

# ORGALLOY® RS 6620 NAT

**Orgalloy® RS 6620 NAT resin** is a fiberglass reinforced polyamide 66 alloy designed for injection molding. This natural grade offers an outstanding dimensional stability, chemical resistance to automotive fluids and is ideal for the realization of complex parts.

| PROPERTIES                               | DRY /<br>COND             | UNIT      | TEST<br>STANDARD   |
|------------------------------------------|---------------------------|-----------|--------------------|
| RHEOLOGICAL PROPERTIES                   |                           |           |                    |
| Melt Volume-Flow Rate                    | 11 / *                    | cm³/10min | ISO 1133           |
| Temperature                              | 275 / *                   | °C        | -                  |
|                                          | 527 / *                   | °F        |                    |
| Load                                     | 2.16 / *                  | kg        | -                  |
|                                          | 4.76 / *                  | lb        |                    |
| Molding Shrinkage, parallel              | 0.4 / *                   | %         | ISO 294-4,<br>2577 |
| Molding Shrinkage, normal                | 0.6 / *                   | %         | ISO 294-4,<br>2577 |
| MECHANICAL PROPERTIES                    |                           |           |                    |
| Tensile Modulus                          | 6320 / 6000               | MPa       | ISO 527-1/-2       |
|                                          | 917000 / 870000           | psi       |                    |
| Stress at Break                          | 115 / 110                 | MPa       | ISO 527-1/-2       |
|                                          | 16700 / 16000             | psi       |                    |
| Strain at Break                          | 3 / 3                     | %         | ISO 527-1/-2       |
| Shore D Hardness                         | 78 / *                    | -         | ISO 868            |
| Tensile Creep Modulus, 1h                | * / 4900                  | MPa       | ISO 899-1          |
|                                          | * /                       | psi       |                    |
| Tensile Creep Modulus, 1000h             | 711000<br>* / 3510        | MPa       | ISO 899-1          |
|                                          | * /                       | psi       |                    |
| Charpy Impact Strength, +23°C            | 509000<br>- / No<br>Break | kJ/m²     | ISO 179/1eU        |
| Charpy Notched Impact Strength, +23°C    | 11 / 13                   | kJ/m²     | ISO 179/1eA        |
|                                          | 5.23 / 6.18               | ftlb/in²  |                    |
| THERMAL PROPERTIES                       |                           |           |                    |
| Melting Temperature, 10°C/min            | 255 / *                   | °C        | ISO 11357-1/-3     |
| Temp. of Deflection Under Load, 1.80 MPa | 220 / *                   | °C        | ISO 75-1/-2        |
|                                          | 428 / *                   | °F        |                    |
| Temp. of Deflection Under Load, 0.45 MPa | 240 / *                   | °C        | ISO 75-1/-2        |
|                                          | 464 / *                   | °F        |                    |
| Vicat Softening Temperature, 50°C/h 50N  | 195 / *                   | °C        | ISO 306            |
|                                          | 383 / *                   | °F        |                    |

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|                                            |              |       |                    |
|--------------------------------------------|--------------|-------|--------------------|
| Burning Behav. at 1.5 mm Nominal Thickness | HB / *       | class | IEC<br>60695-11-10 |
| Thickness Tested                           | 1.6 / *      | mm    | -                  |
|                                            | 0.0630 / *   | in    |                    |
| Burning Behav. at Thickness h              | HB / *       | class | IEC<br>60695-11-10 |
| Thickness Tested                           | 3.2 / *      | mm    | -                  |
|                                            | 0.1260 / *   | in    |                    |
| ELECTRICAL PROPERTIES                      |              |       |                    |
| Relative Permittivity, 100Hz               | - / 3        | -     | IEC 60250          |
| Relative Permittivity, 1MHz                | - / 4        | -     | IEC 60250          |
| Dissipation Factor, 100Hz                  | - / 280      | E-4   | IEC 60250          |
| Dissipation Factor, 1MHz                   | - / 170      | E-4   | IEC 60250          |
| Volume Resistivity                         | - /<br>>1E13 | Ohm*m | IEC 60093          |
| Surface Resistivity                        | * /<br>>1E15 | Ohm   | IEC 60093          |
| Dielectric (Electric) Strength             | 35 / 35      | kV/mm | IEC 60243-1        |
|                                            | 889 / 889    | kV/in |                    |
| Comparative Tracking Index                 | * / 600      | -     | IEC 60112          |
| OTHER PROPERTIES                           |              |       |                    |
| Water Absorption                           | 2.3 / *      | %     | Sim. to ISO 62     |
| Humidity Absorption                        | 1.1 / *      | %     | Sim. to ISO 62     |
| Density                                    | 1180 / 1180  | kg/m³ | ISO 1183           |
|                                            | 1.18 / 1.18  | g/cm³ |                    |

**MAIN APPLICATIONS:** • Electric connectors • Sport parts

## PACKAGING:

This grade is delivered dried in sealed packaging (25kg bags) ready to be processed.

## SHELF LIFE:

Two years from the date of delivery. For any use above this limit, please refer to our technical services.

### Processing conditions:

- Drying time (only necessary for bags opened for more than two hours): 4-8 hours at 80°C
- Injection temperature (min-recommended-max): 270-280-290°C
- Mould temperature (min-max): 60-80°C

# ORGALLOY<sup>®</sup>

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|                                                                                                                  |  |
|------------------------------------------------------------------------------------------------------------------|--|
| <b>PROCESSING</b><br>Injection Molding                                                                           |  |
| <b>DELIVERY FORM</b><br>Pellets                                                                                  |  |
| <b>SPECIAL CHARACTERISTICS</b><br>Heat Stabilized, Light Stabilized                                              |  |
| <b>REGIONAL AVAILABILITY</b><br>North America, Europe, Asia Pacific, South and Central America, Near East/Africa |  |