PRP Corp Pty Ltd
Distributor of Polynt-Reichhold Products

Technical Data Sheet

OptiMold II® RPT-VUP-8341T
Filled Tooling Resin

Description

- Non-shrinkage characteristics,
- Fast wet-out,
- Superior, high quality surface finish,
- Easy to use,
- Sag resistant thixotropy,
- Multiple gel time versions available.

Optimold II® resin is designed for use in manufactured fibreglass moulds. Due to its non-shrinkage characteristics, dimensional stability is maintained during the curing cycle of the product, resulting in a higher quality surface finish. Highly controlled rheological properties provide high resistance to sagging without compromising wet-out. Laminates are formed with significantly better mechanical properties than inferior resins. Optimold II® resin is ready to use, easy to spray and requires only the addition of the proper amount of an appropriate methyl ethyl ketone peroxide (MEKP) to cure.

Liquid Resin Properties

Specific Gravity (25°C)	1.27 to 1.33
Viscosity (25°C Brookfield RVT, spindle No.3 @ 50 rpm)	1100mPa.s to 1600mPa.s
Thixotropic Index (Brookfield RVT, spindle No.3, speeds 5 & 50rpm)	3.2 to 4.0
Gel Time	18 to 22min
Time to Peak Exotherm	25 to 35min
Peak Exotherm	170 to 190°C
Solid Content	65 to 70%

*Cure: It is recommended to recheck the gel time in the customer's plant as age, temperature, humidity and catalyst will produce varied gel times.

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Cured Unreinforced Resin Properties

Tensile Properties ASTM D 638	Tensile Strength	92MPa
	Elongation at Break	1.8%

Application

PRP Corp recommends Curox Cata 2000 as the catalyst to be used. The catalyst level should not exceed 2.0% or fall below 1.0% for proper cure, with 1.5% at 25°C being ideal. This product should not be used when temperature conditions are below 15°C (as cure may be adversely affected). This product is ready to use by application with airless spray equipment or by hand lay-up.

Optimould II® Laminating Procedure

1. Apply a mist coating of resin to the work zone,
    a. A typical work zone ranges from 2.3m^2 to 9.3m^2, depending upon the number of laminators and ambient temperature conditions.
2. Apply 1mm of gun chop to the work zone for the first lamination pass against the skin coat,
    a. Roll the first pass to eliminate all air.
3. Once rolled and before gelation, apply another pass of 3.3 to 4.3mm of gun chop to the work zone.
    a. Roll this second pass for consolidation,
    b. A slow-motion rolling approach with a light touch helps to consolidate the material and helps to avoid just pushing the material around.
4. Cover neighbouring work zones in a similar manner, maintaining a 'wet edge' between work zones.
5. Allow this 4.3 to 5.3mm thick lamination to gel and cure, approximately 30-60 minutes from application to each work zone.
6. The laminate should exotherm at 43°C-60°C and turn uniformly tan-white in approximately 60 minutes.
7. Times in excess of 90 minutes suggest a reduced or poor cure, and subsequent warpage and post-curing of the maid may occur.
8. An infrared thermometer should be used to monitor laminate exotherm.
9. Apply additional Optimould II® laminations until the design thickness is achieved.
10. Each lamination can begin once the temperature returns to near ambient temperature (comfortable to touch).
11. Subsequent laminations do not require the 1mm initial layer, the entire laminate layer thickness can be applied after the mist coating of resin for each subsequent lamination.

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For best results, the entire laminate should be applied on the same workday. Spotty interlaminar adhesion may result if one lamination is allowed to cure too completely. When delays are required, a commercially available two component urethane adhesion promoter should be used to achieve a good secondary bond. Follow the manufacturer's directions.

Each user must determine the suitability of this product for their particular application. PRP Corp is always available to assist in the proper selection of all Polynt-Reichhold products available for commercial use.

Storage Limitations

Uncatalyzed, this resin has a usage life of 3 months from date of manufacture when stored at 25°C or below in a closed, factory-sealed, opaque container, and out of direct sunlight. The usage life is approximately cut in half for every 10°C over 25°C.

Disclaimer and Limitation of Liability

This datasheet contains data that is current and accurate to the best of our knowledge. Differing materials, substrates, environments, site conditions, and product storage, handling and application may affect results. Users should carry out spot-tests to determine each product's suitability for their particular purpose. This data sheet and the properties of the product may change without notice. It is the user's responsibility to ensure that this data sheet is the most up to date version. PRP Corp is not liable for any loss or damage resulting from incorrect, careless, or negligent use or storage of the product, including use of out-of-date product. Any liability arising from use of the product is limited to the replacement or purchase price of the product. Final determination of the suitability of the material for the use contemplated, the manner of use and whether the suggested use infringes any patents is the sole responsibility of the user.

Safety Information

For all safety and regulatory information, please contact PRP Corp for the most up to date Safety Data Sheet.

FOR INDUSTRIAL USE AND PROFESSIONAL APPLICATION ONLY. KEEP OUT OF REACH OF CHILDREN.

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