# OnFlex<sup>™</sup> AF 7210-80

#### Thermoplastic Elastomer

## PolyOne Corporation

#### Message:

Onflex™AF 7210-80 is an easy-to-process TPE, mainly developed for various applications of automobiles.

Great look

has good adhesion to polypropylene

It has good performance in some static mechanical seals, such as sealing rings, fasteners, plugs and cable clamps

good UV performance

OnFlex™AF 7210-80B = black

OnFlex™AF 7210-80N = natural

| General Information             |                                 |       |                     |  |  |
|---------------------------------|---------------------------------|-------|---------------------|--|--|
| Features                        | Workability, good               |       |                     |  |  |
| Uses                            | overmolding                     |       |                     |  |  |
|                                 | Plug                            |       |                     |  |  |
|                                 | Washer                          |       |                     |  |  |
|                                 | Fasteners                       |       |                     |  |  |
|                                 | Application in Automobile Field |       |                     |  |  |
|                                 |                                 |       |                     |  |  |
| RoHS Compliance                 | RoHS compliance                 |       |                     |  |  |
| Appearance                      | Black                           |       |                     |  |  |
|                                 | Natural color                   |       |                     |  |  |
|                                 |                                 |       |                     |  |  |
| Forms                           | Particle                        |       |                     |  |  |
| Processing Method               | Injection molding               |       |                     |  |  |
| Physical                        | Nominal Value                   | Unit  | Test Method         |  |  |
| Density <sup>1</sup>            | 0.990                           | g/cm³ | ISO 1133, ASTM D792 |  |  |
| Hardness                        | Nominal Value                   | Unit  | Test Method         |  |  |
| Durometer Hardness              |                                 |       |                     |  |  |
| Shao A, 3 seconds <sup>2</sup>  | 80                              |       | ISO 868             |  |  |
| Shaw A, 10 seconds <sup>3</sup> | 77                              |       | ASTM D2240          |  |  |
| Elastomers                      | Nominal Value                   | Unit  | Test Method         |  |  |
| Tensile Strength                |                                 |       |                     |  |  |
| Fracture <sup>4</sup>           | 11.0                            | MPa   | ISO 37              |  |  |
| Fracture <sup>5</sup>           | 9.50                            | МРа   | ASTM D412           |  |  |
| Tensile Elongation              |                                 |       |                     |  |  |
| Fracture <sup>6</sup>           | 700                             | %     | ISO 37              |  |  |
| Fracture <sup>7</sup>           | 650                             | %     | ASTM D412           |  |  |
| Tear Strength                   |                                 |       |                     |  |  |
| 8                               | 43.0                            | kN/m  | ISO 34-1            |  |  |
| <sup>9</sup>                    | 40.5                            | kN/m  | ASTM D624           |  |  |

| Compression Set                  |   |        |                    |
|----------------------------------|---|--------|--------------------|
| 23°C, 72 hr <sup>10</sup>        | 32  | %      | ISO 815, ASTM D395 |
| 70°C, 22 hr <sup>11</sup>        | 43  | %      | ISO 815            |
| 70°C, 22 hr <sup>12</sup>        | 47  | %      | ASTM D395          |
| Flammability                     | Nominal Value   | Unit   | Test Method        |
| Burning Rate                     | < 100   | mm/min | DIN 75200          |
| Additional Information           | Nominal Value   |        | Test Method        |
| Weather Resistance <sup>13</sup> | expected to pass  |        | SAE J2527          |
| Injection                        | Nominal Value   | Unit   |                    |
| Suggested Max Regrind            | 20  | %      |                    |
| Rear Temperature                 | 160 - 188   | °C     |                    |
| Middle Temperature               | 177 - 193   | °C     |                    |
| Front Temperature                | 188 - 210   | °C     |                    |
| Nozzle Temperature               | 188 - 216   | °C     |                    |
| Mold Temperature                 | 30 - 60   | °C     |                    |
| Injection Rate                   | Fast  |        |                    |
| Back Pressure                    | 0.00 - 0.827  | MPa    |                    |
| Screw Speed                      | 40 - 100  | rpm    |                    |
| NOTE                             |   |        |                    |
| 1.                               | 2 hours   |        |                    |
| 2.                               | 2 hours   |        |                    |
| 3.                               | China   |        |                    |
| 4.                               | 2 hours   |        |                    |
| 5.                               | China   |        |                    |
| 6.                               | 2 hours   |        |                    |
| 7.                               | China   |        |                    |
| 8.                               | 2 hours   |        |                    |
| 9.                               | China   |        |                    |
| 10.                              | 2 hours   |        |                    |
| 11.                              | 2 hours   |        |                    |
| 12.                              | China   |        |                    |
|                                  | OnFlex AF 7210-60B (60Sh A; black) as part the of the AF-range has been tested according waethering test SAE J2527. It has successfully passed the extended |        |                    |

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