

**MATERIAL SAFETY DATA SHEET
TWINPLAST BOARD**

1. Identification Of The Substance/Preparation And Of The Company/Undertaking

Trade name	Twinplast corrugated plastic board
Chemical name	polypropylene: propene, polymer with Ethene.
Type of product	See technical data sheet
Company identification	See below this page.
Emergency phone number	01923 230191

2. Confidential Composition Intended For The Medical Staff

Name	% Weight	CAS nr	EINECS nr
Polypropylene	>99	9003-07-0	-

3. Composition/Information On Ingredients

Main components	Polypropylene, Propene, polymer with Ethene. :min 98%
- chemical formula	(C3H6)n or (C3H6)n (C2H4)m
- CAS number	9003-07-0 or 9010-79-1
Substances presenting a health hazard	None to our knowledge
Chemical family	Olefinic polymer: polypropylene
Additives	Antioxidants and stabilisers: 2.0% max Additives to confer specific properties eg pigments for colour, ink resistant, flame retardancy (containing antimony broxide and bromine products)

4. Hazards Identification

Main hazards	Low hazard level. Edges of sheet sharp. Wear gloves and eye protection if sheet is cut or granulated.
Symptoms related to use	
- Inhalation	Low risk for temperature below 160°C. Heated at more than 160°C, the product may form vapours or fumes which may cause irritation of respiratory tract and cause coughing and sensation of shortness of breath.
- Skin Contact	In contact with hot material, may cause severe thermal burns.
Physico-chemical hazards	Combustible if exposed to flames

5. First-Aid Measures

Route of exposure	
- Inhalation	Exposure to fumes or vapours, move the affected person into fresh air. Get medical advice if the symptoms continue.
- Skin Contact	Exposure to splashing of hot product. Treat the affected part with cold water (by spraying or immersion). No attempt should be made to detach molten product adhering to the skin or to remove clothing attached with molten material, the injured body part would risk being pulled out; usually the layer detaches itself after a few days. In case of severe burn, seek medical advice immediately.

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<p>- Eye Contact</p> <p>- Ingestion</p>	<p>Exposure to splashing of hot product: Treat the eyes with cold water Seek immediately special attention at hospital or medical centre. In case of irritation caused by fine dust: wash with copious volumes of water, until the irritation disappears.</p> <p>Ingestion should be avoided. In case of ingestion of small quantities, no important effect observed. In case of ingestion of larger amounts: abdominal pain, diarrhoea,.. Ingestion during handling is not likely.</p>
<p>6. Fire-Fighting Measures</p>	
<p>Fire Class Regulations</p> <p>Technical measures</p> <p>Extinguishing media</p> <p>- suitable</p> <p>- not to be used</p> <p>Protective equipment for firefighters</p>	<p>Solid material fires above 350°C giving rise to molten droplets and incandescent flames.</p> <p>Stop the fire spreading Call the fire brigade immediately. Evacuate non-essential personnel. Protective clothing, goggles and self-contained breathing equipment should be made available for firemen.</p> <p>For minor fires: carbon dioxide or powder For more extensive fires: foam, water spray (mist) to cool the surfaces exposed to the fire.</p> <p>Do not use water jets (stick jets) in the early stages of extinguishing fire since they could help to spread the flames.</p> <p>Wear suitable breathing equipment, in case of risk or exposure to vapour or fumes. Treat all fumes from decomposition as toxic.</p>
<p>7. Accidental Release Measures</p>	
<p>See also chapters 8 and 13</p> <p>After spillage/leakage</p> <p>- on soil</p> <p>- on water</p>	<p>Likely components of the fumes: carbon monoxide, formaldehyde, acrolein, hydrocarbons and brominated products</p> <p>Recover the spilled product by sweeping or suction. Put in containers to facilitate its disposal. Dispose safely in accordance with local or national regulations. Prevent the spilled material from spreading. If the material has been discharged into a stream or a sewer, inform the authorities of the possible presence of floating materials. Clean up the water surface by creaming off debris from the top. Refer to a specialist for waste disposal in a safe manner in accordance with local or national regulations.</p>
<p>8. Handling And Storage</p>	
<p>Technical protective measures</p> <p>Handling</p>	<p>Gloves to be worn during handling and cutting because of sharp edges. Normal industrial practice should apply when handling pallets of product. All transport equipment must be electrically earthed.</p>

