

# Leona™ 1402SH

Polyamide 66

Asahi Kasei Chemicals Corporation

## Message:

Leona™ 1402SH is a Polyamide 66 (Nylon 66) product. It is available in Africa & Middle East, Asia Pacific, Europe, or North America. Applications of Leona™ 1402SH include automotive, electrical/electronic applications, engineering/industrial parts and wire & cable.

Characteristics include:

- Flame Rated
- Good Stiffness
- Good Toughness
- Heat Stabilizer

| General Information |                           |
|---------------------|---------------------------|
| UL YellowCard       | E48285-240894             |
| Additive            | Heat Stabilizer           |
| Features            | Good Flow                 |
|                     | Good Stiffness            |
|                     | Good Toughness            |
|                     | Heat Stabilized           |
| Uses                | Automotive Applications   |
|                     | Connectors                |
|                     | Fittings                  |
|                     | Wire & Cable Applications |

| Physical                  | Dry        | Conditioned | Unit              | Test Method           |
|---------------------------|------------|-------------|-------------------|-----------------------|
| Specific Gravity          | 1.14       | --          | g/cm <sup>3</sup> | ASTM D792, ISO 1183   |
| Molding Shrinkage - Flow  | 1.3 to 2.0 | --          | %                 | Internal Method       |
| Water Absorption          |            |             |                   |                       |
| Saturation, 23°C          | --         | 2.5         | %                 |                       |
| Equilibrium, 23°C, 50% RH | --         | 2.5         | %                 | ISO 62                |
| Hardness                  | Dry        | Conditioned | Unit              | Test Method           |
| Rockwell Hardness         |            |             |                   | ASTM D785, ISO 2039-2 |
| M-Scale                   | 80         | 55          |                   |                       |
| R-Scale                   | 120        | 108         |                   |                       |
| Mechanical                | Dry        | Conditioned | Unit              | Test Method           |
| Tensile Modulus (23°C)    | 3000       | 1100        | MPa               | ISO 527-2             |
| Tensile Stress            |            |             |                   |                       |
| Yield, 23°C               | 82.0       | 48.0        | MPa               | ISO 527-2             |
| --                        | 79.0       | 55.0        | MPa               | ASTM D638             |
| Tensile Strain            |            |             |                   |                       |

|                                            |          |             |                   |             |
|--------------------------------------------|----------|-------------|-------------------|-------------|
| Yield, 23°C                                | 4.5      | 25          | %                 | ISO 527-2   |
| Break                                      | 50       | 270         | %                 | ASTM D638   |
| Break, 23°C                                | --       | > 50        | %                 | ISO 527-2   |
| Flexural Modulus                           |          |             |                   |             |
| --                                         | 2800     | 1000        | MPa               | ASTM D790   |
| 23°C                                       | 2600     | 900         | MPa               | ISO 178     |
| Flexural Strength                          |          |             |                   |             |
| --                                         | 118      | 50.0        | MPa               | ASTM D790   |
| 23°C                                       | 111      | 38.0        | MPa               | ISO 178     |
| Taber Abrasion Resistance<br>(1000 Cycles) | --       | 7.00        | mg                | ASTM D1044  |
| Impact                                     | Dry      | Conditioned | Unit              | Test Method |
| Charpy Notched Impact<br>Strength          | 6.0      | 16          | kJ/m <sup>2</sup> | ISO 179     |
| Charpy Unnotched Impact<br>Strength        | No Break | No Break    |                   | ISO 179     |
| Notched Izod Impact                        | 39       | 200         | J/m               | ASTM D256   |
| Thermal                                    | Dry      | Conditioned | Unit              | Test Method |
| Deflection Temperature<br>Under Load       |          |             |                   |             |
| 0.45 MPa, Unannealed                       | 230      | --          | °C                | ASTM D648   |
| 0.45 MPa, Unannealed                       | 162      | --          | °C                | ISO 75-2/B  |
| 1.8 MPa, Unannealed                        | 70.0     | --          | °C                | ASTM D648   |
| 1.8 MPa, Unannealed                        | 62.0     | --          | °C                | ISO 75-2/A  |
| CLTE - Flow                                | 8.0E-5   | --          | cm/cm/°C          | ASTM D696   |
| Specific Heat                              | 1670     | --          | J/kg/°C           |             |
| Thermal Conductivity                       | 0.20     | --          | W/m/K             |             |
| Electrical                                 | Dry      | Conditioned | Unit              | Test Method |
| Surface Resistivity                        | 1.0E+13  | --          | ohms              | IEC 60093   |
| Volume Resistivity (23°C)                  | 1.0E+14  | --          | ohms·cm           | IEC 60093   |
| Electric Strength                          | 20       | --          | kV/mm             | IEC 60243-1 |
| Comparative Tracking<br>Index (3.00 mm)    | 525      | --          | V                 | IEC 60112   |
| Flammability                               | Dry      | Conditioned | Unit              | Test Method |
| Flame Rating (0.750 mm)                    | V-2      | --          |                   | UL 94       |
| Oxygen Index                               | 26       | --          | %                 | ASTM D2863  |

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