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SAFETY DATA SHEET (SDS)

RIGID PVC

Prepared in accordance with the Globally Harmonized System (GHS) and Safe Work Australia requirements.

SECTION 1: IDENTIFICATION

- **Product Name:** Rigid PVC (Polyvinyl Chloride)
- **Recommended Use:** Electrical insulation components; CNC-machined parts; covers, guards, barriers, and general industrial fabrication.
- **Details:**
    - **Company:** MISCO Australia
    - **Address:** 89 -91 Licola Crescent, Dandenong South, VIC 3175
    - **Telephone Number:** 03 9706 5185
    - **Emergency Contact Number:** 000
    - **Poisons Information Centre**: 13 11 26 (Australia)
- **SDS Number:** MISCO – SDS - 0013
- **SDS Version:** 1.0

SECTION 2: HAZARD(S) IDENTIFICATION

- **GHS Classification:**

Rigid PVC (PVC-U) in its supplied solid article form is not classified as a hazardous substance and not classified as a dangerous good according to the Globally Harmonized System (GHS) and the Model Work Health and Safety Regulations.

Component classifications have been reviewed with reference to the Safe Work Australia Hazardous Chemical Information System (HCIS).

GHS Label Elements

- **Signal Word**: None required.
- **Hazard Pictograms:** None required.

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- **Hazard Classes:** Not applicable
- **Hazard Statements:** Not applicable
- **Precautionary Statements:** Not applicable
- **Other Hazards:**

Although not classified as hazardous in its solid form, rigid PVC may pose secondary hazards when processed. These must be understood and controlled.

2.1. Hazards From Machining (Cutting / Routing / Drilling / Grinding)

Mechanical machining can generate:

- Fine airborne dust capable of causing mechanical irritation to eyes and respiratory tract.
- Dry throat, coughing, sneezing due to particulate exposure.
- Skin irritation in sensitive individuals
- Accumulation of dust on floors creating slip hazards
- Electrostatic charge on chips and dust, creating dust attraction (non-flammable, but nuisance)

Dust is considered "nuisance dust" under WHS exposure standards.

2.2. Hazards From Heating or Thermal Degradation

Elevated temperatures above softening, or decomposition thresholds may produce hazardous fumes.

Thermal decomposition products include:

- Hydrogen chloride (HCl) gas (corrosive, strong respiratory irritant)
- Carbon monoxide (CO)
- Carbon dioxide (CO_2)
- Trace chlorinated organic compounds.
- Dense smoke

Likely exposure scenarios:

- Overheated machining edges
- Contact with hot metal surfaces.
- Accidental flame exposure
- Burning of material in a fire

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- Laser cutting (strictly prohibited)

Symptoms of overexposure:

- Burning sensation in nose/throat
- Coughing, chest tightness
- Watery eyes, shortness of breath

2.3. Hazards From Incorrect Processing or Fabrication

- Laser processing decomposes PVC and produces corrosive gases.
- Frictional overheating (cutting, routing, dull tools) can generate irritant vapours.
- Incorrect solvent exposure (acetone, MEK, toluene, chlorinated solvents) may soften material and release irritating vapours.

2.4. Combustion Hazards

In a fire involving PVC, dense, acidic smoke may be produced.
This smoke impairs visibility and is harmful if inhaled.

Firefighters must wear positive pressure SCBA.

2.5. Environmental Hazards

- Solid PVC is not classified as environmentally hazardous.
- Insoluble and non-reactive in water.
- Dust may accumulate in drains but is not toxic.
- Does not bioaccumulate.

2.6. Physical Hazards

- Sheet edges may be sharp.
- Large sheets can flex unexpectedly, posing manual handling risk.
- Stiffness increases at low temperatures, increasing risk of cracking during handling.

Classification Summary (As Supplied)

- **Hazardous Chemical:** No
- **Dangerous Good:** No
- **Hazardous According to WHS Regulation:** No
- **Hazardous When Machined or Heated:** *Yes — due to dust and decomposition fumes*
- **Laser Processing:** *Prohibited — hazardous decomposition products.*

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substance

This product is a single polymeric material supplied as a rigid solid article (sheet or rod).

Rigid PVC (PVC-U) contains no hazardous ingredients in concentrations that require classification under GHS or Australian WHS regulations.

