



3M Aerospace Top products.



# The Greatest Asset in Aerospace: A Reliable Partner.

You strive to reduce weight, improve rates and increase efficiency, in production and in the aircraft itself. 3M can help. For more than 70 years, we have quietly, passionately worked with leading professionals to solve some of the greatest challenges in the aerospace industry. Our work has resulted in a wide-ranging portfolio of aircraft solutions - films, adhesives, sealants and surface protection to name a few. But it also makes us the most valuable asset you can have in aerospace: a reliable partner. One with a curious nature, and a willingness to push beyond the status quo. One that's committed to helping you continually optimize costs throughout the entire cycle of aircraft design, production and maintenance. And, as one of the world's most ethical companies, 3M is equally committed to sustainable solutions that help you build and maintain the safest and most efficient aircraft in the world. Discover how 3M can partner with you.



# **Segment Solutions**

### > Interiors

With the right solutions, every challenge in aircraft interiors – every void, every bracket, every veneer and every monument – becomes an opportunity. Learn more now.

### > Exteriors

Succeed on tighter timelines and budgets with high-quality aerospace sealants that have superb shop-handling characteristics, lower weight, reduce VOC's, offer fast cure times and meet various OEM approvals.

### > Structures

Optimizing designs, meeting stringent build-toprint requirements and cutting weight are just the start to truly setting you apart. Explore 3M aircraft structural solutions now.

## > Propulsion

Fabricating and bonding to composites, hightemp adhesive films, surface protection... 3M has invented and reinvented in key areas of aircraft engine design and integration.

### > MRO

From adhesives to abrasives and films, from tapes to safety products, 3M has a deep and extensive offering of solutions tailored specifically for the aerospace industry.

# > Aircraft Painting

True excellence in aircraft painting requires products that work – not just at a glance, but below the surface and behind the scenes. 3M delivers with a broad range of solutions for performance, reliability and added efficiency from strip/sand to surface prep to sealing.



# **Interiors**

### **Interior Component Fabrication**

### **Bracket Bonding Adhesives**

• 3M<sup>™</sup> Scotch-Weld<sup>™</sup> EC-7202

### **Core Reinforcement Compounds**

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Core Splice Adhesive EC-3500 B/A
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Void Filling Compound FC-3550 B/A FST

#### **Edge and Void Fillers**

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Void Filling Compound EC-3505 B/A FR
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Void Filling Compound EC-3550 B/A FST
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Void Filling Compound EC-3524 B/A FST

### **Insert Potting Compounds**

• 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesive EC-3542 B/A FR

### **Sprayable Contact Adhesives**

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Adhesive EC-1357
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Neoprene High Performance Rubber and Gasket Adhesive EC-1300/ FC-1300I

### Structural Honeycomb Monument Build

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesive EC-2815 B/A FR
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> EC-9356 B/A FST
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> EC-9300 B/A FST
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesive EC-3542 B/A FR

### Thermoplastic Bonding

3M<sup>™</sup> Scotch-Weld<sup>™</sup> EC-7246-2 FST

# Honeycomb Splicing and Edge Finishing

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Core Splice Film AF 3074FST
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Core Splice Film AF 3070 FST

### **Interior Part Assembly & Installation**

#### **Bracket Bonding**

• 3M<sup>™</sup> Scotch-Weld<sup>™</sup> EC-7202

### Floorboard Sealing

- 3M<sup>™</sup> Aerospace Sealant AC-770 B
- 3M<sup>™</sup> Aerospace Sealant AC-735 B

### **Corrosion Prevention**

- 3M<sup>™</sup> Polyurethane Protective Tape 8658DL
- 3M™ Polyurethane Protective Tape 8663DL
- 3M<sup>™</sup> Polyurethane Protective Tape 8657DL
- 3M<sup>™</sup> Polyurethane Protective Tape 8666

### **Thermal Acoustic Solutions**

- Aircraft Damping Composites
- Overframe Blankets
- Carpet Pad
- Primary Insulation

### **Temporary Protection**

- 3M<sup>™</sup> Polyurethane Protective Tape 8547
- 3M<sup>™</sup> Polyurethane Protective Tape 8547-1



### **Surface Prep**

#### **Surface Pre-Treatment**

• 3M™ Surface Pre-Treatment AC-131 BB & CB

### Seal / Polysulfide Sealants

#### **Fuel Tank Sealants**

- 3M<sup>™</sup> Aerospace Sealant AC-350
- 3M<sup>™</sup> Aerospace Sealant AC-380

### **Fuselage Sealants**

- 3M<sup>™</sup> Aerospace Sealant AC-770
- 3M<sup>™</sup> Aerospace Sealant AC-735

#### Non Chromate Corrosion Inhibitive Sealants

3M<sup>™</sup> Aerospace Sealant AC-735

#### Windshield Sealant

3M<sup>™</sup> Aerospace Sealant AC-251

### Adhesion Promoters

- 3M<sup>™</sup> Adhesion Promoter AC-160
- 3M<sup>™</sup> Adhesion Promoter AC-137
- 3M<sup>™</sup> Adhesion Promoter AC-132

### **Tamper Proof Sealing**

• 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Tamper Proof Sealant EC-1252

### **Surface Protection and Enhancement**

# Structural Adhesive Surfacing and Lightning Strike Protection Films

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Composite Surfacing Film AF 325 M & AF 325LS
- 3M™ Scotch-Weld™ Composite Surfacing Film
   AE 536

# Advanced Composite Protection 3M™ Cocure films

- 3M<sup>™</sup> Polyurethane Protective Tape 8730NA
- 3M<sup>™</sup> Polyurethane Protective Tape 8732NA
- 3M<sup>™</sup> Polyurethane Protective Tape 8734NA
- 3M™ RP-2220

### **Corrosion Prevention Tapes**

- 3M<sup>™</sup> Polyurethane Protective Tape 8658DL
- 3M<sup>™</sup> Polyurethane Protective Tape 8663DL
- 3M™ Polyurethane Protective Tape 8657DL
- 3M<sup>™</sup> Polyurethane Protective Tape 8686

### **Rotor Blade Tapes**

- 3M™ Polyurethane Protective Tape 8542HS
- $\bullet~3 \mbox{M}^{\mbox{\tiny M}}$  Polyurethane Protective Tape 8545HS
- 3M<sup>™</sup> Polyurethane Protective Tape 8663HS, Matte Black

### **Military Grade Tapes**

- 3M<sup>™</sup> Polyurethane Protective Tape 8667HS
- 3M™ Polyurethane Protective Tape 8681HS

### **Commercial Grade Tapes**

- 3M<sup>™</sup> Polyurethane Protective Tape 8671 and/or 8671HS
- 3M<sup>™</sup> Polyurethane Protective Tape 8672
- 3M™ Polyurethane Protective Tape 8673
- 3M<sup>™</sup> Polyurethane Protective Tape 8674

### Fuel Cell /Anti-Chafe Tapes

• 3M™ Polyurethane Protective Tape 8544

### **FOD Impact Protection Tapes**

• 3M™ Polyurethane Protective Tape 8641 Indoor Grade Tapes

- 3M<sup>™</sup> Polyurethane Protective Tape 8560
- 3M™ Polyurethane Protective Tape 8561
- 3M<sup>™</sup> Polyurethane Protective Tape 8562

#### **Paint Replacement**

- 3M<sup>™</sup> Surface Protection Film 3952
- 3M™ Paint Replacement Tape 5004

### **Temporary Protection Tapes**

- 3M<sup>™</sup> Polyurethane Protective Tape 8547
- 3M<sup>™</sup> Polyurethane Protective Tape 8547-1

### **Thermoformed Protection Boots**

- Custom made with aircraft specific part number
- Typical application areas: Radome, winglet, antenna leading edge protection, fairings, light/ lens protection, landing gear

### **Urethane Repair Pastes / Edge Sealers**

- 3M™ Scotch-Weld™ Repair Paste 2110
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Repair Paste 2220

### **Application Accessories**

- $\bullet \ \ 3M^{{\scriptscriptstyle \mathsf{TM}}}$  Protective Tape Application Solution
- 3M<sup>™</sup> Adhesion Promoter 86A



