SOCOGLAZE PT-209C

HIGH TEMP THERMAL LAG COATING

Technical Data Sheet

Socoglaze PT-209C Caliente High Temp Thermal Lag Coating keeps metal "Alive" at 2000F. PT-209C is a lightweight, high performance, high temperature thermal insulating barrier coating. It provides excellent environmental protection for super alloys and other surfaces against oxidation, failure, and other deleterious effects at extreme temperatures. It can be used for the following applications:

- Inside and outside of aluminum aircraft wheel-well doors.
- Fire thermal barrier coating.
- Aircraft firewall coating in engine nacelles.
- Fireproofing material for plastic and wood structures.
- Insulation and fireproofing for built-in household applicances.
- Hot duct and pipe insulation coating.

This coating can be provided in the following colors: Eggshell White, Black, and Silver.

USES

Please, consult us regarding SOCOMORE solutions for:

- Surface preparation (SOCOCLEAN, DIESTONE & DS ranges),
- Functionalized coatings (SOCOGLAZE, AEROGLAZE, CHEMGLAZE, PRIAM, LBYH ranges),
- Surface treatment (SOCOCLEAN & SOCOSURF ranges),
- Adhesion promotion (SOCOGEL & PREKOTE ranges),
- Chemical stripping (SOCOSTRIP & SPC ranges)

DIRECTIONS FOR USE

Preparation - Two Component Product

- Shake component A in a paint shaker for 5 - 10 minutes for optimal results.
- Admix by volume:
  - 16 Parts Component A (Base)
  - 1 Part Component B (Catalyst)
  - Add the catalyst into the base.
  - Admixed material should be allowed a 15 minute induction time for best application results.

Reduction

- Use Reducer Socoglaze PT-1023 for a bake dry application and Socoglaze PT-1003 TY III for an air dry application. Thin 3 parts admixed paint to 1 part thinner.

Application

This product can be applied using brush, roller, conventional air spray equipment, or an HVLP spary system. Please consult with a Socomore representative for specific equipment recommendations and settings.

All parts must be chemically or mechanically cleaned, film free, by an industry recognized cleaning specification or method. Immediately before applying PT-209C, wipe the substrate with Socoglaze PT-1002 Solvent Blend.

1. Make sure both pots, guns, and lines are purged and cleaned.
2. Ensure the admixed material is properly incorporated.
3. Suggested HVLP spray pressure is 7 - 10 psi. Suggested Conventional Spray Equipment pressure is 20-40 psi.
4. Always air-blow and tack-wipe the surfaces to be painted. Aircraft should be grounded to prevent static.
5. For best applicaiton results, apply 1 full coat at 1 - 2 mil thickness. Allow the coating to either air dry or bake according to this TDS, and then apply an additional full coat at 1 - 2 mils. Repeat until a total of 7 mils has been applied to the substrate.
6. DO NOT allow more than 48 hours to pass before applying the second coat.
7. The Recomended dry film thickness is 7 mils.

NOTE: Application of SOCOGLAZE products requires the use of all OSHA-approved safety equipment, including proper ventilation. Additionally, SOCOGLAZE PT-209C requires the recommended temperature/humidity conditions and film thickness ranges for optimal performance. The material, hangar, and aircraft skin temperatures should be no lower than 75 F / 25 C before, during, and after application.

Drying and Curing Schedule

Air Dry Times (70-77F and 50% RH):

- For optimum protection, apply 1-2 mils thickness at a time, building to a total dry film thickess of approximately 7 mils. Cure to the "tack free" drying condition or approximately 30 minutes between coats. Let air dry for a minimum of seven days at room temperature. More time may be required to compensate for variations in mil thicknesses and temperatures. A complete cure must be obtained before any topcoat can be applied.

Force Cure (Bake)

- For optimum protection, apply 2 mils thickness. Force dry for 15 minutes at 250F. Allow the coating to cool to an ambient temperature. Repeat this procedure until the desired thickness is achieved, 7 mils is recommended for best results. When application of coating is complete, cure for one hour at 350F.

Equipment Cleanup:

Use clean Acetone, IPA, Socoglaze PT-1023 or Socoglaze PT-1003 TY III. Do not allow material to dry or cure inside any equipment.

TECHNICAL CHARACTERISTICS

Coating Properties & Characteristics	
Characteristic	**Value**
Mix Ratio, By Volume	16 Part Base to 1 Part Catalyst
Reducer	Socoglaze PT-1003 TY III (Air Dry) & PT-1023 (Bake)
Maximum Temperature	2000F
Theoretical Coverage	650 square feet / gal at 1 mil.
Film Weight	Approx 0.035 gm/mil/square inch

Thermal Properties	
Characteristic	**Value**
Thermal Shock	Shock cool from 1000F to 77F - Good response from Coating
Resistance (Direct Flame)	15 minutes @ 2000F before collapse of a 0.020 x 3 x 6 blasted 2024 Al substrate under natural gas-oxygen flame, 5" in diameter
Thermal Lag (2,400F Gas Flame)	1,200F temperature drop after 20 minutes on 15mil coating in freely circulating air
Thermal Lag (0.013" Film) - 300F Heat Source	After 60 minutes, maximum temperature through coating was 210F.
Thermal Lag (0.013" Film) - 500F Heat Source	After 60 minutes, maximum temperature through coating was 320F.
Thermal Lag (0.013" Film) - 1000F Heat Source	After 60 minutes, maximum temperature through coating was 535F.
Thermal Conductivity	KC @ 600F - 1.8 BTU/hr/ft. 2/deg F/in KC @ 900F - 2.2 BTU/hr/ft 2/deg F/in
Expansion	11.2 x 10^6 in/in/deg C from 25C to 700C

PRECAUTIONS FOR USE AND STORAGE

Storage

Shelf life is only applicable for materials stored in unopened and undamaged original factory-filled containers. Shelf life is 12 months when stored between 50 -95 F.(10 -35 C)

For more information regarding the danger of the product, please consult the product safety data sheet.

For professional use only.

This technical data sheet replaces and cancels the previous one.