

# ES – 2620 TIX LSE THIXOTROPIC POLYESTER PRODUCT TECHNICAL DATA SHEET

### **Description and Basic Properties**

ES-2620 TIX LSE is an isophthalic based unsaturated thixotropic polyester resin. GRP applications are used. Because of the low deformation and thixotropy when it is applied to vertical surfaces there will be no flowing and hanging and prodives homogenous final product. It can be used in the production of the materials that requires high temperature and chemical resistance such as tubes and tanks and in the production of equipments that serves the purposes of moving, storing and handling food stuffs. Its fiber wetting features are well developed Available with cobalt, with cobalt, without cobalt and low styrene emission.

| Application Methods | Chemical Structure |
|---------------------|--------------------|
| Hand lay-up         | Acid : Isophthalic |
| Spray-up            | Acceleration : Yes |

## **Properties of Liquid Form**

|                            | Unit  | Value                 | Method   |
|----------------------------|-------|-----------------------|----------|
| Appearance                 | -     | Cloudy, purplish      | -        |
| Viscosity <sup>1</sup>     | ср    | 2200 ± 200<br>(5 rpm) | ISO 2555 |
|                            |       | 800 ± 200<br>(50 rpm) | 130 2333 |
| Monomer<br>Content         | %     | 40 ± 3                | ISO 3251 |
| Density                    | g/cm³ | 1.10 ± 0.02           | ISO 1675 |
| Gel Time <sup>2</sup>      | min   | 11 ± 1                | ISO 584  |
| Peak Exotherm <sup>2</sup> | ° C   | 190 ± 10              | ISO 584  |
| Shelf Life                 | month | 3                     | -        |

<sup>1</sup>Brookfield DV II, 25° C, 4 spd <sup>2</sup>25° C, 2.0 ml MEK-P (Butanox M60) for 100 g sample

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## **Mechanical Properties of Cured Resin**

|  | Unit   | Value <sup>1</sup> | Method     |
|--|--------|--------------------|------------|
| Tensile Strength                                     | MPa    | 72 ± 7             | ASTM D638  |
| Tensile E-<br>Modulus                                | GPa    | 3.5 ± 0.3          | ASTM D638  |
| Elongation at<br>Break                               | %      | 3.5 ± 0.3          | ASTM D638  |
| Flexual Strength                                     | MPa    | 135 ± 10           | ASTM D790  |
| Flexual E-<br>Modulus                                | GPa    | $3.6 \pm 0.3$      | ASTM D790  |
| Heat Deflection<br>Temperature<br>(HDT) <sup>2</sup> | °C     | 90 ± 5             | ISO 75 A   |
| Barcol Hardness                                      | Barcol | 45 ± 5             | ASTM D2583 |

<sup>&</sup>lt;sup>1</sup>For fully cured resin, curing Schedule – 24 hrs at 20° C, 4 hrs at 90° C

<sup>2</sup>Curing Schedule – 24 hrs at 20° C, 4 hrs at 90° C, 3 hrs at 120° C

## **Storage Conditions**

It should be stored in a dry, clean and cool place (15-25  $^{\circ}$  C) in closed packages. The shelf life of the product is valid for this temperature range and it should not be forgotten that it will shorten at high temperatures. Products with the same charge number and date must be stored together.

Another factor that affects the life of unsaturated polyester resins containing styrene is sunlight. Styrene must be polymerized in the sunlight and products that are considered to shorten the life of the product should be avoided from direct sunlight contact.

#### **More Information**

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