### **Structures**

## **Composite Part Fabrication**

### **Composite Resins**

- 3M<sup>™</sup> Matrix Resin 4891
- 3M™ Matrix Resin 2897

### Advanced Composite Protection Cocure Films

- 3M<sup>™</sup> Polyurethane Protective Tape 8730NA
- 3M<sup>™</sup> Polyurethane Protective Tape 8732NA
- 3M<sup>™</sup> Polyurethane Protective Tape 8734NA

#### Repair Paste / Edge Sealers

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Repair Paste 2110
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Repair Paste 2220

### **Structural Adhesive Films**

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 126 and AF 126-2
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 163-2
- 3M™ Scotch-Weld™ Structural Adhesive Film AF 3109-2
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 555
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 191
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 131-2

### Structural Adhesive Composite Surfacing Films

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Composite Surfacing Film AF 325 M
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Composite Surfacing Film AF 536

# Structural Adhesive Lightning Strike Protection Film

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Composite Surfacing Film AF 325LS
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Composite Surfacing Film AF 536

### Honeycomb Void Filler

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Void Filling and Edge Sealing Compound EC-3500 B/A
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Void Filling and Edge Sealing Compound EC-3500-2 B/A
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Void Filling and Edge Sealing Compound EC-3524 B/A

### **Edge Sealers**

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesive EC-2216 B/A Gray
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesive EC-3333 B/A

### **Paste Adhesives**

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesive EC-2214
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesive EC-2615 B/A
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Epoxy Adhesive EC-9323-2 B/A
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Epoxy Adhesive EC-2792 B/A

# Core Splice Structural Adhesive Films

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Core Splice Film AF 3002
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Core Splice Film AF 3028 and AF 3028FR
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Core Splice Film AF 3074 FST

### Structural Adhesive Films

**Metal Component Fabrication** 

- 3M™ Scotch-Weld™ Structural Adhesive Film AF 126 and AF 126-2
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 163-2
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 3109-2
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 555
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 191
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 131-2

#### **Surface Pre-Treatment**

• 3M™ Surface Pre-Treatment AC-130-2

# Structural Adhesive Bond

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesives Primer EC-3917
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesives Primer EC-3924B
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesives Primer EW-5000
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesives Primer EW-5000AS
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesives Primer EW-5005

### Paste Adhesives

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesive EC-2214
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesive EC-2615 B/A
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Urethane Adhesive EC-3587
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Epoxy Adhesive EC-9323-2 B/A

### Core Splice Structural Adhesive Films

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Core Splice Film AF 3002
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Core Splice Film AF 3024
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Core Splice Film AF 3074FST

# Assembly & Completions

 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesive EC-2214

Paste Adhesives

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesive EC-2615 B/A
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Urethane Adhesive EC-3587
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural

Epoxy Adhesive EC-9323-2 B/A

• 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Epoxy Adhesive EC-2792 B/A

### **Liquid Shim Adhesives**

• 3M<sup>™</sup> Scotch-Weld<sup>™</sup> EC-7272 B/A

### **Bracket Bonding Adhesive**

• 3M<sup>™</sup> Scotch-Weld<sup>™</sup> EC-7202

### **Polysulfide Sealants**

3M<sup>™</sup> Aerospace Sealant AC-380

### **Tamper Proof Sealants**

• 3M™ EC-1252



# **Propulsion**

### **Engine Components**

### **Surface Pre-Treatment**

• 3M™ Surface Pre-Treatment AC-130-2

### Structural Adhesive Bond Primers

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesives Primer EC-3917
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesives Primer EC-3924B
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesives Primer EW-5005

#### Structural Adhesive Films and Pastes

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 163-2
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 3109-2
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 191
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesive EC-3448

### Advanced Composite Protection Cocure Films

- 3M™ Polyurethane Protective Tape 8730NA
- 3M<sup>™</sup> Polyurethane Protective Tape 8732NA
- 3M<sup>™</sup> Polyurethane Protective Tape 8734NA

### **Urethane Repair Pastes**

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Repair Paste 2110
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Repair Paste 2220

# Fan Track Abradable / Void Fillers

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Void Filling and Edge Sealing Compound EC-3524 B/A
- 3M™ Scotch-Weld™ Void Filling and Edge Sealing Compound EC-3500 B/A

### Composite Resins

- Matrix Resin 2894
- Matrix Resin 2896

### Nacelle

#### **Surface Pre-Treatment**

 3M<sup>™</sup> Surface Pre-Treatment AC-130-2

### Structural Adhesive Bond Primers

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesives Primer EC-3917
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesives Primer EC-3924B
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesives Primer EW-5005

# Structural Adhesive Films

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 163-2
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 3109-2
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 191
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesive EC-3448

### Core Splice Structural Adhesive Films

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Core Splice Film AF 3002
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Core Splice Film AF 3024
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Core Splice Film AF 3028
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Core Splice Film AF 3074 FST

### Advanced Composite Protection Cocure Films

- 3M<sup>™</sup> Polyurethane Protective Tape 8730NA
- 3M<sup>™</sup> Polyurethane Protective Tape 8732NA
- 3M<sup>™</sup> Polyurethane Protective Tape 8734NA

### **Urethane Repair**

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Repair Paste 2220
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Repair Paste 2110

# Fan Track Abradable /

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Core Splice Adhesive EC-3524 B/A
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Core Splice Adhesive EC-3500 B/A

### Structural Adhesive Surfacing and Lightning Strike Protection Films

- 3M™ Scotch-Weld™ Composite Surfacing Film AF 325 M & AF
  2251 S
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Composite Surfacing Film AF 191 XS
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Composite Surfacing Film AF 536

### **Paint Applique Film**

- 3M<sup>™</sup> Paint Replacement Tape 5004
- 3M™ Surface Protection
  Film 3952

### Thermoformed Boots

• FP 151, FP 231, FP 232

Propulsion content continues overleaf



# **Propulsion**

### **Fan Blades**

#### **Surface Pre-Treatment**

• 3M<sup>™</sup> Surface Pre-Treatment AC-130-2

### Structural Adhesive Bond Primers

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesives Primer EC-3917
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesives Primer EC-3924B
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesives Primer EW-5005

### Structural Adhesive Films

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 191
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 163-2
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 3109-2

### Structural Adhesive Composite Surfacing Films

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Composite Surfacing Film AF 325 M
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Composite Surfacing Film AF 536

### Advanced Composite Protection Cocure Films

- 3M<sup>™</sup> Polyurethane Protective Tape 8730NA
- 3M<sup>™</sup> Polyurethane Protective Tape 8732NA
- 3M<sup>™</sup> Polyurethane Protective Tape 8734NA

### **Urethane Repair Pastes**

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Repair
  Paste 2110
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Repair Paste 2220

### **Composite Resins**

- Matrix Resin 4891
- Matrix Resin 2896

### **Rotor Blades**

### **Surface Pre-Treatment**

 3M<sup>™</sup> Surface Pre-Treatment AC-130-2

### Structural Adhesive Bond Primers

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesives Primer EC-3924B
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesives Primer EC-3917
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesives Primer FC-1660
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesives Primer EW-5005

### Structural Adhesive Films

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 3109-2
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 163-2
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 191
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesive AF 30

# Core Splice Structural Adhesive Films

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Core Splice Film AF 3024
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Core Splice Film AF 3002
- 3M™ Scotch-Weld™ Structural Core Splice Film AF 3028
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Core Splice Film AF 3074 FST

### Advanced Composite Protection Cocure Films

- 3M<sup>™</sup> Polyurethane Protective Tape 8730NA
- 3M<sup>™</sup> Polyurethane Protective Tape 8732NA
- 3M<sup>™</sup> Polyurethane Protective Tape 8734NA

# Polyurethane Protection Films and Tapes

- 3M<sup>™</sup> Polyurethane Protective Tape 8545HS
- 3M<sup>™</sup> Polyurethane Protective Tape 8542HS
- 3M™ Polyurethane Protective Tape 8999 K11 Rotor Blade Protection Kit
- UH-60M: SJ8542HS FP641 Patch

### **Urethane Repair Pastes**

- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Repair Paste 2220
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Repair Paste 2110

