

Protection upgraded

SurTec® 650 RTU

chromitAL TCP - RTU

Ready-to-Use Solution

Properties

- free of hexavalent chromium
- trivalent chromium passivation for aluminium
- ready-to-use solution for spray and wipe application
- viscous adjusted solution for better and longer moistening
- excellent bare corrosion protection, comparable to hexavalent passivations
- very suitable as pre-treatment before lacquering, powder coating and gluing
- produces visible, faintly blue to tan iridescent layers
- meets or exceeds MIL-DTL-81706 and MIL 5541 for bare corrosion (336 h in NSS per ASTM B-117, respectively, DIN 50021 SS)
- low contact resistance: < 5000 µOhm per square inch as per MIL-DTL-81706B
- heat resistant up to 100° C with minimal loss in corrosion resistance

Application

SurTec 650 RTU Ready-to-Use Solution is used undiluted for spray or wipe application.

Make-up-value: 100 %

Temperature: room temperature

pH-value: 3.8 (the ready-to-use solution is adjusted accordingly)

Application time: 2 min (1-10 min)

Spray pressure: 1 bar (0.5-1.5 bar)

Tank material: stainless steel, or steel with acid- and fluoride-resistant coating

Heating/cooling: not necessary

Exhaust: according to local requirements

Hints: During storage, a slight precipitation may occur, which does not impair the quality and the function of the product.

Surfaces treated with SurTec 650 RTU can be coated immediately after drying or stored as long as they are protected from contamination and temperature extremes. For optimum results, the parts should be coated within 7 days.



Treatment Procedure

Pre-treatment: Prior to the passivation with SurTec 650 RTU, the aluminium surface must be cleaned and deoxidized thoroughly. The surface must be completely water-break free.

Cleaning can be done with:

- solvents or solvent-based cleaners (e.g. by rubbing the surface with a soaked cloth); if applicable, the surface can be treated with Scotch Brite or abrasive paper in order to remove corrosion products from the surface; abrasion should be done under water cooling, the abrasive dust must be removed by a wet cloth
- aqueous, acidic, phosphate-free cleaners (a subsequent rinsing is required)
- a combination of alkaline cleaning and subsequent acidic desmutting (between the two steps and after desmutting, the surface has to be rinsed with water)

Treatment with SurTec 650 RTU chromital:

Wet the surface with the ready-to-use solution, e.g. by using a sponge, brush, cloth or spray pistol.

Make sure that the surface is completely wettable with SurTec 650 RTU solution (no contraction/coalescence of the liquid film and no dewetting or formation of separate drops). In case of dewetting, repeat the pre-treatment/cleaning steps.

During the required application time (typically 2-4 min), the surface must be kept permanently wet with SurTec 650 RTU solution. There must not be any drying on the surface. In order to avoid a surface drying use more SurTec 650 RTU solution, if necessary.

A continuous, slight, mechanical treatment (wiping, brushing) supports the uniform formation of the passive layer.

Post-treatment: After passivation in SurTec 650 RTU, the parts have to be rinsed. For best corrosion resistance and best paint adhesion, a rinsing with deionised water is recommended. For subsequent lacquering, the last rinse must have a conductivity of less than 30 µS/cm.

The parts can be dried at environmental conditions, in case of forced drying the drying temperature should not exceed 65°C at the part's surface.

Technical Specification

(at 20°C)	Appearance	Density (g/ml)	pH-value (conc.)
SurTec 650 RTU	liquid, green, clear-turbid contingency precipitate	1.003 (1.00-1.01)	2.9-4.0

Note: During the first days of storage, the pH-value of the product could slightly increase.

Maintenance and Analysis

SurTec 650 RTU as a ready-to-use solution is supplied in the required make-up concentration. Therefore, an analysis is not necessary.

Ingredients

- trivalent chromium salts

Consumption and Stock Keeping

The consumption depends heavily on the drag-out. To determine the exact amounts of drag-out, see **SurTec Technical Letter 11**.

In order to prevent delays in the production process, per 1,000 l bath the following amount should be kept in stock:

SurTec 650 RTU 1000 kg

Product Safety and Ecology

Classification and designation are noted in the **Material Safety Data Sheets** (according to the European legislation). The safety instructions and the instructions for environmental protection have to be followed in order to avoid hazards for people and environment. Please pay attention to the explicit details in our Material Safety Data Sheets.

Warranty

We are responsible for our products in the context of the valid legal regulations. The warranty exclusively accesses for the delivered state of a product. Warranties and claims for damages after further processing of our products do not exist. For details, please find our country-specific **General Terms and Conditions** for downloading on our homepage or ask your regional SurTec representative.

Further Information and Contact

If you have any questions concerning the process, please contact your local technical department.

For further information and contact details, please visit our homepage:

<http://www.SurTec.com>

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