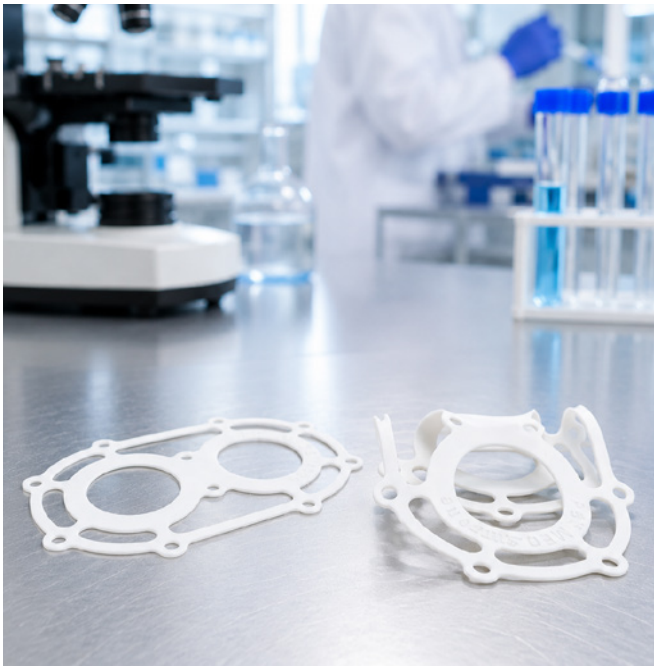
stratasys

MATERIAL DATA SHEET
P3™ DLP

P3™ MED Silicone 25A

by Shin-Etsu

Flexible precision parts for skin-contact applications. Real additive silicone with properties similar to molding silicones.



P3™ MED Silicone 25A is a soft, highly elastic silicone material with ISO 10993 biocompatibility certification. The white material, developed exclusively for Origin by Shin-Etsu, enables accurate, repeatable production of components for comfortable, flexible and reliable patient skin contact.

Printed on the Origin P3™ DLP system, it can produce thin walls, complex designs and internal features with consistent mechanical performance, making it ideal for bridging the gap between prototyping and low-to-mid volume manufacturing without tooling.

The material is biocompatible after the normal postprocess, not requiring additional steps or use of specific solvents.

Key Features

- Soft material with high tear resistance
- Excellent strength and rebound
- High elasticity and tear resistance, low compression set
- Biocompatibility ISO 10993-5, -10, -23 without the need for additional treatment
- Gives fine features with excellent surface finish
- Single-component UV resin; no mixing required
- Low curing shrinkage (<1%)
- No odor, low tackiness
- White

Industries & Applications

- Medical devices for patient contact, like hearing and audiology devices, bolus, respiratory, orthotics & prosthetics,
- Anatomical models
- Medical device prototyping
- Consumer applications like wearables, smartwatch bands, earphones
- Molds
- Small-batch production
- Seals and gaskets for medical and consumer electronics equipment

Liquid Properties

Property	Value
Appearance	White
Viscosity (23 °C)	13,000 mP·s
Density	1.3 g/cm³

Mechanical Properties

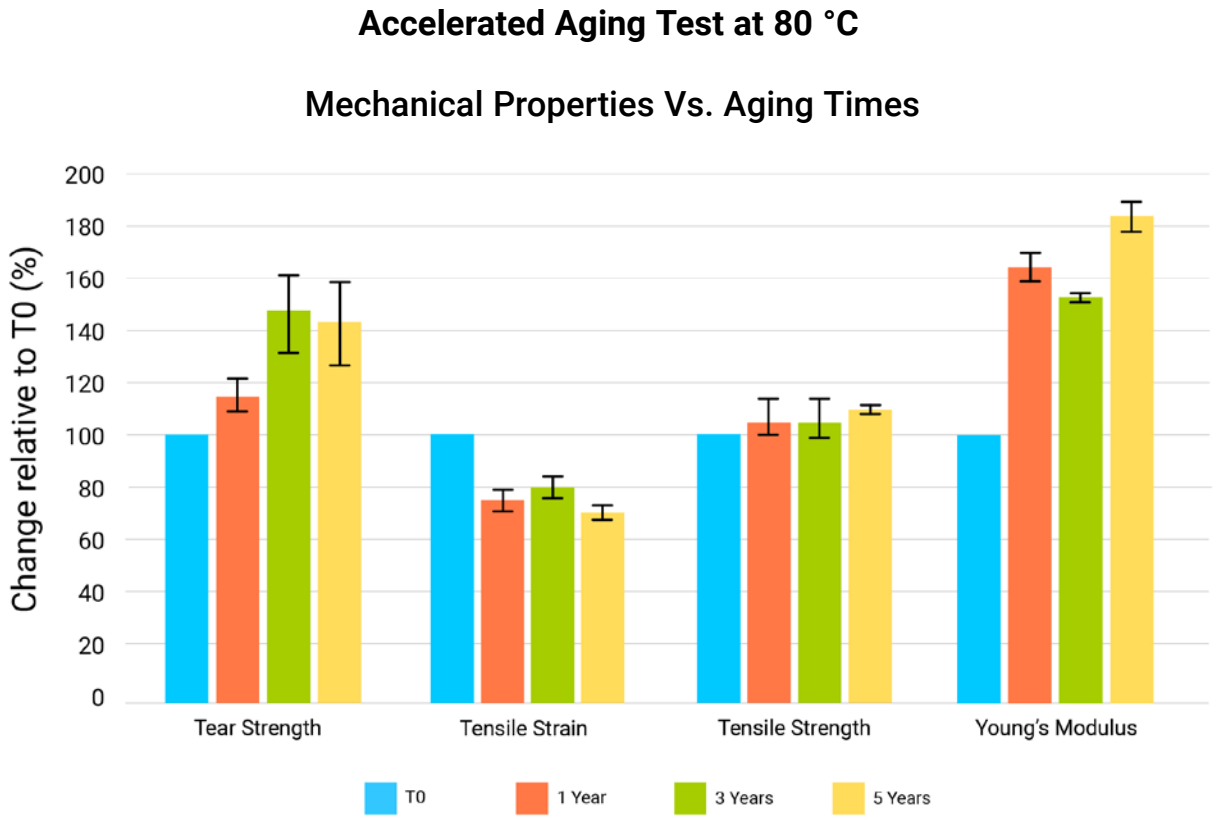
Property	Method	Value
Tear Resistance	ASTM D638	14.8 kN/m
Ultimate Tensile Strength	ASTM D638	4.4 MPa
Tensile Elongation at Break	ASTM D638	835%
Shore A	ASTM D790	23
Ross Flex-Test	ASTM D1052 –09 (Reapproved 2019)	>100,000
Compression Set	ISO 815-1/ASTM D395 Type b 72 hours at 23 °C (73 °F)	7%