### **Thermoformed Boots**

- FP 637, FP 532, FP 557, FP 558, FP 595
- 3M™ Polyurethane Protective Boot SJ8542HS FP637
- 3M<sup>™</sup> Polyurethane Protective Tape SJ8542HS FP641 (UH-60M)





### **Abrasives**

- · Abrasives for Structural Repair
- · Light Corrosion and Sealant Removal
- · Sand Fairings and Flight Control
- Abrasives for Composites
- Decal and Placard Removal on Metal
- Metal Stress Relieving

### **Aircraft Painting**

- Chemically Strip and/or Sand
- · Surface Preparation and Primer
- · Application
- Base Coat and Paint Application, Striping, Livery and Clear Coat Detail Finish and Repair

### Cleaning

- · General Cleaning
- Interior
- Exterior
- · Seat Track Cleaning
- Borehole Cleaning
- Oxygen Line Cleaning

### **Composite Repair**

- Tapes for Composite Repair
- Adhesives for Composite Repair
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesives and Accessories

### **Corrosion Management**

- · Wet Area Corrosion Prevention
- · Abrasives for Corrosion Removal

### **Electrical Systems and Maintenance**

Tapes

### **Engine Overhaul**

- Metal Stress Relieving
- Surface Protection Film Repair
- Abradable Compound
- Fluid Containment

### **Personal Safety**

- · High Noise Environments
- Fall Protection Safety
- · Head, Eye and Face Protection
- Respiratory Exposures
- · Welding Safety
- Confined Spaces

### Sealing, Bonding and Joining

- Sealants
- · Sealant Removal
- Bonding
- Joining
- · Cargo Compartment Sealing
- Decorative Laminate Bonding

### **Specialty and Processing Aid Tapes**

- Adhesion Testing Tapes
- Temporary Part Marking
- Metal Processing Tapes
- Welding Protection Tapes
- Media Blasting
- Floor Marking Tapes
- Vibration Damping Tapes

### **Surface Protection**

- Temporary Protection for Parts, Carpets or Facilities
- Erosion Protection and Edge Sealing
- Chemical Protection
- Impact Protection
- · Chafing Protection



# Aircraft Painting

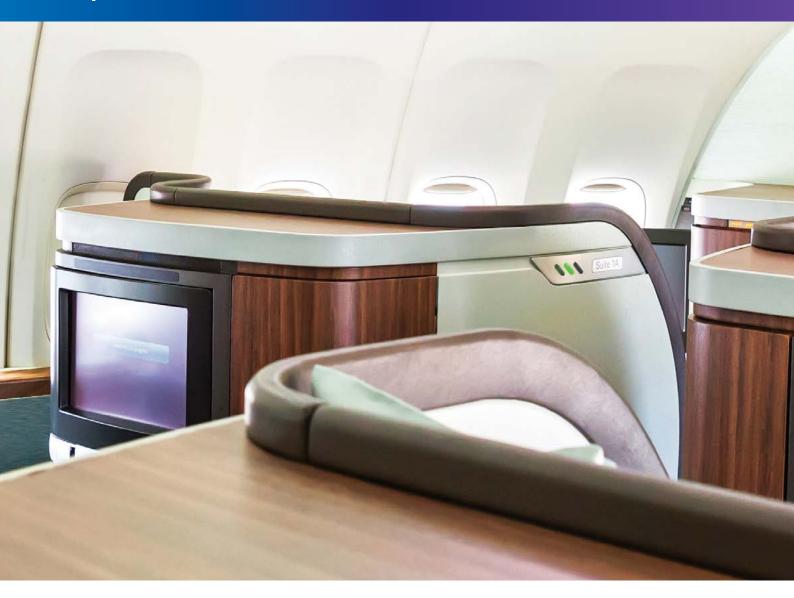
Chemically Strip and/or Sand

**Surface Preparation and Primer Application** 

Base Coat and Paint Application, Striping, Livery and **Clear Coat** 

**Detail Finish and Repair** 

# Aircraft Interiors Component Fabrication



Go above and beyond with 3M's aircraft interior solutions designed to boost assembly efficiency and out-perform most materials used in aircraft construction. 3M's low-density compounds are some of the lightest on the market, offer reduced voids and are built tough. Streamline operation with solutions designed to fit your process.

# Aircraft Interiors Part Fabrication

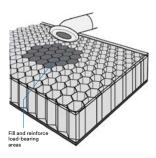
# **Bracket Bonding Adhesives**

- Simple two-step process, apply and bond without using fixtures
- Instant hold with no sag or mess
- Low-flow for use in vertical or overhead applications



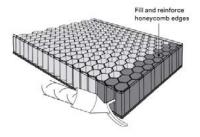
# **Core Reinforcement Compounds**

- Superior compressive strength
- Excellent performance over a wide temp range
- Some meet Fire Retardant (FR) per 14CFR 25.853 and others meet Flame Smoke Toxicity (FST) requirements



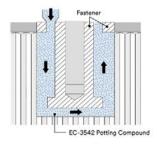
# **Edge and Void Fillers**

- Saves weight with one of the lightest pumpable/extrudable
   Fire Retardant (FR) void filler in the industry
- Industry-leading combination of density with compression strength
- Some meet FR per 14CFR 25.853 and others meet Flame Smoke Toxicity (FST) requirements



# **Insert Potting Compounds**

- High torque resistance ideal for inset potting application
- Fast cure and lightweight options available
- Fire Retardant (FR) compliant per 14CFR 25.853 (a)



# Aircraft Interiors Part Fabrication

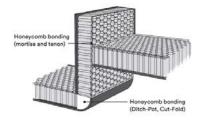
# **Sprayable Contact Adhesives**

- Bonds to flexible foams, wood, fabric, plastic and metal surfaces
- Can be applied by spray, brush or roller
- Applications include bonding of decorative veneer, gaskets and de-icing boots



# **Structural Honeycomb Monument Build**

- Mechanical properties help to achieve high durability and light-weighting goals
- Variable cure and worklife options at room temperature
- Fire Retardant (FR) and Flame Smoke Toxicity (FST) options available



# **Thermoplastic Bonding**

- Can be used to bond thermoplastics to metal and composite surfaces
- Low sag formulation delivers controlled flow for vertical applications
- Flame Smoke Toxicity (FST) options are available



# Honeycomb Splicing and Edge Finishing

- Repeatable expansion rates add consistency to the parts
- Up to six months shelf life and shop life at room temperature
- Core splice adhesive film can be cured at 120°C or 180°C with service temperatures from -55°C to 135°C



# **Component Fabrication - Top Products**

# **Bracket Bonding Adhesives**

3M<sup>™</sup> Scotch-Weld<sup>™</sup> EC-7202 – No-sag eliminates support fixtures to help reduce waste and save time

## **Core Reinforcement Compounds**

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Core Splice Adhesive EC-3500 B/A – Superior compressive strength of 6000 psi (41 MPa) with only 0.64 g/cm density

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Void Filling Compound EC-3550 B/A FST – Meets Airbus FST (Flame, Smoke, Toxicity) Requirement, ABD-0031

## **Edge and Void Fillers**

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Void Filling Compound EC-3505 B/A FR – *Very low density, FR (Fire Retardant)* 

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Void Filling Compound EC-3550 B/A FST – Meets Airbus FST (Flame, Smoke, Toxicity) Requirement, ABD-0031

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural – Void Filling Compound EC-3524 B/A FST - Very low density, FST

# **Insert Potting Compounds**

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesive EC-3542 B/A FR – Two-part epoxy potting compound, fire retardant, with fast gel and cure time at room temperature

# **Sprayable Contact Adhesives**

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Adhesive EC-1357 -Polychlororoprene Based Adhesive, Sprayable

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Neoprene High Performance Rubber and Gasket Adhesive EC-1300/ EC-1300L

# Structural Honeycomb Monument Build

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesive EC-2815 B/A FR – Maximum mechanical strength for overhead luggage bins, stowage panels and monuments. Work life is 60 min

3M<sup>™</sup> Scotch-Weld<sup>™</sup> EC-9356 FST – Fast cure option compared to EC-9300 FST

