

MATERIAL SAFETY DATA

EASY TO WORK WITH – DRILL, SCREW NAIL, ROUTE, MACHINE AND GLUE.

- Lightweight but strong.
- Thermal insulating.
- Immune to attacks by insects.
- Non corrosive, alkaline and acid resistant.
- Good sound insulating.
- Excellent thermoform material.
- Self extinguishing.
- Mould resistant.
- Non-hazardous during the manufacturing process.
- Benign when installed.
- Recyclable.

NUMEROUS SURFACE FINISHING POSSIBILITIES.

- Water proof.
- Can be heat formed.
- Printable surface for use in signage applications.
- Chemical resistant.
- Colour stable.
- Laser engraving.
- Can be welded.
- Weather proof.

APPLICATIONS

- Outdoor signs.
- Cabinets.
- Outdoor Furniture.
- Kitchens.
- Concrete formwork.
- Ceilings.
- Skirting & architraves.
- False ceilings.
- Boxes in wet or outdoor areas.
- Exhibition walls.
- Displays for exhibitions.
- Washroom partitions.
- Wall cladding – external & internal. Coolrooms & Freezers.
- Partitions.
- Office partitions.
- Doors in wet areas.
- Flooring.
- Cavity doors.
- Caravans & RV's.
- Cupboards in wet areas.
- Public transport areas.
- Showcases.
- Boating & general marine industry.

Extruded in a wide range of profiles from door moulding to skirting boards. Polymer building profiles solve traditional wet area timber work problems.

Whether the requirement is for the exterior cladding, barge boards, decking or railings, Polymer boards are extremely versatile.

Doors warping due to wet area exposure? Not providing adequate sound insulation? Or just too heavy for the application? Waterproof, light, sound and thermally insulating as well as easy to finish, Polymer doors provide that long awaited solution.

Reveals in wet areas are prone to crack, swell and warp. Problem solved with Polymer reveals. No more cracking, swelling or moisture problems, with the added benefit of sound and thermal insulation as well as insect and vermin resistance.

The ideal sheet flooring, panelling, cladding or anywhere where moisture, water and weight are problems. Polymer is the sheet material that meets these needs.

The wet area alternative to heavy sheets:

- HMR MDF → Polymer is lighter
- HMR Particle → Polymer is lighter
- Villaboard → Polymer is lighter
- AC Sheet → Polymer is lighter

SURFACE TREATMENT

POLYMER sheet and board can be finished in a variety of ways:

- Painted with both acrylic and enamel paints (research by Watty Paints) – dark colours with exposure to high temperature can cause expansion similar to timber and therefore are not recommended. SOLID RACKS recommends an acrylic sealer before painting.
- Laminated
- Veneered.
- Film printed.
- Silk screen printing.
- Vinyl stickers.
- If uncertain consult a POLYMER representative Silk screen printing.

TESTING

Polymer has been tested at the Azuma Design testing facilities for its reactions to and the absorption of petroleum, hydrochloric acid, turpentine, water, thinners and methylated spirits. The results showed no or very marginal effects and no moisture absorption for all substances except thinners.

TESTING CONTINUED

Substance	Test Number	Test Duration	Result
Water	AZT0191.08	96 hours	No substantial effects or changes
Petrol	AZT0188.08	96 hours	No substantial effects or changes
Hydrochloric acid	AZT0192.08	96 hours	No substantial effects or changes
Turpentine	AZT0190.08	96 hours	No substantial effects or changes
Methylated Spirits	AZT0189.08	96 hours	No substantial effects or changes
Thinners	AZT0193.08	96 hours	Sample split and lost rigidity

For further information on these test results or product samples please consult a POLYMER representative.

Polymer has also been tested by Wattyl for paint adhesion, an extract of the report indicates the strong performance of Polymer to painting.

"We have evaluated the adhesion of various waterbased and alkyd enamel based products over the samples of Polymer board. The coatings evaluated covered the following ranges:

- Solagard applied directly to Polymer board
- Solagard over i.d Primer Sealer Undercoat
- BriteGlo waterbased acrylic applied directly to Polymer board
- BriteGlo over i.d Primer Sealer Undercoat
- i.d Gloss Enamel directly to Polymer board
- i.d Gloss Enamel over i.d Multi Purpose Undercoat (oil based)

All systems had good adhesion to the board, although the use of i.d Primer Sealer Undercoat did improve the adhesion of the Solagard and BriteGlo waterbased acrylics.