Component	CAS Number	Proportion	Notes
Polyvinyl Chloride (PVC-U)	9002-86-2	> 90%	Primary base polymer (Unplasticised)
Heat Stabiliser System	Proprietary (non-hazardous)	< 5%	Lead-free, cadmium-free stabilisers compliant with RoHS / REACH
Lubricants & Processing Aids	Proprietary (non-hazardous)	< 2%	Used during extrusion; not hazardous in solid form
Pigments / Colourants	Various	< 3%	Inorganic, non-hazardous pigments depending on colour
Impact Modifiers (where applicable)	Proprietary (non-hazardous)	< 5%	Optional additive to increase toughness

Note: The exact proportion of ingredients may vary slightly due to the nature of the manufacturing process.

Hazardous Ingredients

This product contains no ingredients classified as hazardous under:

- GHS (Globally Harmonised System)
- Australian WHS Regulations
- Safe Work Australia Hazardous Chemicals Information System (HCIS)

Composition Notes

- Contains no added lead, cadmium, mercury, hexavalent chromium, PBBs, PBDEs or other restricted substances.
- Contains no plasticisers (PVC-U is Unplasticised).

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- Contains no PFAS / PFOA / PFOS substances.
- Additives are bound within the polymer matrix and do not present hazard in solid form.

SECTION 4: FIRST AID MEASURES

Description of Necessary First Aid Measures

Eye Contact

- Rinse immediately with clean, lukewarm water for at least 15 minutes, holding eyelids open.
- Remove contact lenses if present and easy to remove.
- Seek medical attention if irritation, redness, or discomfort persists.
  Most likely exposure route is machining dust.

Skin Contact

- Wash skin with mild soap and water.
- If irritation occurs from dust, rinse thoroughly.
- **If molten PVC contacts' skin:**
    - Do not attempt to remove cooled material forcibly.
    - Cool affected area with plenty of water.
    - Seek urgent medical treatment for thermal burns.

Inhalation

- Move the person to fresh air.
- Keep warm and at rest.
- If breathing becomes difficult, seek medical attention.
- Exposure to decomposition fumes (HCl, smoke) requires immediate removal from source and medical evaluation if symptoms persist.

Ingestion

- Ingestion is unlikely due to product form.
- Rinse mouth with water.
- Do not induce vomiting.
- Seek medical advice if discomfort occurs.

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Most Important Symptoms and Effects, Both Acute and Delayed

Likely Symptoms from Machining Dust:

- Mechanical irritation to eyes, nose, and throat
- Coughing, dryness, mild headache from dust exposure
- Temporary breathing discomfort if dust is inhaled.

Symptoms from Decomposition Fumes (HCl):

- Burning sensation in nose and throat
- Coughing, chest tightness
- Watery eyes, shortness of breath
- Delayed respiratory irritation may occur after significant exposure.

Symptoms from Thermal Burns (Molten PVC):

- Severe skin burns
- Pain, blistering, tissue damage

Indication of Immediate Medical Attention and Special Treatment Needed

- For HCl fume exposure, monitor for respiratory irritation or pulmonary effects. Medical attention recommended for moderate to severe exposures.
- For thermal burns, treat as per standard burn management; urgent medical attention required.
- No specific antidote is known. Treatment is symptomatic and supportive.

SECTION 5: FIREFIGHTING MEASURES

Suitable Extinguishing Media

- Water spray or fog
- Dry chemical powder
- Carbon dioxide (CO_2)
- Alcohol-resistant foam

Use extinguishing media appropriate for surrounding materials.

Unsuitable Extinguishing Media

- Do not use water in a high-pressure jet, as this may spread burning molten material.
- Avoid direct streams that may scatter burning fragments.

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Specific Hazards Arising from the Product

Rigid PVC is not highly flammable and is self-extinguishing, but decomposition at elevated temperatures produces hazardous gases.

Hazardous combustion products include:

- Hydrogen chloride (HCl) gas – highly irritating and corrosive
- Carbon monoxide (CO)
- Carbon dioxide (CO_2)
- Chlorinated organic compounds.
- Dense, acrid smoke with limited visibility

Fire behaviour characteristics:

- Material softens and deforms before burning.
- Burning PVC produces dense smoke that may obscure visibility.
- Run-off water from firefighting may contain dissolved particulates.

Special Protective Equipment and Precautions for Firefighters

- Wear self-contained breathing apparatus (SCBA) with positive pressure.
- Use full protective structural firefighting gear.
- Avoid breathing combustion fumes, vapours, or smoke.
- Approach fire from upwind to minimise exposure to decomposition gases.
- Cool surrounding areas with water spray to prevent heat damage or re-ignition.

