Product datasheet Erkodur



Revision: 3

Modification date: 15.04.21 / created 21.10.20

1. Manufacturer information

Trade name: Erkodur/-freeze/-A1/-A2/-A3/-0M1

Intended use: Fabrication of dental thermoforming splints

Manufacturer: Erkodent Erich Kopp GmbH

Siemensstraße 3

72285 Pfalzgrafenweiler

Germany

Tel.: +49 7445 8501-0

2. Intended use

Erkodur is thermoformed to fabricate intra-oral appliances such as:

| Application | Thickness recommendation |
|--|---|
| Aligners/correction splints | 0.5 – 1.0 mm |
| Occlusal, Bruxism and michigan splints | 1.5 – 2.5 mm (adding) 3.0 – 5.0 mm (subtracting) |
| Stabilization splints | 1.0 mm |
| Copings | 0.5 – 0.8 mm |
| Temporary appliances (Connection to resin for temporaries only with PV-Primer) | 0.6 – 1.0 mm |
| Silensor-sl anti-snoring device | 2.5 mm |
| Dressing plates | 1.0 – 2.0 mm |
| Drilling-, planning and X-ray templates | 1.0 – 5.0 mm |
| Retainers | 0.6 – 1.5 mm |
| Protection splints (implantology) | 1.0 mm |
| Cosmetic splints | 0.6 – 2.0 mm (-A1/-A2/-A3/-0M1) |

The thickness recommendations are non-binding suggestions based on market observation.

3. Composition

CAS-No.: 25640-14-6

Designation: Polyethylenterephthalat (PET-G)

4. Properties

General properties:

| Properties | Guideline | Value |
|------------------------------|-----------|--------------------------------|
| Form | - | very tough, hard |
| Colour | - | clear, turquoise, tooth colour |
| Odour | - | inodorous |
| Density | ISO 1183 | 1.27 g/cm ³ |
| Water absorption, 24 h/23 °C | ISO 62 | 0.2 % |
| Water solubility | - | insoluble |

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Mechanical properties:

| Properties | Guideline | Value |
|---------------------------|-----------|----------|
| Tensile strength | ISO 527 | 53 MPa |
| Flectional strength | ISO 178 | 69 MPa |
| Impact strength, 23 °C | ISO 179 | no break |
| Notch impact, 23 °C | ISO 179 | 10 kJ/m² |
| Yield stress | ISO 527 | 53 MPa |
| Elongation at break | ISO 527 | 40 % |
| E-modulus | ISO 527 | 2200 MPa |
| Hardness shore A/ shore D | D 868 | - |
| Rockwell hardness | D 785 | 115 MPa |

Thermal properties:

| Properties | Guideline | Value |
|----------------------------------|-----------|-------|
| Vicat softening point | D 1525 | 83 °C |
| Temperature resistance, 1.80 MPa | ISO 75 | 68 °C |
| Glass transition temperature | ISO 11357 | - |
| Shrinkage after thermoforming | - | 0.5 % |

Biological properties:

The material has been tested for biocompatibility according to DIN EN ISO 10993-1 and does not affect the patient's biological safety.

5. General information

Storage instructions:

Keep away from sunlight. Keep dry.

Recommended storage temperature: 5 °C – 35 °C

Instructions for cleaning and maintenance:

Best results are achieved with Oxydens cleansing tablets.

Further cleaning agents: Soap, curd soap, liquid soap and dish liquid. Do not use any strongly perfumed soaps.

Not suited are: tooth-paste, mouth-wash and water that is hotter than 50 °C. Solvent-based cleaning agents cause delamination of multi-layered splints.

Sterilisation:

A sterilization with gas and plasma (<50 °C) is possible. As a result of the thermolability the materials are not autoclavable.

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