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Storage	<p>Do not store near highly flammable materials.</p> <p>Store away from heating source. avoid static electricity build up with connection to earth.</p> <p>Store in dry, well-ventilated area away from direct sunlight and heat source.</p>
9. Exposure Controls And Personal Protection	
Exposure Controls	
TA-LUFT CL.I (0%)	Non applicable
TLV-8h TWA (ACGIH) (Mg/m ³)	5 (inhaled dust) 10 (whole dust)
Personal Protection	
- Respiratory Protection	In case of risk of overexposure to dust, vapour or fumes (during product processing), it is recommended that a local exhaust system is placed above the conversion equipment (a fume hood) and the working area must be properly ventilated.
- Skin Protection	If contact with hot materials is possible, wear heat-insulating and chemical-proof gloves as well as a face shield.
- Eye Protection	When the splashing of molten droplets may occur, wearing goggles/spectacles.
- Other Personal Protection	Safety non-slip shoes in areas where spills or leaks can occur
10. Physical And Chemical Properties	
Appearance	Flat corrugated board
Physical state at 20°C	Solid
Colour	Translucent or coloured
Odour	Odourless in translucent form – may have slight odour when flame retardant chemicals are added
Change in physical state at 1013 hPa – melting range	From 160 – 165
Flash point (ASTM D 1929 – 77) (°C)	± 350
Auto ignition temperature (°C)	>380
Explosion limits (kg/m ³) – lower	0.020 (for polymer dust < 100 µm)
Min ignition energy at 20°C (mJ)	
Density, mass at 20°C (kg/m ³)	905 (ISO 1183)
Solubility in water (% weight)	Insoluble
Viscosity (mm ² /s)	Non applicable
11. Stability And Reactivity	
Stability	Stable under normal operating conditions
Conditions to avoid	Avoid contact with strong oxidizing materials, fluorine and strong acids or alkalis. Avoid proximity or contact with flames or sparks. Do not heat to temperatures exceeding 300°C.
Hazardous reactions	Dust may form an explosive mixture with air, ignited by sparks or sources of ignition.

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Combustion and oxidation products	Complete combustion, with an excess of oxygen forms: carbon dioxide and water vapour. Partial combustion, forms also: carbon monoxide, soot and cracked products: aldehydes, ketones, hydrocarbons and volatile fatty acids.
Advice to prevent explosion	Avoid dust accumulation by use of filters Thoroughly ventilate the working place Use explosion proof electrical equipment All conductive materials must be electrically earthed

12. Toxicological Information

Acute toxicity	
Rat oral LD50 (mg/kg)	No information available, although ingestion should be avoided.
Symptoms related to use	
- Inhalation	Low risk for temperatures below 40°C Heated at more than 230°C, the product may form vapours or fumes which may cause irritation of respiratory tract and cause coughing and sensation of shortness of breath Dust may cause irritation of respiratory system.
- Skin Contact	No risk for temperatures below 40°C In contact with hot material, may cause severe thermal burns.
- Eye Contact	Fine dust may cause irritation to ocular mucous, Splashing of molten droplets causes ocular tissue injury.
- Ingestion	Minimal toxicity.
Carcinogenicity	IARC (International Agency on Research on Cancer): category 3 the agent is not classifiable as to its carcinogenicity to humans.
Mutagenicity	This product has been found to be non-mutagenic or non-genotoxic in the following in-vitro assays: mouse lymphoma assays, Chinese hamster ovary cell chromosome aberration test, unscheduled DNA synthesis in rat hepatocytes.
Other	Polyolefins are biologically inert.

13. Ecological Information

Information on ecological effects	Avoid losses to the environment whenever possible.
Mobility	No information available
Biodegradation	Non biodegradable
Photodegradation	Possible in sunlight.
Bioaccumulative potential	No information available
Ecotoxicity	Non ecotoxic
BOD 5 (gO ₂ /g)	Below the detection limit.

14. Disposal Considerations

Disposal	According to local regulations Authorised disposal As refuse for reprocessing Do not dispose of by means of sinks, drains or to the immediate environment. May be used as fuel in suitably designed installations Incinerate with household refuse in a municipal solid waste incinerator plan.
Industrial waste number	57128

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15. Transportation Information

Road (ADR)/Rail (RID)/(ADNR)	Not restricted for transport
Marine (IM)-IMDG	Not restricted for transport
Airline (ICAO/IATA)	Not restricted for transport
VbF-Klasse	Non applicable

16. Regulatory Information

Labelling and classification EC – Symbol(s) EC	Not considered dangerous according to EEC directives 67/548/EEC and 88/379/EEC.
Wassergefährdungsklasse (Germany)	0

17. Other Information

Further information	Users are advised of possible additional hazards when the product is used in applications for what it is not intended.
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Revised 8.1.98 This data sheet conforms to standards defined by directive 91/155/EEC.

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