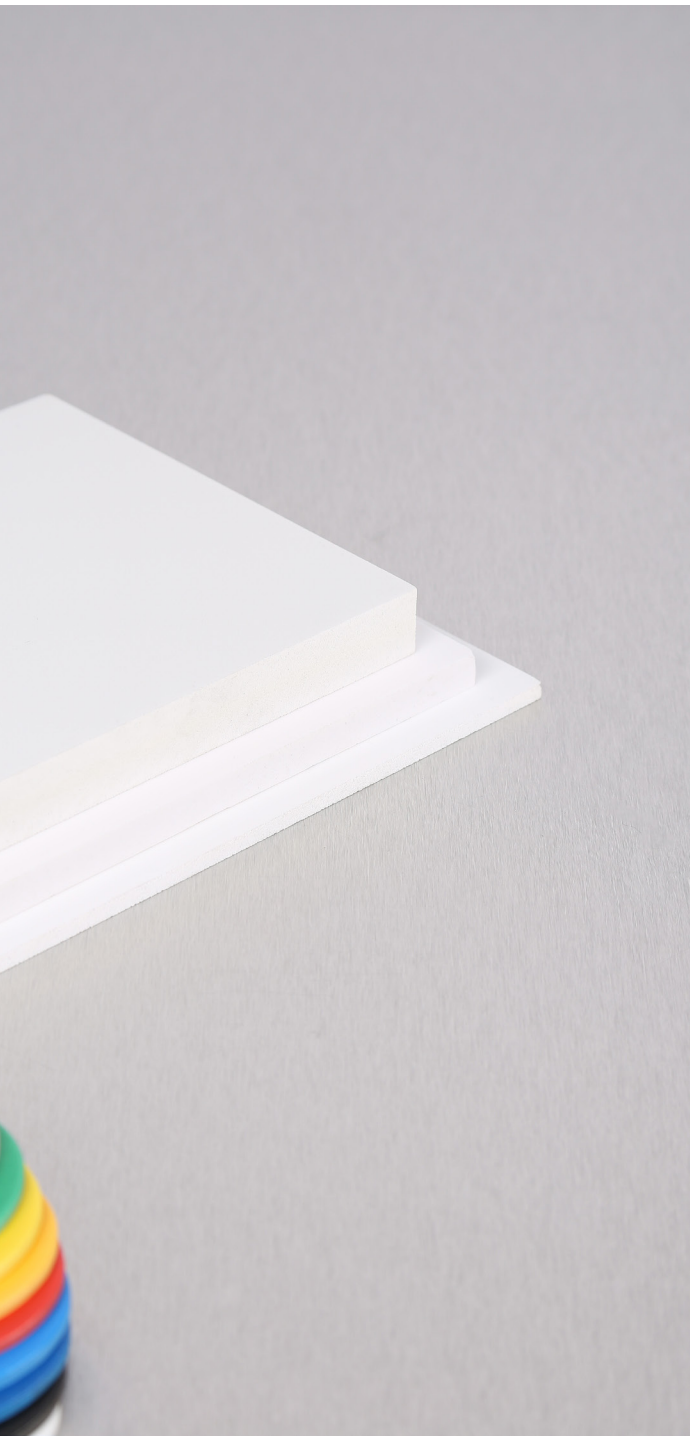
U-PVC | Premium Foam Sheet Extruded

White / black / blue / green / grey / red / yellow



Product information

Product full identity:

Free-foamed PVC

U-PVC Foam is rated self-extinguishing, very light weight (SG 0.55), durable and versatile. U-PVC Foam due to its surface structure is ideal for all print media; this product also boasts low sound and thermal conductivity.

Properties

» Light weight
» Low water absorption
» Indoor and outdoor use
» Excellend sound and heat isolation properties
» Self-extinghuising
» Smooth surface

Applications

» Exhibition boards and signs
» Interior decorations and wall cladding
» Displays
» Letter cut
» Screen printing
» Digital printing

This document contains

For any furthur information regarding food, fire and water certificates then please
contact the sales team on 01604 700 880

