

# Product datasheet DURASOFT®

## 1 Identification of the substance / preparation / company

### Product details

Trade name: **DURASOFT®**

Use of the substance / preparation: Manufacture of dental deep drawing splints

Manufacturer / Supplier: Scheu Dental GmbH  
Am Burgberg 20  
58642 Iserlohn  
Germany  
Tel. 0049 2374 9288-0

## 2 Composition / information on ingredients

### Chemical characterization

CAS-Number: 75701-44-9 (TPU) / 25037-45-0 (PC)

Designation: Thermoplastic polyurethane / Polycarbonate (TPU / PC)

## 3 Handling and storage

### Handling

Information for safe handling: When using do not eat, drink or smoke.  
Provide suction extractors if dust is formed.

### Storage

Storage conditions: Store dry and dark at max. 20°C

## 4 Physical, chemical, mechanical and biological properties

### 4.1 General properties

Properties	Guideline	Value (TPU)	Value (PC)
Form	-	Solid	Solid
Color	-	Transparent	Transparent
Odor	-	Odorless	Odorless
Density	ISO 1183	1,14 g/cm <sup>3</sup>	1,20 g/cm <sup>3</sup>
Water absorption after 24 h at 23°C	ISO 62 Methode 1	0,3 %	0,15 %

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### 4.2 Mechanical properties

Properties	Guideline	Value (TPU)	Value (PC)
Tensile strength	ISO 527	32 MPa	59 MPa
Flexional strength	ISO 178	-	100 MPa
Impact strength 23 °C	ISO 179/1eU	no fracture	no fracture
Notched 23 °C	ISO 180/A	no fracture	80 KJ/m <sup>2</sup>
Yield strain	ISO 527	-	-
Yield stress	ISO 527	7 MPa	65 MPa
Elongation at tear	ISO 527	525 %	>60 %
E-modulus	ISO 527	172 MPa	2400 MPa
Hardness Shore A	DIN 53505	88	-
Hardness Shore D	DIN 53505	33	88
Rockwell Hardness	ISO 2039-1 H358/30	-	110

### 4.3 Thermal properties

Vicat softening point	ISO 306 Methode A	44 °C	-
	ISO 306 Methode B	70 °C	145 °C
Thermoform resistance	ISO 75 Methode A	47 °C	125 °C
	ISO 75 Methode B	86 °C	138 °C
Continuous stress temperature	ISO 75	90 °C	125 °C

### 4.4 Biological properties / Biocompatibility

The material has been tested on biocompatibility according to DIN EN ISO 10993. It meets the requirements regarding biological compatibility for medical products / devices.

### 5 Stability and reactivity

#### Thermal decomposition / Conditions to avoid:

No decomposition by intended use.

### 6 Disposal

The material can be recycled after separation or disposed of like commercial or household waste.

The aforementioned data are given most conscientiously but without any obligation. Any processing details are provided merely for guidance: it is the user's responsibility to check the suitability of the product for the intended application.