PRODUCT BULLETIN

April 2025

ECT120 Series

Epoxy Compatible Technology

DESCRIPTION

Polynt's **IMEDGE®** products are high performance **I**n-**M**old cutting **EDGE** polymer technologies that offer unique and revolutionary alternatives to conventional FRP materials. The IMEDGE® technologies were developed to promote and drive innovation in the FRP industry. The IMEDGE® product line represents Polynt's commitment to be a leader in the industry through technology, sales, technical and customer support.

IMEDGE® ECT120 coatings are advanced Epoxy Compatible Technology (ECT) products that have been formulated to be used as in-mold, exterior coatings for epoxy resin matrix reinforced plastic parts. When IMEDGE® ECT120 coatings are used, tie coats are no longer needed, saving process steps and reducing part weight. Use of IMEDGE® ECT120 coatings also allows fabricators to use an in-mold coating rather than post-painting, resulting in significant labor savings. Neutral and clear formulations can be used for parts where the fabricator wants carbon fiber reinforcement to be visible.

BENEFITS & FEATURES

- Excellent adhesion to epoxy matrix laminates
- Deep, dark, rich, high gloss colors
- Excellent color and gloss recovery after sanding and buffing
- Blush resistant
- Excellent weathering resistance
- Enhanced impact resistance and toughness for reduced cracking
- Excellent scratch and wear resistance
- Resistant to porosity
- Low weight per gallon

IMEDGE® ECT120 coatings are formulated to meet EPA's National Emission Standards for Hazardous Air Pollutants (NESHAP) for both Boat Manufacturing and Reinforced Plastic Composites products.

IMEDGE® ECT120 coatings offer exceptional water resistance and are durable and crack resistant. While offering these benefits, IMEDGE® ECT120 coatings have retained the important construction and application qualities expected from Polynt coatings, such as resistance to tearing and color separation, sag resistance, consistent liquid properties, and more. These all add up to higher quality appeal in FRP parts made with Polynt's IMEDGE® ECT120 Series products.

PROPERTIES – LIQUID

Property[1]	Unit	IMEDGE® ECT120 Colors	IMEDGE® ECT120 Whites	IMEDGE® ECT120 Neutrals/Clear
Viscosity[2]	cps	12,000	13,000	11,000
Thix Index[3]	-	6.5	6.0	6.0
Weight per Gallon	lbs/gal	9.25	9.5	9.0
Gel Time[4]	minutes	15.5	15	13
Lay-up Time	minutes	53	68	53
Sag Resistance	-	Good at 20 mils	Good at 20 mils	Good at 20 mils
Hide (most formulations)	-	Complete at 15 mils	Complete at 15 mils	N/A

1) All properties at 25°C/77°F unless otherwise noted
2) Brookfield Viscometer RVF Spindle #4 at 4 RPM
3) Brookfield Viscometer RVF Spindle #4 at 2/20 RPM
4) 1.8% Arkema Luperox® DDM-9

Properties will vary depending on the formulation. Ask a Polynt representative about a specific formulation.

APPLICATION

IMEDGE® ECT120 products are formulated for spray application. Brushing or rolling is not recommended. IMEDGE® ECT120 products can be applied with typical gel coat spray application equipment. Use of external initiator mix equipment is recommended. Use of internal mix spray equipment increases the potential for porosity.

Actual spray application is similar to conventional gel coats. Refer to Polynt's Composites Applications Guide for additional specific application information. Spray equipment must be well maintained and regularly calibrated. Application procedure recommendations should be followed carefully. Poorly maintained equipment or poor application will quickly negate the beneficial properties of IMEDGE® ECT120.

Refer to Polynt's Composites Applications Guide ("Cookbook") for equipment and application recommendations. Each user must determine the suitability of this product to his/her particular mode of operation and intended end-use application. A Polynt representative will be available to assist in the proper selection of all Polynt products available for commercial use.

CURE

It is recommended that gel time be checked in the customer's plant because age, temperature, humidity and initiator will produce varied gel times. All data referencing gel or cure refers specifically to Arkema Luperox® DDM-9 initiator. United Initiators NOROX® MEKP-9 and NOROX® MEKP-9H, Akzo Nobel CADOX® L-50a and CADOX® D-50 are expected to yield similar performance. Arkema Luperox® DHD-9, or United Initiators NOROX® MEKP-925 and NOROX® MEKP-925H may yield slightly shorter gel and cure times.

Recommended range is 1.2-3.0% with 1.8% at 77°F being ideal. Normally, the coating film is ready for lamination in 45-60 minutes. This time element is dependent on material temperature, room temperature, humidity, air movement, and initiator concentration. If lay-up time is checked by the finger method, slight pressure and dragging should be used. These products should not be used when temperature conditions are below 60°F, as curing may be adversely affected.

CAUTION

IMEDGE® ECT120 Series products may not be compatible in the liquid state with other coatings or resins. Spray and pumping equipment should be completely clean of other coatings or resins before the IMEDGE® ECT120 Series can be used.

Do not add any material, other than recommended methyl ethyl ketone peroxide, to this product without the advice of a Polynt representative.

SHELF LIFE & STORAGE

The shelf life of IMEDGE® ECT120 is 90 days from the date of manufacture from Polynt. To maximize usage life and maintain optimum properties, resins and gel coats should be stored in the original closed container at temperatures below 23°C/73°F and away from ignition sources and sunlight. Keep containers sealed to prevent moisture pick-up and monomer loss.

RELATED LITERATURE

- MB-406 – IMEDGE® Patching Procedure
- FC PATCHAID® 970C961 SPRAYCURE™ Technical Data Sheet
- MB-355 Approval of IMEDGE® ECT120 for use with Gougeon PRO-SET Epoxy

SAFETY & WARRANTY

To receive a copy of our safety and warranty information, please email safetyandwarranty@polynt.com.