



INFERNOWARE®

InfernoWare® Reflect TRC-3

Technical Data Sheet

Color Description

Reflect is a silver metallic coating.

InfernoWare® Reflect Product Description

InfernoWare® Reflect is a thermal resistant coating that provides a tough barrier to heat. It's a simple spray coating that features single-part application, room temperature air cure, and no special equipment needed. Once cured, the coating can protect the substrate material from temperatures up to 600°C (1100°F). This product is PFAS free.

Product Features

- Provides a thermal barrier for substrates up to 600°C / 1100°F.
- Single-part spray application; no catalyst or special application equipment.
- Room temperature air cure formula.
- Corrosion inhibitor with high chemical stability.
- Can easily be applied to steel, aluminum, glass, plastics, and many other substrate materials.
- Low VOC formula
- This product is PFAS free



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Recommended Spray Application Temperature	60-80 °F (15-27 °C)
Recommended Spray Application Relative Humidity	30-80%
Cure Condition	Room Temp Air Cure (Do Not Heat Cure)
Cure Time ¹	30-50 min tack free, 2-3 hrs to recoat
Recommended Thickness (mil)	1
Strainer Size (micron)	30
Total Reflectivity at RT – 550°C Blackbody FTIR (ASTM E408-13)	85%
Specific Gravity	1.374
Viscosity, Zahn #2 Cup (s)	23
% Solid Content	43
Theoretical Coverage Based on 1 Mil Thickness (ft ² /gallon)	690
Cured Coating Stability Maximum Temperature (F/C)	1022°F (550°C)
Cross Hatch Adhesion ASTM D3359	4B
Pencil Hardness Scratch ASTM D3363	9H
Taber ASTM D4060 (Cs17 wheels, 1000g) (cycles/mil)	TBD
Solvent Resistance using Birchwood Gun Cleaner/ Acetone ASTM D5042-19	Slight Discoloration / Slight Discoloration
Impact Performance Direct/Indirect (inch*lbs.) ASTM D3794	TBD
Corrosion resistance (ASTM B117. Scratch line method) (Hrs.)	TBD
Note Definitions	Note 1: Cooler temperatures or higher humidity may prolong curing and tack free time.



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Test Parameters for Technical Data

15N: Multi-Finger Scratch. A 1.0mm hemispherical metal scratch tip is motor-driven across the coated surface. Various weights are mounted on each arm finger to apply a standard force on the test material. All coatings showed no scratches with a 10 Newton force (previous car paint standard), so we reported the scratch resistance using a 15 Newton force (new car paint standard): excellent is no scratch, very good is very light scratch, and good is light scratch.

Silver scratch test: This quality control test uses a rounded scratch tip made of 99.999% silver, motor-driven across the coated surface with a 500g weight applied. Silver has a Mohs of 2.5, therefore a result of >2.5 means no scratch and <2.5 means coating was scratched.

Crosshatch: ASTM D3359. ASTM D3359 is a standard method for measuring adhesion using a tape test. This test evaluates the adhesion of film coatings to metallic substrates by applying and removing pressure-sensitive tape over cuts made in the film. Also known as the Cross Hatch test, Method B involves creating a perpendicular lattice pattern with six cuts in each direction through the film. A calibrated pressure-sensitive tape is then applied over the lattice and removed. The adhesion is assessed by comparing the results with descriptions and illustrations, and it is rated on a scale from 0 to 5.

Taber: ASTM D4060. Taber tests involve placing a flat specimen on a turntable platform that rotates at a fixed speed of 60rpm. Two Taber abrasive wheels (CS17), each applied with a specific pressure using a 1000g weight, are lowered onto the specimen surface. The characteristic rub-wear action is created by the contact between the test specimen and the rotating abrasive wheels. As the turntable rotates, the wheels move in opposite directions around a horizontal axis, tangentially displaced from the specimen's axis. One wheel rubs the specimen outward toward the edge, while the other rubs inward toward the center, with a vacuum system removing loose debris during the test. The wheels complete a full circle on the specimen surface, revealing abrasion resistance at all angles relative to the material's weave or grain. We report the Wear Cycles Per Mil (0.001 inch), which indicates the number of abrasion cycles required to wear through a coating of a known thickness.

Solvent: ASTM D5042. A cotton swab or rag is soaked in a harsh solvent and vigorously rubbed several times against the coated surface. The coating and swab are then inspected. A rating of No effect indicates no color change to the sample, and slight discoloration indicates some minor color change or removal from sample.