Firefighting Advice

- Contain and extinguish fire using normal firefighting procedures.
- Remove unburnt materials from the fire area if safe to do so.
- Prevent molten or burning material from spreading across floors.
- Ventilate area after extinguishing to clear corrosive fumes.
- Dispose of residues according to local EPA regulations.

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SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

For Non-Emergency Personnel

- No acute hazards exist for rigid PVC in solid sheet/rod form.
- If dust or chips are present, avoid breathing airborne particles.
- Wear appropriate PPE:
    - Safety glasses to protect against dust irritation.
    - P2/N95 respirator where airborne dust is generated.
    - Cut-resistant gloves when handling large sheets or sharp edges.
- Ensure adequate ventilation during clean-up.
- Prevent slips, trips, and falls — PVC dust can create slippery surfaces.
- Avoid contact with hot surfaces or friction-heated debris that may emit irritant fumes.

For Emergency Responders

- In general, emergency responders are not required for spills of solid materials.
- If fumes from overheating, burning or thermal degradation are present:
    - Wear positive-pressure SCBA.
    - Evacuate area until ventilation removes irritant gases such as HCl.

6.2 Environmental Precautions

- Rigid PVC is inert, insoluble, and not environmentally hazardous.
- Prevent large quantities of dust, granules, or fragments from entering:
    - Drains
    - Ventilation systems
    - Waterways
    - Machinery housings
- Recover spilled material wherever possible for recycling.
- Avoid uncontrolled disposal of fine particulates.

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6.3 Methods and Materials for Containment and Cleaning Up

For Solid Sheets, Rods, Offcuts

- Collect manually or with lifting equipment.
- No chemical containment is required.
- Store recovered sheets/offcuts in clean containers or pallets for reuse or recycling.

For Machining Dust, Swarf, and Fine Particulates

- Avoid dry sweeping if possible — may create airborne dust clouds.
- Prefer industrial vacuum systems fitted with HEPA or fine-particulate filtration.
- Light misting with water may be used to prevent dust lift-off before sweeping.
- Gather dust into sealed bags or containers for safe disposal or PVC recycling streams.
- Clean tools, floors, and surfaces to prevent dust accumulation and slip hazards.

For Heated or Melted PVC (Non-Fire Event)

- Allow molten material to cool and solidify naturally.
- Do not attempt to remove molten PVC from skin — treat as a thermal burn (see Section 4).
- Once cooled, collect solidified material mechanically.

For Material Exposed to Fire or High Heat

- Treat residue as potentially contaminated with decomposition by-products (HCl, soot).
- Wear appropriate respiratory protection during clean-up.
- Ventilate area thoroughly before re-entry.

6.4 Reference to Other Sections

- **Section 4:** First Aid Measures
- **Section 7:** Handling and Storage
- **Section 8:** Exposure Controls / PPE
- **Section 13:** Disposal Considerations

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SECTION 7: HANDLING AND STORAGE

7.1 Precautions for Safe Handling

- Handle in accordance with good industrial hygiene and workshop practices.
- Avoid generating or breathing machining dust. Use dust extraction when cutting, routing, drilling, sanding, or milling.
- Avoid contact with heated surfaces, as frictional heat can soften the material and generate irritant vapours.
- Do not laser cut, or laser engrave PVC — hazardous decomposition gases (including HCl) may be generated.
- Maintain clean workshop conditions to prevent slip hazards from dust and swarf.
- Use appropriate PPE (gloves, safety glasses, P2/N95 respirator if dust is present).
- Use mechanical aids or team lifting for large sheets and long rods to prevent strain or flexing damage.
- Prevent sheets from bending sharply or dropping, as cracks may occur at low temperatures.
- Avoid exposure to solvents such as acetone, MEK, toluene, and chlorinated solvents which may soften the polymer and damage surfaces.

7.2 Conditions for Safe Storage, Including Any Incompatibilities

- Store in a cool, dry, well-ventilated area.
- Keep away from direct sunlight, high-heat sources, radiant heaters, and environments above 50–60°C.
- Store flat and fully supported to prevent warping, bowing or deformation.
- Maintain protective films or coverings until ready for use to avoid scratching and contamination.
- Keep away from strong oxidising agents, aggressive solvents, or chemical vapours that may compromise material integrity.
- Do not store near open flames, welding operations or equipment capable of producing high temperatures.
- Ensure pallets and racks are clean, stable, and capable of supporting the sheet weight.
- Avoid stacking heavy loads onto thin-gauge sheets to prevent compression marks.

