

Advanced Chemistry & Technology

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AC®-130 Metal Prebond Surface Treatment

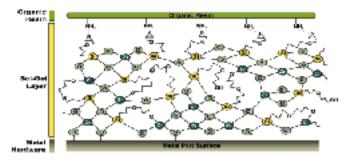
DESCRIPTION AC®-130 is a high-performance surface preparation for adhesive bonding of aluminum alloys, steel, titanium and composites. For aluminum alloys, data shows AC®-130 performs comparatively to the grit-blast silane procedure in the wedge test. The grit-blast AC®-130 Sol-Gel process has also been shown to perform similarly on the wedge test results as when PAA (Phosphoric Acid Anodize) is applied. The process also provides comparable wedge test results on titanium and stainless steel alloys when compared to standard controls, as well as promising results for nickel and other high nickel containing alloys such as Inconel using grit blast and AC®-130.

Product Benefits

- · Promotes enhanced adhesion for metal bonding.
- Reduces hazardous materials and waste produced by other bonding surface preparation methods.
- Environmentally friendly alternative to Acid Paste Etches, Grit Blast Silane, and Phosphoric Acid containment systems.
- Various application methods; brush, spray, dip or wipe applied.
- Available in kits sizes for specific applications;
 50ml, 100ml, 500ml, and 1 liter.
- Great for field repairs, ambient-temperature-curing.
- Enables all metallic substrates to be prepared with a single method.
- Process time savings over Grit Blast Silane, PACS and PANTA.

How It Works

A Sol-Gel preparation, AC®-130 promotes enhanced adhesion as a result of the chemical interaction at the interfaces between the metal and the AC®-130 and the AC®-130 and the primer.



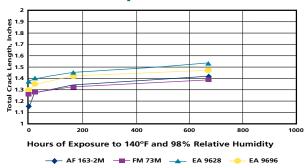
National Stock Numbers

NSN#	KIT SIZE	COVERAGE
6850-01-504-5763	500ml	25.0 SF
6850-01-505-8844	100ml	5.0 SF

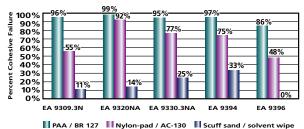
Performance with Various Adhesives

AC®-130's Sol-Gel process works with various Epoxy Adhesive Systems including; Paste and Film Adhesives.

250° Film Adhesives with BR6747-1 & AC®-130 Comparison



Paste Adhesive Comparison





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Financial Benefits

End users have documented cost savings upwards of \$5 million in the way of process time improvements and hazardous material reductions.

Time savings

Reduction in process flow time comparing Grit Blast Silane, PACS or PANTA to Scotch Brite/AC®-130, yields a minimum of a 40% reduction in cost.

Hazardous Materials

Elimination of hazardous materials such as chromates, acids & caustic materials. Hazardous rinse water and waste water containment systems are eliminated.

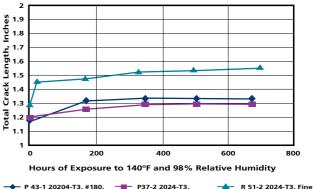
AC®-130 Process



SURFACE TREATMENT COMPARISONS

Aluminum Bonding 2024-T3

Wedge Crack Exposure Data

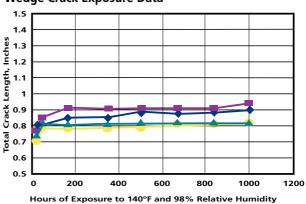


P 43-1 20204-T3, #180, P37-2 2024-T3, Alumina Grit Blasted, Phosphoric Acid Anodized, BR 6747-1,

 R 51-2 2024-T3, Fine ScotchBrite Disc Abraded, Pasa Jell 105 Treated, BR 6747-1, AF 163-2

Titanium Bonding Ti-6A1-4V

Wedge Crack Exposure Data



R 73-2, #180, Alumina Grit Blasted,

AC*-130, BR 6747-1, AF 163-2M

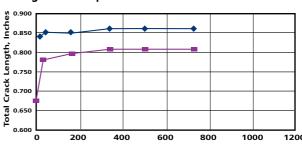
R 87-3 Turco Surface Pretreatment,
AC*-130, BR 6747-1, AF 163-2M

R 73-7 Brown ScotchBrite Pad Abraded, AC*-130, BR 6747-1, AF 163-2M

CAA (with BR 127 & FM 73)

Steel Bonding AM355 Stainless

Wedge Crack Exposure Data



Hours of Exposure to 140°F and 80%+ Relative Humidity

—— AC°-130 → HP 4-121