



Innovative Coating Technologies™

Product Data Sheet

ResoCoat™ 314 Extreme Wear

Ceramic Reinforced Thermoplastic Polyamide Copolymer

PHYSICAL PROPERTIES

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| Bond strength of ResoCoat™ 314 Coating on Steel (ASTM D-4541) | >800 psi (>5.5 MPa) |
| Flexibility (Mandrel Bend ASTM D-522-93) | No Failure by visual inspection |
| Direct Impact (ASTM D-5420, 120 in-lbs) | No Failure by visual inspection on grit blasted steel |
| Reverse Impact (ASTM D-5420, 120 in-lbs) | No Failure by visual inspection on grit blasted steel |
| Hardness (Shore D ASTM D2240) | 65 Shore D |
| Hardness (Pencil Hardness ASTM D-3363) | 2H - Pencil Hardness |
| Tensile Strength (At Break, ASTM D638) | 7120 psi (40 MPa) |
| Compression Set (72hr@100°C; ASTM D395, method B) | 44% non-recovery |
| MEK Double Rub (ASTM D5402) | 100% coating retention after 100 double rubs |
| Glass Transition Temperature (T _g) (DSC, 10° F/min ramp) | 150° F (65.5° C) |
| Abrasion, Taber (ASTM 4060) 1000 cycles at 2.2 lbs, CS-17 wheels; coating deposited on steel substrate | 2.8 x 10 ⁻⁴ oz. (8 mg) |
| Corrosion Resistance, Salt Fog 2000 hrs (ASTM D-1654) | <0.08 inches (<2 mm) |
| Finish appearance | Orange peel to smooth surface with gloss finish |
| Gloss @ 5 mils thickness (60° Gloss, ASTM D-523) | ≈50 gloss units |
| Gloss @ 10 mils thickness (60° Gloss, ASTM D-523) | ≈70 gloss units |
| Weathering/Gloss (UVA-340, 1000 hrs, ASTM G154) 60° Gloss loss (OSHA Safety Red color) | <5 gloss units |
| Weathering/color (UVA-340, 1000 hrs, ASTM G154) (OSHA Safety Red color) | <0.8 ΔE* |
| Weathering/color (UVA-340, 2000 hrs, ASTM G154) (OSHA Safety Red color) | <1.5 ΔE* |
| Weathering/color (UVA-340, 2000 hrs, ASTM G154) (OSHA Safety Red color) | <3 gloss units loss |
| Type | Ready to use Polymer Thermal Spray dry powder, 100% <250 micron (60 mesh) |
| Coatings VOC (g/L) | None |
| Shelf life | One year when stored at 70° F in unopened original sealed container |
| Application Rate | 70 to 200 square feet per hour |
| PTS Application Process Temperatures (IR Thermometer) | Preheat 356° F (180° C) - Application 400° F (205° C) |
| Thickness (suggested range) | 6-10 mils (150-250 μm) |
| Coverage (per pound) | ≈20 ft ² at 10 mils thickness |

Physical properties were determined on specimens prepared under laboratory conditions using applicable ASTM procedures. Actual field conditions may vary and yield different results; therefore, data are subject to reasonable deviation.

ResoCoat™ 314 Extreme Wear coating was specifically engineered to provide an ultra-durable finish for steel and/or non-tempered metal substrates capable of exposure to the higher spray application temperatures required for deposition. This powder coating material is specially formulated for use with the Resodyn family of Polymer Thermal Spray (PTS) systems to allow for portable powder coating of substrate surfaces in-place and virtually anywhere.

ResoCoat™ 314 Extreme Wear is a flexible, wear resistant coating formulated for superior adhesion and outstanding corrosion protection for the substrate. ResoCoat™ 314 may be applied directly to properly prepared steel and other non-ferrous metal surfaces. The coating may be applied to very thick levels to provide a sacrificial layer that may be refurbished or other damage repaired, with the same material and PTS application process in-place without the need to remove the coated object from service.

COATING CHARACTERISTICS

- ❑ Flows out and achieves ready to use coating in single application step
- ❑ Excellent wear and corrosion resistance
- ❑ Flexible while retaining adhesion
- ❑ Zero VOCs or solvents
- ❑ Excellent adhesion
- ❑ Easy repair and touch-up, in-place with same powder and PTS process
- ❑ Apply directly to properly prepared substrates

The Resodyn family of Polymer Thermal Spray (PTS) coating systems is a powder coating technology exclusively designed and developed for the deposition of polymeric coatings directly from dry powder without the need for oven baking, or post curing. The patented and patents pending PTS coating technology can be used to thermally spray thin (< 200 µm) and robust coatings of unlimited thickness. The PTS system can deposit thermoplastic and specially formulated thermosetting polymers, as well as UV curable polymers and syntactic foams on metal, polymer and ceramic based substrates and even heat sensitive substrates such as cardboard, paper, and electronic circuits.