The board also showed good resistance to a wide range of organic solvents"

Paul Bradley
WATTYL AUSTRALIA PTY LIMITED
Granosite Development Chemist
27 September 2007

GENERAL

Polymer - General	Standard	Unit	Polymer 4	Polymer 6	Co-extrusion
Density	GB/T6343-95	g/cm3	≤0.75	≤0.8	≤0.8
Impact Strength of Free Beam	GB/E1043-93	kJ/m2	≥10	≥12	≥15
Tensile Strength	GB/T1040-92	Mpa	≥10	≥10	≥15
Bending Strength	GB9341-88	Mpa	≥12	≥20	≥17
Elongation at Break	GB/E1040-92	%	≥10	≥10	≥15
Schauder Hardness D	GB2411-89	-	≥55	≥55	≥65
Softening Point	GB1633-89		≥70	≥70	≥73
Bending Elasticity Ratio	GB9341-88	Mpa	≥600	≥600	≥800
Heating Size Change Ratio	GB8811-88	%	±2.0	±2.0	±2.0
Water Absorbability	GB9341-88	%	≤1.0	≤1.0	≤1.0
Fire Retardant Ability	GB8624-1997	-	B1	B1	B1
Strength of Holding Screw	GB11718.9-89	N	≥800	≥800	≥800

TONE OF SURFACE WHITE

The tone of white for the standard board can vary between batches and is influenced by many factors, i.e. the pvc raw material, the percentage of CaCO₃, temperature, storage, formulation, machine run-out time etc.

CLEANING TREATMENT

POLYMER boards and sheets are easy and fast to clean with a clean and/or damp cloth. If necessary one of many common household cleaners such as glass cleaners can be used. The cleaning solution should be applied and immediately wiped dry. No cleaning solution should be left to stand on the board for an extended period.

Harsh cleaners with glycol ethers or ethanol type solvents and/or isopropyl alcohol soften the coating if left on for several minutes. Citrus cleaners, abrasive cleaners and solvents such as acetone, paint stripper and lacquer thinner are NOT recommended for cleaning.

EXPANDED RIGID PLASTIC SHEETS

Chemwatch Material Safety Data Sheet

Issue Date: 23-Dec-2008 CHEMWATCH 4692-87

NC317ECP Version No:2.0

Section 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: EXPANDED RIGID PLASTIC SHEETS

PRODUCT USE: Used according to manufacturer's directions.

Section 2 – HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE

NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. According to the Criteria of NOHSC, and the ADG Code.

POISONS SCHEDULE: None

RISK SAFETY: None under normal operating conditions. None under normal operating conditions.

Section 3 – COMPOSITION / INFORMATION ON INGREDIENTS

NAME CAS RN % Expanded PVC sheet with pigments and processing 100 additives immobilised in the polymer.

No hazardous ingredients present.

Section 4 – FIRST AID MEASURES

SWALLOWED: Not considered a normal route of entry.

- Immediately give a glass of water.
- First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

EYE: If this product comes in contact with eyes:

- Wash out immediately with water.
- If irritation continues, seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN: In case of burns:

- Immediately apply cold water to burn either by immersion or wrapping with saturated clean cloth.
- DO NOT remove or cut away clothing over burnt areas. DO NOT pull away clothing which has adhered to the skin

as this can cause further injury.

- DO NOT break blister or remove solidified material.
- Quickly cover wound with dressing or clean cloth to help prevent infection and to ease pain.
- For large burns, sheets, towels or pillow slips are ideal; leave holes for eyes, nose and mouth.
- DO NOT apply ointments, oils, butter, etc. to a burn under any circumstances.
- Water may be given in small quantities if the person is conscious.
- Alcohol is not to be given under any circumstances.
- Reassure.
- Treat for shock by keeping the person warm and in a lying position.
- Seek medical aid and advise medical personnel in advance of the cause and extent of the injury and the estimated time of arrival of the patient.

INHALED:

- If dust is inhaled, remove from contaminated area.
- Encourage patient to blow nose to ensure clear passage of breathing.
- If irritation or discomfort persists seek medical attention.

