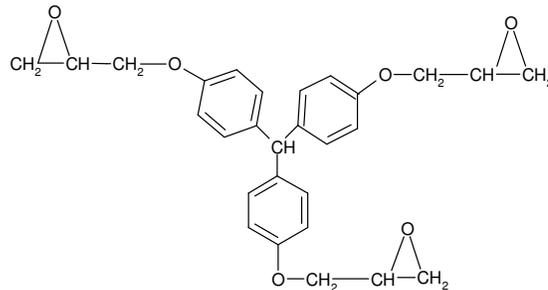


**Advanced Materials****Tactix<sup>®</sup> 742 #**

Solid Trifunctional Epoxy Resin

**DATA SHEET****GENERAL**

Tactix<sup>®</sup> 742 resin is a tris-(hydroxyl phenyl) methane-based epoxy. As with other solid resins, processing is easier with the addition of lower-viscosity epoxy resins such as Tactix<sup>®</sup> 123 resin.

**CHEMICAL STRUCTURE****APPLICATIONS**

- Composite and structural adhesives
- Especially for parts and components near high heat zones

**ADVANTAGES**

- Trifunctional
- Symmetrical and rigid backbone
- Large distance between epoxy reactive groups
- Provide very high Tg
- Excellent thermal stability
- Tactix<sup>®</sup> 742 resin has the highest dry glass transition temperature of any resin in the Tactix<sup>®</sup> resin line.

# In addition to the brand name product denomination may show different appendices, which allows us to differentiate between our production sites: e.g. BD = Germany, US = United States, IN = India, Cl = China, etc. These appendices are in use on packaging, transport and invoicing documents. Generally the same specifications apply for all versions. Please address any additional need for clarification to the appropriate Huntsman contact.

**KEY DATA****Specified key data**

<b>Visual Appearance</b>	<b>Brown solid</b>	
<b>Color Index GARDNER (ISO 4630)</b>	<b>0 - 13</b>	
<b>Epoxy Index (ISO 3001)</b>	<b>5.88 - 6.66</b>	<b>[eq/kg]</b>
<b>Epoxy Equivalent Weight EEW (ISO 3001)</b>	<b>150 - 170</b>	<b>[g/Eq.]</b>
<b>Melt viscosity at 150 °C , Brookfield CAP 2000 (ISO 3219)</b>	<b>25 - 60</b>	<b>[mPa.s]</b>
<b>Volatile matter , 1h at 150 °C (ISO 3251)</b>	<b>0.0 - 0.5</b>	<b>[%]</b>
<b>Chlorine content, hydrolysable (AMTM 116)</b>	<b>0 - 500</b>	<b>[ppm]</b>
<b>Chlorine content, ionic (AMTM 116)</b>	<b>0 - 5</b>	<b>[ppm]</b>

Specified key data are individually checked throughout and guaranteed.

**Typical key data**

<b>Softening Point</b>	<b>45 - 55</b>	<b>[°C]</b>
<b>Viscosity at 100 °C</b>	<b>700 - 800</b>	<b>[mPa.s]</b>
<b>Density @ 25 °C</b>	<b>1.23</b>	<b>[g/cm<sup>3</sup>]</b>
<b>Flash Point, Pensky-Martens Closed Cup (DIN51758)</b>	<b>&gt;200</b>	<b>[°C]</b>

Typical key data are spot checked; the values are typical for the product and are indicated for information only. The values are not guaranteed.

**FORMULATIONS**

Typical Resin System: Tactix<sup>®</sup> 742 and Tactix<sup>®</sup> 123 resins 75:25 (Wt.). (Physical properties listed below are based on this resin system.)

<b>Viscosity @ 79 °C , mPa.s</b>	<b>635</b>
<b>Typical Hardener</b>	<b>DDS</b>
<b>Mix Ratio</b>	<b>38 phr</b>
<b>Cure Schedule</b>	<b>3 hrs @ 177 °C</b>
	<b>2 hrs @ 250 °C</b>
<b>Platen Gel Time</b>	
<b>@ 177 °C</b>	<b>15 min</b>
<b>Flexural Strength (ksi)</b>	<b>15.0</b>
<b>Flexural Modulus (ksi)</b>	<b>400</b>
<b>Tensile Strength (ksi)</b>	<b>10.5</b>
<b>Tensile Modulus (ksi)</b>	<b>455</b>
<b>Tensile Elongation, %</b>	<b>2.7</b>
<b>Moisture Absorption, wt. %</b>	<b>4.4</b>
<b>(14 day water boil)</b>	
<b>Tg (TMA), °C</b>	<b>299</b>
<b>Tg (DMA Tan δ), °C</b>	<b>311</b>
<b>CLTE (below Tg, ppm/°C)</b>	<b>67</b>

**Chemical Resistance Properties of 75:25 Tactix<sup>®</sup> 742 and Tactix<sup>®</sup> 123 resin blend\***

Reagent	Percent Weight Change**
JP4 Fuel	<0.5
Hydraulic Fluid (Skydrol 500B-4, Monsanto)	<0.5
De-icing Fluid (Polyglycol Mixture)	<0.5

\* Typical starting point formulations and properties; not to be construed as specifications; test expected performance before use.

\*\* Following a 28-days immersion.

**Electrical properties of 75:25 Tactix 742 and Tactix 123 resin blend**

Frequency	Dielectric Constant	Dissipation Factor
1 kHz	5.05	0.0210
10 kHz	4.85	0.0321
50 kHz	4.68	0.0373
100 kHz	4.60	0.0378

**STORAGE**

Tactix<sup>®</sup> 742 should be stored between 2 and 40°C in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from food, drink and incompatible materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Don't store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

**HANDLING PRECAUTIONS**

Mandatory and recommended industrial hygiene procedures should be followed whenever our products are being handled and processed. For additional information please consult the corresponding product safety data sheets and the brochure "Hygienic precautions for handling plastics products".

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