

The qualities of

POLYDURE® Expressions

Revolutionary print system adding depth and dimension to your finish



Product information and specifications for POLYDURE Expressions polyester finish

Product Information

POLYDURE Expressions technology engages the senses with the combination of a texture over a print pattern that adds depth and dimension. POLYDURE Expressions allows for endless creativity to design looks that are truly unique and different.

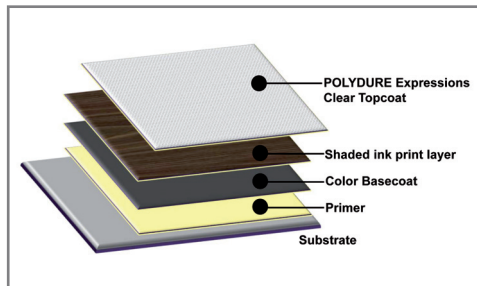
POLYDURE Expressions is formulated from proprietary, special-use resins designed to balance cost and performance for a variety of pre-fabricated metal products, for both exterior and interior uses.

POLYDURE Expressions for building products is suitable for a variety of exterior applications, from building components to commercial and residential steel doors, such as garage and entry door systems.

General System Information

POLYDURE Expressions is approved for use on the following substrates: hot-dipped galvanized (HDG), Galvalume®, Galfan®, ZAM and aluminum. POLYDURE Expressions is a factory-applied finish that is administered to properly cleaned and pre-treated first-quality substrates through roll coating, and then oven-baked to cure.

POLYDURE Expressions can be applied as a three-layer system if applied over HDG substrate, composing of a topcoat and ink layer over one of AkzoNobel's color basecoats. All other substrates require the use of AkzoNobel's High Performance Primers composing of a four-layer system.



POLYDURE Expressions woodgrain print pattern

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Application Characteristics

Film Thickness	Topside finish: Primer (dry) = 0.20 – 0.30 mils; Ink layer – film determined by print type; Topcoat (dry) = 0.70 – 0.80 mils; Reverse side finish: Primer (dry) = 0.15 – 0.25 mils; Pigmented backer (dry) = 0.30 – 0.40 mils. Total DFT for system = 1.35 – 1.75 mils. All measurements per ASTM D 5796.
Topside Color	Controlled to the Master Standard by an approved Color Difference Meter or Spectrophotometer, and by visual match under daylight and horizon light of a Macbeth Daylight Booth per ASTM D 1729.

Physical Properties

Specular Gloss	Determined per ASTM D 523 at a glossmeter angle of 60°. POLYDURE Expressions systems are typically 2 – 4% when reading areas with texture.
Pencil Hardness	Minimum pencil hardness, per ASTM D 3363, is "F".
Solvent Resistance	Passes minimum of 100 double rubs of a MEK soaked cloth, per ASTM D 5402.
Cross-Hatch Adhesion	No paint removal with Scotch #610 cellophane tape after cross-scoring with eleven horizontal and eleven vertical lines 1 mm apart, per ASTM D 3359.
Impact Resistance	No visible paint removal with Scotch #610 cellophane tape after direct and reverse impact of 80-inch pounds, using 5/8" steel ball on a Gardner Impact Tester, per ASTM D 2794.
T-Bend Adhesion	Per ASTM D 4145, no loss of adhesion when taped with Scotch #610 cellophane tape when subjected to a 2T-Bend.

Testing Data

Humidity Resistance	No blistering, cracking, peeling, loss of gloss or softening of the finish after 1000 hours of exposure to 100% humidity at 100° F ± 5° F, per Federal Test Method Standard 141, Method 6201 or ASTM D 2247.
Cleveland Condensing Cabinet	No blistering or white rust after 240 hours at 140°F, with a 15 - minute dry off period every 6 hours, per ASTM D 4585.
Water Immersion Resistance	Samples immersed in distilled water at 100°F per ASTM D 870 will exhibit no loss of gloss, blistering, cracking, color changing or softening of finish after 500 hours. After 1000 hours, samples will exhibit no loss of gloss, color change, cracking, and no blistering greater than medium #6 over 20% of test area per ASTM D 714. Slight softening of the finish may be observed when first removed from immersion; original hardness will be regained after 24 hours at room temperature.
Salt Spray Resistance	Samples diagonally scored and subjected to 5% neutral salt spray for 1000 hours, per ASTM B 117, then taped 1 hour after removal from the test cabinet with Scotch #610 cellophane tape, exhibit no blistering and no loss of adhesion greater than 1/8" from score line.
Chemical Resistance	No significant color change after 24 hours exposure to 10% solutions of hydrochloric and sulfuric acids, per ASTM D 1308-87, Procedure 6.2 (spot test).
Kesternich Test	No significant color change after 10 cycles in an SO2 chamber (Kesternich Cabinet or equivalent), per ASTM G-87.
Weatherometer Test	No checking, blistering or adhesion loss of coating system after 2000 hours of accelerated weathering, per ASTM D 822, G 152 and G 153.
Chalking Resistance	No chalking greater than #8 rating per ASTM D 4214, Method D, after a 2000 hour weatherometer test.
Exterior Weathering	Florida exposure (45° South) and EMMAQUA testing, per ASTM D 4141, Procedure C, both confirm the excellent exposure characteristics of POLYDURE Expressions systems.
Abrasion Resistance	Per ASTM D 968, Method A, POLYDURE Expressions will pass 30 liters/mil, minimum, of falling sand.
Flame Spread Rating	POLYDURE Expressions displays a flame spread classification of A (Class 1), when tested in accordance with ASTM E 84.



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AkzoNobel is a leading global paints and coatings company and a major producer of specialty chemicals. We supply industries and consumers worldwide with innovative products and are passionate about developing sustainable answers for our customers. Our portfolio includes well-known brands such as Dulux, Sikkens, International and Eka. Headquartered in Amsterdam, the Netherlands, we are consistently ranked as one of the leaders in the area of sustainability. With operations in more than 80 countries, our 50,000 people around the world are committed to delivering leading products and technologies to meet the growing demands of our fast-changing world.

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