

# 3M™ Surface Pre-Treatment AC-131

## Product Description

3M™ Surface Pre-Treatment AC-131 is a high-performance, non-chromated, conversion coating for applications on aluminum, nickel, and titanium alloys. The 3M AC-131 Pre-Treatment application is used for parts subsequently finished with epoxy-based and polyurethane-based organic coatings.

3M AC-131 Pre-Treatment provides an excellent solvent-free alternative to achieve the high performance required in aircraft paint applications. The current surface preparation technique such as Alodine® provides acceptable surfaces for coating applications. However, the alodine process produces significant amounts of hazardous waste.

When used with the leading organic primers and topcoats, 3M AC-131 Pre-Treatment provides an economical and environmental alternative to more costly and hazardous processes. 3M AC-131 Pre-Treatment provides equivalent or better wet and dry adhesion performance to that of many of the other surface preparation techniques available. This is true of both OEM and repair/repaint (scuff and sand) applications.

3M AC-131 Pre-Treatment is simply applied to surfaces either by brush, dip or spray on at ambient drying conditions.

## Surface Preparation

3M™ Surface Pre-Treatment AC-131 may be applied after cleaning to a ‘water-break free’ surface. Alkaline cleaning will usually provide a ‘water-break free’ surface. Chemical etching and deoxidizing is generally not required. Manual deoxidation can be accomplished by either Scotch-Brite™ pad abrasion or sanding with #180 grit or finer aluminum oxide sandpaper.

## Patents

One or more of the following US Patents covers 3M™ Surface Pre-Treatment AC-131:

5,939,197	5,869,141	5,869,140
5,866,652	5,849,110	5,814,137
5,789,085		

## Typical Physical and Application Properties

**Note:** The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

<b>Color</b>	As mixed, it is slightly cloudy un-tinted, or blue if tinted
<b>Induction Time</b>	30 minutes
<b>Pot Life</b>	24 hours after mixing

## Standard Package Sizes and Coverage

Kit Designation	Coverage ft <sup>2</sup> (m <sup>2</sup> )
50 mL	16 ft <sup>2</sup> (1.5 m <sup>2</sup> )
100 mL	32 ft <sup>2</sup> (3 m <sup>2</sup> )
Pint	150 ft <sup>2</sup> (13.9 m <sup>2</sup> )
Quart	300 ft <sup>2</sup> (27.9 m <sup>2</sup> )
1 Gallon	1,200 ft <sup>2</sup> (111.5 m <sup>2</sup> )
5 Gallon	6,000 ft <sup>2</sup> (557.5 m <sup>2</sup> )

## Available Product Configurations

<b>3M™ Surface Pre-Treatment AC-131 BB</b>	2-Part, Blue
<b>3M™ Surface Pre-Treatment AC-131 CB</b>	2-Part, Clear

## Typical Application Technique

3M™ Surface Pre-Treatment AC-131 in accordance with instructions. Use the appropriately sized kit for the size of part and the method of application. Application rate is approximately 1 quart of 3M AC-131 Pre-Treatment for approximately 300 square feet of surface to be coated.



### Spray Application

3M™ Surface Pre-Treatment AC-131 surface treatment can be sprayed onto the part surface using a variety of methods including HVLP guns, hand pump sprayers, etc. The solution is applied so as to completely wet the part surface with a mist. Excess solution may run off the part. Larger surface areas may require coating by sections.

Allow coated part to drain for 3 to 10 minutes. If there is surplus 3M AC-131 Pre-Treatment that has pooled or collected in crevices, pockets, or other collection areas, including drip edges or fastener holes, use filtered compressed air to blow off excess. Do not splatter this excess solution onto adjoining part surfaces. Alternatively a cloth pre-wetted with 3M AC-131 Pre-Treatment may be used to gently blot, not rub, the surface of pooled liquid. Do not blow dry areas of the part that are able to freely drain.

### Brush Application

Apply fresh 3M™ Surface Pre-Treatment AC-131 by brushing with a clean natural bristle brush or swabbing with a clean wiper, cheesecloth or gauze. Do not scrub with a brush or applicator. Apply enough to achieve complete coverage of surface to be treated. Brushes or wipers should not leave streaks on the surface.

Allow coated part to drain for 3 to 10 minutes. If any surplus 3M AC-131 Pre-Treatment has pooled or collected in crevices, pockets, or other collection areas, including drip edges or fastener holes, use the same methods described under spray application to remove excess.

### Dry/Cure of 3M™ Surface Pre-Treatment AC-131

3M™ Surface Pre-Treatment AC-131 coated parts may be painted as soon as the surface appears dry but no sooner than 15 minutes, at ambient, from the time of application of the 3M AC-131 Pre-Treatment. When the 3M AC-131 Pre-Treatment treated surface is to be masked, the 3M AC-131 Pre-Treatment must dry for a minimum of 60 minutes, at ambient, prior to masking. Minimize contact with the part while drying. Exact drying time will vary depending upon the configuration of the part and ambient conditions. Alternately, after drying at ambient temperature for a minimum of 30 minutes, parts may be heated to 120°F maximum for an additional 8 hours minimum to facilitate drying. After drying, coated surfaces should be protected from contamination prior to applying the epoxy-based or polyurethane-based organic coating.

### Health and Safety Precaution

3M™ Surface Pre-Treatment AC-131 is safe to use and apply when recommended precautions are followed. Before using this product, read and understand the Material Safety Data Sheet (MSDS), which provides information on health, physical and environmental hazards, handling precautions and first aid recommendations. An MSDS is available on request.

### Storage

For BMS10-128 and AMS3175, the shelf life of 3M™ Surface Pre-Treatment AC-131 BB and CB is 12 months from the date of package when stored in the original unopened containers between 40°F and 100°F.

## For Additional Information

In the U.S., call toll free 1-800-235-2376, or fax 1-800-435-3082 or 651-737-2171. For U.S. Military, call 1-866-556-5714. If you are outside of the U.S., please contact your nearest 3M office or one of the following branches:

<b>Australia</b> 61-2-949-89333 tel	<b>Austria</b> 01-86686-298 tel	<b>Brazil</b> 55 19 3838-7876 tel	<b>Canada</b> 800-410-6880 ext. 6018 tel
<b>China</b> 86-21-62753535 tel	<b>Denmark</b> 45-43-480100 tel	<b>France</b> 0810-331-300 tel	<b>Germany</b> 02131-14-2344 tel
<b>Hong Kong</b> 852-2806-6111 tel	<b>India</b> 1-800-425-3030 tel (inside country only)	<b>Italy</b> 02 7035-3423 tel 02 7035-2162 fax	<b>Japan</b> +81 3 3709 8165 tel
<b>Korea</b> +82 2 3771 4114 tel	<b>Malaysia</b> 60 3 7806 2888 tel	<b>New Zealand</b> 64-9-477-4040 tel	<b>Netherlands</b> 31-71-5-450-272 tel
<b>Philippines</b> 63-2-588-9100 tel	<b>Singapore</b> 65-6450-8888 tel	<b>South Africa</b> 11-922-9111 tel	<b>Spain</b> 34-91-321-6000 tel
<b>Switzerland</b> 01-724-9114 tel	<b>Taiwan</b> +88 62 2704 9011 tel	<b>Thailand</b> 66-2260-8577 tel	<b>United Kingdom</b> (0) 161-237-6174 tel

## Technical Information

The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

## Product Use

Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

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These products were manufactured under a 3M Quality Management System registered to the AS9100 standard.



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