



SAFETY DATA SHEET (SDS)

POLYCARBONATE

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

SECTION 1: IDENTIFICATION

- **Product Name:**
- **Recommended Use:** Polycarbonate
- **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 - 005
- **SDS Revision Date:** 14/08/29
- **SDS Version:** 1

SECTION 2: HAZARD(S) IDENTIFICATION

GHS Classification:

This product is **not classified as hazardous** under the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) or the Model Work Health and Safety (WHS) Regulations when in its supplied solid form (sheet, rod, or tube).

GHS Label Elements:

- **Signal Word:** *Not applicable.*
- **Hazard Pictograms:** *None required.*
- **Hazard Statements:**
 - This material is not considered hazardous in its solid state.
 - Dust generated from cutting, sanding, or machining may cause mechanical irritation to the eyes, skin, or respiratory tract.

Precautionary Statements:

- **P261:** Avoid breathing dust generated during processing.
- **P280:** Wear protective gloves, safety glasses, and a dust mask when machining.
- **P264:** Wash hands and exposed skin thoroughly after handling.
- **P271:** Use only outdoors or in a well-ventilated area when processing.
- **P273:** Avoid release to the environment during fabrication waste disposal.

Other Hazards:

- **Static Accumulation:** May develop static charges during handling, especially in dry environments. Use grounding methods if required.
- **Combustibility:** While polycarbonate is not easily ignited, it is combustible. In fire conditions, it may melt and drip, releasing toxic combustion products such as carbon monoxide (CO) and carbon dioxide (CO₂).
- **High Heat Risk:** Material softens above 135°C. Use caution during thermal processing.
- **Dust Explosion Risk:** Although not classified as explosive, finely divided dust may present a low risk of ignition in confined, dusty atmospheres with a heat source.

Summary:

This material presents no acute or chronic health hazards in its as-supplied form. Hazards are primarily associated with secondary processing (e.g., machining, thermoforming) where dust, fumes, or thermal decomposition products may be generated. These should be managed with proper engineering controls and personal protective equipment.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

This product is a manufactured article composed primarily of thermoplastic polycarbonate resin and may contain proprietary additives to enhance processing or performance characteristics.

| Component | CAS Number | Proportion (% w/w) | Classification |
|-----------------------|-------------|--------------------|-----------------------------|
| Polycarbonate Resin | 25037-45-0 | >99% | Not classified as hazardous |
| Additives / Modifiers | Proprietary | <1% | Not classified as hazardous |

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

SECTION 4: FIRST AID MEASURES

Polycarbonate in solid form does not present an immediate hazard. First aid is only likely to be required in the event of exposure to dust, fumes, or vapours generated during machining or thermal processing.

Inhalation:

Polycarbonate is not hazardous in solid form. However, dust or fumes generated during machining, grinding, sawing, or overheating may cause irritation.

- Move the person to fresh air.
- Keep at rest and monitor for symptoms (coughing, irritation, shortness of breath).
- Seek medical attention if irritation persists or breathing difficulties develop.

Skin Contact:

Solid material is not expected to cause irritation. Dust or sharp edges may cause minor abrasion.

- Wash affected area with soap and water.
- Remove contaminated clothing if necessary.
- Seek medical attention if irritation or discomfort continues.

Eye Contact:

Machining dust, chips, or fragments may cause mechanical irritation.

- Rinse cautiously with clean water for at least 10–15 minutes.
- Remove contact lenses if present and easy to do.
- Do not rub the eye.
- Seek medical attention if redness, pain, or irritation persists.

Ingestion:

Ingestion of solid polycarbonate is unlikely and generally low risk.

- Rinse mouth with water.
- Give water to drink if the person is conscious.
- Do not induce vomiting.
- Seek medical attention if discomfort occurs.

Most Important Symptoms and Effects, Both Acute and Delayed

- **Acute:** Temporary respiratory irritation, eye irritation, or mild skin abrasion from dust or chips.

- **Delayed:** None known for solid polycarbonate.
- Exposure to decomposition fumes (from overheating or fire) may cause delayed respiratory irritation.