3M<sup>™</sup> Scotch-Weld<sup>™</sup> EC-9300 FST – Best choice for ditch and pot applications

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesive EC-3542 B/A FR – Fast flow and strong mechanical performance for easy panel forming. Work life is 30 min

# **Thermoplastic Bonding**

3M<sup>™</sup> Scotch-Weld<sup>™</sup> EC-7246-2 FST – Excellent flow control for vertical applications. Not formulated with Antimony-Trioxide

# Honeycomb Splicing and Edge Finishing

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Core Splice Film AF 3074FST. Low Density Expanding Core Splice Film with FST (Flame, Smoke, Toxicity) Resistance

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Core Splice Film AF 3070 FST. Low Density Expanding Core Splice Film with FST (Flame, Smoke, Toxicity) Resistance



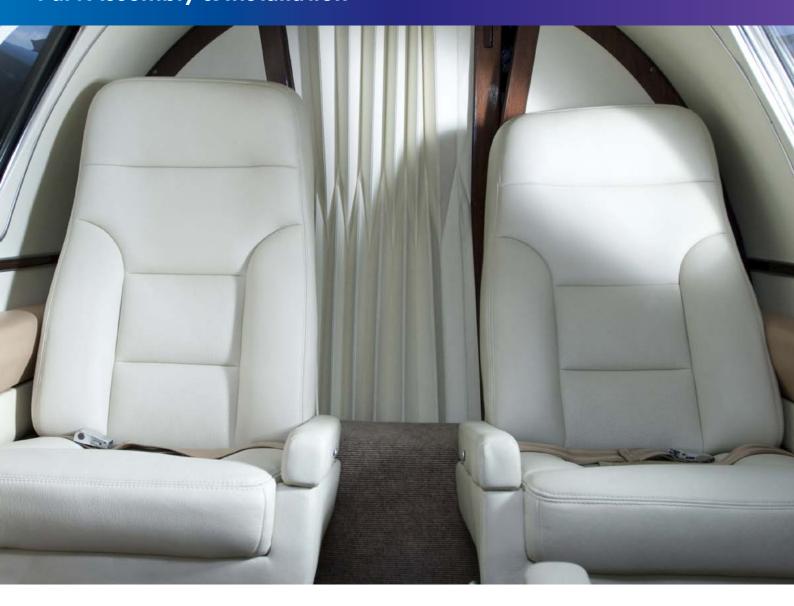
# Other 3M Products (consumables)

To aid in your bonding, use 3M<sup>™</sup> Polyester Tapes 875 and 876. These non-silicone tapes provide a secure hold for composite parts manufacturing and metal bonding processes, even when exposed to high temperatures. In addition, they're easy to apply and remove cleanly, leaving no residue.

CLICK FOR ONLINE PRODUCT INFORMATION



# Aircraft Interiors Part Assembly & Installation



Everything you need to assemble your interior and complete the best-in-class design - from edge and void fillers, bracket-bonding, insert bonding, to corrosion prevention, sealants and thermal acoustic products. We have the complete solution to create a lighter, safer and quieter aircraft.

# **Aircraft Interiors**

# **Interior Part Assembly & Installation**

# **Bracket Bonding**

- Simple two-step process, apply and bond without having to use fixtures
- Instant hold with no sag or mess
- Low-flow for use in vertical or overhead applications



# Floorboard Sealing

- Polysulfide sealant fills voids and seals fuselages
- Offers outstanding resistance to jet fuel, chemicals and petroleum products
- Fast cure, tack free in as little as 3 hours
- Low non-volatile content to reduce shrinkage and rework
- Easy to apply and work with



### **Corrosion Prevention**

- Prevent fluids from reaching floorbeams and other metal structures
- Highly durable, puncture-resistant and Fire Retardant (FR) rated
- Conformable and easy to apply



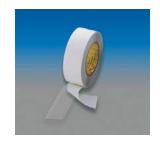
### Thermal Acoustic Solutions

- Thermal and Acoustic kits and materials to improve cabin comfort
- Supplemental Type Certificate (STC) kits available for a variety of aircraft
- Parts Manufacturer Approval (PMA) certified materials



# **Temporary Protection Tapes**

- Easy removal without surface residue
- Flame resistant
- Conform to curved and uneven surfaces



# **Interior Part Assembly & Installation – Top Products**

# **Bracket Bonding**

3M<sup>™</sup> Scotch-Weld<sup>™</sup> EC-7202 – No-sag eliminates support fixtures to help reduce waste and save time

## Floorboard Sealing

3M<sup>™</sup> Aerospace Sealant AC-770 B 3M<sup>™</sup> Aerospace Sealant AC-735 B

### **Corrosion Prevention**

3M<sup>™</sup> Polyurethane Protective Tape 8658DL – Flame resistant tape meets FAR 25.852 for aircraft interior burn certifications and is used to seal floor panels

3M<sup>™</sup> Polyurethane Protective Tape 8663DL – Moisture barrier tape that is used in wide areas or seam sealing applications and passes burn testing as a sandwich construct

3M™ Polyurethane Protective Tape 8657DL – For wet-area corrosion prevention areas such as aircraft lavatories and galleys. Flame resistant tape meets FAR 25.852 for aircraft interior burn certifications and is used for wide area applications

3M<sup>™</sup> Polyurethane Protective Tape 8666

### Thermal Acoustic Solutions

Aircraft Damping Composites – a low surface weight, high-performing aircraft damping composite for structural applications optimized across a variety of temperature ranges

Carpet Pad – An under-carpet cushion, acts as an acoustic barrier and absorber in addition to helping provide thermal comfort

Primary Insulation - Encapsulated fiberglass bags are thermally and acoustically tuned, and control both fiber fly and moisture

## **Temporary Protection Tapes**

3M™ Polyurethane Protective Tape 8547-1 - Protects components from surface damage during manufacturing and transportation, and removes cleanly from a variety of substrates



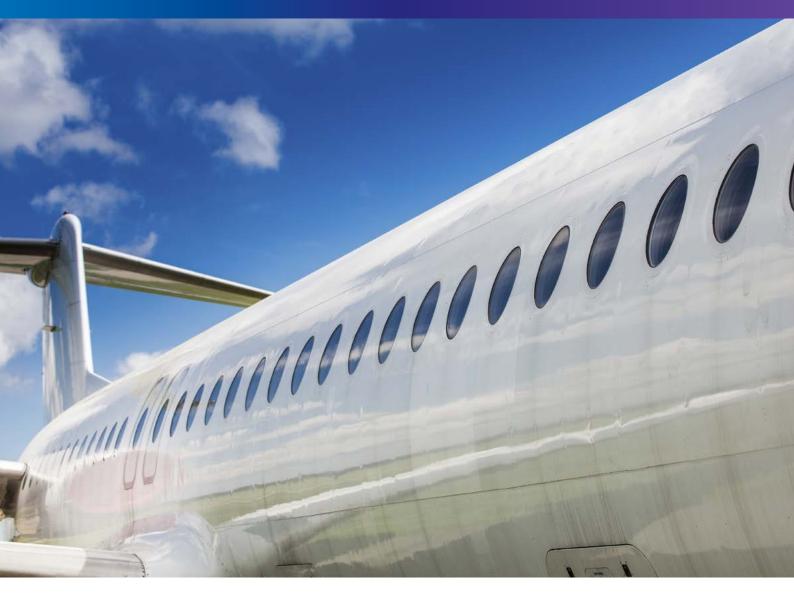
### **Other Featured Products**

3M Aerospace Paste Adhesives are available in a variety of work life, cure time and density to fit your specific design. Contact your local 3M sales representative or aerospace authorized distributor for more information.

CLICK FOR ONLINE PRODUCT INFORMATION



# Aircraft Exteriors Surface Prep



Succeed on tighter timelines and budgets with high-quality aerospace sealants that have superb shop-handling characteristics, light-weight, low VOC, fast cure times and various OEM approvals.



