# Medalist® MD-50273 AP NAT

## Teknor Apex Company - Thermoplastic Elastomer

Wednesday, April 1, 2026

### General Information

**Product Description**

The Medalist MD-50200 Series is a high performance thermoplastic elastomer series, designed to be a sustainable alternative to flexible PVC for medical tubing and film. Medalist MD-50273 AP is a low density, medium hardness, clear grade, available in Nat and color-matched, intended for use in medical and healthcare applications, with excellent processability and throughput in extruded tubing.

| General | | | |
|---|---|---|---|
| Material Status | • Preliminary Data | | |
| Availability | • Asia Pacific | | |
| Features | • Chemical Resistant<br>• Ethylene Oxide Sterilizable<br>• Good Adhesion<br>• Good Colorability<br>• Good Processability | • Halogen Free<br>• High Clarity<br>• High Purity<br>• Kink Resistant<br>• Low Density | • Low Specific Gravity<br>• Medium Hardness<br>• No Animal Derived Components<br>• Radiation (Gamma) Resistant |
| Uses | • Clear Sheet<br>• Film | • Hose<br>• Medical/Healthcare Applications | • Pharmaceuticals<br>• Tubing |
| Agency Ratings | • ISO 10993-5 | • ISO 13485 | |
| RoHS Compliance | • RoHS Compliant | | |
| Appearance | • Clear/Transparent | • Colors Available | |
| Forms | • Pellets | | |
| Processing Method | • Cast Film | • Extrusion | • Injection Molding |

### Properties [1]

| Physical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Density / Specific Gravity | 0.892 | | ASTM D792 |
| Melt Mass-Flow Rate (MFR) (200°C/5.0 kg) | 6.0 | g/10 min | ASTM D1238 |
| **Films** | **Nominal Value** | **Unit** | **Test Method** |
| Oxygen Permeability | | | ASTM D3985 |
| 73°F, 40 mil, 35% RH | 1300 | cm³·mil/100in²/atm/24 hr | |
| 73°F, 40 mil, 90% RH | 1200 | cm³·mil/100in²/atm/24 hr | |
| Oxygen Transmission Rate (Wet) | | | ASTM F1927 |
| 73°F, 40 mil, 35% RH | 30.9 | cm³/100 in²/24 hr | |
| 73°F, 40 mil, 90% RH | 28.9 | cm³/100 in²/24 hr | |
| Water Vapor Transmission Rate | | | ASTM F1249 |
| 100°F, 100% RH, 1.0 mil | 2.7 | g/100 in²/24 hr | |
| **Elastomers** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Stress (50% Strain) | 555 | psi | ASTM D412 |
| Tensile Stress (100% Strain) | 610 | psi | ASTM D412 |
| Tensile Stress (300% Strain) | 880 | psi | ASTM D412 |
| Tensile Strength (Break) | 2090 | psi | ASTM D412 |
| Tensile Elongation (Break) | 630 | % | ASTM D412 |
| Tear Strength | 320 | lbf/in | ASTM D624 |
| Compression Set | | | ASTM D395 |
| 73°F, 22 hr | 21 | % | |
| 158°F, 22 hr | 82 | % | |

Revision Date: 2/13/2023

The information and recommendations contained in this bulletin are, to the best of our knowledge, accurate and reliable but no guarantee of their accuracy is made. All products are sold upon condition that purchasers shall make their own tests to determine the suitability of such products for their particular purposes and uses and purchasers assume all risks and liability for the results of use of the products, including use in accordance with seller's recommendations. Nothing in this bulletin constitutes permission or a recommendation to practice or use any invention covered by any patent owned by this company or by others. There is no warranty of merchantability and there are no other warranties for the products described.

