Approvals and conformities

BELL HELICOPTER	Approved for Edwards & Associates Inc. (Piney Flats)
BOEING (HELICOPTERS, MESA)	HMS20-1267 QPL
BOMBARDIER	NTO CRJ-700 EA 05-2011-049, All Bombardier aircraft at Midcoast Aviation - RIL GX-0051
DASSAULT AVIATION	Approved for all Falcon Aircraft
DELTA AIRLINES	Process Standard 900-3-6 No 36
EMBRAER	NTO ERJ-145 05-2011-047
GULFSTREAM	GMS 5008, GAR 110VK
OTAN/NATO	6850-01-513-8589 (quart), 6850-01-513-8586 (gallon), 6850-01-513-8567 (5-gallon pail), 6850-01-513-8560 (55-gallon drum), 6850-01-549-3632 (275-gallon tote), 6850-01-505-8688 (large repair kit), 6850-01-602-6830 (50 wipes with canister), 6850-01-602-6827 (50 wipes, no canister)
SAAB	NTO 340B 05-2011-050
SAE	Conforms to AMS 3095 (as a pretreatment)
SOUTHWEST AIRLINES	EA 1-A11-0075 referencing spec G51-21-01
UNITED AIRLINES	M&E 40-0608-3-0475 / 40-609-3-0312, Product code: CHE 3101-2
US Air Force	TO 1-1-8
US Air Force	Airframes: C-130, F-16, C-5, F-117, KC-10, KC-135, B52, E-3, B-1, C-17, A-10
USA Department of Defense	MIL-PRF-32239 QPL

PreKote is a ready-to-use pretreatment solution that cleans, deoxidizes, and promotes adhesion of coatings to metallic and composite surfaces.

Advantages/Benefits

- Single component cleaning and adhesion promotion surface treatment. Significantly reduces processing time, number of products required, and water usage compared to existing conversion coatings.
- Chromate-free alternative to conversion coatings.
- Versatile surface pretreatment; compatible with most coating systems.

- No dilution needed. Use as-received.

Substrates have millions of microscopic grooves where contaminants become embedded and difficult to remove. These contaminants can impede the adhesion of coatings to the substrate, leading to paint failures such as chipping, peeling, and blistering. **PreKote** cleans the surface and improves surface wettability. This significantly reduces the risk of adhesion failure between the substrate and coating and maximizes corrosion protection.

PreKote does not contain chromates and is non-toxic, non-hazardous, non-flammable, non-corrosive, CFC-free, odor-free, and non-ozone depleting. The liquid format is readily biodegradable upon disposal. As PreKote is non-hazardous, users can reduce HAZMAT shipping and storage costs. The product requires less rinsing, thus reducing water consumption.

The US Environmental Protection Agency (EPA) found PreKote to have environmentally preferable chemistry. PreKote has been recognized with the Design for the Environment (DfE) award. The EPA has also determined that PreKote is not one of the six core metal finishing effluent operations and does not trigger categorical industrial user (CIU) status.

Available Formats

- Quart
- Gallon
- 5-gallon pail
- 55-gallon drum
- 275-gallon tote
- Presaturated wipes
- Repair kit

DIRECTIONS FOR USE

PreKote may be used in both original manufacturing and maintenance, repair, and overhaul applications. It can be applied by spray, power washer, or immersion. It is also suitable for touch-up and repairs. PreKote may be applied to the following substrates:

- Aluminum alloys (including anodized)
- Composites
- Magnesium alloys
- Plastics
- Steel (including stainless alloys and galvanized)
- Titanium alloys (including anodized)

Surface Preparation

Before Applying PreKote:

- Any existing coating systems should first be removed with a suitable paint stripper. SPC and SOCOSTRIP paint strippers are suitable for use.
- Thoroughly clean all surfaces to be treated. DS-108 and DIESTONE cleaners are suitable for

use.
- Rinse the surface to remove any remaining dust and debris.
- Mask all areas that will not be treated with PreKote.

Application

Equipment Recommendations

- PreKote, as-received (do not dilute)
- Aluminum oxide pads (280-400 grit)
    - IMPORTANT: Use only aluminum oxide pads to scrub the surface. Use of any other pad may further contaminate the surface and prevent adhesion of the coating.
- Spray gun with 1.6-1.8 mm spray tip
- Municipal water
- Optional: pole scrubber or pneumatic sander. Pole scrubbing is recommended; however, pneumatic sanders may be used.

Workflow Recommendations for Application to Aircraft

- Work from the tail section forward; always begin on the top and outboard of the aircraft, working inward and downward.
- Work in small sections. Horizontal surfaces allow for larger work areas than vertical areas. The top of the vertical stabilizer will require a smaller work area.
- Pay particular attention to high erosion areas such as leading edges.