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7.3 Specific End Use(s)

- Intended for use as electrical insulation, protective covers, fabricated components, and CNC-machined parts.
- Use only within published temperature, chemical, mechanical and fire safety limits.
- Not suitable for high-temperature environments, solvent-rich atmospheres, or structural load-bearing applications.
- For machining and fabrication, follow MISCO's Processing and Machining Considerations to avoid decomposition or material damage.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

Rigid PVC (PVC-U) in solid form has no specific exposure limits under Safe Work Australia. However, machining generates inert (nuisance) dust, which is subject to general workplace exposure standards:

Safe Work Australia Exposure Standards (for Particulates Not Otherwise Classified)

- **Inhalable dust (TWA 8-hr):** 10 mg/m³
- **Respirable dust (TWA 8-hr):** 3 mg/m³

No short-term exposure limits (STEL) are established.

There are no biological exposure indices for PVC.

8.2 Exposure Controls

Engineering Controls

- Provide local exhaust ventilation (LEV) at points where dust is generated (cutting, routing, drilling, sanding).
- Use dust extraction systems on CNC equipment and saws.
- Ensure general workshop ventilation meets Safe Work Australia exposure standards.
- Avoid heat build-up on tooling to prevent thermal decomposition fumes.
- For confined spaces, ensure adequate forced-air ventilation.

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8.3 Personal Protective Equipment (PPE)

Eye/Face Protection

- Safety glasses or chemical splash goggles recommended during machining, cutting, or drilling.
- Full face shield where high-speed tools or large chips are generated.

Respiratory Protection

- Not required under normal handling of solid sheets.
- During machining:
    - Use P2 or N95 particulate respirator where airborne dust may exceed exposure limits.
- During accidental overheating or fume exposure:
    - Use full-face respirator with acid gas/particulate cartridges until area is ventilated.

Skin/Hand Protection

- Wear cut-resistant gloves when handling sheet edges or during fabrication.
- Use standard workshop protective clothing that prevents skin irritation from dust.

Hearing Protection

- Use earplugs or earmuffs when operating high-noise machinery (CNC routers, saws, drills).

8.4 Environmental Exposure Controls

- Prevent significant quantities of dust or chips from entering drains or waterways.
- Use vacuum extraction to minimise airborne particulate release.
- Dispose of collected dust in accordance with local EPA requirements (see Section 13).

8.5 Additional Workplace Hygiene Measures

- Do not eat, drink, or smoke in machining or processing areas.
- Wash hands and face after handling or machining material.
- Clean surfaces regularly to prevent dust accumulation and slipping hazards.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Rigid solid; extruded or machined sheet, rod, or profile.
Colours include clear, white, grey, black, or custom pigments. Smooth surfaces with uniform finish.

Odour:

Odourless in solid form. Very slight characteristic odour may appear when heated.

pH:

Not applicable (solid polymer; not water-soluble).

Boiling Point:

Not applicable — decomposes before boiling.

Melting Point / Softening Behaviour:

Rigid PVC is an amorphous thermoplastic and does not exhibit a true melting point.

- Softening range: **70–80°C**
- Vicat softening temperature (VST B50): **~80–90°C.**

Flash Point:

Not applicable (non-volatile solid).

Evaporation Rate:

Not applicable (does not evaporate).

Flammability (Solid/Gas):

Classified as self-extinguishing. Will char and burn slowly when exposed to sustained flame but extinguishes when flame is removed.

Upper/Lower Flammability or Explosive Limits:

Not applicable — does not form explosive vapours.

Vapour Pressure:

Not applicable — solid polymer.

Vapour Density:

Not applicable.

Relative Density:

1.38 – 1.42 g/cm^3 (typical for Unplasticised PVC-U).
Density may vary slightly depending on additives and pigmentation.

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Solubility:

- **Water:** Insoluble; no swelling.
- **Organic Solvents:** Resistant to most aliphatic hydrocarbons; softened or attacked by ketones, aromatic hydrocarbons, and chlorinated solvents.

Partition Coefficient (n-Octanol/Water):

Not applicable — polymeric solid, not intended for dissolution or partition behaviour.

Auto-Ignition Temperature:

Typically, **> 400–450°C**.

Decomposition Temperature:

Begins to thermally degrade at **~200–220°C**, releasing:

- Hydrogen chloride (HCl) gas
- Carbon monoxide (CO)
- Hydrocarbon fragments
- Dense smoke

Viscosity:

Not applicable (solid).

