Celanese
The chemistry inside innovation™

# SANTOPRENE® 121-40B265

Santoprene® 121-40B265 is a soft, black thermoplastic vulcanizate (TPV) that combines a low coefficient of friction with good bonding to TPV and EPDM rubber, in particular EPDM sponge profiles. This grade offers easy processability due to a high shear thinning behavior for injection molding of complex geometries and excellent surface aesthetics, without surface bleeding after heat or UV aging. This grade has been designed to offer excellent UV resistance performance to fulfill most of the global auto OEMs specifications.This grade has been primarily designed for soft corner molding, sails, muckets and end caps of automotive dense and sponge weatherseals.

## Key Features

- High flow injection molding grade
- Exterior UV stabilized fulfilling SAEJ2527 3.5MJ/$m^2$ and PV3930 5.8MJ/$m^2$
- Built-in low coefficient of friction properties
- Specially formulated to replace thermoset EPDM rubber in automotive weather seal and general molding applications
- Designed for shorter processing cycle time compared to thermoset EPDM rubber
- Adheres to vulcanized EPDM rubber (dense and sponge) and TPV Excellent surface aspect

## Typical mechanical properties

| | | | |
|---|---|---|---|
| Stress at 100% elongation | 158 | psi | ISO 527-1/-2 or ISO 37 |
| Stress at break | 540 | psi | ISO 527-1/-2 or ISO 37 |
| Elongation at break | 578 | % | ISO 527-1/-2 or ISO 37 |
| Shore A hardness, 15s | 40.5 | | ISO 48-4 / ISO 868 |
| Compression set at 23°C, 24h | 16 | % | ISO 815 |
| Compression set at 70°C, 24h | 33 | % | ISO 815 |

## Other properties

| | | | |
|---|---|---|---|
| Density | 8 | lb/gal | ISO 1183 |

## Injection

| | | | |
|---|---|---|---|
| Drying Temperature | 176 | °F | |
| Drying Time, Dehumidified Dryer | 3 | h | |
| Processing Moisture Content | 0.08 | % | |
| Max. regrind level | 10 | % | |
| Melt Temperature Optimum | 419 | °F | Internal |
| Max. mould temperature | 104 - 140 | °F | |
| Injection speed | fast | | |

## Processing Texts

| | |
|---|---|
| Processing Notes | Santoprene® is incompatible with acetal and PVC. Desiccant drying for 3 hours at 80°C (180°F) is recommended. Santoprene® TPV has a wide temperature processing window from 175 to 230°C (350 to 450°F). To obtain a good bonding on EPDM sponge profile, the injection speed should be fast, at very high temperature in a warm mold. In order to prevent a deformation of the sponge profile, the injection pressure should be moderate, keeping the holding pressure |



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low. The EPDM profile should be perfectly positioned in the mold, and maintained without deformation, to insure a maximum of surface interaction with the melt. Cooling time should be longer than a typical TPV, to initiate recrystallization at contact interface.



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