Indication of Any Immediate Medical Attention and Special Treatment Needed

- Treat symptomatically.
- No specific antidote required.
- If exposed to combustion fumes, monitor for respiratory complications.
- For significant inhalation of decomposition vapours (rare), provide supportive care including oxygen.

Advice for Medical Personnel

- Irritation is typically **mechanical**, not chemical.
- No known systemic toxicity from solid polycarbonate.
- Decomposition products (fire conditions) may contain carbon monoxide, carbon dioxide, phenols, and organic vapours—treat as smoke inhalation.

SECTION 5: FIREFIGHTING MEASURES

Suitable Extinguishing Media:

Water spray, dry chemical, foam, or carbon dioxide (CO₂). Use the extinguishing method appropriate for the surrounding fire.

Unsuitable Extinguishing Media:

Do not use water jet directly on burning material — may spread fire or cause splattering of molten plastic.

Specific Hazards Arising from the Material:

- Material is **combustible** and may melt and drip when exposed to flame.
- **Thermal decomposition** may produce toxic and irritating gases, including:
 - Carbon monoxide (CO)
 - Carbon dioxide (CO₂)
 - Aromatic hydrocarbons (trace)
- Burning polycarbonate can generate dense black smoke.

Special Protective Equipment and Precautions for Firefighters:

- Firefighters should wear full protective clothing and self-contained breathing apparatus (SCBA).

- Cool exposed containers and surfaces with water spray to prevent reignition or thermal stress.

Hazchem Code:

Not applicable – product is not classified as dangerous goods for transport.

SECTION 6: ACCIDENTAL RELEASE MEASURES**Personal Precautions, Protective Equipment and Emergency Procedures:**

- No acute hazards expected from the release of solid polycarbonate sheet or rod.
- If the product has been machined or is present as dust or chips, avoid inhalation and contact with eyes or skin.
- Use appropriate personal protective equipment (PPE) such as safety glasses, gloves, and a dust mask if handling fine particulates.
- Avoid generating airborne dust. Ensure adequate ventilation in enclosed areas.

Environmental Precautions:

- Prevent dust or offcuts from entering stormwater drains or natural waterways.
- Although the product is non-toxic and non-soluble, solid waste can contribute to environmental litter or blockage risks.

Methods and Materials for Containment and Cleaning Up:

- Collect solid material manually or with mechanical equipment.
- For dust or fines, use a vacuum fitted with a HEPA filter or wet sweeping methods. Avoid dry sweeping that may create airborne dust.
- Place collected material into suitable containers for recycling or disposal in accordance with local regulations.

SECTION 7: HANDLING AND STORAGE**Handling:**

- No special handling precautions are required for the material in its solid form.
- Avoid creating dust during cutting, drilling, or sanding. Use appropriate local exhaust ventilation if processing produces particulates.
- Do not breathe dust or fumes generated during thermal processing.
- Handle with clean gloves to avoid surface contamination.

- Discharge static electricity by grounding equipment and workstations, particularly when handling large sheets in dry environments.
- Remove protective film only immediately prior to machining to protect surfaces from damage.

Storage:

- Store indoors in a cool, dry, and well-ventilated area away from direct sunlight and heat sources.
- Keep flat and supported to prevent warping or distortion.
- Avoid contact with strong acids, bases, and oxidising agents.
- Do not stack heavy items directly on top of polycarbonate sheets.
- Ensure packaging remains intact to protect from dust, moisture, and mechanical damage.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:

Polycarbonate does not contain hazardous substances in its solid form. However, machining, or thermal processing can generate dust or fumes. The following exposure limits apply to general nuisance dust:

| Substance | TWA (8-hour) | Source |
|---------------------------------------|----------------------|---------------------|
| Nuisance Dust (inert respirable dust) | 5 mg/m ³ | Safe Work Australia |
| Nuisance Dust (inert total dust) | 10 mg/m ³ | Safe Work Australia |

Thermal decomposition fumes (rare, only if overheated):

- Treat as general combustion products; avoid inhalation.

Engineering Controls

Ventilation

- Provide local exhaust ventilation (LEV) or dust extraction at machining points (CNC routers, saws, drills).
- General workshop ventilation should maintain dust levels below TWA limits.

