Application Information



IPAS-433P

IP3 Range: 2 Component Low VOC Epoxy Anti-Corrosive Primers:

Please read in conjunction with IP3-Primer Range TDS

1. Scope

- 1.1. This document covers the application and curing of the IP3 Range of 2 component low VOC epoxy primers, to include IP3-6700; IP3-6600; IP3-6500; IP3-6362 and IP3-9IRR. These materials are primarily designed for use as the chromate or chrome free anti-corrosive primer in an aerospace coating system, although other applications may be applicable subject to end user approval.
- 1.2. This procedure covers all versions
- 1.3. Please read this document in conjunction with any specifier drawings or application information sheets

2. Substrate Preparation

- 2.1. All substrates must be clean, grease and dust free prior to painting
- 2.2. Surface preparation can be abrasive blast with 120 / 220 aluminium oxide grit, chromate or chrome free chemical conversion treatment, anodizing or tri-valent chrome conversion treatment, e.g. Surtec 650V. The IP3 primer range can also be applied directly to clean metal or composite substrates.
- 2.3. For certain applications, on small parts, a mechanical abrasive clean with abrasive paper can be used, subject to end user evaluation / approval.

3. Coating Preparation

- 3.1 Ensure that the Part A (Base) material is thoroughly mixed prior to use. Thorough mixing that is designed to lift any settled material from the base/bottom of the container is essential prior to coating application.
- 3.2 Ensure that part A (BASE) & B (CATALYST) are stored between 5°C and 35°C
- 3.3 Ensure that part A & B are between 20°C and 35°C before use
- **3.4 Mixing:** The IP3 Range is a two-component product and the Part A (Base) requires mixing with IP3-CAT (Part B) before use. Please refer to the Data sheet and Part A (Base) component can label for the correct volumetric mixing ratio. Full details of the volumetric and mix by weight values are obtained from the IP3-Primer technical data sheet. (NOTE: the mixing ratio can vary from colour to colour).
 Small volume mixing: please obtain the mixing ratio calculated by weight to ensure that correct stoichiometry is maintained. Small quantities may be measured by volume if operators are confident that the required mix ratio/tolerance can be achieved.

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IP3 Primers have been evaluated with a \pm 5% variance in the mix ratio for Part A (base) and/or Part B (catalyst). Although under laboratory conditions the coatings retain their design properties, care must be taken to achieve the correct mix ratio.

Part A and B blending: The order of addition for Part A to B is not critical. Part A may be added to Part B or Part B to Part A. The critical factor for the IP3 coatings is thorough mixing and the Dwell Period (induction time) before spraying.

- 3.4.1 After thoroughly mixing for a minimum 2 minutes the blended Part A and B should be allowed to stand for a minimum induction time of 15 minutes.
- 3.4.2 Re-stir the mix before use.
- 3.4.3 Mixed pot life: 4 hours
- 3.5 The mixed material may require thinning for spray application. Typically, 5-10% using standard thinner IP985-REDUCER, IP3-REDUCER or IP-MEG-REDUCER is required for optimum application properties. Alternative thinners may be used after consultation with Indestructible Technical Department.

Viscosity measurement and recording prior to application may be performed at the discretion of the end user.

4. Spray Room Conditions

4.1. Temperature and humidity within the spray area can affect the application properties of the coating.

Mixing precautions: to avoid the possibility of Amine Blush, care must be taken to observe the correct mixing time and dwell period. This can be a critical factor during periods of low temperature and high humidity conditions.

4.2. The recommended spray room conditions are as follows:

Temperature:	in the range 20(±2)-30°C
Humidity:	in the range 30-80% RH

4.3. These guidelines should be read in conjunction with any indicated values quoted in end user application specifications.

5. Application and Curing / Baking

- 5.1. The coating is designed for spray application using conventional or HVLP air atomising spray guns. It is recommended that latest generation 'compliant' spray guns are used to provide the best finish with minimal orange peel. Other methods may be employed subject to end user evaluation and approval for specific components.
- 5.2. Parts shall be sprayed with wet on wet process. For thicker coatings, allow a 1-5 minute dwell between each coat. Thicker coatings can be applied to a typical dry film thickness of 50-60 microns (82-99 microns wet film thickness). Minimum recommended thickness 20 microns (33 microns wet film thickness).

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5.3. The IP3 primers can be allowed to cold cure (air dry) or can be force cured.

5.3.1. Air Drying / Cold Curing:	Controlled room temperature: 20 ±2°C minimum - 35°C maximum Maximum 80% RH Surface dry / handleable: 4 hours Hard dry to overcoat: minimum: 16 hours Chemical resistant: 7 days
5.3.2. Forced Air Dry:	Air Dry / Flash off: 50-90 minutes at room temperature Cure: 16 hours @ 40-55°C (104-131°F)
5.3.3. Force Curing:	Air Dry / Flash off: 45-60 minutes at room temperature Cure: 60-90 minutes @ 70-90 ⁰ C (160-195 ⁰ F) or 30 minutes @ 125 ^o C (255 ^o F)

6. Primer, Second coat and/or refresher coating:

- 6.1. Lightly abrade using 240-320 grade abrasive paper or Scotchbrite pads.
- 6.2. Remove dust and clean the abrade surface using isopropyl alcohol (IPA). Allow coating to dry before painting.
- 6.3. Follow sections 3 to 5

7. Topcoat Application:

 Air Dry: Allow primer to air dry for a minimum 16 hours, maximum 32 hours at room temperature (20-35^oC) and maximum 80% RH before the application of topcoat.

Forced Air Dry: Overcoat within 24 hours of removal from oven. Where a longer dwell cannot be avoided, lightly abrade surface using 240-320 grade abrasive paper or Scotchbrite pads

Force Curing: Overcoat within 24 hours of removal from oven. Where a longer dwell cannot be avoided, lightly abrade surface using 240-320 grade abrasive paper or Scotchbrite pads

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