



## Product information

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### Product full identity:

Unplasticised Polyvinyl Chloride

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.

### Properties

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- » 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

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

### This document contains

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- » Technical Datasheet (Page 2)
- » Chemical Datasheet (Page 3)
- » Safety Datasheet (Pages 4-5)

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

## Technical Properties

| Physical Properties   | Test        | Unit              | Result                 |
|---|-------------|-------------------|------------------------|
| 1. Specific gravity   | ISO 1183    | g/cm <sup>3</sup> | 1.44                   |
| 2. Maximum service temp. Upper temp limit<br>(no stronger mechanical stress involved) | -           | °C                | 60                     |
| 3. Lower temp limit   | -           | °C                | 0                      |
| Mechanical Properties   | Test        | Unit              | Result                 |
| 1. Elongation at yield  | ISO 527     | %                 | 4                      |
| 2. Yield Stress   | ISO 527     | MPa               | 58                     |
| 3. Impact strength  | ISO 179     | kJ/m <sup>2</sup> | -                      |
| 4. Notch impact strength  | ISO 179     | kJ/m <sup>2</sup> | 4                      |
| 5. Ball indentation   | ISO 2039-1  | MPa               | 82                     |
| 6. Shore-D  | ISO 868     | -                 | -                      |
| 7. Modulus of elasticity  | ISO 527     | MPa               | 3300                   |
| Thermal Properties  | Test Method | Unit              | Result                 |
| 1. Coefficient of linear thermal expansion  | DIN 53752   | k <sup>-1</sup>   | 0.8 x 10 <sup>-4</sup> |
| 2. Thermal conductivity   | DIN 52612   | W / (m*K)         | 0.159                  |
| Electrical Properties   | Test Method | Unit              | Result                 |
| 1. Surface resistivity  | IEC 6093    | Ω                 | >10 <sup>13</sup>      |
| 2. Dielectric strength  | IEC 60243-1 | kV/mm             | 39                     |
| 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 |
|-----|---------|---------|
| +   | 0       | -       |

## Chemical Properties

| Agent                  | Conc %  | Working Temp |      | Agent                      | Conc %      | Working | Temp |
|------------------------|---------|--------------|------|----------------------------|-------------|---------|------|
|                        |         | 20°C         | 60°C |                            |             |         |      |
| Acetic Acid            | 100     | +            | -    | Hydrofluoric acid          | 40          | +       | o    |
| Acetone                | 100     | -            | -    | Hydrogen peroxide          | 10          | +       | +    |
| Ammonia                | Conc.   | +            | o    | Hydrogen Sulphide          |             | +       | +    |
| Ammonium chloride      |         | +            | +    | Isopropyl Alcohol          | 100         | +       | +    |
| Amyl Alcohol           |         | +            | o    | Mercurochrome              |             | o       | -    |
| Benzene                |         | -            | -    | Methyl alcohol             | 100         | +       | +/o  |
| Bleaching Solution     | 12,5 Cl | +            | -    | Methyl ethyl ketone        | 100         | -       | -    |
| Boric Acid             | 100     | +            | o    | Methylene chloride         | 100         | -       | -    |
| Brake Fluid            |         | +            | +    | Nitric acid                | 50          | +       | +    |
| Butyl Acetate          |         | -            | -    | Nitrobenzine               |             | -       | +    |
| Calcium Chloride       |         | +            | +    | Oxalic Acid                |             | +       | +    |
| Carbon disulphide      | 100     | -            | -    | Ozone, gas                 | ca. 0,5 ppm | +       | +    |
| Carbon Tetrachloride   |         | -            | -    | Paraffin Oil               | 100         | +       | o    |
| Chlorine, gas          | 100     | o            | -    | Perchlroethylene           |             | -       | -    |
| Chlorobenzene          | 100     | -            | -    | Petroleum                  | 100         | +       | +    |
| Chloroform             |         | -            | -    | Petroleum, aromatic free   | 100         | +       | +    |
| Citric Acid            | 10      | +            | -    | Phenol, aqu                | ca.9        | o       | -    |
| Cresol                 |         | -            | -    | Phosphoric Acid            | 50          | +       | +    |
| Cyclohexanone          | 100     | -            | -    | Potassium hydroxide liquor | 50          | +       | +    |
| Cyclohexene            | 100     | +            | o    | Propyl alcohol             |             | +       | o    |
| Diesel Fuel            |         | +            | o    | Pyridine                   |             | -       | -    |
| Diethylene oxide, THF  |         | -            | -    | Silicone oil               |             | +       | +    |
| Ethyl acetate          | 100     | -            | -    | Sodium carbonate. aqu      |             | +       | +    |
| Ethyl alcohol          | 96      | +            | o    | Sodium chloride, aqu       |             | +       | +    |
| Ethylene Chloride      | 100     | -            | -    | Sodium Hydroxide liquor    | 15          | o       | o    |
| Formic Acid            | 10      | +            | o    | Sodium Hydroxide liquor    | 60          | o       | o    |
| Frost protection agent | Petrol  | +            | +    | Sodium hydrogen sulphite   |             | +       | +    |
| Fuel, aromatic free    |         | +            | +    | Sodium nitrate, aqu        |             | +       | +    |
| Glycerine              | 100     | +            | +    | Sodium thiosulfate         |             | +       | +    |
| Glycol                 | 100     | +            | +    | Sulphuric Acid             | 96          | +       | +/o  |
| Heating oil            |         | +            | +    | Tetrahydrofurance          | 100         | -       | -    |
| Heptane                | 100     | +            | +    | Toluene                    | 100         | -       | -    |
| Hydrochloric acid      | conc.   | +            | +    | Trichlorethylene           | 100         | -       | -    |
|                        |         |              |      | Xylene                     |             | -       | -    |

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### Key:

| Yes | Limited | No data |
|-----|---------|---------|
| +   | o       | -       |

## 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

### First-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

### Handing 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>

## 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.