

# EPIGUM OR/87

Thermoplastic Vulcanizate

Crosspolimeri S.p.A.

Message:

EPIGUM OR/87 is a halogen-free thermoplastic elastomer (TPV) study for application at high temperature also in contact with oil.  
EPIGUM OR/87 is a high performance thermoplastic vulcanised (TPV) designed to survive long-term exposure to hot oil. Ideal for automotive and electrical applications where there is exposure to heat and/or oil.  
It has excellent resistance to many mineral and synthetic motor oils, transmission fluids, and greases.  
It is suitable in bondable to polyamides via overmoulding (insert and 2-shot).  
Readily recycled both in process and post consumer.

| General Information                                      |                                    |                   |             |
|--|------------------------------------|-------------------|-------------|
| Features   | Grease Resistant                   |                   |             |
|  | High Heat Resistance               |                   |             |
|  | Oil Resistant                      |                   |             |
| Uses   | Automotive Applications            |                   |             |
|  | Electrical/Electronic Applications |                   |             |
|  | Overmolding                        |                   |             |
|  | Wire & Cable Applications          |                   |             |
| Forms  | Pellets                            |                   |             |
| Processing Method  | Extrusion                          |                   |             |
| Physical   | Nominal Value                      | Unit              | Test Method |
| Specific Gravity   | 1.15                               | g/cm <sup>3</sup> | ASTM D792   |
| Hardness   | Nominal Value                      | Unit              | Test Method |
| Durometer Hardness (Shore D)                             | 45                                 |                   | ASTM D2240  |
| Mechanical   | Nominal Value                      | Unit              | Test Method |
| Tensile Stress (Yield)                                   | > 15.0                             | MPa               | IEC 60811   |
| Tensile Strain (Break)                                   | > 250                              | %                 | IEC 60811   |
| Aging  | Nominal Value                      | Unit              | Test Method |
| Change in Tensile Strength in Air (150°C, 240 hr)        | > 13                               | %                 | IEC 60811   |
| Change in Tensile Strain at Break in Air (150°C, 240 hr) | > 200                              | %                 | IEC 60811   |
| Change in Shore Hardness in Air (Shore A, 150°C, 240 hr) | < 5.0                              |                   | IEC 60811   |
| Change in Volume in Air (150°C, 240 hr)                  | < 5.0                              | %                 | IEC 60811   |
| Change in Tensile Stress                                 |                                    |                   | IEC 60811   |
| 121°C, 18 hr, in IRM 902 Oil                             | > 12                               | %                 |             |
| 121°C, 18 hr, in IRM 903 Oil                             | > 12                               | %                 |             |
| 150°C, 240 hr, in ASTM #2 Oil                            | > 13                               | %                 |             |
| Change in Tensile Strain at Break                        |                                    |                   | IEC 60811   |

| 121°C, 18 hr, in IRM 902 Oil           | > 200                | %    |             |
|--|----------------------|------|-------------|
| 121°C, 18 hr, in IRM 903 Oil           | > 200                | %    |             |
| 150°C, 240 hr, in ASTM #2 Oil          | > 200                | %    |             |
| Change in Shore Hardness               |                      |      | IEC 60811   |
| Shore A, 121°C, 18 hr, in IRM 902 Oil  | < 3.0                |      |             |
| Shore A, 121°C, 18 hr, in IRM 903 Oil  | < 3.0                |      |             |
| Shore A, 150°C, 240 hr, in ASTM #2 Oil | < 5.0                |      |             |
| Change in Volume                       |                      |      | IEC 60811   |
| 121°C, 18 hr, in IRM 902 Oil           | < 3.0                | %    |             |
| 121°C, 18 hr, in IRM 903 Oil           | < 3.0                | %    |             |
| 150°C, 240 hr, in ASTM #2 Oil          | < 5.0                | %    |             |
| Thermal                                | Nominal Value        | Unit | Test Method |
| Hot Set <sup>1</sup>                   |                      |      | IEC 60811   |
| 200°C                                  | 15                   | %    |             |
| Residual : 200°C                       | 0.0                  | %    |             |
| Service Temperature                    | -40 to 125           | °C   |             |
| Flammability                           | Nominal Value        | Unit | Test Method |
| Oxygen Index                           | 20                   | %    | ASTM D2863  |
| Extrusion                              | Nominal Value        | Unit |             |
| Drying Temperature                     | 100 to 120           | °C   |             |
| Drying Time                            | 3.0                  | hr   |             |
| Cylinder Zone 1 Temp.                  | 190                  | °C   |             |
| Cylinder Zone 2 Temp.                  | 195                  | °C   |             |
| Cylinder Zone 3 Temp.                  | 210                  | °C   |             |
| Cylinder Zone 4 Temp.                  | 220                  | °C   |             |
| Cylinder Zone 5 Temp.                  | 230                  | °C   |             |
| Die Temperature                        | 240                  | °C   |             |
| NOTE                                   |                      |      |             |
| 1.                                     | 20 N/cm <sup>2</sup> |      |             |

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