Specific Gravity:

1.38 – 1.42 (equivalent to relative density).

Thermal Conductivity:

Approximately 0.15 – 0.19 W/m·K (low thermal conductivity).

Coefficient of Thermal Expansion (CLTE):

Approx. 5–8 × 10^{-5} /K.

Hardness:

Shore D: 75–85 (typical).

Odour Threshold:

No data — not relevant for solid polymer.

Explosive Properties:

Non-explosive; does not form flammable dust-air mixtures under normal machining.

Oxidising Properties:

Not classified as an oxidising substance.

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SECTION 10: STABILITY AND REACTIVITY

Reactivity:

Rigid PVC (PVC-U) is stable and non-reactive under normal ambient conditions.
It does not undergo hazardous polymerisation, oxidation, or decomposition when stored or handled correctly.
Reactivity increases only when exposed to high heat, open flame, or aggressive solvents.

Chemical Stability:

- Chemically stable at temperatures up to 60–70°C in normal service.
- Stable under typical workshop machining conditions when heat is controlled.
- Resistant to moisture, dilute acids, dilute alkalis, and many industrial chemicals.
- Stability decreases rapidly when heated above 200°C, where thermal degradation begins.

Possibility of Hazardous Reactions:

- No dangerous reactions occur under standard handling and storage.
- Hazardous decomposition may occur if the material is:
    - overheated
    - burned
    - laser-cut
    - exposed to open flames or hot metal surfaces.
- PVC does not undergo self-polymerisation or produce unstable intermediates.

Conditions to Avoid:

- Temperatures above 70–80°C for prolonged periods (softening).
- Temperatures above 200°C (thermal decomposition).
- Direct flame, sparks, or high-heat sources.
- Laser cutting or laser engraving equipment (produces hazardous fumes).
- Poor ventilation during machining where frictional heat may build up.
- Strong UV exposure for extended periods without protection (may cause surface discolouration over years).

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Incompatible Materials:

Avoid contact with:

- Strong oxidising acids (e.g., nitric acid, chromic acid)
- Ketones (e.g., acetone, MEK)
- Aromatic hydrocarbons (e.g., toluene, xylene)
- Chlorinated solvents (e.g., dichloromethane, trichloroethylene)
- Strong bases at elevated temperatures
  These substances may soften, swell, dissolve or degrade the polymer matrix.

Hazardous Decomposition Products:

When PVC-U is exposed to excessive heat, flame, or laser energy, thermal decomposition may release:

- Hydrogen chloride (HCl) gas – corrosive, highly irritating to eyes and respiratory system
- Carbon monoxide (CO)
- Carbon dioxide (CO_2)
- Hydrocarbons and chlorinated organic compounds
- Dense, acrid smoke

Decomposition products may cause respiratory irritation and require adequate ventilation and respiratory protection.

SECTION 11: TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

- **Inhalation:** Inhalation of dust generated during machining may cause mechanical irritation of the nose, throat, and upper respiratory tract.
- **Eye Contact:** Dust may cause redness, discomfort, or transient mechanical irritation.
- **Skin Contact:** Generally non-irritating. Dust may cause mild, temporary irritation in sensitive individuals.
- **Ingestion:** Unlikely due to product form; ingestion of small quantities is not expected to be toxic.

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Acute Effects

- **Machining dust:** May cause coughing, dryness of throat, sneezing, and minor irritation.
- **Thermal decomposition fumes (HCl):** Can cause acute respiratory irritation, chest tightness, watery eyes, and shortness of breath.
- **Molten PVC:** May cause severe thermal burns on contact with skin.

Chronic Effects

- No chronic health effects are expected from handling solid PVC-U.
- Long-term exposure to high concentrations of airborne dust may cause persistent respiratory irritation, similar to exposure to other nuisance particulates.
- No evidence of sensitisation, carcinogenicity, mutagenicity, or reproductive toxicity from solid PVC-U.

Toxicity Data (for Reference Components)

Polyvinyl Chloride polymer (CAS 9002-86-2):

- **Acute Oral Toxicity (rat):** LD_{50} > 5,000 mg/kg
- **Acute Dermal Toxicity:** LD_{50} > 2,000 mg/kg
- **Acute Inhalation Toxicity:** No significant toxicity observed from dust exposure at typical concentrations.
  Additives present in the material are bound within the polymer matrix and do not present toxicity hazards in the solid article form.

Information on Toxicological Effects

Acute Toxicity:

Not classified as toxic. Solid PVC-U presents no acute toxicity hazard.

