



## U-PVC Hexagonal Bar

Grey (RAL 7011)

U-PVC is rated self-extinguishing, has excellent chemical resistance with high mechanical and tensile strength, together with a high degree of stability. U-PVC is easily weldable but has a limited operating temperature range of 0°C to +60°C.

### *product information*

Name:	Unplasticised Polyvinyl Chloride
Other names:	GEHR PVC-U
Abbreviation:	U-PVC

### *key characteristics*

- » Machines well to a polished finish
- » Solvent Cemented & Welded
- » Relatively less expensive than other plastics
- » Strong and stiff
- » Flame retardant grades available
- » Chemical resistant
- » Self extinguishing
- » UV stabilised grades available
- » Drinking water approved
- » Food compliant grades available

### *applications*

- » Corrosive fluid handling
- » Valves
- » Tanks
- » Water applications
- » Air conditioning & ventilation systems
- » Threaded bolts

### *this document contains*

- » Technical Datasheet (Page 1)
- » Chemical Datasheet (Page 2)
- » Safety Datasheet (Pages 3-4)

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

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### technical properties

Physical Properties	Test	Unit	Result
1. Specific gravity	ISO 1183	g/cm <sup>3</sup>	1.45
2. Water absorption in saturation	ISO 62	%	<0.2
3. Maximum service temp. Upper temp limit (no stronger mechanical stress involved)	-	°C	60
Lower temp limit	-	°C	-15

Mechanical Properties	Test	Unit	Result
1. Tensile strength at yield	ISO 527	MPa	-
2. Elongation at yield	ISO 527	%	3
3. Tensile strength at break	ISO 527	MPa	30
4. Elongation at break	ISO 527	%	>10
5. Impact strength	ISO 179	kJ/m <sup>2</sup>	no break
6. Notch impact strength	ISO 179	kJ/m <sup>2</sup>	3
7. Ball indentation / Rockwell hardness	ISO 2039-1	MPa	-
8. Shore-D	DIN 53505	-	80 - 82
9. Flexural strength	ISO 178	MPa	90
10. Modulus of elasticity	ISO 527	MPa	-

Thermal Properties	Test Method	Unit	Result
1. Vicat-softening point VST/B/50	ISO 306	°C	75
2. Heat deflection temperature 1.8 MPa	ISO 75	°C	-
HDT/A	-	°C	-
3. Coefficient of linear thermal expansion at 23°C	ASTMD 696	µm/ (m * °K)	80
4. Thermal conductivity at 23°C	DIN 52612	W / (K *m)	0.14

Electrical Properties	Test Method	Unit	Result
1. Volume resistivity	IEC 6093	Ω x m	>10 <sup>15</sup>
2. Surface resistivity	IEC 6094	Ω	>10 <sup>13</sup>
3. Dielectric constant at 1MHz	IEC 60250	abs	3
4. Dielectric loss factor at 1 MHz	IEC 60250	tan	0.01
5. Dielectric strength	IEC 60243	kV/mm	20 - 40
6. Tracking resistance	IEC 60112	-	-

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.

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## 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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### *safety properties*

#### Substance/preparation and Company detail

Polyvinylchloride

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

#### Composition / Indications to components

Chemical characteristics: polymer of vinyl chloride  
CAS-number: not necessary

#### Possible dangers

Unknown

#### First-aid measures

General comment: medical aid is not necessary  
First-aid measures: none  
Routes of exposure: none  
Symptoms / effects: none

#### Fire-fighting measures

In case of fire please use gas mask and breathing equipment in depending of circulating air. Fire residues must be disposed of according to the local instructions. Suitable fire-fighting appliance: water fog, foam, fire fighting powder, carbon dioxide  
Hazard warning notice: not applicable

#### Measures in case of unintended release

Person-related measures: none  
Environmental protection measures: not applicable  
Cleaning equipment: not applicable  
Unsuitable cleaning products: not applicable

#### Handling and storage

Handling: no special regulations must be observed  
Storage: unlimited good storage property

#### Limitation of exposition

Special design of techn. processing facilities: not required  
Tolerance levels: none  
Exposure measurement procedures: none  
Respiratory protection: not required  
Eye protection: not required  
Body protection: not required

#### Physical and chemical characteristics

##### **Phenotype**

Phenotype / form: semi-finished product, solid state  
Colour: dark grey  
Smell: not applicable

##### **Change of state**

Flash point: not applicable

##### **Other remarks**

Density: 1.44 g/cm<sup>3</sup>

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### *safety properties*

#### Stability and reactivity

Thermal decomposition: above appr. 200°C

Dangerous decomposition products:

Besides hydrochloric acid also carbon dioxide and water will develop during the burning process. In case of incomplete burning also carbon monoxide and traces of phosgene may arise.

Use of stabilisers: none

Exothermic reactions: none

Notices regarding state of aggregation: none

Conditions to be avoided: none

Substances/media to be avoided: none

#### Toxic information

During several years of usage no effects being harmful for the health were observed.

#### Ecological information

No biodegradation, no solubility in water, no effects being harmful to the environment must be expected.

Mobility: not applicable

Accumulation: not applicable

Eco-toxicity: not applicable

#### Waste-disposal information

Can be recycled or can be disposed of together with household rubbish (acc. To local regulations).

Waste key for the unused product: EAK-Code 120 105

Waste name: waste of polyvinylchloride

#### Transport information

No dangerous product in respect to / according to transport regulations

Notice/symbol transport containers: none

Special marking for containers: none

#### Regulations

Marking according to GefStoffV/EG: no obligation for marking

Water danger class: class 0 (self classification)

Domestic requirements to be observed: none

#### 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.