Bay Plastics Safety Sheet

UPVC Welding Rod – Grey & White Safety Sheet

1. Substance/Preparation

Product Name:	Rigid Polyvinyl Chloride
Material Name:	Polyvinyl Chloride Homopolymer
CAS Number:	9002-86-2
Material Synonyms:	PVC
NFPA Ratings:	Health = 1, Fire = 0, Reactivity = 0

2. Composition/Indications to Components

Calcium-Zinc stabilised PVC sheets.

Pigments and additives used to enhance specific properties are encapsulated in the polymer resin matrix.

No solvents. No plasticisers. No cadmium, lead, or other heavy metals used.

3. Possible Dangers

No particular hazards know.

Effects of a single overexposure -

Swallowing:	Non-Relevant.
Skin Absorption:	Non-Relevant.
Inhalation:	Non-Relevant.
Skin Contact:	Exposure is not expected to cause adverse health effects.
Eye Contact:	Non-Relevant.
Effects of Repeated Exposure:	None currently known.
Medical Conditions Aggravated by Overexposure:	None currently known.
Other Effects of Overexposure:	None currently known.

4. First Aid Measures

In general handling the material will not cause accidents.

Inhalation:	If exposed to combustion fumes in high concentrate – bring victim to fresh air and seek medical attention.
Ingestion:	Non-harmful. If irritation caused, seek medical advice.
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. Seek medical help.
Skin Absorption:	Non-harmful.
Eye Contact:	Like any foreign object can cause irritation to the eye, wash thoroughly with clean water and if symptoms persist, seek medical advice.

5. Fire Fighting Measures

Extinguisher Type:	Water spray or CO_2. CO_2 is less recommended due to lack of cooling capacity.
Extinguisher to Avoid:	No information currently available.
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:	Positive-pressure self-contained breathing apparatus, protective closing, gas mask approved for acid vapours.
Unusual Fire/Explosion Hazards:	PVC is a self extinguishing fire retardant material, which 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 of HCl will cause irritation of the respiratory passages, at very high concentrations may cause burns to mucous membranes. Soot emitted when PVC is forced to burn may obscure visibility.

6. Handling & Storage

General Handing Precautions:	Avoid contact with eyes.
Ventilation:	General (mechanical) room ventilation is expected to be satisfactory where this product is stored and handled.
Other Precautions:	No explosion hazard. In the event of fire, cool and overlap product with water. Static electricity discharge sparks possible daring handling. Avoid contact or vicinity of flammable materials. When opening truck or railcar for unloading, ventilate before entering.
Storage:	Store in a cool shady area. No special technical protective measures required.

7. Limitation of Exposition

Respiratory Protection:	No special protection needed.
Hand Protection:	No special protection needed.
Eye Protection:	No special protection needed.

8. Physical & Chemical Characteristics

Appearance:	Flat or corrugated plastic sheets.	Physical State:	Solid.
Colour:	Clear or coloured.	Odour:	None.
Density:	1.35 – 1.45 gr/cm³	Heat Deflection:	62 - 65°C
Boiling Point:	Not applicable	Viscosity:	Not applicable
Solubility:	< 0.1g/100mL at 23°C	pH Value:	Not applicable
Flash Point:	391°C ASTM D 1929	Ignition Temp:	454°C ASTM D 1921
Flammability Limit:	None	Explosion Limit:	None
Evaporation Rate:	Not applicable	Percent Volatiles:	Not applicable

9. Stability & Reactivity

Stability: Stable

Conditions to Avoid: Excessive heat, or open flame. Temperature above 150°C will decompose raw polymer resin and liberate HCl.

Incompatible Materials: Oxidising 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: Burning can produce the following combustion products –

Carbon Monoxide (CO) – is highly toxic if inhaled.

Carbon Dioxide (CO_2) – in sufficient concentrations can act as an asphyxiant.

Hydrogen Chloride (HCl) – in high concentrations cause irritation of the respiratory passages, at very high concentrations may cause burns to mucous membranes.

Reactivity:

Hazardous polymerisation: Will not occur

Hazardous reactions: None

10. Toxic 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.

11. 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. Not generally hazardous to water. Insoluble in water, non-toxic solid.

Mobility:	No information currently available.
Persistence & Biodegradability:	Biodegradation period – tens of years.
Bio-accumulative potential:	No information currently available.

Environmental Risks –

No hazard expectation to terrestrial or aquatic flora and fauna.

Eco Toxicity –

LD50 (rats) > 10 gr/kg

IC50 (bacterial inhibition) – no data available

Aquatic Toxicity

LC50 (daphnia magna) – no data available

LC50 (fathead minnow fish) – no data available

12. Waste Disposal Information

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.

13. Transport Information

Additional transportation data: Not currently regulated under Department of Transportation regulations Labelling: No labelling is required in accordance with the EEC directives Placarding : No placarding is required in accordance with the EEC directives Special transport requirements : None Packaging : Avoid dark-coloured packaging to prevent heat distortion The product is classified as a non-hazardous material in the meaning of transport regulations.