Dust Control

- Use HEPA-filtered extraction when machining large volumes of material.

- Enclose cutting areas where feasible.
- Clean work surfaces regularly to prevent dust accumulation.

Thermal Controls

- Prevent overheating during machining to avoid melting or decomposition fumes.
- For hot-forming or thermoforming, ensure proper ventilation above heating equipment.

Personal Protective Equipment (PPE)

Eye / Face Protection

- Safety glasses with side shields for normal handling.
- Face shield recommended for routing, sawing, CNC machining, or operations generating high chip volumes.

Skin Protection

- Cut-resistant gloves when handling sheets, offcuts, or sharp edges.
- Lightweight protective gloves for routine handling.
- Protective clothing not usually required.

Respiratory Protection

- Respiratory PPE generally not required under normal conditions.
- When machining generates visible airborne dust:
 - Use P2 dust mask (AS/NZS 1716 compliant).
- If thermal decomposition fumes are suspected (fire or overheating):
 - Use full-face respirator or SCBA (emergency conditions only).

Hearing Protection

- Required when operating high-speed CNC machines, routers, band saws, and panel saws in noisy environments.

Foot Protection

- Standard safety footwear recommended for handling large sheets and pallets.

Hygiene Measures

- Wash hands after handling material or machining dust.
- Do not eat, drink, or smoke in machining or fabrication areas.
- Maintain clean work areas to reduce slip hazards from chips or offcuts.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

| Property | Value |
|---|-------------------------------|
| Appearance: | Transparent solid (sheet/rod) |
| Odour: | Odourless |
| pH: | Not applicable |
| Boiling Point: | Not applicable |
| Melting Point (Softening Point): | ~230°C |
| Flash Point: | >450°C |
| Evaporation Rate: | Not applicable |
| Flammability (solid, gas): | Combustible solid |
| Upper/Lower Flammability Limits: | Not determined |
| Vapour Pressure: | Not applicable |
| Vapour Density: | Not applicable |
| Relative Density: | ~1.20 (water = 1) |
| Solubility: | Insoluble in water |
| Partition Coefficient (n-octanol/water): | Not applicable |
| Auto-ignition Temperature: | ~630°C |
| Decomposition Temperature: | >300°C |
| Viscosity: | Not applicable |
| Specific Gravity: | 1.20 g/cm ³ |

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Polycarbonate is chemically stable and non-reactive under normal conditions of handling, storage, and use.

It is not self-reactive and does not undergo hazardous polymerisation.

Chemical Stability

- Stable at ambient temperatures and pressures.
- Maintains structural integrity within its recommended service temperature range (–20°C to approx. +120°C).
- Exposure to temperatures above 150°C causes softening; above 300°C, thermal decomposition begins.

Possibility of Hazardous Reactions

- Hazardous polymerisation: Will not occur.
- No violent reactions expected with common industrial materials.
- Reacts adversely with certain solvents and strong chemicals, leading to stress cracking or degradation (see "Incompatible Materials").

Conditions to Avoid

- **High temperatures / open flames:**
 - Prolonged exposure above 200–250°C can cause degradation.
 - Auto-ignition possible at approx. 450°C.
- **Localised overheating during machining:**
 - May cause melting, discolouration, or release of fumes.
- **Direct contact with incompatible chemicals** such as:
 - Ketones (acetone, MEK)
 - Aromatic solvents (toluene, xylene)
 - Chlorinated solvents
 - Strong alkalis (sodium hydroxide, ammonia)
 - Alcohols (methanol, ethanol, IPA)
- **Extended UV exposure** for non-UV-stabilised grades, which may cause yellowing or embrittlement.

Incompatible Materials

Polycarbonate should not come into contact with:

Solvents / Organics:

- Acetone
- MEK

- Dichloromethane
- Toluene and xylene
- Benzene and aromatic hydrocarbons
- Ether-based solvents
- Chloroform

Alkaline Chemicals:

- Sodium hydroxide
- Potassium hydroxide
- Ammonia and ammonium compounds
- Strong alkaline cleaners

Other Incompatibilities:

- Strong oxidisers (e.g., concentrated hydrogen peroxide)
- Strong acids (may cause surface degradation)

These materials may cause stress cracking, crazing, swelling, or loss of mechanical strength.

