

# RÖCHLING datasheet

SUSTADUR | 2009

## SUSTADUR PET & PBT

SUSTADUR thermoplastic polyester products are semi-crystalline materials that offer good wear resistance along with a combination of excellent thermal stability and chemical resistance. SUSTADUR PET (polyethylene terephthalate) offers higher strength and stiffness over acetal, nylon and PBT. This product has outstanding dimensional stability by virtue of low moisture absorption and a low coefficient of thermal expansion. SUSTADUR PBT (polybutylene terephthalate) offers similar mechanical properties to acetal, however a higher maximum continuous operating temperature and improved chemical resistance makes it an excellent choice in food processing applications that require chemical or steam sanitizing.

### Product Features:

#### PET:

- ⇒ Continuous use temperature of 230°F
- ⇒ High strength and stiffness
- ⇒ Outstanding dimensional stability
- ⇒ Low moisture absorption

#### PBT:

- ⇒ Continuous use temperature of 230°F
- ⇒ Optimum toughness
- ⇒ Better for intricate machining
- ⇒ Higher impact strength than PET

### Typical Properties of Stock Shapes

Property	Units	Test Method	Value PET	Value PBT
Specific Gravity	-	ASTM D 792	1.41	1.31
Water Absorption 24 hrs	%	ASTM D 570	0.07	0.25
Water Absorption Saturation	%	ASTM D 570	0.7	0.4
Flammability	-	UL 94	HB	HB
Tensile Strength	psi	ASTM D 638	12,000	8,000
Elongation	%	ASTM D 638	30	30
Modulus	psi	ASTM D 638	460,000	425,000
Flexural Strength	psi	ASTM D 790	17,000	14,000
Modulus	psi	ASTM D 790	480,000	425,000
Notched Izod	ft-lb/in	ASTM D 256	0.5	0.6
Rockwell Hardness	-	ASTM D 785	M93	M72
HDT @ 264 psi	°F	ASTM D 648	240	175
Coefficient Linear thermal expansion	in/in/°F	ASTM D 696	$3.3 \times 10^{-5}$	$4.0 \times 10^{-5}$
Dielectric Strength	V / mil	ASTM D 149	385	400
Volume Resistivity	ohm-cm	ASTM D 257	$10^{16}$	$>10^{13}$
Dielectric Constant	-	ASTM D 150	3.1	3

### Typical Applications

- ⇒ Parts for food processing machinery
- ⇒ Valves
- ⇒ Manifolds
- ⇒ Bushings and bearings
- ⇒ Pistons

### Certifications

- ⇒ ASTM D6261
- ⇒ FDA compliant



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