Copyright © 2026 UL Prospector

# Medalist® MD-50273 AP NAT

## Teknor Apex Company - Thermoplastic Elastomer

| Hardness | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Durometer Hardness | | | ASTM D2240 |
| Shore A, 1 sec | 78 | | |
| Shore A, 5 sec | 76 | | |

**Legal Statement**

The information and recommendations contained in this bulletin are, to the best of our knowledge, accurate and reliable but no guarantee of their accuracy is made. All products are sold upon condition that purchasers shall make their own tests to determine the suitability of such products for their particular purposes and uses and purchaser assumes all risks and liability for the results of use of the products, including use in accordance with seller's recommendations. Nothing in this bulletin constitutes permission or a recommendation to practice or use any invention covered by any patent owned by this company or others. There is no warranty of merchantability and there are no other warranties for the products described. For detailed Product Stewardship information, please contact us. Any product of Teknor Apex, including product names, shall not be used or tested in medical or food contact applications without the prior written acknowledgement of Teknor Apex as to the intended use. Please note that some products may not be available in one or more countries.

## Processing Information

| Injection | Nominal Value | Unit |
|---|---|---|
| Rear Temperature | 300 to 340 | °F |
| Middle Temperature | 340 to 380 | °F |
| Front Temperature | 380 to 440 | °F |
| Nozzle Temperature | 380 to 440 | °F |
| Processing (Melt) Temp | 380 to 440 | °F |
| Mold Temperature | 70 to 125 | °F |
| Back Pressure | 50.0 to 150 | psi |
| Screw Speed | 50 to 100 | rpm |
| Cushion | 0.140 to 1.00 | in |

**Injection Notes**

Drying is not necessary, however, if moisture is a problem, dry the pellets for 2 to 4 hours at 150°F (65°C)

| Extrusion | Nominal Value | Unit |
|---|---|---|
| Cylinder Zone 1 Temp. | 340 to 370 | °F |
| Cylinder Zone 2 Temp. | 360 to 385 | °F |
| Cylinder Zone 3 Temp. | 365 to 400 | °F |
| Cylinder Zone 4 Temp. | 400 to 440 | °F |
| Cylinder Zone 5 Temp. | 400 to 440 | °F |
| Die Temperature | 400 to 440 | °F |

**Extrusion Notes**

Screw Speed: 30 to 100 rpm.

Screen Pack Recommendation:

60/200/200/60 to 60/200/400/400/200/60 mesh size.

## Notes

[1] Typical properties: these are not to be construed as specifications.

**Teknor Apex Company**
**Corporate Headquarters**

*In U.S. for Vinyls, TPEs, Colorants,*

*Engineered Thermoplastics (Chem Polymer)*
505 Central Avenue
Pawtucket, Rhode Island 02861 U.S.

Phone: 401-725-8000
Fax: 401-725-8095
Toll Free (U.S. only) 800-556-3864

www.teknorapex.com
info@teknorapex.com

**Teknor Apex B.V.**

Brightlands Chemelot Campus Umonderbaan 22
6167 RD Geleen, Netherlands

Phone: +31 46 7020 950
Fax: +31 46 7020 990

www.teknorapex.com
tpe@teknorapex.com

**Teknor Apex (Suzhou) Advanced Polymer Compounds Co. Pte. Ltd.**

No. 78 Ping Sheng Road

Suzhou Industrial Park
Jiangsu, China 215126

Phone: (86) 512-6287-1550
Fax: (86) 512-6288-8371

www.teknorapex.com
infotaap@teknoapex.com

**Teknor Apex Asia Pacific PTE. LTD.**

41 Shipyard Road

Singapore 628134

Phone: (65) 6265-2544
Fax: (65) 6265-1821

www.teknorapex.com
infotaap@teknorapex.com

Revision Date: 2/13/2023

The information and recommendations contained in this bulletin are, to the best of our knowledge, accurate and reliable but no guarantee of their accuracy is made. All products are sold upon condition that purchasers shall make their own tests to determine the suitability of such products for their particular purposes and uses and purchasers assume all risks and liability for the results of use of the products, including use in accordance with seller's recommendations. Nothing in this bulletin constitutes permission or a recommendation to practice or use any invention covered by any patent owned by this company or by others. There is no warranty of merchantability and there are no other warranties for the products described.

Copyright © 2026 UL Prospector