Hazardous Decomposition Products

Under thermal decomposition, especially above 300°C, products may include:

- Carbon monoxide (CO)
- Carbon dioxide (CO₂)
- Phenolic compounds
- Bisphenol-A decomposition fragments
- Organic vapours and smoke particulates

In fire scenarios, thick black smoke and molten polymer droplets may form.

SECTION 11: TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Polycarbonate in solid form is not hazardous. Exposure may occur primarily through:

- **Inhalation:** Dust generated during machining, cutting, routing, sawing, drilling.
- **Eye Contact:** Mechanical irritation from chips, dust, or fine particulates.

- **Skin Contact:** Minor abrasion from sharp edges or fragments.
- **Ingestion:** Unlikely under normal industrial conditions.

No systemic toxicity is expected from exposure to the solid polymer.

Acute Effects (Short-Term Exposure)

Inhalation

- Machining dust may cause temporary nose, throat, or respiratory irritation.
- High dust concentrations may cause coughing or discomfort.
- Decomposition fumes (only if overheated) may cause:
 - Headache
 - Irritation to eyes, nose, throat
 - Mild respiratory tract irritation

Skin Contact

- Generally non-irritating.
- Sharp edges or particulate dust may cause minor mechanical abrasion.

Eye Contact

- Dust or chips may cause mechanical irritation, redness, tearing, and transient discomfort.

Ingestion

- Low hazard.
- May cause mild gastrointestinal discomfort if swallowed.

Chronic Effects (Long-Term Exposure)

- No known chronic health hazards associated with long-term contact with solid polycarbonate.
- Long-term exposure to decomposition fumes (fire conditions only) may irritate respiratory tissues but is unlikely in normal use.

Polycarbonate is not known to cause sensitisation, mutagenicity, carcinogenicity, or reproductive toxicity.

Toxicity Data (For Polycarbonate Resin)

- **Acute Oral Toxicity (LD₅₀):** > 5,000 mg/kg (rat) — low toxicity
- **Acute Dermal Toxicity (LD₅₀):** Not expected to be toxic.

- **Acute Inhalation Toxicity:** No toxicity at typical exposure levels
- **Irritation:** Slight mechanical irritation possible from dust
- **Sensitisation:** Not a skin or respiratory sensitiser

Information on Toxicological Effects:

Skin Corrosion/Irritation:

- Not corrosive; not chemically irritating.
- Mechanical irritation only from dust or sharp fragments.

Serious Eye Damage/Irritation:

- Not corrosive; not chemically irritating.
- Machining dust may cause transient irritation.

Respiratory Sensitisation:

- Not a sensitiser.

Skin Sensitisation:

- Not a sensitiser.

Germ Cell Mutagenicity:

- No evidence of mutagenicity.

Carcinogenicity:

- Not listed by IARC, OSHA, NTP, or Safe Work Australia as a carcinogen.
- Solid polycarbonate contains NO free monomeric BPA — the polymerised resin is stable and non-reactive.

Reproductive Toxicity:

- No reproductive or developmental effects known.

STOT – Single Exposure:

- Dust: may cause temporary irritation to eyes or respiratory tract.
- Fumes (thermal decomposition): may cause transient respiratory irritation.

STOT – Repeated Exposure:

- No known chronic systemic effects.
- Repeated exposure to high dust levels may cause mild chronic irritation.

Aspiration Hazard:

- Not applicable — solid polymer; not a liquid.

Additional Information

- Polycarbonate does not exhibit systemic toxicity under normal industrial conditions.
- Hazards arise mainly from processing conditions (dust or fumes), not from the solid product.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

Polycarbonate is not classified as hazardous to the environment.

- Not toxic to aquatic organisms.
- Not toxic to soil organisms.
- Not acutely or chronically harmful in typical environmental exposure scenarios.

Because it is an inert solid, ecological effects relate primarily to physical litter rather than chemical toxicity.

Persistence and Degradability

- Polycarbonate is chemically stable and degrades slowly in the environment.
- Not readily biodegradable.
- UV exposure may cause slow surface degradation over time.
- Does not readily break down into harmful metabolites.

