

TECHNICAL DATA SHEET**SurTec 650V****Trivalent Chromium Conversion Coating - Visible**

Description Trivalent Chromium (Hexavalent Chromium-free) conversion coating for aluminium, which produces a visible blue-grey to yellow iridescent layer.

- Features**
- Excellent corrosion protection.
 - REACH, RoHS and WEEE compliant.
 - Designed for immersion application but can also be spray or wipe applied.
 - Can be used to repair anodised coatings and refresh them before painting.
 - Approved for aerospace use to MIL-DTL-81706 and MIL-DTL-5541F. Also approved by Qualicoat for architectural aluminium.
 - Supplied as a concentrated liquid.
 - Low electrical resistance.
 - Drop-in replacement for hexavalent chrome passivation.

Product Code **MP0252.**

SG 1.00 ± 0.1 kg/l at 20°C.

Equipment The SurTec 650V tank and water rinse tanks can be made of polypropylene (recommended), rigid PVC or stainless steel.

Initial Fill SurTec 650V must be made up with deionized or demineralized water at concentrations from 5% to 30% by volume (see **Control Points**). Before make up, the tank must be thoroughly cleaned and rinsed.

- Application** The process sequence is usually:
1. Aqueous degreasing with T Cleaner 70 (**MP0035**) non-etching - dip for 3 - 15 min at 60°-70°C.
 2. Water rinse.
 3. Alukleen (acidic) or T Cleaner 79 (alkali). Dip 30 seconds to 10 min at ambient temperature.
 4. Deionised (Demineralised) Water Rinse.
 5. SurTec 650V Dip for 1 – 4 min at 30° – 40°C.
 6. Deionised (Demineralised) Water Rinse – normally 2 stages, see **RINSING** below.
 7. Dry off (at maximum 60°C).

The addition of a nitric acid rinse before the SurTec 650V step can improve performance.

Further treatment should be applied no longer than 16 - 24 hours after SurTec 650V application.

Control Points	For Bare Metal:	
	Concentration	18 - 25%
	Acidity (pH)	3.7 - 3.9
	Temperature	30° - 40°C
	Time	1 - 5 min.

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Analytic Control	<p>Titration: Accurately measure 100 ml sample of the bath into a conical flask. Acidify with 10 ml of 40% sulphuric acid. Add 3 g of ammonium persulphate. Boil for 20 minutes. Cool to room temperature. Add 1 g of potassium iodide and 10 ml of 40% sulphuric acid. Leave for 1 minute until dissolved. Add 0.5 g of iodine indicator. Titrate slowly against 0.1 M sodium thiosulphate. Titrate until colour changes to clear/light blue.</p> <p>Each ml required x 1.613 = concentration %.</p> <p>A Test Kit (MP0614) is available from Trimite containing all the necessary items.</p> <p>Replenishment: Add 10 litres of SurTec 650V per 1000 litres of bath for each 1% by which the bath is short.</p> <p>Acidity: Measure the pH of the bath with a reliable meter after replenishing with SurTec 650V. If the pH is not within specification very carefully add 200 ml of 5% sulphuric acid or 1% sodium hydroxide solution to each 1000 litres of bath as appropriate and re-check. Add in further 100 ml increments if necessary. pH meters are available from Trimite.</p>
Rinsing	Rinse the work thoroughly in deionised or distilled water. The rinse bath should be regularly maintained. A second, hot (50° - 70°C) rinse can be used to improve the rinsing standard and assist in drying the work. This rinse should be changed regularly.
Drying	For most reliable results, the work should be dried in an indirect-fired oven at 60°C maximum.
Tank Maintenance	Based on usage, the tank should be regularly emptied, cleaned, and refilled.
Shelf Life	For best before date, see label.
Storage	The product should be stored in cool, dry, frost-free conditions, in sealed containers.
Health & Safety	Refer to the product's Safety Data Sheet and safety advice on the product label before use.
Technical Support	For technical support in using this product, please contact: e: birminghamtech@trimite.com , or t: 0121 554 7000.
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