# Aircraft Exteriors Surface Prep

# **Surface Pre-Treatment**

- Excellent for preparing aluminum, and titanium alloy parts subsequently finished with epoxy-based and polyurethane-based organic coatings
- Helps reduce labor time and water usage; no scrubbing or rinsing required
- Superior adhesion of organic coatings to metal substrates
- Eliminates chromates from surface treatment process



### **Fuel Tank Sealants**

- Universal sealants that can be used across fuel tank and fuselage applications
- Multiple OEM and MRO approvals
- Class B sealants help reduce shrinkage and rework for total cost reduction



# **Fuselage Sealants**

- Non-Chromate Corrosion Inhibiting (NCCI) sealants available
- Excellent shop-handling characteristics including less stringing, low sag and optimized formulas to help reduce odor
- Easier application less effort to tool and shape



### Non Chromate Corrosion Inhibitive Sealants

- Non-chromate corrosion inhibitive formula helps comply with chromate reduction initiatives
- Allows for total cost reduction; helps reduce shrinkage and rework
- Low density formula weighs 3-4 lbs. less per gallon than traditional sealants
- Helps process improvement; excellent tooling properties, easily applied and cures quickly



## **Helpful Tools**

Product Configuration								
	Usage	Application						
CLASS A (Brushable)	For fasteners and brush-coat sealing	Brush applied						
CLASS B (Extrudable)	For fillet and injection seals; little to no flow (sag)	Usually applied with a sealant gun						
CLASS C (Rollable)	For fay surface seals	Applied using a roller or a sealant gun						

## Windshield Sealant

- Formulated for sealing acrylic, glass, and polycarbonate aircraft canopies and windshields
- Class B Sealants contain no solvents and do not craze
- Quickly cure and exhibit excellent adhesion and resistance to UV and weather exposure.



## **Adhesion Promoters**

- Allows for faster initial adhesion build rate of polysulfide sealant
- One component formula for simple application
- Available in a water-based formula for solvent sensitive surfaces.



# **Tamper Proof Sealing**

- One-part formula for convenient dispensing
- Protect settings and calibrations
- Indicates whether fastener has been tampered with or has moved.



# **Surface Prep - Top Products**

### **Surface Pre-Treatment**

3M<sup>™</sup> Surface Pre-Treatment AC-131 BB & CB - Version of sol gel appropriate for paint surface preparation

### **Fuel Tank Sealants**

3M™ Aerospace Sealant AC-380 3M™ Aerospace Sealant AC-350

3M™ Aerospace Sealant AC-370

# **Fuselage Sealants**

3M<sup>™</sup> Aerospace Sealant AC-770 3M<sup>™</sup> Aerospace Sealant AC-735 3M<sup>™</sup> Aerospace Sealant AC-370

# Non Chromate Corrosion Inhibitive Sealants

3M<sup>™</sup> Aerospace Sealant AC-735

### Windshield Sealant

3M™ Aerospace Sealant AC-251

### **Adhesion Promoters**

3M<sup>™</sup> Adhesion Promoter AC-160 3M<sup>™</sup> Adhesion Promoter AC-137 3M<sup>™</sup> Adhesion Promoter AC-132

## **Tamper Proof Sealing**

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Tamper Proof Sealant EC-1252 – Available in blue, pink, yellow and white

# **Aerospace Polysulfide Sealants**

Sealant	Fuel Tank	Fuselage	Fast Cure	Standard Density (1.5+)	Reduced Density (1.3-1.4)	Low Density (1.1)	No Solvent (Class B)	Non- Chromate Corrosive Inhibitive
AC-350 A,B	1	1	1		1		1	
AC-370 B	1	1	1		1		1	
AC-380 B	1	1	1			1	1	
AC-735 B		1	1			1	1	1
AC-770 B		1	1			1	1	
AC-251 B Black		✓ (windows)	1	1			1	





# Other 3M Products (consumables)

Use 3M 231A masking tape and 471 vinyl tape for effective masking of aircraft lap joints, doublers and other sealant applications.

CLICK FOR ONLINE PRODUCT INFORMATION



# **Aircraft Exteriors**

**Surface Protection and Enhancement** 



You need to think ahead, to fix things before they're broken, to prevent errors before they happen. You need built-in, proactive protection. You need to take control of future issues while you still can—now.

3M surface protection solutions can help.

# **Aircraft Exteriors**

# **Surface Protection and Enhancement**

# Structural Adhesive Surfacing and Lightning Strike Protection Films

- Resistant to effects of humidity exposure
- Cocure compatible with most epoxy composite pre-preg systems
- Excellent for surfacing composite parts



# **Advanced Composite Protection Cocure Films**

- Game-changing technology for protecting advanced composite parts
- Processing temperatures up to 400 °F and service temperatures up to 250 °F
- Unique flow capabilities to stack protection where you need it



# **Corrosion Prevention Tapes**

- Prevent fluids from reaching floorbeams and other metal structures
- Highly durable and puncture-resistant with flame resistant options available
- Conformable and easy to apply



# **Rotor Blade Tapes**

- Highly durable, long service life
- Meets several OEM specifications
- Protect rotor blades to avoid replacement



# Military Grade Tapes

- Proven military use
- Available in various colors
- NSNs available



# Aircraft Exteriors - Surface Protection and Enhancement

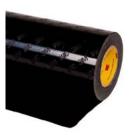
# **Commercial Grade Tapes**

- Transparent tapes with a superior UV package
- Easy to apply and conforms to curved surfaces
- Can be painted over, or applied to painted surfaces



# **Fuel Cell/Anti-Chafe Tapes**

- Adhere to a wide variety of substrates
- Solvent-free technology
- Conform to curvatures



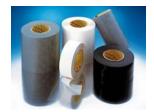
# **FOD Impact Protection Tapes**

- Extremely tough elastomer for aerospace applications
- Can be perforated for easier application
- Adheres to a wide variety of substrates



# **Indoor Grade Tapes**

- Highly durable in challenging environments
- Easy to apply
- Constant adhesion and easy removal



# **Paint Replacement Tapes**

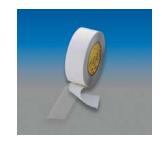
- Designed to resist fluid ingress
- Low surface energy for interior and exterior applications
- Conform to irregular surfaces



# Aircraft Exteriors - Surface Protection and Enhancement

# **Temporary Protection Tapes**

- Easy removal without surface residue
- Flame resistant
- Conform to curved and uneven surfaces



### **Thermoformed Protection Boots**

- Hundreds of pre-shaped shapes to meet your needs and prevents damage caused by rain and sand
- Can be formulated to be UV-stable to hold clarity and not yellow over time.
- Virtually no reduction in radar transmissivity



# **Urethane Repair Pastes / Edge Sealers**

- On-aircraft repairs, no vacuum bagging required
- Erosion resistance in the harshest conditions
- Tack free, flyable and fully cured in less than 24 hours



# **Application Accessories**

- Allows to easily apply 3M<sup>™</sup> Polyurethane Protective Tapes and Boots
- Aids proper installation
- Easy to use and allows faster application



# **Surface Protection and Enhancement – Top Products**

# Structural Adhesive Surfacing and Lightning Strike Protection Films

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Composite Surfacing Film AF 325 M & AF 325LS – *Available in white and blue versions* 

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Composite Surfacing Film AF 191XS

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Composite Surfacing Film AF 536 – Multiple film weight options available. Can be cured at either 250°F (120°C) or 350°F (175°C)

# Advanced Composite Protection Cocure Films

3M<sup>™</sup> Polyurethane Protective Tape 8730NA – (12 mil thick)

3M<sup>™</sup> Polyurethane Protective Tape 8732NA – (24 mil thick)

3M<sup>™</sup> Polyurethane Protective Tape 8734NA – (6 mil thick)

3M™ Scotch-Weld™ Repair Paste 2110 Kit – Urethane paste designed for durable erosion resistance equivalent to original 3M film.