Skin Corrosion/Irritation:

Not corrosive; not irritating in solid form. Mechanical irritation from dust is possible.

Serious Eye Damage/Irritation:

Not classified as an eye irritant. Machining dust may cause temporary mechanical irritation.

Respiratory or Skin Sensitisation:

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Not a skin or respiratory sensitiser. No sensitising ingredients released from the solid polymer.

Germ Cell Mutagenicity:

No evidence of mutagenic effects. PVC polymer and additives present in PVC-U are not identified as mutagens.

Carcinogenicity:

PVC-U is **not classified as carcinogenic**. No carcinogenic ingredients are present.
No agencies (IARC, NTP, OSHA, Safe Work Australia) classify solid PVC-U as a carcinogen.

Reproductive Toxicity:

No known reproductive or developmental toxicity associated with solid PVC-U.

STOT – Single Exposure:

Not classified. Dust may cause transient respiratory irritation.

STOT – Repeated Exposure:

Not classified.
Long-term exposure to high levels of nuisance dust may contribute to chronic throat or respiratory irritation but does not cause systemic toxicity.

Aspiration Hazard:

Not applicable — solid polymer; not a liquid or inhalable hydrocarbon.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity:

- Rigid PVC (PVC-U) is not classified as hazardous to the environment.
- The solid polymer is inert and not expected to cause acute or chronic toxicity to aquatic or terrestrial organisms.
- Machining dust may cause temporary turbidity in water but is not toxic to aquatic life.
- No known ecotoxicological effects from the polymer in its solid form.

Persistence and Degradability:

- PVC-U is resistant to degradation in the environment due to its stable polymer structure.
- Does not degrade rapidly in soil or water.

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- Over extended periods, material may undergo slow physical fragmentation into smaller particles but remains chemically stable.
- Thermal decomposition or incineration produces hydrogen chloride gas and other by-products; therefore, incineration is not recommended.

Bioaccumulative Potential:

- No potential for bioaccumulation.
- PVC-U is a large, solid polymer molecule that does not dissolve or enter biological systems.
- Additives are bound tightly within the polymer matrix and are not expected to bioaccumulate or migrate.

Mobility in Soil:

- Solid PVC-U exhibits very low mobility in soil due to insolubility and high density.
- Does not leach significant components under normal environmental conditions.
- Machining dust may disperse mechanically but remains inert and non-reactive.

Other Adverse Effects:

- Not classified as a PBT (Persistent, Bioaccumulative, Toxic) or vPvB (very Persistent, very Bioaccumulative) substance.
- Does not deplete ozone; contains no CFCs or HCFCs.
- Contains no PFAS, PFOA, PFOS or other fluorinated contaminants.
- Large quantities of dust should be prevented from entering waterways to avoid physical contamination.
- Environmental impact is minimal when handled, recycled, and disposed of correctly.

SECTION 13: DISPOSAL CONSIDERATIONS

Safe Waste Disposal Methods

- Rigid PVC (PVC-U) is fully recyclable. Recycling is the preferred disposal method wherever suitable collection systems exist.

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- Collect machining dust, chips, and offcuts and dispose of them through PVC recycling programs or approved industrial waste handlers.
- If recycling is not available, dispose of material at a licensed landfill in accordance with local EPA and waste regulations.
- Do not incinerate PVC — thermal decomposition releases hydrogen chloride (HCl) and other hazardous combustion products.
- Avoid releasing large quantities of dust to the environment, drains, waterways, or stormwater systems.
- Keep waste segregated from incompatible materials (strong oxidisers, solvents).

Contaminated Packaging Disposal

- Packaging materials (pallets, wrapping films, cardboard, protective films) should be recycled where facilities exist.
- If recycling is not available, dispose of packaging through approved waste management services.
- Ensure any dust-contaminated packaging is sealed to prevent dust release during transport and disposal.
- Contaminated packaging does not require special handling unless exposed to fire residues or chemical contamination.

SECTION 14: TRANSPORT INFORMATION

UN Number:
Not regulated – *No UN number assigned.*

Proper Shipping Name:
Not classified as a dangerous good. Transport as **"Non-Hazardous Solid Material (Rigid PVC Sheet/Rod)"**.

Transport Hazard Class:
Not applicable – *Not a hazardous or dangerous substance under ADG, IMDG, or IATA.*

Packing Group:
Not applicable.

Environmental Hazards:

- Not classified as environmentally hazardous.
- Material is inert in solid form and presents minimal transport-related environmental risk.

