

## TROVIDUR

Grey Rigid PVC

*TROVIDUR EN is the name for extruded sheets made from rigid PVC which contains no plasticizers or fillers.*

*It conforms to the technical supply conditions of DIN 16927 for PVC-U.*

*TROVIDUR EN conforms to the requirements of ASTM-D 1784, class 12464-B.*

## Characteristic properties of TROVIDUR EN are:

### High rigidity and strength in comparison with other thermoplastics

- TROVIDUR EN fulfils the tensile creep strength requirements in a similar way to PVC-U pipes in conformity with DIN 8061. The creep moduli are higher than those specified in DVS 2205 Part 1.

### Very good electrical insulation properties

- TROVIDUR EN fulfils the requirements for insulating protective sheets in conformity with VDE 0681 Part 8 for systems in conformity with VDE 0101.

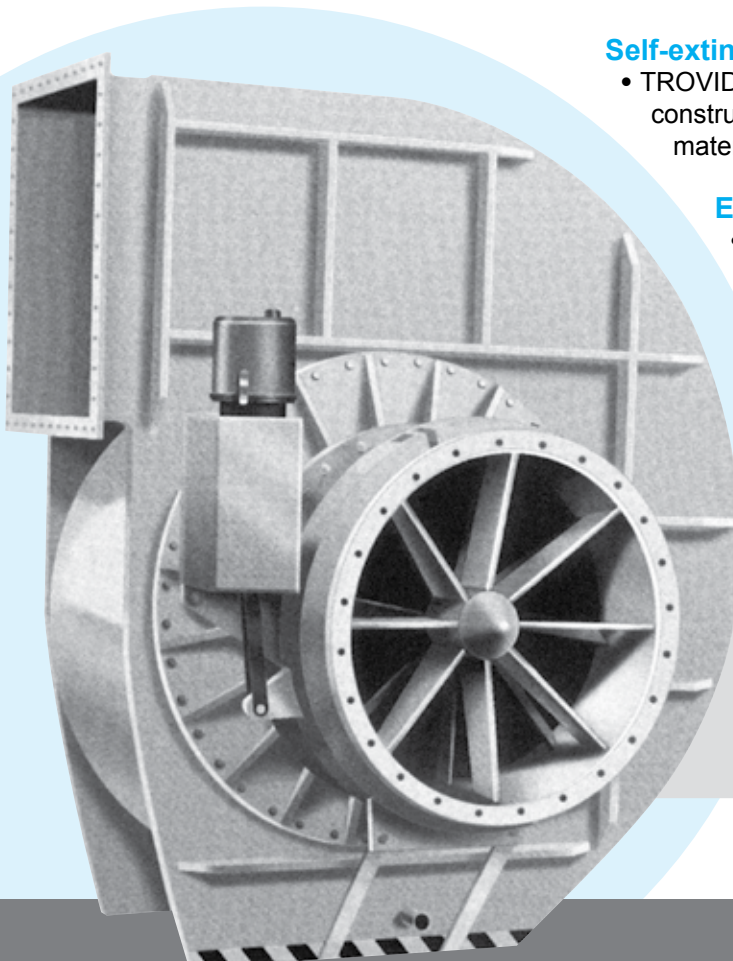
### High resistance to acids, lyes and salt solutions

- TROVIDUR EN's high resistance to chemical attack is comparable with that of DIN 8061.
- TROVIDUR EN is certified for use as an inner for composites for use with large number of water polluting liquids in accordance with the Water Resources Policy Act (Wasserhaushaltsgesetz) of the Deutsche Institut für Bautechnik (DIBt).

### Thermoplastic containers, apparatus, exposure to chlorine

Containers, Tanks, Special Constructions requirements:

- **Materials properties and weld strength in conformity with DVS 2205 Part 1**
- **High chemical resistance**



### Self-extinguishing when flame is withdrawn

- TROVIDUR EN has passed almost all German fire tests for the construction sector. The test certificates are listed in the table of material properties.

### Easily processable

- TROVIDUR EN can be welded by means of conventional welding methods. It fulfils the requirements of DVS 2203, Part 1.
- TROVIDUR EN can be bonded with solvent cements, two-pack adhesives and contact adhesives in accordance with the specifications of DVS 2204.
- TROVIDUR EN can be formed by the known forming methods in accordance with the specifications of VDI 2008/1 and 2 by bending, drawing or stretching.

