

## PTU-5103

### DESCRIPTION

The PTU-5103 is an un-promoted, non-thixotropic, hybrid, unsaturated polyester resin.

### FEATURES AND BENEFITS

- Good wet out/roll out properties.
- Excellent mechanical properties.
- Good handling characteristics.

### APPLICATIONS

- Manufacture of fiberglass pipes, through the filament winding process.

### TYPICAL LIQUID PROPERTIES

Property	Units	Min	Max	Test Method
Acid Number (Solids)	Mg KOH/g sample	--	30	TARQ-110
Non-volatile Content	%	55	--	TARQ-200
Brookfield Viscosity <sup>2</sup>	Cps	300	400	TARQ-300
Gel Time <sup>1</sup>	Min	17	24	TARQ-400
Cure Time <sup>1</sup>	Min	--	40	TARQ-400
Exothermic Peak <sup>1</sup>	°C	140	210	TARQ-400
Stability at 120°C	Hours	1.5	--	TARQ-660
Appearance	--	Cloudy	Cloudy	VISUAL

<sup>1</sup> 1% Co (1%), 1.1% Butanox M-50 @25°C; <sup>2</sup> RVT, spindle #2, 50 rpm @25°C

NOTE: Tests results compared with the reported in certificate can be affected due to: batch age, temperature, moisture, type and amount of catalyst, testing equipment and method.

### PHYSICAL

Physical properties are shown for fiberglass laminate: These are typical values and are provided for reference only.

Property	Units	Min	Max	Test Method
Tensile Strangth	Mg KOH/g sample	--	30	TARQ-110
Tensile Modulus	%	55	--	TARQ-200
Elongation	Cps	300	400	TARQ-300
Flexural Strength	Min	17	24	TARQ-400
Flexural Modulus	Min	--	40	TARQ-400
HDT @ 1.82 MPa	°C	140	210	TARQ-400

- 1-. Laminate construction: 30% fiberglass to resin ratio.
- 2-. Laminate cured overnight at room temperatura and post-cured at 65°C for 5 hours.
- 3-. HDT is evaluated at neat resin casting.

## RECOMMENDATIONS

- 1.- The catalyst level should not exceed 2.8% or fall below 1% for proper cure.
- 2.- This product should not be used when temperature conditions are below 16°C, as curing and handling may be adversely affected.
- 3.- Do not add any material different to the catalyst recommended for this product.
- 4.- Do not mix organic peroxides with metallic soaps, amines or any type of accelerators or promoters, because it can result on violent decomposition with fire or explosion.
- 5.- Any additional questions, please contact your Reacciones Químicas SA de CV sales representative.

## STORAGE

Uncatalyzed PTU-5103 resin, has a usage life of three months from invoice date, when stored at 25°C or below, in a closed, factory sealed opaque containers, and out of direct sunlight, heat sources or moisture. For every 7°C increase in storage temperature, the shelf life is reduced by one half.

## **SAFETY AND HANDLING**

Detailed information for safe handling of PTU-5103 resin, can be found on its SDS. For more information, please contact your Reacciones Químicas SA de CV sales representative.

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