Technical Data Sheet

41-100 41-200 41-300 Series

DESCRIPTION:

41-100, 41-200, 41-300 Series are pre-promoted, thixotropic, polyester resins formulated for the production of reinforced plastic products by the spray-up or hand lay-up technique.

CHARACTERISTICS & ADVANTAGES:

- Excellent wet out and rollout
- Low Shrinkage
- Excellent cure in thin sections
- Excellent properties after water boil tests

TYPICAL PROPERTIES (at 22ºC or 71.6ºF):

These values may or may not be manufacturing control criteria; they are listed as a reference guide only. Particular batches will not conform exactly to the numbers listed because storage conditions, temperature changes, age, testing equipment (type and procedure) can each have a significant effect on the test results. Resins with properties outside of these ranges can perform acceptably.

Waxed Series:	41-100	41-200	41-300
Waxless Series:	41-180	41-280	41-381

Gel Time (minutes) (1% MEC-EX):	8-16’	16-26’	34-42’

Viscosity……500-600 cps.
Specific Gravity……1.10-1.15

(100 g mass in a cup @ 22°C)

PHYSICAL CHARACTERISTICS at 25ºC or (77ºF):

Polyesters do not develop ultimate physical properties right away. Time and / or heat is needed to reach full cure. Heat may come from internal exotherm or external sources. The amount of catalyst will influence the extent of cure. With time and/ or heat, a moderate cure will develop into ultimate physical properties. When the part reaches ultimate cure depends upon time, temperature and satisfactory catalyzation. Too much or too little catalyst can result in permanent under-cure, which cannot be adjusted. Practically speaking, serviceable cure time will range from overnight to a week and occasionally longer due to circumstances. Small, properly catalyzed thin laminates that do not exotherm and do not receive external heat may take months or years to achieve ultimate physical properties. Sufficient external heat can reduce the cure time to less than a day.

MECHANICAL PROPERTIES[1]

Flexural Strength, kPa……133000
Flexural Modulus, kPa x 1,000,000……3.73
Tensile Strength, kPa……69200
Tensile Elongation, %……1.6
Heat Distortion Temperature, C……53
Barcol Hardness……..45
Compressive Strength, kPa……...88900

[1] Mechanical properties are obtained in controlled laboratory test and may vary in production conditions.

CURE:

It is recommended gel time be checked in a customer's plant because age, temperature, humidity and catalyst will produce varied gel times. All data referencing gel or cure time refers specifically to MEC-EX catalyst. Other MEKP catalysts can be used but gel and cure times will vary.The catalyst level should not exceed 2.4% or be below 0.9% for proper cure. Follow the recommended level and the temperature provided.

PRECAUTION

Do not over-mix. Over-mixing breaks down viscosity, increasing tendencies to sag, and causes styrene loss. Resins should be mixed once a day for 10 minutes. The resin should be mixed to the sides and bottom of the container with the least amount of turbulence possible. Pressurized Air bubbling should not be used for mixing. It is not effective and only serves as a potential for water or oil contamination. Do not add any material other than recommended catalyst to this product without the advice of a representative of the Polynt Composites.

STORAGE LIMITATIONS:

Polyester resin has a shelf life of 90 days from date of manufacture when stored at 22° (73°F) or below, in a closed, factory sealed, opaque container, and out of direct sunlight. Fast cure resin (gel times less than 9.0 minutes) is stable for 45 days. The shelf life is cut in half for every 11°C (20°F) over 22°C (73°F). Totes of product can have even shorter shelf life (66.0% of that for drums).

SHIPPING:

Shipment is normally in lined 205 liters (45 imp. gallon) and/or 20 liters (4.4 imp. gallon) containers.

DISPOSAL :

Dispose of in accordance with local and provincial regulations. Do not incinerate closed containers. Incinerate in approved facilities only.

