

Material key data: TPE
Thermoplastic Elastomer

Blueglobe Application Seal
TPE Thermoplastic Elastomer

TPE Thermoplastic Elastomers combine the special highly elastic properties of elastomers with the processing potential of thermoplastics. They are multi-purpose materials suited to a wide range of applications.

The special TPE used by PFLITSCH has been optimised specially for use in cable screw connections.

- good abrasion-resistance
- high tensile strength
- UV-resistant
- outstanding ozone- and weather-resistance
- range of uses from -40 °C to +130 °C
- good chemical resistance to aqueous fluids, oils and short-chain hydrocarbons
- halogen-free
- plasticizer-free, in particular phthalate-free
- UL 94 HB
- RoHS, WEEE-conformant
- low

Resistance to:

- alcohols (e.g. ethanol, propanol)
- aqueous acid solutions
- short-chain hydrocarbons
- oils
- see page 2, further information on request -

Severe corrosion/severe swelling with:

- cyclic alkanes
- servo-steering fluids

TPE has a high resistance to environmental conditions and high chemical resistance to many media. This unique combination of outstanding resistance to environmental conditions and resistance to fluids results in an ideal thermoplastic rubber for a wide range of applications.

PFLITSCH Application Forms:

Product group: bg50./bg 60.

Technische Werte:

Density:	DIN 53 479	1,18g/cm ³
Hardness:	ASTM D2240	Shore 75 A
Ultimate tensile strength:	DIN 53 504	7,0 N/mm ²
Tension set:	ASTM D-412	10 %
Elongation at tear:	DIN 53 504	400 %
Tear propagation strength:	DIN 53 504	26 N/mm
Modulus		
100 % elongation	DIN 53 504	3.3 N/mm ²
200 % elongation	DIN 53 504	4.9 N/mm ²
Brittle point		-60 °C
Flame protection		HB
UL 94		
Thermal value		26,5 MJ / kg

Use in the following fields:

- two-component injection moulding: hard-soft combination
- conduits
- cable insulating material
- sections
- medical goods
- automotive industry
- electrical industry: cable sheathing
- engineering industry
- consumer goods industry

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Suitability for use - TPE

Chemical	Property	Chemikalie	Eigenschaft
Aero Shell Fluid 4	o	Methylethylketone	+
ASTM No. 1 oil	+	Methyl alcohol	+
ASTM No. 2 oil	o	Sodium hydroxide solution 20 %	+
ASTM No. 3 oil	-	Nitroethane	+
Ethyl alcohol	+	Oils for automatic gearboxes	-
2-ethyl hexanol	+	Oils	+
Bases	+	Ozone-resistance	+
Brake fluid	+	n-propyl alcohol	+
Brombenzol	o	Pyridine	+
n-butyl alcohol	+	Reference fuel A	
n-butyl acetate	+	(isooctane)	+
Cyclohexane	o	Reference fuel B	
Dekalin	-	(isooctane/toluene 70/30)	o
Diethyl ether	+	Reference fuel C	
Dimethylformamides	+	(isooctane/toluene 50/50)	o
Dimethylphthalates	+	Hydrochloric acid	+
Acetic acids	+	Salt solution 15 %	+
Antifreeze compounds	+	Aero Shell Fluid 4	o
n-hexane	+	UV-resistance	+
IRM oils	-	Water	+
Lithium lubricating grease	+		

+ = resistant

o = limitedly resistant

- = not resistant

Product could be unsuitable for use with chemicals and temperatures not listed.

This information is only an extract from our presupplier's extensive documentation.

Warranty:

Our warranty is based on correct handling and treatment of the function and quality, particularly adherence to the clamping ranges and suitable cable diameters and "minimum" and "maximum" tightening torques.

Material data are based on measurements carried out on stress-free test specimens (not component parts).

"The suitability of the product for the user's application must be tested and guaranteed by the user himself under relevant practical conditions."

For information about special applications please enquire in writing.

We reserve the right to make technical changes.