

# SYNOLITE™ 0288-I-2

## CHEMICAL/PHYSICAL NATURE

Synolite™ 0288-I-2 is an unsaturated isophthalic polyester resin, dissolved in styrene.

Synolite™ 0288-I-2 is thixotropic, pre-accelerated and contains color change indicator.

## MAJOR APPLICATIONS

Synolite 0288-I-2 is suitable for hand lay-up and spray-up applications.

## PRINCIPAL PROPERTIES

Synolite™ 0288-I-2 exhibits excellent wetting of the glass fiber reinforcement and its thixotropic nature allows good workability (also on vertical laminates).

Its good glass fiber wetting properties allow to obtain laminates with high content of glass fiber.

Synolite™ 0288-I-2 exhibits low peak exotherm that allows wet on wet construction of very thick laminates, without shrinkage or strain problems.

Synolite™ 0288-I-2 is supplied with a color indicator additive that changes color as the cure proceeds and provides a peroxide presence evidence.

Synolite™ 0288-I-2 is particularly suited for boat building; its chemical nature guarantees good mechanical properties also after many years of water immersion.

## APPROVALS

Synolite™ 0288-I-2 is approved for the use in boat building by Registro Navale Italiano (R.I.Na.), Lloyd's Register of Shipping and Det Norske Veritas.

## PRODUCT SPECIFICATIONS UPON DELIVERY

Property	Range	Unit	TM
Solids content, IR	53.0 - 55.0	%	2033
Gel time from 25 to 35°C	17.0 - 19.0	minutes	2625
Peak temperature	90 - 110	°C	2625
Cure time from 25°C to peak	37.0 - 45.0	minutes	2625
Appearance	blue, hazy	-	2265
Stability, 120°C	> 120	minutes	2300C
Viscosity, 20 s-1	460 - 540	mPa.s	2313
Viscosity, 50 s-1	380 - 440	mPa.s	2313
Viscosity, 250 s-1	320 - 360	mPa.s	2313

## REMARKS

Curing conditions at 25°C TM2625: 2.5 g of Butanox M50 in 100 g of resin.

Viscosity measurement: Physica MC1+ / Z2 / 23°C

## PROPERTIES OF THE LIQUID RESIN (TYPICAL VALUES)

Property	Value	Unit	TM
Flash point	33	°C	2800
Stability at 20°C	6	months	-

## PROPERTIES OF CAST UNFILLED RESIN (TYPICAL VALUES)

Property	Value	Unit	TM
Hardness	35	Barcol	2604
Tensile strength	75	MPa	ASTM D638
Tensile E-Modulus	3.8	GPa	ASTM D638
Elongation at break	2.6	%	ASTM D638
Heat Deflection Temp. (HDT)	65	°C	ASTM D648B
Water immersion after 24 hrs.	0.40	%	ASTM D570
Asymptotic absorption	0.80	%	ASTM D570
Asymptotic weight loss	< 0.20	%	ASTM D570

## REMARKS

After 16 hours post curing at 40°C.

## PROPERTIES OF CAST UNFILLED BASE RESIN (TYPICAL VALUES)

Property	Value	Unit	TM
Hardness	45	Barcol	2604
Tensile strength	80	MPa	ASTM D638
Tensile E-Modulus	4.1	GPa	ASTM D638
Elongation at break	2.5	%	ASTM D638
Heat Deflection Temp. (HDT)	75	°C	ASTM D648B

## REMARKS

After 3 hours post curing at 80°C.

## PROPERTIES OF GLASS REINFORCED RESIN (TYPICAL VALUES)

Property	Value	Unit	TM
Tensile strength	98	MPa	ASTM D638
Tensile E-Modulus	9.0	GPa	ASTM D638
Elongation at break	1.3	%	ASTM D638

## REMARKS

After 16 hours post curing at 40°C. Glass content: 30%.

## PROCESSING

It is recommended to cure at temperature between 15 and 30 °C with medium reactivity MEKP (methyl ethyl ketone peroxide).

In order to have longer gel time at summer conditions it is suggested to use low reactivity MEKP. Using mixture of MEKP / AAP (acetyl acetone peroxide) allows obtaining shorter gel time with higher exotherm peak.

## GUIDELINES BEFORE USE

Before use, the resin should be conditioned at a well-defined, application dependent temperature (usually 15°C minimum for a MEKP / Co cure). Stir the product before blending.

## STORAGE GUIDELINES

The resin should be stored indoors in the original, unopened and undamaged packaging, in a dry place at temperatures between 5°C and 30°C and the properties might change during storage. Shelf life is reduced at higher temperatures and the properties of the resin might change during storage. The shelf life of styrene containing unsaturated polyesters will be significantly reduced when exposed to light. Store in dark and in 100%light tight containers only.

## MATERIAL SAFETY

A Material Safety Data Sheet of this product is available on request.

## TEST METHODS

Test methods (TM) referred to in the table(s) are available on request.

Aliancys is a leading global company active in the sales of Quality Resins for composite applications. Together with its customers, Aliancys is pushing the limits of both composite part manufacturing and performance. Taking an integral approach to new product development, Aliancys is using its full expertise in resin chemistry, material science, and component manufacturing for shaping new applications in composites. So let's talk and increase our mutual business success, both today and tomorrow. More information on [www.aliancys.com](http://www.aliancys.com)

PRODUCT INQUIRY? PLEASE CLICK HERE

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