### Industrial exhaust air technology

Ducts, Gas Scrubbers, Ventilators, Filters requirements:

- **Dimensional stability**
- **Flame resistance**

# MATERIAL PROPERTIES

	PROPERTY AT 23°C	UNIT	TEST METHOD	TROVIDUR EN EC (PVC-U) PVC-NI	TROVIDUR ET (glass-clear) (PVC-U) PVC-NI	
1	Density	g/cm <sup>3</sup>	DIN 53479/ISO 1183	= 1,45	= 1,38	
2	Yield stress	N/mm <sup>2</sup>	DIN 53455/ISO 527	= 55	≥70	
3	Elongation at break	%	Testing speed: 50 mm/min Test piece: 3	= 20	≥10	
4	Impact strength	kJ/m <sup>2</sup>	DIN 53453/ISO 179 Small standard test piece	no break at 0°C	no break at 23°C	
5	Notched impact strength (Charpy)	kJ/m <sup>2</sup>	DIN 53453/ISO 179 Small standard test piece	≥4 to 23°C	≥2 to 23°C	
6	Ball indentation hardness H 358/30	N/mm <sup>2</sup>	DIN 53456/ISO 2039 Applied load 358 N	= 120	= 130	
7	Modulus of elasticity	N/mm <sup>2</sup>	DIN 53457 Tensile test	≥3100	≥3200	
8	Flexural creep modulus for PVC = 5 N/mm <sup>2</sup>	N/mm <sup>2</sup>	Stress duration 1 year	20°C	1800	
				40°C	1400	
				60°C	600	
				80°C	–	–
9	Creep strength measured on pipes	N/mm <sup>2</sup>	Stress duration 10 years	20°C	28	
				40°C	15	
				60°C	6,8	
				80°C	–	–
10	Vicat softening point	°C	DIN 53460, method B 50 ISO 306	≥80	≥67	
11	Heat distortion temperature	°C	DIN 53461 } ISO R 75 }	Method A	≈75	≈59
				Method B	≈82	≈62
12	Coefficient of linear expansion	K <sup>-1</sup>	Measured between 20 and 60°C	≈70 · 10 <sup>-6</sup>	≈70 · 10 <sup>-6</sup>	
13	Volume resistivity	□ · cm	DIN 53482	> 10 <sup>15</sup>	>10 <sup>15</sup>	
14	Surface resistance	□	DIN 53482	> 10 <sup>13</sup>	> 10 <sup>13</sup>	
15	Hot gas welding with round nozzle	°C	Temperature measurement in conformity with DVS 2208/2; Quantity of air approx. 50 l/min	340 ± 10	340 ± 10	
	with high speed nozzle	°C		365 ± 10	365 ± 10	
16	Heated tool welding	°C	Temperature ± 10°C Preheating pressure Joining pressure	210 to 230	210 to 230	
		N/cm <sup>2</sup>		5	5	
		N/cm <sup>2</sup>		60	40	
17	Thermoforming temperature	°C	–	120 to 150	120 to 150	
	Hot-gas heating Infrared radiation heating	°C	–	170 to 180	170 to 180	
18	Bonding with solvent cements		DVS 2204 Page 1	suitable	suitable	
19	Non-toxicity	–	BGA recommendations	does not correspond	does not correspond	
20	Fire behaviour	Construction material class Check symbol	DIN 4102, part 1 B 1 = flame resistant B 2 = normally flammable	B 1 PA-111 2.548	B 1 PA-111 2.1591	
21	Weathering resistance		Guiding values	good	satisfactory	
22	Working temperature range	°C	Guiding values	-15 to 60	-10 to 55	

# DELIVERY PROGRAMME

## ROD STOCK

6, 8, 10, 12, 16, 20, 25, 30, 35, 40, 45, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150, 180, 200, 225, 250mm Diam.

Available on request 280, 300, 350, 400, 500.  
Standard 2 metre  
Colour RAL 7011 Dark grey

## SHEET STOCK

Standard Sheet Size 2440mm x 1220mm  
Standard Sheet Thickness 3, 4.5, 6, 10, 12, 15, 20, 25mm  
Colour RAL 7001 FM Light Grey

Standard Sheet Size 2000mm x 1000mm  
Standard Sheet Thickness 30, 40, 50mm  
Colour RAL 7011 Dark Grey

## WELDING ROD

3mm, 4mm Single Round – 5.7mm Triple Core  
Standard (approx) 3kg Coils

## TROVIDUR PVC Sheet Materials are also available in:

Trovidur EC White UV Stabilized  
Trovidur ET Clear UV Stabilized

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