



Technical Process Bulletin

BONDERITE S-MA 5580 G AERO PEELABLE MASKANT (KNOWN AS TURCO 5580-G)

INTRODUCTION:

BONDERITE S-MA 5580 G AERO (known as TURCO 5580-G) is a green hand-strippable coating formulated to provide protection to metal surfaces during successive fabrication operations, such as forming, chemical cleaning, conversion coating, Type I and Type II anodizing, adhesive bonding and machining. It is applied by hot airless spray methods and can be used on ferrous and nonferrous alloys. It meets the requirements of Boeing Specification BMS 10-65 and Douglas DPS 4.50-139, System 3 (DPM 5252). It is nonphotochemically reactive per South Coast Air Quality Control District Rule 102 and Bay Area Regulation #3. BONDERITE S-MA 5580 G AERO resists emulsion cleaners, anodizing solutions, alkaline cleaners, acid deoxidizers, strong caustic solutions (at 120°C) and various plating solutions.

PROPERTIES:

LIQUID:	Weight per gallon	11.9 lbs
	Solids, % by weight	16.9 lbs
	Coverage (sq. ft./gal./1 mil dry film)	300
	Flash point, Pensky Martens Method	176 F (T.O.C.)
	VOC:	145 g/L
	VOC VP:	2 mm Hg (Rule 1124)
	Viscosity, #5 Zahn Cup	17-28 seconds

NOTE: BONDERITE S-MA 5580 G AERO may revert to a soft gel on standing. This will in no way impair its performance. Simply mix well before using.

DRY FILM:	Peel adhesion, lbs/in. width	0.8 (solvent wiped 2024 clad)
	Tensile strength, psi minimum	1200
	Elongation, % minimum	500%
	Abrasion resistance	Excellent
	Impact resistance	Excellent
	Salt spray resistance	168 hours

PRECLEANING: The parts to be coated must be dry and clean, free of corrosion, dirt, oil and grease. Your HST Sales Representative can recommend suitable precleaners based on your requirements.

SPRAY APPLICATION:

Equipment: Hot Airless Spray equipment such as Graco Nordson or Binks may be used. Example: Graco President or Bulldog 30:1 circulating unit with Stainless Steel Heater #523. A Graco Reflex Gun for hand spray fitted with a Graco tip filter assembly, #210-624, with a #250-264 filter element, #163-919 or 163-919 or 163-921 spray tips for large parts, 163-515 for small parts. Adequate compressed air volume at 80 to 100 psi is required for the pump. Set "back pressure" at 1800 to 2100 psi and the heater thermostat at 70° to 80°C.



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Application Procedure: Hold the spray gun approximately 12 to 15 inches from the work surface moving the gun parallel and at right angles to the work surface. Use straight uniform strokes. Apply one fast half (1/2) box coat, i.e. one horizontal pass overlapping about 50% to 75%. Then spray full box coat (one horizontal pass and one vertical pass) overlapping approximately 50%. This will provide a 6 to 10-mil dry film depending on the speed at which the spray gun is moved. Approximately a 16 to 25-mil wet film equates to a 6 to 10-mil dry film.

Cold Airless Spray: BONDERITE S-MA 5580 G AERO may be sprayed cold. However, 5 box coats may be required to obtain the same dry film thickness as 1 1/2 to 2 box coats when applied hot. Hot spray allows application of heavier wet films without sagging than can be obtained with cold spray.

CURING: Allow the coating to dry overnight (ca. 16 hours) at room temperature before processing. To accelerate the cure, allow to dry 4 hours at room temperature, then oven cure for 1 hour at 70° to 80°C. (As a stop-off for plating or anodizing, optimum results are obtained by additional cure of 30 to 40 minutes at 120°C.)

REMOVAL: BONDERITE S-MA 5580 G AERO is hand peelable. However, on rough and oxidized surfaces, the adhesion will be higher than normal.

DISPOSAL INFORMATION:

Dispose of spent material per local, state and regional regulations. Refer to HENKEL SURFACE TECHNOLOGIES MATERIAL SAFETY DATA SHEET for additional disposal information.

PRECAUTIONARY INFORMATION:

WARNING! Causes skin irritation, may cause eye irritation.

BONDERITE S-MA 5580 G AERO contains chlorinated solvents. Avoid contact with eyes, skin and clothing. Do not take internally. Avoid prolonged breathing of vapors. Use with adequate (equivalent to outdoor) ventilation. Protective clothing, such as a chemical face shield or goggles, gloves, boots and apron made from solvent resistant materials should be worn when using this product. A **NIOSH approved** respirator should be used during mist conditions.

Do not use 1,1,1-trichloroethane, methylene chloride, perchloroethylene, or other halogenated solvents or solvent mixture containing halogenated solvents with pressurizable fluid handling equipment such as airless spray equipment containing aluminum or galvanized wetted parts. Direct contact between aluminum or galvanized metal and these or other chlorinated solvents could result in an uncontrollable chemical reaction and possible explosion.

Keep away from flames or other ignition sources, such as welding arcs or cutting torches, since hazardous gases may be formed.

Before using this product refer to container label and HENKEL SURFACE TECHNOLOGIES MATERIAL SAFETY DATA SHEET for additional precautionary, handling and first aid information.



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NOTICE:

The above information and recommendations concerning this product are based upon our laboratory tests and field use experience with this or similar products. However, since conditions of actual use are beyond our control, any recommendations or suggestions are made without warranty, express or implied. Manufacturer's and seller's sole obligation shall be to replace that portion of the product shown to be defective. Neither shall be liable for any loss, damage, or injury, direct or consequential, arising out of the use of this product.

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