

# StarRov<sup>®</sup> 090

## Product description:

StarRov<sup>®</sup> 090 direct roving is manufactured by direct winding of continuous glass fibers of defined diameter into a cylindrical roving package. The fibers are coated with a silane sizing most suitable for reinforcement of epoxies, vinylester and polyester and polyurethane resins.

StarRov<sup>®</sup> 090 direct roving are easy to unwind due to even tension and low fuzz generation. The wettability of StarRov<sup>®</sup> 090 is excellent and can be processed in different process technologies, such as pultrusion, filament winding and weaving. The end-use composites applications can be found in infrastructure, building, marine, sport & leisure and water transportation market.

#### **Resin compatibility:**

- Epoxy
- Unsaturated polyester
- Vinylester
- Polyurethane

#### Designation: Glass type is E-Glass

# Benefits:

• Stable runout with even tension

DIRECT ROVING

- Very low fuzz
- Sharp angle feeding possible
- High strand integrity
- Excellent wettability
- Tex consistency
- High mechanical properties
- Excellent surface finish
- Very good color impregnation



| JM Designation                  | Region | LOI content<br>(%) | Moisture content<br>max. (%) | Linear density<br>Tex (g/km)/<br>Yield (yd/lb) |
|---------------------------------|--------|--------------------|------------------------------|--|
| StarRov <sup>®</sup> 090 9600   | EU     | 0.55               | 0.15                         | 9600 Tex                                       |
| StarRov <sup>®</sup> 090 4800   | EU     | 0.60               | 0.15                         | 4800 Tex                                       |
| StarRov <sup>®</sup> 090 2400   | EU     | 0.60               | 0.15                         | 2400 Tex                                       |
| StarRov <sup>®</sup> 090 1200   | EU     | 0.55               | 0.15                         | 1200 Tex                                       |
| StarRov <sup>®</sup> 090 FS 56  | NA     | 0.80               | 0.12                         | 56 Yield                                       |
| StarRov <sup>®</sup> 090 FS 113 | NA     | 0.80               | 0.12                         | 113 Yield                                      |
| StarRov <sup>®</sup> 090 FS 225 | NA     | 0.60               | 0.12                         | 225 Yield                                      |
| StarRov <sup>®</sup> 090 CS 250 | NA     | 0.60               | 0.12                         | 250 Yield                                      |
| StarRov <sup>®</sup> 090 FS 450 | NA     | 0.60               | 0.12                         | 450 Yield                                      |

### **Bobbin dimensions:**

| Region | Typical weight | Inner diameter        | Outer<br>diameter      | Height     |
|--------|----------------|-----------------------|------------------------|------------|
| EU     | 19 - 20 kg     | 165 mm                | 300 mm                 | 260-270 mm |
| NA     | 44 lbs         | 6 <sup>3/8</sup> inch | 11 <sup>1/4</sup> inch | 10 inch    |

#### Packaging:

| Region | Pallet wrap  | Bobbin<br>wrap | Pallet dimensions    | Net weight<br>per pallet | Bobbins per<br>pallet |
|--------|--------------|----------------|----------------------|--------------------------|-----------------------|
| EU     | Stretch foil | Tacky foil     | 1285 x 960 x 1400 mm | 930 kg                   | 48                    |
| NA     | Stretch wrap | Shrink bags    | 48 x 48 inch         | 2800 lbs                 | 64                    |

## Storage:

These products should be stored in original packaging in dry, roofed, dust free storehouses. The recommended temperature is between 10°C to 30°C (50°F to 86°F). The products should remain in the original packaging and be conditioned in the work area for a minimum of 24 hours prior to use. The pallets should be single stacked unless otherwise specified on the packaging unit.



Warranty disclaimer :

Technical specifications as shown in this literature are intended to be used as general guidelines only. Please refer to the Safety Data Sheet and product label prior to using this product. The physical and chemical properties of this product represent typical, average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Check with the Regional Sales Office nearest you for the most current information.

All Johns Manville products are sold subject to Johns Manville's standard Terms and Conditions, which includes a Limited Warranty and Limitation of Remedy. For a copy of the Johns Manville standard Terms and Conditions or for information on Johns Manville products, please visit https://www.jm.com/en/login/policies-terms-and-conditions/ or call (800)654-3103.

# Values:

All data represent typical average values.

JM Johns Manville

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