180 Assembled Roving for Spray－up is coated with a silane－based sizing，compatible with unsaturated polyester，vinyl ester and polyurethane resins．
180 is a versatile general purpose spray－up roving used to manufacture boats，yacht，sanitary ware，swimming pool and automotive parts and also pipe by centrifugal casting process．

## Product Features

O Excellent static control
© Excellent choppability and dispersion
© Fast and complete wet－out ensures easy roll－out and rapid air release
O Excellent strength of the composite products
O Excellent hydrolysis－resistance of finished parts
O High strength of end products and good resistance to boiling water

## Identification

| Example | E6CR11－2400－180 |
| :--- | :---: |
| Type of Glass | E6－CR |
| Assembled Roving | $R$ |
| Filament Diameter，$\mu \mathrm{m}$ | 11 |
| Linear Density，tex | 2400,3000 |
| Size Code | 180 |



## Technical Parameters

| Linear Density（\％） | Moisture Content（\％） | Size Content（\％） | Stiffness（mm） |
| :---: | :---: | :--- | :---: |
| ISO 1889 | ISO 3344 | ISO 1887 | ISO 3375 |
| $\pm 5$ | $\leq 0.15$ | $1.00 \pm 0.15$ | $135 \pm 15$ |

## Storage

Unless otherwise specified，fiberglass products should be stored in a dry，cool and rain－proof area．It is recommended that the room temperature and humidity should be always maintained at $15^{\circ} \mathrm{C} \sim 35^{\circ} \mathrm{C}$ and $35 \% \sim 65 \%$ respectively．To ensure safety and avoid damage to the product，the pallets should not be stacked more than three layers high．When the pallets are stacked in 2 or 3 layers，care should be taken to correctly and smoothly move the top pallet．


## Packaging

＊The product can be packed on pallet or in small cardboard boxes．

| Package height mm（in） | $260(10)$ | $260(10)$ |
| :--- | :---: | :---: |
| Package inside diameter mm（in） | $100(4)$ | $100(4)$ |
| Package outside diameter mm（in） | $270(10.6)$ | $310(12.2)$ |
| Package weight kg（lb） | $17(37.4)$ | $23(50.7)$ |


| Number of layers | 3 | 4 | 3 | 4 |
| :--- | :---: | :---: | :---: | :---: |
| Number of doffs per layer | 16 |  | 12 |  |
| Number of doffs per pallet | 48 | 64 | 36 | 48 |
| Net weight per pallet kg（in） | 816 （1797．3） | 1088 （2396．5） | $828(1825.4)$ | 1104 （2433．9） |


| Pallet length mm （in） | $1120(44)$ |  | $1270(50)$ |  |
| :--- | :--- | :--- | :--- | :--- |
| Pallet width mm （in） | $1120(44)$ |  | $960(37.8)$ |  |
| Pallet height mm （in） | $940(37)$ | $1180(46.5)$ | $940(37)$ | $1180(46.5)$ |

