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Raven® 150

Technical Data Sheet

Selection & Specification Data

Description

Raven® 150 is a solvent-free 100% solids, two component epoxy adhesive bonding intermediate for thermoplastics (including PVC, plasticized vinyl sheet linings and ABS plastic).

Typical Uses

Formulated for interfacing low surface energy thermoplastics materials such as pipe, pipe liners, sheet liners, etc., and Raven epoxy coatings.

Color

The Part A Resin is white; the Part B Curing agent is black. When mixed the product is light gray.

Theoretical Coverage Rates

Theoretical coverage is 25 square feet per gallon at 60 mils wet film thickness. Actual surface coverage will depend on surface irregularities. A wet film thickness gauge may be used to determine actual coating coverage.

Film Thickness

The theoretical coverage is 1604 sq. ft. per gallon at 1 mil dft. Actual surface coverage will depend on the substrate porosity and roughness of the substrate. Depending on the substrate type and profile, a maximum of 10 mils of A-6 or 80 mils of A-6 Thick per coat is recommended to prevent sagging. Typically recommended thickness for immersion duty is 16-80 mils on metal and 60-120 mils on concrete.

Physical Properties (Typical) (Post cured at 225°F for 24 hours)

Test	Method	Result
Solids by Volume	Calculated	100%
VOC	Calculated	0.0 g/L
Tensile Strength	ASTM D638	4,000 psi
Tensile Elongation	ASTM D638	3.7%
Hardness, Shore D	ASTM D2240	80
Compressive Strength	ASTM D695	6,600 psi
Tabor Abrasion, CS-17	ASTM D4060 1 kg load/1,000 cycles	<150 mg
Adhesion, Steel	ASTM D4541	>1,500 psi

The value ranges stated in this Technical Data Sheet are based on system processing under controlled laboratory conditions. Equipment configuration and/or field application conditions may produce variances in the final system values.

Surface Preparation

General

Before coating, the substrate must be prepared in a manner that provides a uniform, clean, sound, neutralized surface suitable for the specified coating. The substrate must be free of all contaminants, such as oil, grease, rust, scale, or deposits. In general, coating performance is proportional to the degree of surface preparation. Thermoplastics may require solvent cleaning to remove bond inhibiting materials from the surface of the plastic, such as mold release compounds, processing aids, or other nonpolar contaminants. Acetone, methyl ethyl ketone (MEK), PVC cleaner or similar solvents may be used. (WARNING: Many solvents are hazardous.) After loose dirt and contaminants have been removed, wipe or scrub the specified surfaces with clean lint-free rags wetted with solvent. Allow solvent cleaned areas to thoroughly dry by evaporation. PROFILE: After contaminants have been removed, create a surface profile for enhanced adhesion. Abrasive blasting, power tools, or hand tools may be used. Proper ventilation, respiratory protection, personal protective equipment, and other safety measures should be utilized in compliance with appropriate regulations.



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Mixing, Thinning, & Pot Life	
<p>Mix Ratio</p> <p>Part A Resin: Part B Curing Agent mix ratio is 1:1 by volume.</p> <p>Mixing</p> <p>Individually power mix both Part A and Part B containers prior to measuring out 1 part of Part A to 1 part of Part B by volume into a clean disposable pail. Completely mix combined A & B for a minimum of one minute before transferring contents to a clean pail. Continue mixing at least another minute, scraping the sides and bottom, to obtain a thorough mix before application. Properly mixed material will be a uniform color without light or dark spots.</p>	<p>Thinning</p> <p>Do not thin with solvents. </p> <p>If lower viscosity is needed, heat unmixed material by placing the containers in hot tap water until the desired flow properties are obtained.</p> <p>Pot Life</p> <p>The pot life is 45 minutes for one gallon at 72°F. Longer pot life is possible by mixing smaller amounts and/or cooling down the part A & B before mixing.</p>
Application	
<p>Substrate Temperature</p> <p>Minimum recommended substrate temperature: 40°F Maximum recommended substrate temperature: 120°F</p> <p>Temperature Resistance</p> <p>Maximum recommended dry temperature: 170°F. Wet temperature resistance depends on chemical concentration and exposure time.</p>	<p>Application</p> <p>Apply with brush, squeegee, trowel or hand application. For specific information on application, contact Raven Lining Systems.</p>
Cure Time and Recoat Time	
<p>Cure Time</p> <p>Thin film set time varies with substrate temperature and application thickness. Raven 150 has sufficient “body” for it be top coated as soon as it is applied. Raven 150 will be tack free in 5 hours at 72°F and dry-hard in 7 hours. If it is not top coated before it is dry-hard, abrade and clean any contamination from the surface prior to application of the topcoat.</p>	<p>Recoat Time</p> <p>Apply the specified Raven coating topcoat immediately after application of the Raven 150, while the Raven 150 is still tacky. Before top coating; inspect, clean and dry surface thoroughly to remove all contamination, including amine blush or condensation. If the recoat time is missed, allow the surfaces to cure thoroughly, then abrade and clean the surface prior to application of the Raven topcoat.</p>



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Cleanup & Safety	
<p>Cleanup</p> <p>To clean tools, use soap and water. For clean-up of part A only, use acetone, MEK or xylene. To clean skin, wash immediately and thoroughly with soap and water. Refer to the Safety Data Sheet for additional information on health and safety.</p>	<p>Safety</p> <p>SDS's are available on the website (www.ravenlining.com) or upon request. All personnel should read and understand the safety recommendations as set forth in the SDS. Keep uncured product away from children at all times.</p>
Packaging, Handling, & Storage	
<p>Packaging</p> <p>Available in gallons (2-gallon kit) and five gallon pails (10-gallon kit). Kits are supplied in the correct proportions of A & B; these two components must be mixed together before use. Raven 150 is available through Raven Certified Applicators.</p>	<p>Shelf Life</p> <p>Product shelf life is 1 year from purchase date in original unopened containers.</p> <p>Storage Temperature & Humidity</p> <p>Store in a sheltered area between 60°F (16°C) and 80°F (27°C).</p>
Warranty	
<p>Limited Warranty. Company warrants its goods to be free of manufacturing defects. Goods manufactured by Company will comply with all applicable federal, state and local laws and regulations. Company makes no warranty as to any parts or equipment manufactured by others. Customer shall look solely and only to the manufacturer of such parts or equipment with respect to any warranty claims. Company hereby assigns to Customer the original manufacturer's warranties to all such equipment and parts, to the full extent permitted. THE AFORESAID IS THE EXCLUSIVE WARRANTY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. SPECIFICALLY, THERE ARE NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.</p> <p>Limitation of Liability. COMPANY'S LIABILITY FOR DEFECTIVE OR NON-CONFORMING GOODS SHALL BE LIMITED TO, AND SHALL IN NO EVENT EXCEED, THE AMOUNT PAID BY CUSTOMER FOR SUCH DEFECTIVE OR NON-CONFORMING GOODS. UNDER NO CIRCUMSTANCES SHALL COMPANY BE LIABLE FOR ANY SPECIAL, PUNITIVE, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR FOR LOST PROFITS. In no event may any claim by Customer arising from or relating to any sale of any goods or services referenced herein be brought more than one year after the date of delivery of such Goods.</p>	