



GENERAL DESCRIPTION

STORMBRITE is a lightweight, versatile, flexible and durable foamed PVC sheet with a Class 1 Fire rating. Easily fabricated and maintenance free, ideal for use in construction and cladding. A laminated, high gloss finish to one side is excellent for producing high quality displays for printers and advertisers. Complies with international standards.

IDENTIFICATION TO THE ARTICLE

- Trade Names : STORMBRITE84 / STORMBRITE104
- Product Name : Foamed Rigid Polyvinyl Chloride sheets
- Product Name : Polyvinyl Chloride Homopolymer
- CAS Number : 9002-86-2
- UN Number : None
- ACX Number : X1007407-8
- RTECS : KV0350000
- Material Synonyms : PVC
- NFPA Ratings : Health = 1, Fire = 0, Reactivity = 0

Physical and Chemical Properties

- Appearance : Flat foamed plastic sheets
- Physical State : Solid
- Colour : White or coloured
- Odor : None
- Density : 0.4-1.0gr/cm³
- Heat Deflection : 62-65°C
- Boiling Point, 760 Hg : Not relevant
- Viscosity : Not relevant
- Solubility in Water : <0.1g/100mL at 23°C
- pH Value : Not relevant
- Flash Point : 391°C ASTM D 1929
- Autoignition Temp. : 454°C ASTM D 1921
- Flammability Limit : None
- Explosion Limit : None
- Evaporation Rate : Not relevant
- Percent Volatiles : Not relevant

COMPOSITION/INFORMATION OF INGREDIENTS

Tin stabilized PVC sheets, 2.5% by weight tin-mercaptide based stabilizer. Pigments and additives used to enhance specific properties are encapsulated in the polymer resin matrix. No solvents. No plasticizers. No cadmium, lead, or other heavy metals used.

HAZARDS IDENTIFICATION

No particular hazards known.



Inhalation

Route of entry – inhalation: No

If exposed to combustion fumes in high concentration – bring victim to fresh air. Medical attention needed.

Skin Contact

Burns resulting from accidental contact with molten material must be flushed immediately with cold water.

Do not remove the polymer from the skin. Medical attention needed.

Skin Absorption

Route of entry – skin: No

Eye Contact

Like any foreign body, can cause mechanical irritation. Consult physician.

FIRE FIGHTING MEASURES

Extinguishing Media

Water spray or CO₂. CO₂ is less recommended due to lack of cooling capacity.

Special Fire Fighting Procedures

Personnel without suitable respiratory apparatus should leave the affected area to prevent exposure to toxic or combustible gases.

Special Protective Equipment for Firefighters

Positive-pressure self-contained breathing apparatus, protective clothing, and gas mask approved for acid vapours.

Unusual Fire and Explosion Hazards

PVC is a self-extinguishing fire retardant material, that being exposed to open fire and high temperatures decomposes emitting large quantities of HCl, which tends to extinguish the flames. It does not continue to burn after ignition without an external fire source. HCl has a strong acidic odour that causes sensory alert at very low concentrations. HCl odour threshold = 0.77 ppm. Exposure to high concentrations may cause burns to mucous membranes. OSHA legal airborne PEL is 5 ppm, which should not be exceeded at any time. Soot emitted when PVC is forced to burn may obscure visibility.

HANDLING AND STORAGE

Handling

General handling precautions

Avoid mechanical contact with eyes.

Ventilations

General (mechanical) room ventilation is expected to be satisfactory where this product is stored and handled.

Other precautions

No exposure hazard. In the event of fire, could and overlap product with water.

Static electricity discharge sparks possible during handling. Avoid contact with vicinity of flammable materials.

Storage

Store in a cool shady area. No special technical protective measures required.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits

No occupational exposure limits established by OSHA, ACGIH, or NIOSH.

Personal Protection

Respiratory protection : No special protection needed

Hand protection/protection gloves : No special protection needed

Eye protection : No special protection needed

Other protective equipment : No special protection needed

STABILITY AND REACTIVITY

Stability

Stable.

Conditions to Avoid

Excessive heat, or open flame. Temperatures above 150°C will demonstrate raw polymer resin and liberate HCl.

Incompatible Materials

Oxidizing agents or strong mineral acids can cause reaction.

Thermal Decomposition

Begins above 150°C caused by fire, overheating during improper processing. Fumes damaging to health may be released.

Hazardous Decomposition Products

Burning can produce the following combustion products:

- Carbon monoxide (CO) - is highly toxic if inhaled, present in combustion fumes of all organic materials;
- Carbon dioxide (CO₂) - in sufficient concentrations can act as an asphyxiate, present in combustion fumes of all organic materials;
- Hydrogen chloride (HCl) - in high concentrations cause irritation of the respiratory passages, at very high concentrations may cause burns to mucous membranes.

TOXICOLOGICAL INFORMATION

PVC materials have a very low acute toxicity. In rats an acute LD₅₀ > 10 gr/kg of body weight.

PNEUMOCONIOSIS has been described from inhalation of combustion products (effects of overexposure).

Industrial hygiene studies have shown that under normal and expected conditions of use of PVC materials, exposures are well below applicable limits.

ECOLOGICAL INFORMATION

Persistence and Degradability

Detailed studies have not been conducted concerning the environmental fate of the product. According to present knowledge no unfavourable ecological effects are to be expected. No generally hazardous to water.

Insoluble in water, non-toxic solid.

- Mobility : No information currently available
- Persistence and biodegradable ability : Biodegradation period – tens of years
- Bioaccumulative potential : No information currently available

Environmental Risks

No hazard expectation to terrestrial or aquatic flora and fauna.

- Ecotoxicity : LD₅₀ (rats) > 10 gr/kg
- : LC₅₀ (bacterial inhibition) – no data available
- Aquatic toxicity : LC₅₀ (daphnia magna) – no data available
- : LC₅₀ (fathead minnow – fish) - no data available

Other Information

All available ecological data have been taken into account for the development of the hazard and precautionary information contained in this safety area.

DISPOSAL CONSIDERATIONS

The product is not considered hazardous under current EPA hazardous waste regulations.

Recycling is the preferred method of disposal.

Alternatively, the product may be disposed of in an approved landfill.

High temperature incineration under controlled conditions due to formation of HCl.

All wastes should be evaluated in conjunction with applicable solid and hazardous waste regulations, Toxicity Characteristic Leaching Procedures (TCLP), and disposed of as appropriate. This product does not contain any cadmium or other heavy metal pigments or stabilizers. It is the user's responsibility to dispose of all wastes in accordance with all national and local regulations at properly permitted or authorized facilities.

REGULATORY INFORMATION

With regards to dust formed as a consequence of mechanical treatments, the appropriate regulations value limits for fine dust must be observed: MAC value (fine dust) – 5mg/m³. OSHA Hazard Communication Classification for dusts and combustion fumes: Irritant, Skin Hazard and Lung Hazard.

SARA Title III Classification for dusts and combustion fumes: Acute Health Hazard; Chronic Health Hazard
WHMIS Classification: Non-hazardous.