Bioaccumulative Potential

- Polycarbonate has low bioaccumulation potential.
- Due to its high molecular weight and solid structure, it is not absorbed by organisms.
- Does not bio-magnify in food chains.

Mobility in Soil

- Polycarbonate is an insoluble solid; mobility is extremely low.
- Tends to remain where deposited.
- Not expected to migrate into groundwater.

Other Adverse Effects

- Considered environmentally safe under normal use.
- Primary environmental concern is physical waste, not chemical toxicity.
- Does not release hazardous chemicals into soil or water under normal conditions.
- Not classified as an ozone-depleting substance.
- Contains no halogens, mercury, lead, or restricted substances under RoHS 3.

Additional Environmental Notes

- Material is recyclable where facilities exist (Plastic Identification #7 – Polycarbonate).
- Burns to carbonaceous ash, combustion gases similar to other organic materials.
- Does not contribute to eutrophication or aquatic oxygen depletion.

SECTION 13: DISPOSAL CONSIDERATIONS

Safe Waste Disposal Methods

Polycarbonate is classified as non-hazardous solid waste under Australian environmental regulations.

- Dispose of in accordance with local, state, and federal regulations.
- Polycarbonate waste may be placed in general industrial waste if recycling is not available.
- Recycling is strongly encouraged where facilities exist (Plastic Identification Code #7 – Other Plastics).
- Offcuts, machining chips, and solid scrap can often be returned to plastics recyclers for mechanical reprocessing.
- Do not incinerate polycarbonate waste except at licensed facilities equipped to handle polymer combustion products.

Recycling Considerations

- Polycarbonate is suitable for mechanical recycling into secondary plastic products.
- Keep waste clean, dry, and free from solvent contamination to maintain recyclability.
- Segregate from incompatible plastics (PVC, PETG, etc.) to avoid recycling contamination.

Contaminated Packaging Disposal

- Packaging materials (PE film, cardboard, timber pallets, plastic strapping) should be disposed of or recycled according to their respective recycling streams.
- Protective film may be recyclable depending on local facilities (often LDPE recycling streams).
- Ensure that packaging is free from chemical contamination before disposal.

Special Disposal Requirements or Considerations

- Molten or thermally degraded polycarbonate should cool completely before handling or disposal.
- Do not allow large volumes of machining dust to accumulate in drains or air-handling systems.
- Not regulated as dangerous goods and does not pose special transportation hazards when disposed of.

Environmental Impact of Disposal

- Material is stable and non-leaching in landfill environments.
- Does not contain heavy metals, halogens, or persistent Bioaccumulative toxins.
- Main environmental concern is long-term physical persistence, not chemical toxicity—proper recycling reduces environmental burden.

SECTION 14: TRANSPORT INFORMATION

Polycarbonate in solid sheet, rod, tube, or machined form is not classified as Dangerous Goods under Australian or international transport regulations.

UN Number:

Not applicable – product is not regulated.

Proper Shipping Name:

Not regulated for transport

(Recommended description: "*Polycarbonate Articles*" or "*Plastic Articles*" where required)

Transport Hazard Class:

Not applicable – non-hazardous, non-flammable solid.

Subsidiary Hazard Class:

None.

Packing Group:

Not applicable.

Environmental Hazards:

- Not classified as a marine pollutant.
- Not harmful to the environment during transport.

Special Precautions for User:

- Transport in a manner that prevents physical damage (e.g., cracking, chipping, bending).
- Secure pallets or bundles to avoid movement in transit.
- Keep away from open flames or excessive heat.
- Avoid stacking heavy loads on top of sheets to prevent deformation.

Transport in Bulk According to Annex II of MARPOL and the IBC Code:

Not applicable — product is transported only as solid articles.

Regulatory Transport Notes**Australian Dangerous Goods (ADG Code):**

- Not classified as Dangerous Goods.
- No special transport labelling required.

International Maritime Dangerous Goods (IMDG):

- Not regulated.
- Not a marine pollutant.

International Air Transport Association (IATA):

- Not regulated as dangerous goods for air freight.
- No hazard class, UN number, or packaging instructions required.