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Special Precautions:

- No special transport precautions required.
- Secure loads to prevent movement, sliding, or flexing of large sheets or long rods.
- Avoid transporting near high-heat sources or ignition sources.
- Ensure packaging prevents dust release from machining residues.

Marine Pollutant:
No – *Rigid PVC is not a marine pollutant.*

SECTION 15: REGULATORY INFORMATION

- Safety, Health, and Environmental Regulations Specific to the Product
- Classified in accordance with the Globally Harmonized System (GHS) and the Model Work Health and Safety (WHS) Regulations.
- Regulatory data for components referenced from the Safe Work Australia Hazardous Chemical Information System (HCIS).
- This product is supplied as a non-hazardous manufactured article.

Regulatory Framework	Details
GHS Classification (Safe Work Australia)	Not classified as hazardous under GHS criteria for solid articles.
Australian Inventory of Industrial Chemicals (AIIC)	All components are listed or exempt.
Dangerous Goods Classification (ADG Code)	Not classified as Dangerous Goods for road, rail, sea, or air transport.
Work Health and Safety (WHS) Regulations	Complies with WHS legislation. Machining dust must be controlled under nuisance dust exposure limits (10 mg/m^3 inhalable, 3 mg/m^3 respirable).
RoHS 3 (EU Directive 2015/863)	Fully compliant — contains no lead, mercury, cadmium, hexavalent chromium, PBB, or PBDE.
REACH (EU Regulation 1907/2006)	Compliant — contains no Substances of Very High Concern (SVHC) above 0.1% w/w.
US TSCA (Toxic Substances Control Act)	All ingredients are listed or exempt.
IARC / OSHA / NTP Carcinogenicity Classification	Not listed as a carcinogen or suspected carcinogen by any agency.
Ozone-Depleting Substances	None present; compliant with Montreal Protocol requirements.
Greenhouse Gas / Kyoto Protocol	Contains no substances with global warming potential; not a greenhouse gas source.
EPA / State Environmental Regulations	Classified as non-hazardous solid waste in Australia; disposal must be via licensed facilities.

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International Chemical Inventories	Complies with major global inventories (AIIC, TSCA, DSL/NDSL, ENCS, EINECS/ELINCS equivalents).
Hazard Communication Requirements	SDS prepared in accordance with the Safe Work Australia *Code of Practice: Preparation of Safety Data Sheets*.
Quality and Environmental Management	Manufactured under ISO 9001 and ISO 14001 principles (supplier dependent).

SECTION 16: OTHER INFORMATION

Information	**Details**
SDS Preparation Date:	14.8.2025
Revision Number:	1
Review Date:	24 months or upon regulatory update (whichever occurs first)
Prepared By:	MISCO Australia Pty Ltd
Abbreviations:	**GHS** – Globally Harmonised System of Classification and Labelling of Chemicals; the international system governing chemical safety communication. **AIIC** – Australian Inventory of Industrial Chemicals; list of chemicals permitted for industrial use in Australia. **ADG** – Australian Dangerous Goods Code; governs transport of hazardous materials by road and rail. **WHS** – Work Health and Safety; regulatory framework for workplace safety in Australia. **PPE** – Personal Protective Equipment. **LC_{50} / LD_{50}** – Median lethal concentration/dose used in toxicological testing. **SVHC** – Substance of Very High Concern (EU REACH). **UL** – Underwriters Laboratories safety certification body. **TWA** – Time-Weighted Average workplace exposure limit over 8 hours. **REACH** – European Union regulation for Registration, Evaluation, Authorisation and Restriction of Chemicals. **RoHS** – European Directive restricting hazardous substances in electrical/electronic equipment.

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	IEC – International Electrotechnical Commission (global electrical standards). **NEMA** – National Electrical Manufacturers Association (US industrial standards; referenced for insulating materials). **MIL-I-24768** – U.S. Military Specification for insulating plastics (reference only; PVC-U is not manufactured to this standard). **RTI** – Relative Thermal Index; thermal endurance rating from UL. **SCBA** – Self-Contained Breathing Apparatus; required for fire or decomposition fume response. **VOC** – Volatile Organic Compounds. **HEPA** – High-Efficiency Particulate Air filtration used for dust extraction. **LEV** – Local Exhaust Ventilation used in machining and manufacturing environments.
Key References:	**Safe Work Australia (SWA)** – *Code of Practice: Preparation of Safety Data Sheets* (May 2021). **Globally Harmonised System of Classification and Labelling of Chemicals**, 7th Edition (UNECE). **Australian Dangerous Goods (ADG) Code**, Edition 7.7 – National Transport Commission. **Industrial Chemicals Act 2019** – Australian Industrial Chemicals Introduction Scheme (AICIS). **NOHSC (National Occupational Health and Safety Commission)** – *Exposure Standards for Atmospheric Contaminants*. **UL 94** – Standard for Safety: Flammability of Plastic Materials.