Safety information

All sales of products manufactured by Polynt Composites Canada Inc. and described herein, are made solely on condition that Polynt's customers comply with applicable health and safety laws, regulations and orders relating to the handling of our products in the workplace. Before using, read the following information, and both the product label, and Material Safety Data Sheet pertaining to each product. Most products contain styrene. Styrene can cause eye, skin and respiratory tract irritation. Avoid contact with eyes, skin and clothing. Impermeable gloves, safety eyewear and protective clothing should be worn during use to avoid skin and eye contact. Wash thoroughly after use. Styrene is a solvent and may be harmful if inhaled. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Extended exposure to styrene at concentrations above the recommended exposure limits may cause central nervous system depression causing dizziness, headaches or nausea and, if overexposure is continued indefinitely, loss of consciousness, liver and kidney damage.

Do not ingest or breathe vapor, spray mists or dusts caused by applying, sanding, grinding and sawing products. Wear an appropriate NIOSH/MSHA approved and properly fitted respirator during application and use of these products until vapors, mists and dusts are exhausted, unless air monitoring demonstrates vapors, mists and dusts are below applicable exposure limits. Follow respirator manufacturer's directions for respirator use. The International Agency for Research on Cancer (IARC) reclassified styrene as Group 2B, "possibly carcinogenic to humans." This revised classification was not based on new health data relating to either humans or animals, but on a change in the IARC classification system. The Styrene Information and Research Center does not agree with the reclassification and published the following statement: Recently published studies tracing 50,000 workers exposed to high occupational levels of styrene over a period of 45 years showed no association between styrene and cancer, no increase in cancer among styrene workers (as opposed to the average among all workers), and no increase in mortality related to styrene.

Styrene is classified by OSHA and the Department of Transportation as a flammable liquid. Flammable products should be kept away from heat, sparks, and flame. Lighting and other electrical systems in the work place should be vapor-proof and protected from breakage. Vapors from styrene may cause flash fire. Styrene vapors are heavier than air and may concentrate in the lower levels of molds and the work area. General clean air dilution or local exhaust ventilation should be provided in volume and pattern to keep vapors well below the lower explosion limit and all air contaminants (vapor, mists and dusts) below the current permissible exposure limits in the mixing, application, curing and repair areas.

Most polyester/vinylester products contain hazardous ingredients. To determine the hazardous ingredients present, their applicable exposure limits and other safety information, read the Safety Data Sheet for each product (identified by product identifier) before using. If unavailable, these can be obtained from your Polynt representative or from: Polynt Composites Canada Inc. 905 495-0606

Technical Data Sheet

41-100 41-200 41-300 Series

January 2023

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

Polynt Composites Canada Inc.
29 Regan Road, Brampton, Ontario L7A 1B2 905-495-0606
2650 T-Casgrain, Drummondville Québec J2A 4J5 819 477-4516

Disclaimer and limitation of liability

The products sold hereunder shall meet seller's applicable specifications at the time of shipment. Seller's specifications may be subject to change at any time without notice to buyer. Buyer must give seller notice in writing of any alleged defect covered by this warranty (together with all identifying details, including the product code(s), description and date of purchase) within thirty (30) days of the date of shipment of the product or prior to the expiration of the shipment's quality life, whichever occurs first.

The warranty described herein shall be in lieu of any other warranty, express or implied, including but not limited to, any implied warranty of merchantability or fitness for a particular purpose, there are no warranties that extend beyond the description on the face hereof.

The buyer's sole and exclusive remedy against seller shall be for the replacement of the product or refund of the purchase price in the event that a defective condition of the product should be found to exist by seller. No other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available to the buyer.

The sole purpose of this exclusive remedy shall be to provide buyer with replacement of the product or refund of the purchase price of the product if any defect in material or workmanship is found to exist. This exclusive remedy shall not be deemed to have failed its essential purpose so long as seller is willing and able to replace the defective products or refund the purchase price.

To the best of our knowledge, the information contained herein is accurate. 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 buyer.