ICAO Technical Instructions:

- Not regulated.

Additional Transport Information

- Sheets and rods should be transported with protective masking in place.
- Use edge protectors or padding to prevent mechanical damage.

- Keep material dry and clean throughout transportation.
- Forklifts and lifting equipment must be operated carefully to prevent puncture or edge cracking.

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.
- Relevant component hazard data sourced from the Safe Work Australia Hazardous Chemical Information System (HCIS).

| Regulatory Area | Details |
|--|---|
| GHS Classification (Safe Work Australia) | Not classified as hazardous under GHS. No signal word, pictograms, or hazard statements required. |
| Australian Inventory of Industrial Chemicals (AIIC) | All components listed or exempt. |
| Australian Dangerous Goods (ADG Code) | Not classified as Dangerous Goods for transport by road, rail, sea, or air. |
| Work Health and Safety (WHS) Regulations | Complies with WHS Regulations. Machining dust to be managed under nuisance dust exposure standards. No special controls required for solid polymer. |
| RoHS 3 (EU Directive 2015/863) | Fully compliant. Free from lead, mercury, cadmium, hexavalent chromium, PBB, and PBDE. |
| REACH (EU Regulation 1907/2006) | Fully compliant. Contains no SVHCs (Substances of Very High Concern) above regulatory thresholds. All ingredients registered or exempt. |
| TSCA (US Toxic Substances Control Act) | All components listed or exempt on the TSCA Inventory. |
| IARC / OSHA / NTP Classification | Not classified as a carcinogen by IARC, OSHA, NTP, or Safe Work Australia. |
| Ozone-Depleting Substances (Montreal Protocol) | None present. No CFCs, HCFCs, halons, carbon tetrachloride, or methyl chloroform. |

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|---|---|
| Kyoto Protocol / Greenhouse Gas Regulations | Does not contain greenhouse gases or substances with global warming potential. |
| Environmental Protection (EPA / State Regulations) | Classified as non-hazardous solid waste. Disposal must follow local environmental guidelines. |
| International Product Standards (Grade Dependent) | ASTM D3935 (polycarbonate resin); UL 94 (flammability); ISO 527, ISO 178 (mechanical testing); ISO 306 (softening point). |
| Quality & Environmental Systems | Manufactured under ISO 9001 and ISO 14001 principles (supplier dependent). |
| Hazard Communication Requirements | SDS prepared according to Safe Work Australia Code of Practice (2021) and GHS 7th Edition. |
| Other International Compliance | Meets global product stewardship and environmental assurance frameworks for non-hazardous polymeric materials. |

SECTION 16: OTHER INFORMATION

| Information Category | Details |
|-----------------------------|--|
| SDS Preparation Date | 14 August 2025 |
| Revision Number | 1 |
| Review Date | August 2027, or earlier if required due to regulatory updates, changes in raw materials, hazard reclassification, or significant process modifications. |
| Prepared By | MISCO Australia Pty Ltd – Quality, Compliance & Technical Services Department. Prepared under ISO 9001-aligned document control protocols. |
| Purpose of SDS | This Safety Data Sheet provides health, safety, environmental, and regulatory guidance for handling solid polycarbonate materials supplied by MISCO Australia. It forms part of MISCO's compliance obligations under the Work Health and Safety (WHS) Regulations and the Safe Work Australia SDS Code of Practice. |
| Training Advice | Personnel handling or machining polycarbonate should receive training in: <ul style="list-style-type: none"> • Safe workshop and CNC machining practices • PPE selection and proper use |

