



# Monprene® IN-12250 (PRELIMINARY DATA)

Teknor Apex Company - Thermoplastic Elastomer

## General Information

### Product Description

Monprene IN-12250 is a general purpose thermoplastic elastomer, available in Nat, BLK, and colors, designed for the industrial market, including seals and gaskets. Monprene IN-12250 is a medium hardness, high density grade with good compression set that is suitable for extrusion or injection molding.

### General

|                   |                                                                                                                       |                                                                                                                                       |                                                                                                          |
|-------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| Material Status   | • Commercial: Active                                                                                                  |                                                                                                                                       |                                                                                                          |
| Availability      | • Africa & Middle East<br>• Asia Pacific                                                                              | • Europe<br>• Latin America                                                                                                           | • North America                                                                                          |
| Features          | • Chemical Resistant<br>• Filled<br>• General Purpose<br>• Good Adhesion<br>• Good Colorability<br>• Good Flexibility | • Good Processability<br>• Good Toughness<br>• Good Weather Resistance<br>• Halogen Free<br>• High Density<br>• High Specific Gravity | • Low Compression Set<br>• Lubricated<br>• Medium Hardness<br>• Resilient                                |
| Uses              | • Building Materials<br>• Flexible Grips<br>• Gaskets<br>• Handles<br>• Industrial Applications                       | • O-rings<br>• Plugs<br>• Profiles<br>• Rubber Replacement<br>• Seals                                                                 | • Soft Touch Applications<br>• Weatherstripping<br>• White Goods & Small Appliances<br>• Windows & Doors |
| RoHS Compliance   | • RoHS Compliant                                                                                                      |                                                                                                                                       |                                                                                                          |
| Appearance        | • Black<br>• Colors Available                                                                                         | • Grey<br>• Natural Color                                                                                                             |                                                                                                          |
| Forms             | • Pellets                                                                                                             |                                                                                                                                       |                                                                                                          |
| Processing Method | • Extrusion                                                                                                           | • Injection Molding                                                                                                                   |                                                                                                          |

## ASTM & ISO Properties<sup>1</sup>

| Physical                                 | Nominal Value | Unit     | Test Method |
|------------------------------------------|---------------|----------|-------------|
| Density / Specific Gravity               | 1.22          |          | ASTM D792   |
| Melt Mass-Flow Rate (MFR) (200°C/5.0 kg) | 10            | g/10 min | ASTM D1238  |
| Elastomers                               | Nominal Value | Unit     | Test Method |
| Tensile Strength (Break)                 | 1000          | psi      | ASTM D412   |
| Tensile Elongation (Break)               | 770           | %        | ASTM D412   |
| Compression Set (73°F, 22 hr)            | 20            | %        | ASTM D395   |
| Hardness                                 | Nominal Value | Unit     | Test Method |
| Durometer Hardness                       |               |          | ASTM D2240  |
| Shore A, 14°F                            | 65            |          |             |
| Shore A, 1 sec, Injection Molded         | 52            |          |             |
| Shore A, 5 sec, Injection Molded         | 50            |          |             |

### Additional Information

CHANGE IN VOLUME (WATER) ASTM D-471 = 1.11%  
OZONE RESISTANCE ASTM D-1149)= NO CRACKS

STRESS RELAXATION - INITIAL STRESS(23C) 1200 KPA  
100 M HR, % OF STRESS 0.42%

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### Processing Information

| Injection              | Nominal Value | Unit |
|------------------------|---------------|------|
| Rear Temperature       | 360 to 450    | °F   |
| Middle Temperature     | 370 to 460    | °F   |
| Front Temperature      | 380 to 470    | °F   |
| Nozzle Temperature     | 390 to 480    | °F   |
| Processing (Melt) Temp | 390 to 480    | °F   |
| Mold Temperature       | 60 to 90      | °F   |
| Injection Pressure     | 200 to 800    | psi  |
| Injection Rate         | Fast          |      |
| Back Pressure          | 25.0 to 100   | psi  |
| Screw Speed            | 50 to 100     | rpm  |
| Cushion                | 0.150 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. | 360 to 450    | °F   |
| Cylinder Zone 2 Temp. | 370 to 460    | °F   |
| Cylinder Zone 3 Temp. | 380 to 470    | °F   |
| Cylinder Zone 4 Temp. | 380 to 470    | °F   |
| Cylinder Zone 5 Temp. | 390 to 480    | °F   |
| Die Temperature       | 390 to 480    | °F   |

### Extrusion Notes

Screw Speed: 30 to 100 rpm

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.