NOTES TO PHYSICIAN: Treat symptomatically.

Section 5 – FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA:

- Water spray or fog.
- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

FIRE FIGHTING:

- Use water delivered as a fine spray to control fire and cool adjacent area.
- Do not approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- Equipment should be thoroughly decontaminated after use.

FIRE/EXPLOSION HAZARD: Does not burn without an external flame.

Self-extinguishing, once the source of ignition is removed.

NOTE: Burns with intense heat. Produces melting, flowing, burning liquid and dense acrid black smoke.

Decomposes on heating and produces acrid and toxic fumes of: carbon monoxide (CO), carbon dioxide (CO₂), (hydrogen chloride.

FIRE INCOMPATIBILITY: None known.

HAZCHEM: None

Section 6 – ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES

MINOR SPILLS:

- Clean up all spills immediately.
- Secure load if safe to do so.
- Bundle/collect recoverable product.
- Collect remaining material in containers with covers for disposal.

MAJOR SPILLS:

- Clean up all spills immediately.
- Secure load if safe to do so.
- Bundle/collect recoverable product.
- Collect remaining material in containers with covers for disposal.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 – HANDLING AND STORAGE

PROCEDURE FOR HANDLING: Sharp edges may cause skin laceration.

SUITABLE CONTAINER: Not applicable.

STORAGE INCOMPATIBILITY: Keep dry.

STORAGE REQUIREMENTS: Store flat and in the shade.

Section 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

MATERIAL DATA: REL TWA: 10 mg/m³ nuisance dust

PERSONAL PROTECTION

EYE: Safety glasses with side shields. (if dust is generated)

HANDS/FEET: Cotton gloves.

OTHER:

- Overalls.
- Eyewash unit.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required. For further information consult site specific CHEMWATCH data (if available), or your Occupational Health and Safety Advisor.

ENGINEERING CONTROLS: Persons exposed to dust should wear an approved dust mask of the type used for nuisance dusts.

Section 9 – PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

White or coloured, odourless plastic sheet. Bulk density 500-700 g/cm³.

PHYSICAL PROPERTIES

Molecular Weight: Not Applicable Boiling Range (°C): Not Applicable

Melting Range (°C): 80 (softening temp.) Specific Gravity (water=1): Not Applicable

Solubility in water (g/L): Not Applicable pH (as supplied): Not Applicable

pH (1% solution): Not Applicable Vapour Pressure (kPa): Not Applicable

Volatile Component (%vol): Not Applicable Evaporation Rate: Not Applicable

Relative Vapour Density (air=1): Not Applicable Flash Point (°C): Not Applicable

Lower Explosive Limit (%): Not Applicable Upper Explosive Limit (%): Not Applicable

Autoignition Temp (°C): >450 Decomposition Temp (°C): Not Available

State: Manufactured Viscosity: Not Applicable

Section 10 – CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY: Product is considered stable and hazardous polymerisation will not occur.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 – TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED: Not normally a hazard due to the physical form of product. The material is a physical irritant to the gastrointestinal tract.

EYE: Not normally a hazard due to physical form of product. Generated dust may be discomforting.

SKIN: Not normally a hazard due to physical form of product.

INHALED: Not normally a hazard due to physical form of product. Generated dust may be discomforting.

- Hazard relates to dust released by sawing, cutting, sanding, trimming or other finishing operations.

CHRONIC HEALTH EFFECTS: Not applicable.

TOXICITY AND IRRITATION: unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances. Not applicable.

Section 12 – ECOLOGICAL INFORMATION

Harmless to the environment.

Not biodegradable.

Section 13 – DISPOSAL CONSIDERATIONS

Recycle wherever possible, otherwise dispose of in an authorised landfill.

Section 14 – TRANSPORTATION INFORMATION

HAZCHEM: None (ADG7)

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: UN, IATA, IMDG

Section 15 – REGULATORY INFORMATION

POISONS SCHEDULE: None REGULATIONS

Expanded Rigid Plastic Sheets (CAS: None):

No regulations applicable



MATERIAL SAFETY DATA CONT.

Section 16 – OTHER INFORMATION

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references. A list of reference resources used to assist the committee may be found at:

www.chemwatch.net/references

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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This is the end of the MSDS.