| | |
|-------------------------------------|---|
| | <ul style="list-style-type: none"> • Dust extraction and LEV operation. • Identification of thermal decomposition hazards • Correct handling and storage of polymer sheets • Emergency procedures for fire, injury, or inhalation exposure |
| Recommended Use Restrictions | <p>Not recommended for:</p> <ul style="list-style-type: none"> • Exposure to aggressive solvents (acetone, MEK, toluene, strong alkalis) • High-temperature continuous service environments above 120°C • Structural applications requiring metal-like rigidity without adequate engineering assessment. • Prolonged UV exposure without UV-stabilised grades |
| Abbreviations Used | <p>GHS: Globally Harmonised System of Classification and Labelling of Chemicals</p> <p>AIIC: Australian Inventory of Industrial Chemicals</p> <p>ADG: Australian Dangerous Goods Code</p> <p>WHS: Work Health and Safety</p> <p>PPE: Personal Protective Equipment</p> <p>LD₅₀ / LC₅₀: Median lethal dose/concentration</p> <p>SVHC: Substance of Very High Concern</p> <p>UL: Underwriters Laboratories</p> <p>TWA: Time-Weighted Average</p> <p>REACH: EU Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals</p> <p>RoHS: Restriction of Hazardous Substances Directive</p> <p>ISO: International Organization for Standardization</p> <p>VOC: Volatile Organic Compounds</p> <p>HEPA: High-Efficiency Particulate Air filtration</p> <p>LEV: Local Exhaust Ventilation</p> <p>SCBA: Self-Contained Breathing Apparatus</p> |
| Key References and Standards | <p>Safe Work Australia: Code of Practice – SDS (2021); Workplace Exposure Standards.</p> |

| | |
|--|--|
| | <p>Globally Harmonised System: UN GHS Rev.7 (Australia-aligned).</p> <p>ADG Code (7.7): Australian Dangerous Goods transport requirements.</p> <p>AICIS (Industrial Chemicals Act 2019): Chemical inventory and introduction rules.</p> <p>ASTM D3935: Standard specification for polycarbonate.</p> <p>ASTM D149 / D638 / D790: Electrical, tensile, and flexural test methods.</p> <p>ISO 527 / ISO 178: Mechanical property test methods.</p> <p>ISO 306: Vicat softening temperature determination.</p> <p>UL 94: Flammability testing classification.</p> <p>REACH Regulation (EC 1907/2006): European chemical registration and SVHC framework.</p> <p>RoHS Directive (EU 2015/863): Control of hazardous substances in electrical equipment.</p> <p>ISO 9001 & ISO 14001: Quality and environmental management (applies to certified suppliers).</p> <p>MISCO Australia: Internal Material Compliance Database and Product Dossiers (2025).</p> |
| <p>Emergency Contact Details</p> | <p>Australia – Emergency Services: 000</p> <p>Poisons Information Centre: 13 11 26</p> <p>MISCO Australia Office: +61 3 9706 5185</p> |
| <p>Additional Notes for Users</p> | <ul style="list-style-type: none"> • This SDS applies only to solid polycarbonate in sheet, rod, tube, or machined form. • Variants such as UV-stabilised, anti-static, flame-retardant, or coated grades may have additional performance or regulatory characteristics. • Users must assess workplace conditions such as heat, machining processes, and chemical exposure to ensure safe use. • Decomposition hazards occur only when burned or overheated above recommended temperature ranges. • This SDS should be used in conjunction with MISCO’s TDS, machining guidelines, and handling instructions. |

WARRANTY

MISCO Australia warrants that all polycarbonate products supplied are **free from defects in material and workmanship** at the time of dispatch. This warranty is provided in accordance with MISCO Australia's quality management practices and applies when the product is handled, stored, processed, and installed in line with recognised industry standards and MISCO-provided guidelines.

This warranty does not cover:

- Improper handling, storage, machining, or installation
- Exposure to incompatible chemicals or excessive heat
- UV degradation of non-UV-stabilised grades
- Normal wear, scratching, or cosmetic damage
- Misuse, overloading, or modification of the material.
- Any consequential or indirect losses

Liability is limited to repair, replacement, or refund of the product value.

Customers must inspect materials upon receipt, report defects within **7 days**, and confirm suitability for their intended application.

Warranty Period: 12 months from invoice date unless otherwise agreed.

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.*
- *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 Polycarbonate | Director, MISCO Australia |

Document Control:

- **Document Title:** Polycarbonate Safety Data Sheet (SDS)
- **Document ID:** MISCO – SDS - 005
- **Issue Date:** 01/01/2025.
- **Revision:** 1.0
- **Review Cycle:** 24 months or upon regulatory update (whichever occurs first)

END OF SAFETY DATA SHEET.