Technical Properties

Physical Properties	Test	Unit	Result
1. Specific gravity	ISO 1183	g/cm³	0.55
2. Water absorption	ISO 62	%	<1
3. Maximum service temp. Upper temp limit (no stronger mechanical stress involved)	-	°C	60
Lower temp limit	-	°C	0
Mechanical Properties	**Test**	**Unit**	**Result**
1. Tensile strength at yield	ISO 527	MPa	>12
2. Elongation at yield	ISO 527	%	-
3. Tensile strength at break	ISO 527	MPa	-
4. Elongation at break	ISO 527	%	15
5. Impact strength	ISO 179	kJ/m²	12
6. Notch impact strength	ISO 179	kJ/m²	-
7. Ball indentation / Rockwell hardness	ISO 2039-1	MPa	-
8. Shore-D	DIN 53505	-	>40
9. Flexural strength	ISO 178	MPa	-
10. Modulus of elasticity	ISO 527	MPa	>750
Thermal Properties	**Test Method**	**Unit**	**Result**
1. Vicat-softening point VST/B/50	ISO 306	°C	74
2. Heat deflection temperature HDT/B	ISO 75	°C	-
HDT/A	-	°C	-
3. Coefficient of linear thermal expansion	DIN 53752	$k^{-1}*10^{-4}$	0.75
4. Thermal conductivity at 20 °C	DIN 52612	W/(m*K)	0.08
Electrical Properties	**Test Method**	**Unit**	**Result**
1. Volume resistivity	VDE 0303	Ω x m	-
2. Surface resistivity	-	Ω	$>5 \times 10^{14}$
3. Dielectric constant at 1MHz	-	-	-
4. Dielectric loss factor at 1 MHz	DIN 53483	-	-
5. Dielectric strength	VDE 0303	kV/mm	13
6. Tracking resistance	IEC 60112	-	-
Additional Data	**Test Method**	**Unit**	**Result**
1. Bondability	-	-	-
2. Food compliance	FDA	-	-
3. Flammability	UL 94	-	V-0

All The above information is for guide purposes only. The data has been taken from standard test results provided by our manufacturers.

Key:

Yes	Limited	No data
+	o	-

Chemical Properties

Agent	Conc %	Working Temp	
		20°C	60°C
Acetic Acid	100		
Acetone	100		
Ammonia	Conc.		
Ammonium chloride			
Amyl Alcohol			
Benzene			
Bleaching Solution	12,5 Cl		
Boric Acid	100		
Brake Fluid			
Butyl Acetate			
Calcium Chloride			
Carbon disulphide	100		
Carbon Tetrachloride			
Chlorine, gas	100		
Chlorobenzene	100		
Chloroform			
Citric Acid	10		
Cresol			
Cyclohexanone	100		
Cyclohexene	100		
Diesel Fuel			
Diethylene oxide, THF			
Ethyl acetate	100		
Ethyl alcohol	96		
Ethylene Chloride	100		
Formic Acid	10		
Frost protection agent	Petrol		
Fuel, aromatic free			
Glycerine	100		
Glycol	100		
Heating oil			
Heptane	100		
Hydrochloric acid	conc.		

Agent	Conc %	Working Temp	
Hydrofloric acid	40		
Hydrogen peroxide	10		
Hydrogen Sulphide			
Isopropyl Alcohol	100		
Mercurochrome			
Methyl alcohol	100		
Methyl ethyl ketone	100		
Methylene chloride	100		
Nitric acid	50		
Nitrobenzine			
Oxalic Acid			
Ozone, gas	ca. 0,5 ppm		
Paraffin Oil	100		
Perchlorethylene			
Petroleum	100		
Petroleum, aromatic free	100		
Phenol, aqu	ca.9		
Phosphoric Acid	50		
Potassium hydroxide liquor	50		
Propyl alcohol			
Pyridine			
Silicone oil			
Sodium carbonate. aqu			
Sodium chloride, aqu			
Sodium Hydroxide liquor	15		
Sodium Hydroxide liquor	60		
Sodium hydrogen sulphite			
Sodium nitrate, aqu			
Sodium thiosulfate			
Sulphuric Acid	96		
Tetrahydrofurance	100		
Toluene	100		
Trichlorethylene	100		
Xylene			

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Key:

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Safety Properties

Substance / preparation and company detail

Product Name : Polyvinyl Chloride foam
Material Name : Polyvinyl Chloride Homopolymer
CAS Number : 9002-86-2
Material Synonyms : PVC
NFPA Ratings : Health=1, Fire=0, Reactivity=0
ABG Plastics
10 Sketty Close,
Brackmills,
Northampton,
NN4 7PL
01604 700 880

Composition / indications to components

Tin stabilized PVC sheets, 2.5% by weight metal-tin or tin-mercaptide based stabilizer.
Pigments and additives used to enhance specific properties are encapsulated in the polymer resin matrix.
No solvents. No plasticizers. No cadmium, lead, or other heavy metals used.

Possible dangers

No particular hazards known.
Health Hazard Data
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
Effects of a Repeated Overexposure: None currently known
Medical Conditions Aggravated by Overexposure: None currently known
Other Effects of Overexposure: None currently known

First-aid measures

In general handling the material will not cause accidents.
Inhalation
If exposed to combustion fumes in high concentration - bring victim to fresh air. Medical attention needed.
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. Medical attention needed.
Eye Contact
Like any foreign body, can cause mechanical irritation. Consult physician.