Procedure (Oxidized Substrates and Composites)

1. Apply a flood coat of PreKote to the designated area.
2. Scrub the area with an aluminum oxide pad using overlapping horizontal motions until you see a rich lather. Do not allow PreKote to dry on the application area at any time. If drying occurs, PreKote must be reapplied.
3. In same area just treated, apply a second application of PreKote. The second application is necessary in order to remove the soil and contaminants lifted by the first application. Do not rinse between applications.
4. Scrub the surface once more with an aluminum oxide pad, this time using overlapping vertical motions until you see a rich later. Do not allow PreKote to dry on the surface.
5. Immediately following the second PreKote application, rinse the treated area thoroughly from top down. When rinsing, pay special attention to seams and depressions to ensure thorough removal of PreKote.
6. Look for a water break-free surface as an indicator of proper application (typically 10 seconds). If water beads or breaks immediately, repeat the PreKote procedure.
7. Allow surfaces to dry prior to painting. Forced hot air drying is acceptable as long as the air is filtered and free of particulates.
8. Repeat the procedure above for the remaining sections of the part/structure.

Procedure (Prepared, Non-Oxidized Substrates and Small Touch-Ups)

1. The part should first be prepared following the *Surface Preparation* guidelines above.
2. Using presaturated PreKote Wipes, wipe the surface in one direction to maximize removal of contaminants.

I. Wiping back and forth or in circles spreads and further embeds contaminants.
II. Use light, uniform pressure on the wipe during the application process.
III. Each presaturated PreKote Wipe covers 4 ft^2 (0.37 m^2).
IV. PreKote Wipes should only be damp to touch. Do not add additional liquid PreKote to the wipes or apply liquid PreKote directly to the surface.
V. The wipe may be folded and used multiple times as long as a clean side of the wipe is used on each pass.

3. Allow surfaces to dry prior to painting. Forced hot air drying is acceptable as long as the air is filtered and free of particulates.

Post-Application

- Substrates should be painted within 24 hours of PreKote application.
- Do not use any solvents on the surface after applying PreKote.
- There should be no evidence of a wax-like appearance on the surface. If there is a wax-like film, a single coat application of PreKote should be repeated (steps 1, 2, 5, 6, and 7 of *Oxidized Substrates and Composites* application procedure).
- Inspect all areas previously masked for intrustion of chemicals used for surface preparation to ensure chemicals have not entered any cavities.
- Use a water-dampened lint-free cloth to remove any dust prior to painting.
- If fuels and/or oils have contaminated the substrate, use a presaturated PreKote wipe or moisten a lint-free cloth with PreKote and wipe off in one direction to prevent smearing the contaminant across the surface. In the same direction, immediately wipe off any excess PreKote with a dry, lint-free cloth. Prime the substrate immediately.

TECHNICAL CHARACTERISTICS

PreKote has passed the following tests for pretreatments.

Test description	Test name	Results
Salt spray	BMS 10-72, Test #20a ASTM B117	Pass
Filliform corrosion	BMS 10-72, Test #20b	Pass
Rain erosion	BMS 10-72, Test #23	Pass
Flexibility	ASTM D4145 (passes 1/8" Mandrel Bend Test)	Pass
Wet Tape Adhesion	BMS 10-72, Test 16	Pass
Corrosion resistance	ASTM G85 Annex 4	Pass
Hydrogen Embrittlement	ASTM F519-97	Pass
Paint Softening	BMS D6-17487 ASTM F502	Pass
Humidity Resistance	BMS 10-11, Test 24.8.2.16	Pass

Boiling point ..... 219°F (104°C)
Freezing point ..... 28°F (-2°C)
pH 10.0-11.5
VOC (US regulation) ..... 65.5 g/L (0.55 lb/gal)
Evaporation rate (NFT 30301) (n-Butyl acetate=1) ..... Less Than Water
Specific gravity ..... 1.01 at 77°F (25°C)

Vapour pressure ..... 0.02 mmHg at 68°F (20°C)
Vapour density 1
Water miscibility 100%
Biodegradability ..... +90% in 28 days
Appearance ..... Clear Amber Liquid
Odor ..... Odorless
Application temperature ..... 40-110°F (4-43°C)
Application Humidity 0-100%

PRECAUTIONS FOR USE AND STORAGE

Liquid Shelf Life

- Store in original closed packaging at 40-100°F (4-38°C).
- Unopened: 36 months from date of manufacture.
- Open: 12 months. Seal the container when not in use.

Wipe Shelf Life

- Store in original closed packaging at 40-100°F (4-38°C).
- Unopened: 12 months from date of manufacture.
- Open: 90 days. Seal the container when not in use.

For more information regarding the danger of the product, please consult the product safety data sheet according to local regulation.

Appropriate ventilation and personal protective equipment are recommended. For professional use only.

This technical data sheet replaces and cancels the previous one.