



C-PVC Rod Extruded

Light grey (RAL 9310)

C-PVC has a high rigidity, strength and hardness at increased temperatures (up to 95°C) compared to U-PVC. C-PVC retains its self extinguishing properties as well as excellent chemical resistance and high impact strength.

product information

Name:	Chlorinated Polyvinyl Chloride
Other names:	GEHR PVC-C
Abbreviation:	C-PVC

key characteristics

- » Higher heat resistance than UPVC
- » Excellent chemical resistance
- » Excellent Flammability Properties
- » Corrosion Resistant
- » More ductile than UPVC
- » High rigidity

applications

- » Chemical Tank and Equipment
- » Construction
- » Ventilation systems

this document contains

- » Technical Datasheet (Page 1)
- » Chemical Datasheet (Page 2)
- » Safety Datasheet (Pages 3-5)

For any further information regarding food, fire and water certificates then please contact the sales team on 0116 232 1010

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C-PVC Rod Extruded Light Grey (RAL 9310)

technical properties

Physical Properties	Test	Unit	Result
1. Specific gravity	ISO 1183	g/cm ³	1.52
2. Water absorption	ISO 62	%	0.5
3. Maximum service temp. Upper temp limit (no stronger mechanical stress involved)	UL 7466	°C	85
Lower temp limit	-	°C	-15

Mechanical Properties	Test	Unit	Result
1. Tensile strength at yield	ISO 527	MPa	49
2. Elongation at yield	ISO 527	%	5
3. Tensile strength at break	ISO 527	MPa	80
4. Elongation at break	ISO 527	%	15
5. Impact strength	ISO 179	kJ/m ²	no break
6. Notch impact strength	ISO 179	kJ/m ²	27
7. Ball indentation / Rockwell hardness	ISO 2039	MPa	150
8. Shore-D	ISO 868	-	90
9. Flexural strength	ISO 178	MPa	76
10. Modulus of elasticity	ISO 527	MPa	2570

Thermal Properties	Test Method	Unit	Result
1. Vicat-softening point VST/B/50	ISO 306	°C	114
2. Heat deflection temperature HDT/B	ISO 75	°C	-
HDT/A	ISO 75	°C	105
3. Coefficient of linear thermal expansion	ISO 11359	k ⁻¹ *10 ⁻⁴	0.7
4. Thermal conductivity at 20 °C	ISO 2200-4	W/(m*K)	0.14

Electrical Properties	Test Method	Unit	Result
1. Volume resistivity	IEC 60093	Ω x cm	>10 ¹³
2. Surface resistivity	IEC 60093	W	>10 ¹³
3. Dielectric constant at 1MHz	IEC 60250	-	3
4. Dielectric loss factor at 1 MHz	IEC 60250	-	0.01
5. Dielectric strength	IEC 60243-1	kV/mm	40
6. Tracking resistance	IEC 60112	V	KB 600

Additional Data	Test Method	Unit	Result
1. Bondability	-	-	+
2. Food compliance	FDA	-	-
3. Flammability	UL 94	-	V-0

Key:

Yes	Limited	No or no data
+	o	-

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

C-PVC Rod Extruded Light Grey (RAL 9310)

chemical properties

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

Agent	Conc %	Working Temp	
		20°C	60°C
Hydrofluoric acid	40	+	o
Hydrogen peroxide	10	+	+
Hydrogen Sulphide		+	+
Isopropyl Alcohol	100	+	+
Mercurochrome		o	-
Methyl alcohol	100	+	+/o
Methyl ethyl ketone	100	-	-
Methylene chloride	100	-	-
Nitric acid	50	+	+
Nitrobenzine		-	+
Oxalic Acid		+	+
Ozone, gas	ca. 0,5 ppm	+	+
Paraffin Oil	100	+	o
Perchlorethylene		-	-
Petroleum	100	+	+
Petroleum, aromatic free	100	+	+
Phenol, aqu	ca.9	o	-
Phosphoric Acid	50	+	+
Potassium hydroxide liquor	50	+	+
Propyl alcohol		+	o
Pyridine		-	-
Silicone oil		+	+
Sodium carbonate. aqu		+	+
Sodium chloride, aqu		+	+
Sodium Hydroxide liquor	15	o	o
Sodium Hydroxide liquor	60	o	o
Sodium hydrogen sulphite		+	+
Sodium nitrate, aqu		+	+
Sodium thiosulfate		+	+
Sulphuric Acid	96	+	+/o
Tetrahydrofuran	100	-	-
Toluene	100	-	-
Trichlorethylene	100	-	-
Xylene		-	-

Key:

Resistant	Partly Resistant	Non-Resistant
+	o	-

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U-PVC Sheet Extruded Grey (RAL 7011)



safety properties

Substance/preparation and Company detail

PVC-C of semi-finished material

Oadby Plastics
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Braunstone Frith Industrial Estate,
Leicester,
LE3 1UA
0116 232 1010

Composition / Indications to components

Polyvinyl chloride hard and processing auxiliary materials and filling materials
CAS No.: 9002-86-2

Possible dangers

PVC-U is not dangerous material in the sense of the dangerous material regulation and/or pursuant to the EEC guideline in the present valid support.

First-aid measures

No special measures necessarily.
Notes for the physician: none.

Fire-fighting measures

In general handling the material will not cause accidents.

Inhalation: Non-relevant

If exposed to combustion fumes in high concentration - bring victim to fresh air and seek medical advice.

Ingestion: Non-relevant

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 and seek medical advice.

Skin Absorption: Non-relevant

Eye Contact: Like any foreign object can cause irritation to the eye, Wash thoroughly with clean water and if symptoms persist, seek medical advice.

Measures in case of unintended release

Extinguisher type

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 clothing, 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.

Handling and storage

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

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safety properties

Limitation of exposition

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.

Storage

Store in a cool shady area. No special technical protective measures required.

Physical and chemical characteristics

Personal Protection

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

Stability and reactivity

Appearance: Flat or corrugated plastic sheets

Physical State: Solid

Colour: Clear or coloured

Odour: None

Density: 1.35-1.45 gr/cm³

Heat Deflection: 62-65°C

Boiling Point, 760 Hg: Not relevant

Viscosity: Not relevant

Solubility in Water: <0.1g/100mL at 23oC

pH Value: Not relevant

Flash Point: 391°C ASTM D 1929

Auto ignition Temp.: 454°C ASTM D 1921

Flammability Limit: None

Explosion Limits: None

Evaporation Rate: Not relevant

Percent Volatiles: Not relevant

Toxic information

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

safety properties

Ecological 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

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.

Waste-disposal 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.

Transport 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

Regulations

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.

Further information

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