

# Santoprene™ 8281-55MED

Thermoplastic Vulcanizate

ExxonMobil Chemical

## Message:

It is a soft, colorable, special non-hygroscopic thermoplastic vulcanized elastomer (TPV) in the thermoplastic elastomer (TPE) series. It applies to the field of health care. This brand of Shanduping TPV is a shear rate dependent product that can be processed on conventional thermoplastic injection molding equipment. This is a polyolefin-based material that can be recycled in the production process.

| General Information                                   |                                  |                   |                   |
|-------------------------------------------------------|----------------------------------|-------------------|-------------------|
| Features                                              | Low extract                      |                   |                   |
|                                                       | Radiation disinfection           |                   |                   |
|                                                       | Recyclable materials             |                   |                   |
|                                                       | Good coloring                    |                   |                   |
|                                                       | Ozone resistance                 |                   |                   |
|                                                       | High pressure heating resistance |                   |                   |
|                                                       | Good chemical resistance         |                   |                   |
|                                                       | Biocompatibility                 |                   |                   |
|                                                       | Low or no water absorption       |                   |                   |
|                                                       | Disinfect with steam             |                   |                   |
| Uses                                                  | Medical/nursing supplies         |                   |                   |
| Agency Ratings                                        | USP Class VI                     |                   |                   |
| RoHS Compliance                                       | RoHS compliance                  |                   |                   |
| Appearance                                            | Natural color                    |                   |                   |
| Forms                                                 | Particle                         |                   |                   |
| Processing Method                                     | Multiple injection molding       |                   |                   |
|                                                       | Injection molding                |                   |                   |
| Physical                                              | Nominal Value                    | Unit              | Test Method       |
| Specific Gravity                                      |                                  |                   |                   |
| --                                                    | 0.918                            | g/cm <sup>3</sup> | ASTM D792         |
| --                                                    | 0.920                            | g/cm <sup>3</sup> | ISO 1183          |
| Hardness                                              | Nominal Value                    | Unit              | Test Method       |
| Durometer Hardness (Shaw A, 15 seconds, 23°C, 2.00mm) | 59                               |                   | ISO 868           |
| Elastomers                                            | Nominal Value                    | Unit              | Test Method       |
| Tensile Stress - Across Flow (100% Strain, 23°C)      | 2.00                             | MPa               | ASTM D412, ISO 37 |
| Tensile Strength - Across Flow (Break, 23°C)          | 5.20                             | MPa               | ASTM D412, ISO 37 |
| Tensile Elongation - Across Flow (Break, 23°C)        | 430                              | %                 | ASTM D412, ISO 37 |

|                                                                                                                                                                |                                      |        |            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|--------|------------|
| Tear Strength - Across Flow                                                                                                                                    |                                      |        |            |
| 23°C <sup>1</sup>                                                                                                                                              | 14.0                                 | kN/m   | ASTM D624  |
| 100°C <sup>2</sup>                                                                                                                                             | 5.00                                 | kN/m   | ASTM D624  |
| 23°C <sup>3</sup>                                                                                                                                              | 14                                   | kN/m   | ISO 34-1   |
| 100°C <sup>4</sup>                                                                                                                                             | 5.0                                  | kN/m   | ISO 34-1   |
| Compression Set                                                                                                                                                |                                      |        |            |
| 23°C, 168 hr <sup>5</sup>                                                                                                                                      | 14                                   | %      | ASTM D395B |
| 23°C, 168 hr <sup>6</sup>                                                                                                                                      | 14                                   | %      | ISO 815    |
| Additional Information                                                                                                                                         |                                      |        |            |
| 如果适用,这是基于扇形浇口注塑成型的平板测试结果.拉伸强度,伸长率和拉伸应力沿垂直流动方向测定 - ISO 1 型,ASTM die C.25% 形变时的永久压缩变形.从埃克森美孚欧洲分支机构直接购买的所有产品都符合 REACH 法规. 对于埃克森美孚未进口至欧洲的产品,用户应自行评估其是否满足 REACH 法规. |                                      |        |            |
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| Injection                                                                                                                                                      | Nominal Value                        | Unit   |            |
| Suggested Max Moisture                                                                                                                                         | 0.080                                | %      |            |
| Suggested Max Regrind                                                                                                                                          | 20                                   | %      |            |
| Rear Temperature                                                                                                                                               | 177 - 191                            | °C     |            |
| Middle Temperature                                                                                                                                             | 179 - 193                            | °C     |            |
| Front Temperature                                                                                                                                              | 185 - 199                            | °C     |            |
| Nozzle Temperature                                                                                                                                             | 185 - 210                            | °C     |            |
| Processing (Melt) Temp                                                                                                                                         | 143 - 216                            | °C     |            |
| Mold Temperature                                                                                                                                               | 23.9 - 51.7                          | °C     |            |
| Injection Rate                                                                                                                                                 | Fast                                 |        |            |
| Back Pressure                                                                                                                                                  | 0.345 - 0.689                        | MPa    |            |
| Screw Speed                                                                                                                                                    | 100 - 200                            | rpm    |            |
| Clamp Tonnage                                                                                                                                                  | 4.1 - 6.9                            | kN/cm² |            |
| Cushion                                                                                                                                                        | 3.18 - 6.35                          | mm     |            |
| Screw L/D Ratio                                                                                                                                                | 16.0:1.0 to 20.0:1.0                 |        |            |
| Screw Compression Ratio                                                                                                                                        | 2.0:1.0 to 2.5:1.0                   |        |            |
| Vent Depth                                                                                                                                                     | 0.025                                | mm     |            |
| Injection instructions                                                                                                                                         |                                      |        |            |
| Santoprene TPV与乙缩醛和PVC不相容.                                                                                                                                     |                                      |        |            |
| NOTE                                                                                                                                                           |                                      |        |            |
| 1.                                                                                                                                                             | C mould                              |        |            |
| 2.                                                                                                                                                             | C mould                              |        |            |
| 3.                                                                                                                                                             | Method B, right-angle specimen (cut) |        |            |
| 4.                                                                                                                                                             | Method B, right-angle specimen (cut) |        |            |
| 5.                                                                                                                                                             | Type 1                               |        |            |
| 6.                                                                                                                                                             | Type a                               |        |            |

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