3M™ RP-2220

# **Corrosion Prevention Tapes**

3M™ Polyurethane Protective Tape 8658DL – Flame resistant tape meets FAR 25.852 for aircraft interior burn certifications and is used to seal floor panels

3M<sup>™</sup> Polyurethane Protective Tape 8663DL – Moisture barrier tape that is used in wide areas or seam sealing applications and passes burn testing as a sandwich construct

3M™ Polyurethane Protective Tape 8657DL – For wet-area corrosion prevention areas such as aircraft lavatories and galleys. Flame resistant tape meets FAR 25.852 for aircraft interior burn certifications and is used for wide area applications

3M™ Polyurethane Protective Tape 8666

# **Rotor Blade Tapes**

3M<sup>™</sup> Polyurethane Protective Tape 8542HS – 10x better rain and sand erosion performance than 8663HS (43 mil thick)

3M<sup>™</sup> Polyurethane Protective Tape 8545HS & 8545NA – 7x better rain and sand erosion performance than 8663HS (22 mil thick)

3M<sup>™</sup> Polyurethane Protective Tape 8663HS Matte Black – Meets multiple military specifications (18 mil thick)

## **Military Grade Tapes**

3M<sup>™</sup> Polyurethane Protective Tape 8667HS – Commonly used in industrial applications. Erosion protection with high shear adhesive. (28 mil thick)

3M<sup>™</sup> Polyurethane Protective Tape 8681HS – Available in Matte Clear and 36118, 36173, 36251, 36270, 36320 and 36375 Grays (14 mil thick)

## **Commercial Grade Tapes**

3M<sup>™</sup> Polyurethane Protective Tape 8671 and/or 8671HS

3M<sup>™</sup> Polyurethane Protective Tape 8672

3M<sup>™</sup> Polyurethane Protective Tape 8673 – Best UV stability package and is 3M's first choice for exterior leading edge protection.

3M<sup>™</sup> Polyurethane Protective Tape 8674 – *Thinner version of 8673* 

# Fuel Cell/Anti-Chafe Tapes

3M<sup>™</sup> Polyurethane Protective Tape 8544 – Prevents chafing of rivets on aircraft fuel cells and bladders

# **FOD Impact Protection Tapes**

3M™ Polyurethane Protective Tape 8641 – "Belly Tape" protects against small foreign object damage (FOD) on underside of aircraft. Impact protection tape—our thickest tape (41 mil thick)

# **Indoor Grade Tapes**

3M<sup>™</sup> Polyurethane Protective Tape 8560 –Indoor grade, high-tack, repositionable, abrasion resistant (14 mil thick)

3M<sup>™</sup> Polyurethane Protective Tape 8561 – Indoor grade, impact and erosion resistance. Commonly used in industrial applications. (14 mil)

3M<sup>™</sup> Polyurethane Protective Tape 8562 – Indoor grade, for isolation, abrasion resistant (8 mil) than 8663HS (43 mil thick).

CLICK FOR ONLINE PRODUCT INFORMATION

# **Surface Protection and Enhancement – Top Products**

# **Paint Replacement Tapes**

3M<sup>™</sup> Surface Protection Film 3952 – *Provided* without adhesive for cocure applications

3M<sup>™</sup> Paint Replacement Tape 5004 – Designed as a paint replacement. Excellent moisture barrier and Skydrol resistant

# **Temporary Protection Tapes**

3M<sup>™</sup> Polyurethane Protective Tape 8547 – Protects components from surface damage during manufacturing and transportation.

3M™ Polyurethane Protective Tape 8547-1

### Thermoformed Protection Boots

Visit 3M.com/boots to see a full list of available aerospace boots

Typical application areas: Radome, Winglet, Antenna

# Urethane Repair Pastes / Edge Sealers

3M™ Scotch-Weld™ Repair Paste 2110 – black repair paste used with our black protective tapes

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Repair Paste 2220 – clear repair paste used with our transparent tapes, also perfect for edge sealing

# **Application Accessories**

3M<sup>™</sup> Protective Tape Application Solution – Ready-to-use spray bottles save time and guesswork mixing - includes an application squeegee

3M<sup>™</sup> Adhesion Promoter 86A – Allows for faster initial adhesion build rate of 3M<sup>™</sup> Polyurethane Protective Tapes and Boots



## **Other Featured Products**

# **Corrosion Prevention Tapes**

3M<sup>™</sup> Polyurethane Protective Tape 8658DL – Flame resistant seam-sealing tape meets FAR 25.852 for aircraft interior burn certifications.

3M™ Polyurethane Protective Tape 8663DL – A transparent polyurethane protective tape that is qualified to multiple leading aircraft manufacturer specifications for corrosion prevention, wide area protection.

3M<sup>™</sup> Polyurethane Protective Tape 8657DL – A white polyurethane protective tape that meets FAR 25.853. Corrosion prevention, wide area protection tape.

3M<sup>™</sup> Polyurethane Protective Tape 8686 – Meets FAR 25.853. Thin and removable commonly used as an interior patch tape.

CLICK FOR ONLINE PRODUCT INFORMATION





Manufacture a toughened composite part with 3M products that bring you the best lightweight, durable and shop-handling characteristics in the industry. We have the complete composite part fabrication package with toughened resin system (nano technology), integrated composite protection and multiple composite bonding options to fit exactly what your design calls for.

3M Structural Adhesive Bonding solutions can help.



# **Composite Resins**

- Excellent high strength and stiffness
- Improved toughness and durability
- High temperature performance



# **Advanced Composite Protection Cocure Films**

- Game-changing technology for erosion and abrasion protection of composite parts
- Processing temperatures up to 400 °F and service temperatures up to 250 °F
- Able to be cocured with composite parts or post bonded with structural adhesives (built-in erosion protection)



# **Repair Pastes**

- On-aircraft repairs, no vacuum bagging required
- Erosion resistance in the harshest conditions
- Tack free, flyable and fully cured in less than 24 hours



# **Structural Adhesive Films**

- High fracture toughness and peel strength
- Excellent pre-bond humidity performances
- Available in multiple cure temperatures





# **Structural Adhesive Composite Surfacing Films**

- Cocure compatible with most epoxy composite prepreg systems
- Smooth surfacing with minimal pinholes and imperfections
- Available in multiple cure temperatures



# Structural Adhesive Lightning Strike Protection Film

- Cocure compatible with most epoxy composite prepreg systems
- Smooth surfacing with minimal pinholes and imperfections
- Available in multiple cure temperatures



# **Honeycomb Void Filler**

- Strong, low-density formulas save weight
- Non-sag compound dispenses easily
- Cartridge and bulk dispensing options available





# **Paste Adhesives**

- High peel and shear strength for aerospace applications
- Maintain bond strength at high and low temperatures
- FR and FST solutions available



# **Core Splice Structural Adhesive Films**

- Thermally expanding films for gap filling
- High performance over a broad range of temperature
- Excellent shear strength even at elevated temperatures





# **Composite Component Fabrication – Top Products**

# **Composite Resins**

3M<sup>™</sup> Matrix Resin 4891 – For structural parts requiring high compression strength and high temperature performance.

3M™ Matrix Resin 2897

# Advanced Composite Protection Cocure Films

3M<sup>™</sup> Polyurethane Protective Tape 8730NA – (12 mil thick)

3M<sup>™</sup> Polyurethane Protective Tape 8732NA – (24 mil thick)

3M<sup>™</sup> Polyurethane Protective Tape 8734NA – (6 mil thick)

3M™ Polyurethane Protective Tape RP-2220

## Repair Paste/Edge Sealers

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Repair Paste 2110 – *black repair* paste used with our black protective tapes.

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Repair Paste 2220 – clear repair paste used with our transparent tapes, also perfect for edge sealing

# Structural Adhesive Films

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 126 and AF 126-2 – 250°F (120°C) cure.

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 163-2 – 250°F (120°C) cure.

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 3109-2 – *Dual cure 250°F (120°C) or 350°F (175°C)* 

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 555 – 350°F (175°C) cure.

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 191 – 350°F (175°C) cure.

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 131-2 – 350°F (175°C) cure

# Structural Adhesive Composite Surfacing Films

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Composite Surfacing Film AF 325 M – Available in white and blue versions, for color contrast

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Composite Surfacing Film AF 536 – Multiple film weight options available. Can be cured at either 250°F (120°C) or 350°F (175°C)

# Structural Adhesive Lightning Strike Protection Film

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Composite Surfacing Film AF 325 LS – Available in white and blue for color contrast

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Composite Surfacing Film AF 536 – Multiple film weight options available. Standard temperature cure from 250°F (120°C) up to 350°F (175°C)

## **Honeycomb Void Filler**

3M™ Scotch-Weld™ Void Filling and Edge Sealing Compound EC-3500 B/A

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Void Filling and Edge Sealing Compound EC-3500-2 B/A

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Void Filling and Edge Sealing Compound EC-3524 B/A – Versatile formula can be used for bonding inserts

### **Paste Adhesives**

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesive EC-2214 – 350°F (175°C) cure.

