

WB Solar Chem Black

GENERAL INFORMATION	PHYSICAL PROPERTIES	APPLICATION
<p>WB Solar Chem Black is an anti-reflective flat black coating engineered for spray application to a variety of substrates. WB Solar Chem Black provides a flat black appearance which absorbs light with no reflectance regardless of the incidence angle of the light. WB Solar Chem Black can be cleaned of surface dust and contamination by washing with a mild soap and water solution and/or mild solvent wash. It is suggested that one use a camel hair brush to avoid lint/dust contamination.</p> <p>WB Solar Chem Black is primarily used in the optical industry where “light-tight” situations are required. Its low out gassing properties make it ideal for electro-optical instrumentation, defense systems, instrument dials, aircraft, satellites or lasers as well as a solar absorbing coating for thermal usages.</p> <p>Product ID: W3700</p> <p>Randolph Products Co. warrants that its products meet its internal specifications and are of merchantable quality. However, the purchaser is solely responsible for the suitability of the product for any particular application. The purchaser should thoroughly test or qualify the product for serviceability, environmental compliance and health and safety factors prior to use. Further, our total liability is limited to the price of the product or replacement in kind.</p> <p>Randolph Products Company 33 Haynes Circle Chicopee, MA 01020 Phone: 413-592-4191 Fax: 413-594-7321 www.randolphproducts.com</p>	<p>Physical and chemical tests were performed on “Bonderite 1000” steel panels. All panels were baked for 30 minute at 325°F. Adhesion tests were performed on the appropriate substrates.</p> <ol style="list-style-type: none"> 1. Volume Solids: 40% 2. Pencil Hardness: H 3. Cross Hatch Adhesion: 5B 4. Flexibility: Pass 1/8” Mandrel 5. Theoretical Coverage @ 1 mil dft: 641 ft²/gallon 6. Direct Impact: 50 inch lbs. 7. Reverse Impact: 50 inch lbs 8. Solvent Resistance: 25 double rubs – “No effect” is defined as no permanent softening of film and/or permanent change in appearance. <p>Isopropyl Alcohol: No effect Lacquer Thinner (T4-1): No effect VM&P Naphtha: No effect</p> <p>13. Maximum Operating Temperature: 500°F.</p> <p>14. Gloss @ 20°, 60° and 85°: < 2</p> <p>15. Out Gassing (ASTM E595): Total Mass Loss: 0.62 Collected Volatile Condensable Material: 0.01 Water Vapor Recovered: 0.44</p>	<p>Use of conventional air pressurized spray equipment or low air airless is recommended for best results. Metal substrates should be cleaned and chemically pretreated.</p> <p>SMOOTH COAT</p> <p>Air pressure (Conventional air pressurized spray equipment): 50 psi approximately</p> <p>Spray Viscosity: 30 – 35 seconds #2 Zahn cup @ 68°F.</p> <p>Reduction: 4 parts W3700/ 2.5 parts Water – mix well.</p> <p>First coats should be applied smooth and wet. Do not exceed more than 0.8 mils wet. Allow short flash off of one to two minutes and repeat. Second or final coats should be smooth and wet in order to avoid dry spray. Avoid spot spraying areas as this leads to over spray in other areas. Final dry film thickness should not exceed 1.0 mils.</p> <p>Bake Cycle:</p> <p>Bake for 30 minutes minimum at 325°F (substrate temperature)</p> <p>Note: It is imperative in order to assure optimum properties that baking time commences when the substrate temperature reaches 325°F. This is especially important when baking large mass items such as castings. Additional time may be required for larger mass items. Ask your technical representative for additional information.</p> <p>Safety Precautions: This product is intended for professional use in an industrial environment only. Consult the Material Safety Data Sheet prior to application.</p>

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16. Spectral Reflectance (300 – 2500 nm) (ASTM E903-88):

Percent Solar Reflectance: 2.7

17. Air Mass (ASTM E892-87):

105

18. VOC

1.68 lbs/gallon

19. Shelf Life: Six Months