant				

#### Notes:

(1) When "Not regulated," enter the proper freight classification, "MSDS Number," and "Product Name" on the shipping paperwork.

Canadian TDG Hazard Class & PIN	Not regulated
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## Section 15 - Regulatory Information

### US FEDERAL REGULATIONS

#### A) General Product Information

- No information available for product.

#### B) Component Analysis

- None of the components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

#### C) SARA 311/312 PHYSICAL AND HEALTH HAZARD CATEGORIES:

- **Immediate (acute) Health Hazard:** No
- **Delayed (chronic) Health Hazard:** No
- **Fire Hazard:** No
- **Sudden Release of Pressure:** No
- **Reactive:** No

### STATE REGULATIONS

#### A) General Product Information

- No information available for product.

#### B) Component Analysis – State

- The following components appear on one or more of the following state hazardous substances lists:

Component	CAS #	CA	FL	MA	MN	NJ	PA
Titanium dioxide	13463-67-7	No	No	Yes	Yes	Yes	No
Proprietary ingredients	Proprietary	No	No	Yes	Yes	No	Yes

### OTHER REGULATIONS

#### A) General Product Information

- No information available for product.



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**RIGID VINYL SIDING AND ACCESSORIES**

## B) Component Analysis - WHMIS IDL

- No components are listed in the WHMIS IDL or are listed but are proprietary.

## C) Component Analysis – Inventory

Component	CAS #	TSCA	DSL	EINECS	AUST	MITI
Polyvinyl chloride	9002-86-2	Yes	Yes	No	Yes	Yes
Polypropylene	9003-07-0	Yes	Yes	No	Yes	Yes
Titanium dioxide	13463-67-7	Yes	Yes	Yes	Yes	Yes
Proprietary ingredients	Proprietary	Yes	Yes	Yes	Yes	Yes

## Section 16 - Other Information

### MSDS History

- Original:
- Supersedes: 08/12/2007
- Revised Date: 11/05/2009

### MSDS Status

- 11/05/09: Changes to section 1, manufacturer name, address and phone number.
- 11/05/09: Changes in Section 2. 9, 11, and 14.

### Prepared By

- Ply Gem Siding Group, Corporate Environmental, Health & Safety Dept.

### Other Information

- Guide to Occupational Exposure Values-2003, Compiled by the American Conference of Governmental Industrial Hygienists (ACGIH).
- Documentation of the Threshold Limit Values and Biological Exposure Indices, Sixth Edition, 1991, Compiled by the American Conference of Governmental Industrial Hygienists, Inc. (ACGIH).
- NIOSH Pocket Guide to Chemical Hazards, U.S. Department of Health and Human Services, June 1994.
- Dangerous Properties of Industrial Materials, Sax, N. Irving, Van Nostrand Reinhold Co., Inc., 1984.
- Patty's Industrial Hygiene and Toxicology: Volume II: Toxicology, 4th ed., 1994, Patty, F. A.; edited by Clayton, G. D. and Clayton, F. E.: New York: John Wiley & Sons, Inc.
- Integrated Index(R), MICROMEDEX, Inc., 2003



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**RIGID VINYL SIDING AND ACCESSORIES**

## LEGEND:

ACGIH American Conference of Governmental Industrial Hygienists  
AICS Australian Inventory of Chemical Substances  
CAS Chemical Abstract Service  
CERCLA Comprehensive Environmental Response, Compensation, and Liability Act  
CFR Code of Federal Regulations  
CPR Cardio-pulmonary Resuscitation  
DOT Department of Transportation  
DSL Domestic Substances List (Canada)  
EINECS European Inventory of Existing Commercial Chemical Substances  
EPA Environmental Protection Act  
IARC International Agency for Research on Cancer  
LC<sub>50</sub> Lethal concentration (50 percent kill)  
LC<sub>L0</sub> Lowest published lethal concentration  
LD<sub>50</sub> Lethal dose (50 percent kill)  
LD<sub>L0</sub> Lowest published lethal dose  
LFL Lower Flammable Limit  
MITI Ministry of International Trade & Industry  
NFPA National Fire Protection Association  
NIOSH National Institute for Occupational Safety and Health  
NTP National Toxicology Program  
OEL Occupational Exposure Limit  
OSHA Occupational Safety and Health Administration  
PEL Permissible Exposure Limit  
PIN Product Identification Number  
PSN Proper Shipping Name  
RCRA Resource Conservation and Recovery Act  
SARA Superfund Amendments and Reauthorization Act  
STEL Short Term Exposure Limit  
TCLP Toxic Chemicals Leachate Program  
TDG Transportation of Dangerous Goods  
TLV Threshold Limit Value  
TSCA Toxic Substance Control Act  
TWA Time Weighted Average  
UFL Upper Flammable Limit  
WHMIS Workplace Hazardous Materials Information System  
atm atmosphere  
cm centimeter  
g, gm gram  
in inch  
kg kilogram  
lb pound  
m meter  
mg milligram  
ml, ML milliliter  
mm millimeter  
mppcf million particles per cubic foot  
n.o.s. not otherwise specified  
ppb parts per billion  
ppm parts per million  
psia pounds per square inch absolute  
u micron  
ug microgram

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