3M<sup>™</sup> Scotch-Weld Epoxy Adhesive EC-2615 B/A – Room temperature cure.

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesive EC-2792 B/A – Reaches handling strength in approximately 5 hours and is fully cured in 24 hours

# **Core Splice Structural Adhesive Films**

3M™ Scotch-Weld™ Structural Core Splice Film AF 3002

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Core Splice Film AF 3024 – Highest expansion and lowest density of core splice films in our portfolio. Dual cure 250°F (120°C) or 350°F (175°C)

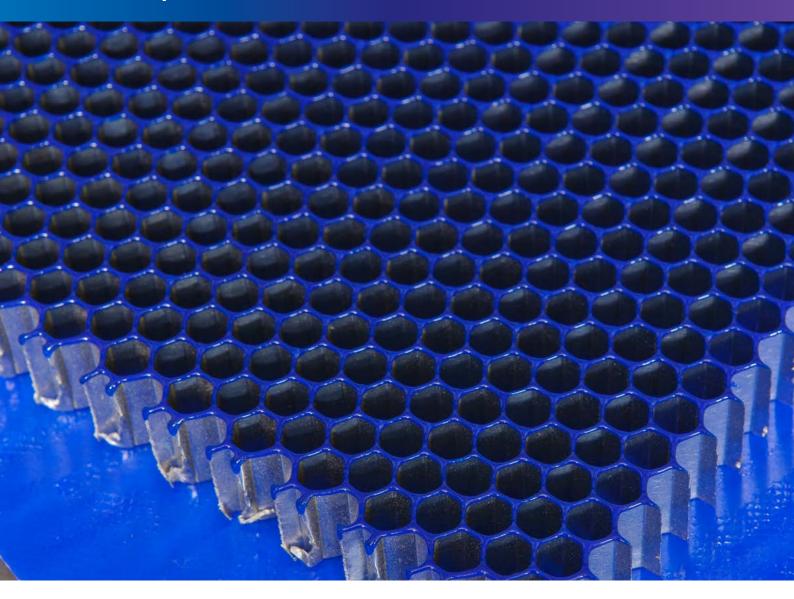
3M™ Scotch-Weld™ Structural Core Splice Film AF 3028 and AF 3028FR

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Core Splice Film AF 3074 FST– Low Density Expanding Core Splice Film with FST (Flame, Smoke, Toxicity) Resistance

CLICK FOR ONLINE PRODUCT INFORMATION



# Aircraft Structures Metal Component Fabrication



Rely on 3M engineered solutions for your aerospace metal part fabrication and make it easier to maintain lighter, safer and more fuel-efficient aircraft.



# Aircraft Structures Metal Component Fabrication

### Structural Adhesive Films

- High fracture toughness and peel strength
- Excellent pre-bond humidity performances
- Available in multiple cure temperatures



# **Surface Pre-Treatment**

- Excellent for preparing aluminum, stainless steel and titanium alloy parts subsequently finished with epoxy-based and polyurethanebased organic coatings.
- Helps reduce labor time and water usage; no scrubbing or rinsing required
- Eliminates chromates from surface treatment process



### Structural Adhesive Bond Primers

- Corrosion inhibitive pigment allows for increased service life
- Protect high-cost surface preparation helps preserve Chemical Surface Preparation Prior to bonding
- Water based and non-chromate options available





# Aircraft Structures Metal Component Fabrication

### **Paste Adhesives**

- Excellent adhesion on primed or painted metal
- Maintain bond strength at high and low temperatures
- High peel and shear strength for aerospace applications



# **Core Splice Structural Adhesive Films**

- Thermally expanding films for gap filling
- High performance over a broad range of temperature
- Excellent shear strength even at elevated temperatures



# **Metal Component Fabrication – Top Products**

### Structural Adhesive Films

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 126 and AF 126-2 – 250°F (120°C) cure

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 163-2 – *250°F* (*120°C*) *cure* 

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 3109-2 – *Dual cure 250°F (120°C) or 350°F (175°C)* 

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 555 – 350°F (175°C) cure

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 191 – 350°F (175°C) cure

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 131-2 – *350°F (175°C) cure* 

### **Surface Pre-Treatment**

3M<sup>™</sup> Surface Pre-Treatment AC-130-2 – Sol-gel based surface preparation for adhesive bonding of aluminum alloys, stainless steel and titanium

### Structural Adhesive Bond Primers

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Primer EC-3917– Solvent based, chromated inhibitor Complimentary to both 250°F (120°C) and 350°F (175°C) cure adhesive films

3M™ Scotch-Weld™ Structural Adhesives Primer EC-3924B – Solvent based, chromated inhibitor. Complimentary to 250°F (120°C) cure adhesive films

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Primer EW-5000 – Water-based, chromated inhibitor. Complimentary to both 250°F (120°C) and 350°F (175°C) cure adhesive films

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Primer EW-5000AS – Water based, non-chromated inhibitor. Complimentary to both 250°F (120°C) and 350°F (175°C) cure adhesive films

3M™ Scotch-Weld™ Structural Adhesive Primer EW-5005 – Water based, non-chromated inhibitor. Appropriate for use with AC 130-2 sol gel surface prep. Complimentary to both 250°F (120°C) and 350°F (175°C) cure adhesive films

### **Paste Adhesives**

3M™ Scotch-Weld™ Epoxy Adhesive EC-2214

3M™ Scotch-Weld™ Epoxy Adhesive EC-2615 B/A

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Epoxy Adhesive EC-9323-2 B/A

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesive EC-2792 B/A – Reaches handling strength in approximately 5 hours and is fully cured in 24 hours

## **Core Splice Structural Adhesive Films**

3M™ Scotch-Weld™ Structural Core Splice Film AF 3002

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Core Splice Film AF 3024 – Highest expansion and lowest density of core splice films in our portfolio. Dual cure 250°F (120°C) or 350°F (175°C)

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Core Splice Film AF 3028 and AF 3028FR

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Core Splice Film AF 3074FST – Low Density expanding Core Splice Film with FST (Flame, Smoke, Toxicity) resistance



# Other 3M Products (consumables)

Aircraft need the best abrasives available to assist with construction to maintenance. 3M offers a full line of abrasives including quick change discs, flap wheels, cartridge rolls, fiber discs and non-woven wheels, brushes, flap discs, hand pads, belts and more to fit your needs.

CLICK FOR ONLINE PRODUCT INFORMATION



# Aircraft Structures Assembly & Completions



3M structural solutions are driving new efficiencies and raising the bar for performance of aerospace components.



# Aircraft Structures Assembly & Completions

## **Paste Adhesives**

- Excellent adhesion on primed or painted metal
- Maintain bond strength at high and low temperatures
- High peel and shear strength for aerospace applications



# **Liquid Shim Adhesives**

- Fast curing at ambient temperature
- Excellent adhesion and compression properties
- Extrudable from cartridges or bulk material



# **Bracket Bonding Adhesives**

- Simple two-step process, apply and bond without having to use fixtures
- Instant hold with no sag or mess
- Low-flow for use in vertical or overhead applications







# Aircraft Structures Assembly & Completions

# **Polysulfide Sealants**

- Excellent shop-handling characteristics including less stringing and low sag
- Quick tack free times and short cure times for increased throughput



# **Tamper Proof Sealants**

- One-part formula in multiple colors for convenient dispensing
- Self-extinguishing
- Numerous OEM approvals



# **Assembly & Completions – Top Products**

#### **Paste Adhesives**

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesive EC-2615 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Epoxy Adhesive EC-9323-2 B/A

# **Liquid Shim Adhesives**

3M™ Scotch-Weld™ EC-7272 B/A - Good for gap filling

# **Bracket Bonding Adhesives**

3M<sup>™</sup> Scotch-Weld<sup>™</sup> EC-7202 – cures within 90 minutes to handling strength

