



**Biocompatible Skin-Contact
TPS-SEBS based compounds
for Healthcare**

Limited compliance with ISO 10993 standards
for skin contact applications such as wearables,
oxygen masks, nebulizers and surgical tool handles

Trinseo's MEGOLTM SK IP and IF Series are skin-contact grades suitable for applications in which there is no or non-invasive contact with the patient. Designed for standalone injection molding applications and overmolding onto polyolefin, MEGOLTM SK IP and IF Series materials are manufactured with a high level of attention to quality standards and compliance requirements as well as stability of supply. MEGOLTM SK IP and IF Series have undergone biocompatibility testing based on ISO 10993 standards (Biological Evaluation of Medical Devices) and they are suitable for use in approved medical applications. MEGOLTM SK IP and IF Series are produced in compliance with cGMP.

Key Features

- Excellent grip-haptic properties
- Wide hardness range: 20 ShA – 80 ShA
- Very strong adhesion on polyolefin
- Available in translucent (IP) and opaque (IF) versions
- Wide range of operating temperatures (-50°C to 120°C)
- Completely recyclable
- Excellent UV and aging resistance

Advantages and Benefits

Sterilizable

MEGOL™ MED SK IP and IF Series can be sterilized by Ethylene Oxide (EtO) and by Steam. They exhibit very good radiation stability when subjected to Gamma, even at high doses.

Chemical Resistance

MEGOL™ MED SK IP and IF Series are designed for environments where they may be exposed to skin contact applications and/or also surface disinfectants and cleaners such as water, salt solutions, alcohols and acids. The following table indicates the ability of TPS-SEBS to resist the identified chemical agents.

| Chemical | Resistance |
|-------------------|------------|
| Acetone | Poor |
| Dilute Acids | Good |
| Dilute Bases | Good |
| Oils/Grease | Poor |
| Silicones | Good |
| Ethylene Oxide | Good |
| Saline Water | Good |
| Bleaches | Good |
| Hydrogen Peroxide | Fair |
| Disinfectants | Good |
| Soaps/Detergent | Good |
| Carboxylic Acids | Poor |

Table 1: TPS-SEBS Resistance

Overmolding

MEGOL™ MED SK TPS-SEBS Series are developed with a focus on excellent processability and strong adhesion on polyolefin. In Trinseo's Specialized Overmolding Center (SOC), the adhesion between soft and rigid components is measured in accordance with the VDI 2019 standard.

Notification of Change

MEGOL™ MED SK TPS-SEBS Series compounds offer a standard notification of change. MEGOL™ SK IP and IF Series are manufactured according to cGMP.

Contact Us

Additional information about Trinseo resins for healthcare applications is available from your Trinseo representative or by contacting us at [trinseo.com](https://www.trinseo.com)

Material Properties

| MEGOL™ SK "IP" | MEGOL™ SK 20 IP | MEGOL™ SK 50 IP | MEGOL™ SK 80 IP |
|---|-----------------|-----------------|-----------------|
| Appearance | Translucent | Translucent | Translucent |
| Hardness ASTM D2240, ShA (15") | 20 | 50 | 80 |
| Density ASTM D792, g/cc | 0.89 | 0.89 | 0.89 |
| MFI (190°C-49,05N) ASTM D1238, g/10' | 25 | 35 | 25 |
| Tensile Strength ASTM D638, MPa | 5.5 | 7.5 | 12 |
| Elongation at Break ASTM D638, % | 800 | 750 | 750 |
| Tear Strength (type C) ASTM D624, KN/m | 15 | 23 | 44 |
| Regulatory Compliance | | | |
| <ul style="list-style-type: none"> • Food contact (EU & FDA) • Compliant with ISO 10993 5 and 10 • USP 661 Physicochemical study (aqueous and non-aqueous) | | | |

Table 2: MEGOL™ SK IP

| MEGOL™ SK "IF" | MEGOL™ SK 20 IF | MEGOL™ SK 60 IF | MEGOL™ SK 85 IF |
|---|-----------------|-----------------|-----------------|
| Appearance | Opaque | Opaque | Opaque |
| Hardness ASTM D2240, ShA (15") | 20 | 60 | 85 |
| Density ASTM D792, g/cc | 1.19 | 1.19 | 1.19 |
| MFI (190°C-49,05N) ASTM D1238, g/10' | 20 | 20 | 16 |
| Tensile Strength ASTM D638, MPa | 3.5 | 7 | 10 |
| Elongation at Break ASTM D638, % | 750 | 750 | 700 |
| Tear Strength (type C) ASTM D624, KN/m | 13 | 26 | 40 |
| Regulatory Compliance | | | |
| <ul style="list-style-type: none"> • Food contact (EU & FDA) • Compliant with ISO 10993 5 and 10 • USP 661 Physicochemical study (aqueous and non-aqueous) | | | |

Table 3: MEGOL™ SK IF

