

DENKA Transparent Polymer TH-21

Methyl Methacrylate Butadiene Styrene

Denka Company Limited

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Technical Data

Product Description

DENKA Transparent Polymer TH-21 is a Methyl Methacrylate Butadiene Styrene (MMBS) product. It can be processed by injection molding and is available in Asia Pacific, Europe, or North America. Primary characteristic: flame rated.

General

Material Status	• Commercial: Active
Literature ¹	• Technical Datasheet (English) • Technical Datasheet (English)
UL Yellow Card ²	• E49895-101202121 • E49895-241555
Search for UL Yellow Card	• Denka Company Limited
Availability	• Asia Pacific • Europe • North America
Features	• General Purpose
Uses	• General Purpose
UL File Number	• E49895
Processing Method	• Injection Molding

Physical	Nominal Value Unit	Test Method
Density (23°C)	1.09 g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR)		ISO 1133
200°C/5.0 kg	3.1 g/10 min	
220°C/10.0 kg	47 g/10 min	
Molding Shrinkage (2.00 mm)	0.40 %	Internal Method

Mechanical	Nominal Value Unit	Test Method
Tensile Stress (Yield)	51.0 MPa	ISO 527-2/5
Nominal Tensile Strain at Break	36 %	ISO 527-2/5
Flexural Modulus ⁴	2400 MPa	ISO 178
Flexural Stress ⁴	72.0 MPa	ISO 178

Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength	11 kJ/m ²	ISO 179

Hardness	Nominal Value Unit	Test Method
Rockwell Hardness (M-Scale)	39	ISO 2039-2

Thermal	Nominal Value Unit	Test Method
Deflection Temperature Under Load 1.8 MPa, Unannealed	65.0 °C	ISO 75-2/Af
Vicat Softening Temperature	86.0 °C	ISO 306/B

Flammability	Nominal Value Unit	Test Method
Flame Rating	HB	UL 94

Optical	Nominal Value Unit	Test Method
Light Transmittance (2000 µm)	91.0 %	ISO 13468-1
Haze (2000 µm)	2.40 %	ISO 14782

Injection	Nominal Value Unit
Drying Temperature	70 to 80 °C
Drying Time	2.0 to 3.0 hr
Rear Temperature	200 to 240 °C
Middle Temperature	200 to 240 °C
Front Temperature	200 to 240 °C
Nozzle Temperature	220 to 240 °C
Mold Temperature	40 to 70 °C



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Notes

¹ These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

² A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

³ Typical properties: these are not to be construed as specifications.

⁴ 2.0 mm/min



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Where to Buy

Supplier

Denka Company Limited

Tokyo, Tokyo Japan

Telephone: +81-3-5290-5553

Web: <http://www.denka.co.jp/>

Distributor

Calsak Polymers

Telephone: 800-743-2595

Web: <http://www.calsak.com/>

Availability: North America

Resin Resource, Inc.

Telephone: 877-652-3431

Web: <http://www.resinresourceinc.com/>

Availability: North America

