



Polycarbonate Sheet Safety Sheet

1. Identification

Trade Names:	PALTUF, PALSUN, PALSUN FR, PALGARD, SUNTUF, SUNSKY, SUNOPAK, DYNAGLAS, SUNLITE, SUNPAL, SUNGLAZE, PALTILE, SUNTOP, SUNSPHERE, EDGELOCK.		
Product Name:	Solid and foamed polycarbonate sheets – Polycarbonate Homopolymer.		
CAS Number:	25307-45-0		
UN Number:	None.		
ACX Number:	X1017917-2		
RTECS:	Not listed.		
Material Synonyms:	PC		
NFPA Ratings:	Health=0	Fire=1	Reactivity=0

2. Composition / Information on Ingredients

Main Polymer: Polycarbonate 100 wt%.

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

No cadmium, or other heavy metals based pigments or stabilisers used. This product does not contain hazardous ingredients as defined by OSHA Hazard Communication Standard.

3. Hazard Identification

No particular hazards known.

3.1. Health Hazard Data

3.1.1. 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

3.1.2. Effects of a Repeated Overexposure

None currently known.

3.1.3. Medical Conditions Aggravated by Overexposure

None currently known.

3.1.4. Other Effects of Overexposure

None currently known.



4. First Aid Measures

Inhalation:	If exposed to combustion fumes in high concentration – bring victim to fresh air. Medical attention needed.
Ingestion:	No known health risks.
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. Do not use solvent for removal. Medical attention needed.
Skin Absorption:	No known health risks.
Eye Contact:	Like any foreign body, can cause mechanical irritation. Remove contact lenses at once. Immediately flush eyes well with copious quantities of water or normal saline for at least 20-30 minutes. If irritation persists, consult physician.
Notes for Physician:	There are no specific notes.

5. Fire Fighting Measures

This material burns with difficulty and generally requires a continuous external flame source to sustain combustion. Without flashover fire conditions it will tend to extinguish it. When forced to burn it will produce a sooty fire. Main products of combustion are carbon dioxide and carbon monoxide. Some flame-retardant grades will evolve trace quantities of hydrogen bromide on combustion.

Extinguishing Media:	Water spray or foam CO ₂ is less recommended due to lack of cooling capacity.
Extinguishing Media 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 Equipment for Fire-fighters:	Positive-pressure-self-contained breathing apparatus, protective clothing, gas mask approved for acid vapours.
Unusual Fire & Explosion Hazards:	Hazardous combustion products may include intense heat, dense black smoke, carbon dioxide, and carbon monoxide and hydrocarbon fragments. Combustion products/processing fumes may include trace levels of phenol, alkylphenols, and diarylcarbonates. Soot emitted when PC is forced to burn may obscure visibility. During combustion the base resin does not produce hydrogen cyanide, phosgene, acrolein, hydrogen chloride or sulphur dioxide. This material is not sensitive to static discharge. Static electricity discharge sparks possible at handling – avoid vicinity of static discharge sensitive materials.

6. Accidental Release Measures

No special precautions and no personal protective equipment needed. Collect mechanically for disposal.



7. Handling & Storage

7.1. Handling

General Handling Precautions

Avoid mechanical contact with eyes. Use good industrial hygiene practices. Provide adequate ventilation. Secondary operations such as grinding, sanding or sawing may produce a dust explosion hazard. Use aggressive housekeeping activities to prevent dust accumulation; employ bonding, grounding, venting and explosion relief provisions in accordance with accepted engineering practices.

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. The material is not sensitive to static discharge. Static electricity discharge sparks possible during handling. Avoid contact or vicinity of flammable materials.

8. Exposure Controls / Personal Protection

8.1. Exposure Limits

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

8.2. Personal Protection

Respiratory Protection:	No special protection needed.
Hand Protection:	No special protection needed.
Eye Protection:	No special protection needed.
Other Protective Equipment:	No special protection needed.

9. Physical Properties

Appearance:	Flat or corrugated plastic sheets
Physical State:	Solid
Colour:	Clear or coloured
Odour:	None
Density:	1.2 gr/cm ³
Change in State:	T = 140-150°C, DSC according to ASTM D 792
Boiling Point:	None
Viscosity:	Not relevant
Solubility in Water:	None
pH Value:	Not relevant
Flash Point:	>450°C ASTM D 1929
Auto Ignition Temp:	>650°C ASTM D 1921



10. Stability & Reactivity

10.1. Stability

Conditions to Avoid

Excessive heat, or open flame.

Incompatible Materials

Oxidising agents or strong mineral acids can cause reaction.

Thermal Decomposition

Caused by fire or overheating during improper processing. Fumes damaging to health may be released.

Carbon Monoxide: Is highly toxic if inhaled, present in combustion fumes of all organic materials.

Carbon Dioxide: In sufficient concentrations can act as an asphyxiant present in combustion fumes.

10.2. Reactivity

Hazardous Polymerisation: Will not occur.

Hazardous Reactions: None.

11. Toxicological Information

Independent testing and many years of experience confirm that this material has very low toxicity. The International Agency for Research on Cancer does not list this material as a confirmed or suspected carcinogen. In rats an acute LD >5 gr/kg of body weight. Industrial hygiene studies have shown that under normal and expected conditions of use of PC materials, exposures are well below applicable limits.

11.1. Acute Toxicological Information

Acute Oral Toxicity: Oral LD (rat) > 5g/kg estimated.

Acute Vapour Exposure: Processing fumes from similar products are not considered toxic. In acute inhalation tests, laboratory rats were exposed to processing fumes at concentrations exaggerating those that would likely occur in workplace situations. No death or signs of toxicity, except transient irritancy in some cases, were noticed during the 6 hour fume exposure tests. There were no distinct or consistent treatment related tissue or organ changes noted in gross necropsies.

Primary Skin Irritation: Product not considered primary skin irritant. Draize skin primary irritation score (rabbit) for similar products, in finely divided form, for a 24 hour exposure is 0.

Eye Irritation: Product not considered primary irritant. When similar products, in finely divided form, were placed into the eyes of rabbits, slight transient redness or discharge occurred – consistent with the expected slightly abrasive nature of product.

Sensitisation: Not expected to be skin sensitised based on results of modified buehler guinea pig sensitisation test from similar products. Dermal LD (rabbit) 2g/kg estimate.

Chronic Effects: In sub-chronic testing, the base resin was considered physiologically inert when fed to rats for 8 weeks at a dietary level of 6%.

12. Ecological Information

12.1. 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.

12.2. Environmental Risks

No hazard expectation to terrestrial or aquatic flora and fauna.



13. 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.

Incineration in accordance with federal, state and local regulations – collected processing fume condensates and incinerator ash should be tested to determine waste classification.

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 stabilisers.

It is the user's responsibility to dispose of all wastes in accordance with all national and local regulations at properly permitted or authorised facilities.

13. Transport Information

DOT PSN Code:	ZZZ
DOT Proper Shipping Name:	Not regulated by this mode of transportation.
IMO PSN Code:	ZZZ
DOT Proper Shipping Name:	Not regulated by this mode of transportation.
IATA PSN Code:	ZZZ
IATA Proper Shipping Name:	Not regulated by this mode of transportation.
AFI PSN Code:	ZZZ
AFI Proper Shipping Name:	Not regulated by this mode of transportation.
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.

14. Regulatory Information

With regards to dust formed as a consequence of mechanical treatments, the appropriate regulations value limits for fine dust must be observed.