Chemical Properties

Property	Method	Value
Biocompatibility - Cytotoxicity	ISO 10993-5 / USP <87> *Steam-sterilized test article	Passed*
Biocompatibility - Sensitization	ISO 10993-10 *Steam-sterilized test article	Passed*
Biocompatibility - Irritation / intracutaneous reactivity	ISO 10993-23 *Steam-sterilized test article	Passed*
Solid Density (Cured)	ASTM D792	1.3 g/cm³
Water Absorption (24 hours)	ASTM D570	1.5%

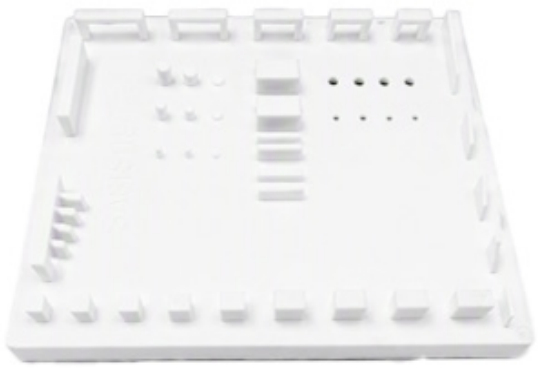
* According to the supplier procedure

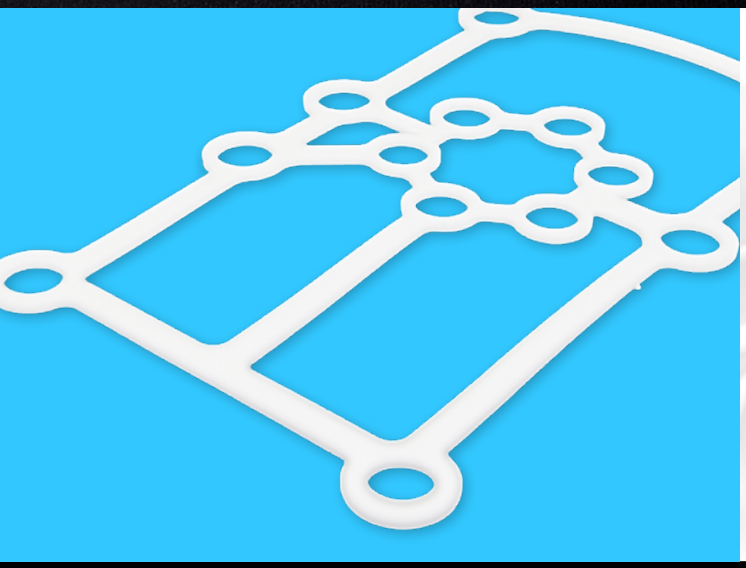
Thermal Properties



Feature Capabilities

Evaluated Feature	Value
Color	White
Maximum unsupported overhang length	3 mm
Maximum span length	7 mm
Minimum unsupported overhang angle	15°
Minimum vertical wire diameter	
1 mm height	0.5 mm
3 mm height	1 mm
5 mm height	1 mm
Minimum unsupported wall thickness	
5 mm height	1 mm
10 mm height	1 mm
Minimum hole diameter in Z	2 mm
Minimum hole diameter in XY	2 mm





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