# Solprene® 416

### Styrene Butadiene Styrene Block Copolymer

#### **Dynasol Elastomers**

#### Message:

Solprene 416 is a radial styrene/butadiene block copolymer having 30% of styrene content, most of it forming a polystyrenes block which gives the polymer a thermoplastic behavior. It develops properties of vulcanized rubber yet not requiring vulcanization.

It is protected with a non staining antioxidant system; FDA approved, suitable for food contact applications and is essentially gel free with a very clear color.

Solprene 416 is used as elastomeric modifier for asphalt and plastics, as ingredient of soling formulations and as base for pressure sensitive adhesives. It is available as free flowing porous crumb for easy handling and dissolution, packaged in standard paper bags, super sacs and cardboard boxes.

| General Information                                |                                  |          |             |
|--|----------------------------------|----------|-------------|
| Additive   | Antioxidant                      |          |             |
| Features   | Antioxidant                      |          |             |
|  | Block Copolymer                  |          |             |
|  | Branched Polymer Structure       |          |             |
|  | Food Contact Acceptable          |          |             |
|  | High Clarity                     |          |             |
|  | Low Gel                          |          |             |
|  | Porous                           |          |             |
|  |                                  |          |             |
| Uses   | Adhesives                        |          |             |
|  | Asphalt Modification             |          |             |
|  | Footwear                         |          |             |
|  | Plastics Modification            |          |             |
|  |                                  |          |             |
| Agency Ratings                                     | FDA Food Contact, Unspecified Ra | ting     |             |
| Appearance   | Clear/Transparent                |          |             |
| Forms  | Crumb                            |          |             |
| Physical   | Nominal Value                    | Unit     | Test Method |
| Specific Gravity                                   | 0.938                            | g/cm³    | DIN 53479   |
| Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)           | < 0.50                           | g/10 min | ASTM D1238  |
| Block Styrene <sup>1</sup>                         | > 28                             | %        |             |
| Solution Viscosity - 5.23% in toluene <sup>2</sup> | 11                               | cSt      |             |
| Styrene Content                                    | 30                               | %        | ASTM D5775  |
| Volatile Matter                                    | < 0.75                           | %        | ASTM D5668  |
| Hardness   | Nominal Value                    | Unit     | Test Method |
| Durometer Hardness (Shore A)                       | 78                               |          | ASTM D2240  |
| Elastomers   | Nominal Value                    | Unit     | Test Method |
| Tensile Stress (300% Strain)                       | 2.70                             | MPa      | ASTM D412   |
| Tensile Strength (Break)                           | 17.0                             | MPa      | ASTM D412   |
| Tensile Elongation (Break)                         | 800                              | %        | ASTM D412   |

| NOTE |           |  |
|------|-----------|--|
| 1.   | NM 202-07 |  |
| 2.   | NM 300-11 |  |

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