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	REACH Regulation (EC) No. 1907/2006 – including SVHC listings. **RoHS Directive (EU) 2015/863** – Restriction of Hazardous Substances. **ISO 9001 & ISO 14001** – Quality and Environmental Management Systems (applies when supplier is certified). **PVC industry technical literature**, polymer chemistry data, and general engineering plastics reference handbooks. **MISCO Australia Pty Ltd** – Internal Material Compliance Records, Technical Data Files, and Supplier Certifications (2025).
(*Note: IEC 60893, NEMA LI-1, and MIL-I-24768 are included as industry reference frameworks for insulation materials. PVC-U is not certified to these standards and their inclusion is for comparative and informational context only.*)	
Emergency Contact:	• **Emergency Services (Australia):** 000 • **Poisons Information Centre:** 13 11 26 • **MISCO Australia Pty Ltd:** +61 3 9706 5185

Further Information

- This SDS applies only to rigid Unplasticised PVC (PVC-U) supplied in solid article form (sheet, rod, machined components).
- The information contained herein is correct to the best of MISCO Australia's knowledge at the date of issue.
- This SDS is intended to describe the health, safety and environmental requirements for handling and machining PVC-U and is not a specification or warranty of material performance.
- Users must ensure the product is suitable for their specific application and comply with all local legislative requirements.

SECTION 17: WARRANTY

MISCO Australia warrants that all Rigid PVC (PVC-U) products are free from defects in material and workmanship at the time of dispatch. This warranty applies when the product is

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stored, handled, machined, and installed in accordance with MISCO guidelines and recognised industry practices.

Covered

- Manufacturing and workmanship defects
- Material non-conformance attributable to MISCO or its suppliers

Not Covered

- Damage from incorrect storage, handling, machining, or installation.
- Failure due to exposure outside published temperature or chemical limits
- Improper use of solvents or unsuitable fabrication methods
- Alteration, misuse, modification, or negligence
- Consequential or indirect loss

Liability

MISCO's liability is limited to replacement of the product or credit of the original purchase price.

DISCLAIMER

The information contained in this Safety Data Sheet (SDS) is provided by MISCO Australia in good faith and is believed to be accurate and reliable as of the date of issue. The information is based on current knowledge and is intended to describe the product solely in terms of health, safety, and environmental requirements. It does not represent any guarantee of the product's properties or suitability for a specific application.

This SDS is intended as a guide for the safe handling, use, storage, transport, and disposal of the material. It is the responsibility of the user to assess the suitability of the material for any intended purpose and to ensure that working conditions comply with applicable laws, standards, and safety practices.

Important Notes:

- *MISCO Australia makes no warranties, express or implied, and assumes no liability for the accuracy or completeness of the data or for any damages resulting from the use of the product or the information provided in this SDS.*
- *This document is not intended to serve as a substitute for proper training, risk assessment, or professional judgement in the use of chemical and composite materials.*
- *Users must ensure that they understand and comply with all local, state, and federal regulations, as well as workplace safety procedures when handling this product.*

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- *Where this material is used as part of a larger system or process, additional hazards may exist that are not covered in this SDS. It is the user's responsibility to assess the entire context in which the product is used.*

MISCO Australia reserves the right to revise Safety Data Sheets in response to new information, changes in legislation, or updated risk assessments without prior notice. The most current version of this SDS supersedes all previous versions and should be consulted before each use of the product.

Revision	Date Issued	Prepared / Reviewed By	Description of Change	Approved By
1.0	January 2025	MISCO Australia	Initial release of Safety Data Sheet for Rigid PVC (PVC-U).	Director, MISCO Australia

Document Control:

- **Document Title:** Rigid PVC (Polyvinyl Chloride) – Safety Data Sheet
- **Document ID:** MISCO–SDS–PVC–013
- **Issue Date:** 14 August 2025
- **Revision:** 1.0
- **Review Cycle:** 24 months or upon regulatory update (whichever occurs first)

END OF SAFETY DATA SHEET.

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