

# SYNOLITE™ 8488-G-1

## CHEMICAL/PHYSICAL NATURE

Synolite™ 8488-G-1 is an unsaturated polyester based on DCPD, dissolved in styrene.

## MAJOR APPLICATIONS

Synolite 8488-G-1 was especially developed for use in resin transfer molding (RTM) and infusions processes.

## PRINCIPAL PROPERTIES

Synolite™ 8488-G-1 is designed for high productivity cycle times performing an outstanding polymerization degree. Despite the high output rate Synolite™ 8488-G-1 features a reduced peak exotherm compared to traditional resin types aimed for infusion processes.

Synolite™ 8488-G-1 is used for the high quality production GRP parts in the Marine and Transport segments.

## APPROVALS

Synolite™ 8488-G-1 is approved by Det Norske Veritas for the use in Marine applications.

## PRODUCT SPECIFICATIONS UPON DELIVERY

| Property                    | Range              | Unit  | TM   |
|-----------------------------|--------------------|-------|------|
| Appearance                  | Clear - sl. turbid | -     | 2265 |
| Viscosity, 20 s-1, 23°C     | 110 - 150          | mPa.s | 2313 |
| Solids content, IR          | 59 - 62            | %     | 2033 |
| Cure time from 25 to 35°C   | 22 - 26            | Min   | 2625 |
| Cure time from 25°C to peak | 34 - 42            | Min   | 2625 |
| Peak temperature            | 100 - 140          | °C    | 2625 |

## REMARKS

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

Curing conditions: 2,0 g Butanox M 50 added to 100 g of resin.

## PROPERTIES OF THE LIQUID RESIN (TYPICAL VALUES)

| Property                        | Value | Unit  | TM |
|---------------------------------|-------|-------|----|
| Stability, no init., dark 25 °C | 6     | Month | -  |

## PROPERTIES OF CAST UNFILLED RESIN (TYPICAL VALUES)

| Property                        | Value | Unit   | TM        |
|---------------------------------|-------|--------|-----------|
| Hardness                        | 4     | Barcol | 2604      |
| Tensile strength                | 66    | MPa    | ISO 527-2 |
| Tensile-E-modulus               | 3,5   | GPa    | ISO 527-2 |
| Elongation at break             | 3,0   | %      | ISO 527-2 |
| Heat distortion Temperature (1) | 64    | °C     | ISO 75-A  |
| Heat distortion Temperature (2) | 85    | °C     | ISO 75-A  |

## CURING CONDITIONS

(1) Cured 24 hrs. at RT and 16 hrs. at 40 °C.

(2) Cured 24 hrs. at RT and 3 hrs. at 80 °C.

1 ml Butanox LPT-IN (AKZO-Nobel) and 0,5 ml Co-octoate solution (1% Co) added to 100 g of resin

## PROCESSING

Synolite™ 8488-G-1 will be cured best when used between 15 and 30 °C with MEK-peroxide with medium reactivity.

For longer gel times we recommend the use of low reactive MEK-peroxide.

Synolite™ 8488-G-1 may be used also with MEK-AAP peroxide mixtures in order to get a fast through cure, nevertheless an increased exotherm reaction with consequent higher peak exotherm must be kept in mind.

## GUIDELINES BEFORE USE

The resin should be conditioned at a well-defined, application dependent temperature (usually 15 °C for MEKP/Co cure).

## 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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