Safety Properties

First-fighting measures

Extinguishing Media
Water spray or CO2. CO2 is less recommended due to lack of cooling capacity.
Special Fire Fighting Procedures
Personnel without suitable respiratory apparatus should leave the affected area to prevent exposure to toxic or combustible gases.
Special Protective Equipment for Fire-fighters
Positive-pressure self-contained breathing apparatus, protective closing, gas mask approved for acid vapours.
Unusual Fire and Explosion Hazards
PVC is a self extinguishing fire retardant material that being exposed to open fire and high temperatures decomposes emitting large quantities of HCl, which tends to extinguish the flames.
It does not continue to burn after ignition without an external fire source.
HCl has a strong acidic odour that causes sensory alert at very low concentrations. HCl odour threshold = 0.77 ppm.
Exposure to high concentrations of HCl will cause irritation of the respiratory passages, at very high concentrations may cause burns to mucous membranes.
Soot emitted when PVC is forced to burn may obscure visibility.
No special precautions and no personal protective equipment needed.

Measures in case of unintended release

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

Handing and storage

General handling precautions
Avoid contact with eyes.
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.
Static electricity discharge sparks possible during handling. Avoid contact or vicinity of flammable materials.
When opening truck or railcar for unloading, ventilate before entering.
Storage
Store in a cool shady area. No special technical protective measures required.

Limitation of exposition

Respiratory protection: No special protection needed
Hand protection/protection gloves: No special protection needed
Eye protection: No special protection needed
Other protective equipment: No special protection needed

Physical and chemical characteristics

Appearance: Flat sheets
Physical State: Solid
Colour: White or coloured
Odour: None
Density: 0,55- 0,70 gr/cm3
Heat Deflection: 62-65°C
Boiling Point, 760 Hg: Not relevant
Viscosity: Not relevant
Solubility in Water: <0.1g/100mL at 23°C
pH Value: Not relevant
Flammability Limit: None
Explosion Limits: None
Evaporation Rate: Not relevant
Percent Volatiles: Not relevant

Safety Properties

Stability and reactivity

Stability
Stable.
Conditions to avoid
Excessive heat, or open flame. Temperature above 150 °C will decompose raw polymer resin and liberate HCl.
Incompatible materials
Oxidizing agents or strong mineral acids can cause reaction.
Thermal decomposition
Begins above 150°C caused by fire, overheating during improper processing. Fumes damaging to health may be released.
Hazardous decomposition products
Burning can produce the following combustion products:
Carbon monoxide (CO) - is highly toxic if inhaled;
Carbon dioxide (CO2) - in sufficient concentrations can act as an asphyxiant;
Hydrogen chloride (HCl) - in high concentrations cause irritation of the respiratory passages, at very high concentrations may cause burns to mucous membranes.
Reactivity
Hazardous polymerization: Will not occur
Hazardous reactions: None

Toxic information

PVC materials have a very low acute toxicity. In rats an acute LD50 > 10 gr/kg of body weight. PNEUMOCONIOSIS has been described from inhalation of combustion products (effects of overexposure).
Industrial hygiene studies have shown that under normal and expected conditions of use of PVC materials, exposures are well below applicable limits.
Acute Toxicological Information
Acute oral toxicity: None
Acute percutaneous toxicity: None
Acute vapour exposure: None
Primary skin irritation: No irritation
Eye irritation: No irritation
Sensitization: No information available
Chronic effects: Unknown
Carcinogenicity: None
Other Toxicological Information
No known toxicological effects with normal use. For heating see section 10.
Additional Information
No additional toxicity information currently available.

Ecological information

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.
Mobility: No information currently available
Persistence and biodegradability: Biodegradation period - tens of years.
Bio accumulative potential: No information currently available.
Environmental Risks
No hazard expectation to terrestrial or aquatic flora and fauna.
Eco-toxicity: LD50 (rats) > 10 gr/kg
: IC50 (bacterial inhibition) - no data available
Aquatic toxicity: LC50 (daphnia magna) - no data available
: LC50 (fathead minnow – fish) - no data available
Other information
All available ecological data have been taken into account for the development of the hazard and precautionary information contained in this safety data.

Safety Properties

Waste-disposal information

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.
High temperature incineration under controlled conditions due to formation of HCl.
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 stabilizers.
It is the user's responsibility to dispose of all wastes in accordance with all national and local regulations at properly permitted or authorized facilities.

Transport information

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.

Regulations

With regards to dust formed as a consequence of mechanical treatments, the appropriate regulations value limits for fine dust must be observed: MAC value (fine dust) – 5mg/m3.
OSHA Hazard Communication Classification for dusts and combustion fumes: Irritant, Skin Hazard, and Lung Hazard.
SARA Title III Classification for dusts and combustion fumes: Acute Health Hazard; Chronic Health Hazard.
WHMIS Classification: Non-hazardous

Further information

The information is based on our current knowledge. They are meant to describe our products in respect to safety requirements. They do not represent any guarantee of the described product in the sense of the legal guarantee regulations.