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## TECHNICAL DATA SHEET

### KZN-A060

#### DESCRIPTION : ISOPHTHALIC LAMINATING RESIN

Revision: August 2022

#### CHARACTERISTICS:

**KZN-A060** is a rigid, medium-reactive isophthalic unsaturated polyester resin. It is a pre-accelerated, thixotropic resin which is intended for use in Fibre Glass Reinforced applications where good water and chemical resistance is required together with excellent weathering and good retention of mechanical properties.

**KZN-A060** gives good glass fibre wet out with minimal drainage. This product is especially suited for high performance areas such as marine application, storage tanks, pool fabrication and pool linings.

There are many factors that influence the chemical resistance of GRP structures made with **KZN-A060**. In order to ensure the best long-term performance from your GRP laminate, the following points should be carefully considered. :-

- quality of laminate construction such as air entrapment
- extent of final cure
- effect of filler addition
- type and level of catalyst
- choice of reinforcement
- glass type and content
- design configuration

#### Other versions available:

Code	Description
A060LV	Low Viscosity Isophthalic Resin

**LIQUID PROPERTIES:**

PROPERTY		SPECIFICATION
Liquid appearance		Hazy pink, no contamination
Viscosity (Brookfield, @ 25 °C)	@100rpm	280 - 420 centipoises *190 – 210 centipoises
Thixotropic index		1.1 - 1.4
Acid value		< 25 mg KOH/g
Gel time @ 25°C using 2% MEKP-50 *Geltime @ 25°C using 1.5% MEKP-50 (Based on mass of resin used)		10 – 18 minutes *18 – 22 minutes
Non-volatile content		58 - 62%
Shelf Life at ambient temperature		6 months

*\*A060LV specification*

**GELTIME CHARACTERISTICS:**

**KZN-A060** is specially formulated to cure at room temperature using MEKP- 50. Addition levels should be 2% by weight to ensure that satisfactory cure is achieved at normal workshop temperature (20 - 25°C). Catalyst levels of less than 1% or greater than 3% should be avoided. Working temperatures below 15°C will affect the final cure of the product and is therefore not recommended. Typical gel times at different temperatures and catalyst levels can be obtained as a guide from the table below:

Product temperature in °C	Gel times in minutes at different catalyst levels				
	1.0%	1.5%	2.0%	2.5%	3.0%
15	77	52	35	20	16
20	54	32	23	15	11
25	33	22	15	9	7
30	25	16	11	6	5
35	16	10	7	4	3

#### PHYSICAL PROPERTIES:

##### A) UNFILLED CASTING

PROPERTY	TYPICAL VALUE
Barcol hardness (BS2782-10)	53 bhu
Water absorption (ISO 62-2)	45mg
Temperature of deflection (BS EN ISO 75-2)	105 °C
Elongation at break (ISO 527-2)	2,5%

##### B) FULLY CURED CHOPPED STRAND MAT LAMINATE

PROPERTY		TYPICAL VALUE
Tensile strength		90MPa
Flexural strength	molded surface	200MPa
	reverse surface	195MPa
Barcol hardness		53bhu
Glass content of test sample		33%
Modulus in flexure	molded surface	7700MPa
	reverse surface	7600MPa

**C) RECOMMENDED POST CURING SCHEDULE FOR LAMINATES:**

TEMPERATURE	POST CURE PERIOD
80 °C	2 hours
70 °C	3 hours
60 °C	4 hours
50 °C	5 hours
40 °C	6 hours

Post curing should preferably take the form of dry electrical heat or heated blower fans, which should cure all areas of the complete moulding simultaneously. Care should be taken to avoid excessive localised heating and irregular post cure from area to area on a mould, and the maximum temperature of 80°C should not be exceeded.

**STORAGE CONDITIONS:**

**KZN-A060** should be stored under cool conditions (20 - 25°C) in closed opaque containers. Exposure to sunlight and/or high temperature should be avoided since this can lead to premature gellation even in the absence of peroxide catalyst. The storage shelf life of this product under ideal conditions is a minimum of six months from the date of manufacture.

First in first out stock rotation must be adhered to in order to obtain optimum performance from this product. If screw top drums are stored outside for any length of time, they should be kept in a horizontal position in order to avoid any ingress of water.

**LIMIT OF LIABILITY APPLIES**

The information included in this document is given in good faith and is intended to assist you the customer in determining the suitability of this product for your application. Due to the diverse applications and conditions in which many of our products may be used, we request that you, the user, test and inspect our product to satisfy yourself of its contents and suitability for your specific need. This document does not constitute any guarantee or warranty expressed or implied. The exclusive remedy for all proven claims is replacement of our product and under no circumstances shall we be liable for any special, consequential or incidental damages.