# **Polysulfide Sealants**

Ideal for fuel tank and fuselage sealing applications

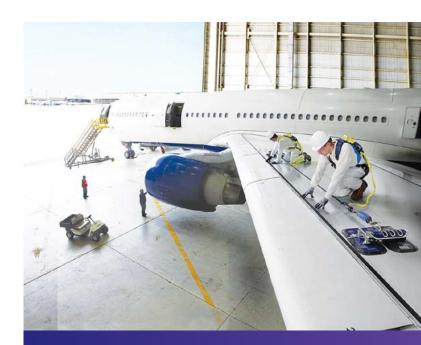
3M<sup>™</sup> Aerospace Sealant AC-350 A,B

3M™ Aerospace Sealant AC-370 B

3M<sup>™</sup> Aerospace Sealant AC-380 B

# **Tamper Proof Sealants**

3M<sup>™</sup> Scotch-Weld EC-1252 – available in white, pink, blue and yellow



# Other 3M Products (consumables)

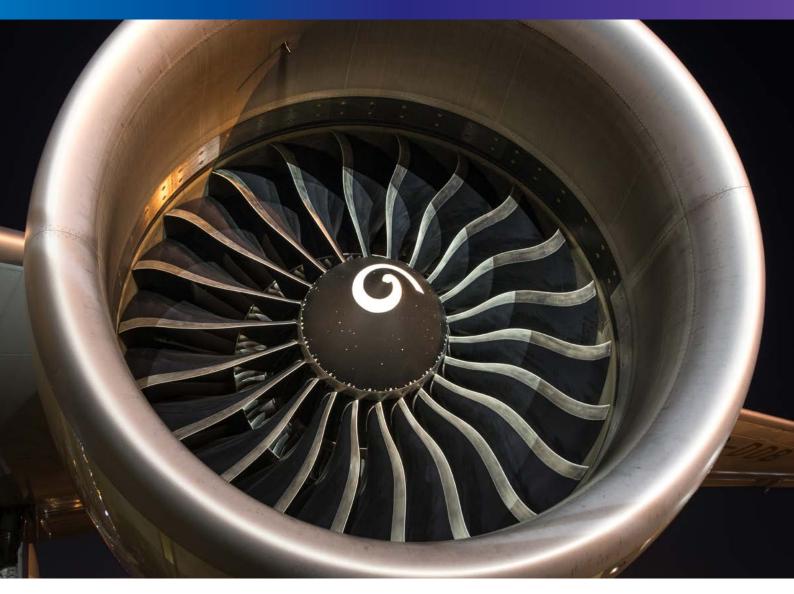
Ensuring technicians' safety during heavy check operations is of vital importance. From eye, hearing and respiratory protection, to coveralls and fall protection, look to 3M for a robust catalog of personal protective equipment.

# **Aerospace Polysulfide Sealants**

Sealant	Fuel Tank	Fuselage	Fast Cure	Standard Density (1.5+)	Reduced Density (1.3-1.4)	Low Density (1.1)	No Solvent (Class B)	Non- Chromate Corrosive Inhibitive
AC-350 A,B	1	1	1		✓		1	
AC-370 B	1	1	<b>√</b>		✓		1	
AC-380 B	✓	✓	1			<b>✓</b>	<b>✓</b>	



# Propulsion Engine Components



3M has a long successful history in the use of structural adhesives for bonding metal to composite. Learn more.



# Propulsion Engine Components

### **Surface Pre-Treatment**

- Eliminates chromates from surface treatment process
- Allows for out-of-tank preparation of metal substrates



### Structural Adhesive Bond Primers

- Corrosion inhibitive pigment allows for increased service life
- Protect high-cost surface preparation helps preserve Chemical Surface Preparation Prior to bonding
- Water based and non-chromate options available



### Structural Adhesive Films and Pastes

- High fracture toughness and peel strength
- Excellent pre-bond humidity performance on composite substrates
- Available in multiple cure temperatures



# **Advanced Composite Protection Cocure Films**

- Game-changing technology for erosion and abrasion protection of composite parts
- Processing temperatures up to 400 °F and service temperatures up to 250 °F
- Able to be cocured with composite parts or post bonded with structural adhesives (built-in erosion protection)





# Propulsion Engine Components

# **Urethane Repair Pastes**

- Urethane paste designed for durable erosion resistance equivalent to original 3M film
- In-place repairability of cured 3M Cocure film helps reduce waste and downtime
- No intentionally added solvent in composition helps reduce shrinkage and rework



# Fan Track Abradable / Void Fillers

- Increases engine efficiency due to effective fan blade sealing
- Compound is sandable within 3 hours of mixing to reduce cycle time
- Numerous OEM approvals



# **Composite Resins**

- One-part epoxy system for resin transfer molding
- High service temperature
- High compression strength



# **Engine Components – Top Products**

### **Surface Pre-Treatment**

3M<sup>™</sup> Surface Pre-Treatment AC-130-2 –Sol-gel based surface preparation for adhesive bonding of aluminum alloys, stainless steel and titanium

### **Structural Adhesive Bond Primers**

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Primer EC-3917 – Solvent based, chromated inhibitor. Complimentary to both 250°F (120°C) and 350°F (175°C) cure adhesive films

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesives Primer EC-3924B – Solvent based, chromated inhibitor. Complimentary to 250°F (120°C) cure adhesive films

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Primer EW-5005 – Water based, non-chromated inhibitor. Appropriate for use with AC 130-2 sol gel surface prep. Complimentary to both 250°F (120°C) and 350°F (175°C) cure adhesive films

### Structural Adhesive Films and Pastes

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 163-2

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 3109-2

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 191

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesive EC-3448

# Advanced Composite Protection Cocure Films

3M<sup>™</sup> Polyurethane Protective Tape 8730NA – (12 mil thick)

3M™ Polyurethane Protective Tape 8732NA – (24 mil thick)

3M<sup>™</sup> Polyurethane Protective Tape 8734NA – (6 mil thick)

## **Urethane Repair Pastes**

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Repair Paste 2110 – black repair paste used with our black protective tapes.

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Repair Paste 2220 – clear repair paste used with our transparent tapes, also perfect for edge sealing

#### Fan Track Abradable / Void Fillers

3M™ Scotch-Weld™ Void Filling and Edge Sealing Compound EC-3524 B/A – Fire retardant, void filling, edge-sealing, potting and complex gap-filling epoxy compound for aerospace weight reduction. Available in blue, white and black

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Void Filling and Edge Sealing Compound EC-3500 B/A

# **Composite Resins**

3M<sup>™</sup> Matrix Resin 2894 3M<sup>™</sup> Matrix Resin 2896



### **Other 3M Products**

3M™ Nextel™ Ceramic Fibers and Textiles for Aerospace
- Nextel ceramic textiles can withstand extremely high
temperatures and are extraordinarily durable, yet are also
flexible and lightweight. Proven in flight and in space,
they have long been used to manufacture seals and heat
blankets that protect metal and composite components
from engine heat and fire. Nextel ceramic fibers are also
used to reinforce Ox-Ox Ceramic Matrix Composites
(CMCs) for exhaust components and heat shields.



# Propulsion Nacelle



3M solutions for honeycomb core structure such as engine nacelles include surface preparation, corrosion inhibiting bond primers, structural adhesives and surfacing films. Learn more.



# Propulsion Nacelle

### **Surface Pre-Treatment**

- Helps reduce labor time and water usage
- Eliminates chromates from surface treatment process
- Allows for out-of-tank preparation of metal substrates



### **Structural Adhesive Bond Primers**

- Corrosion inhibitive pigment allows for increased service life
- Protect high-cost surface preparation helps preserve Chemical Surface Preparation Prior to bonding
- Water based and non-chromate options available



### Structural Adhesive Films and Pastes

- High fracture toughness and peel strength
- Excellent pre-bond humidity performance on both metal and composite substrates
- Available in multiple cure temperatures



# **Core Splice Structural Adhesive Films**

- Thermally expanding films for gap filling
- High performance over a broad range of temperature
- Excellent shear strength even at elevated temperatures





# Propulsion Nacelle

# **Advanced Composite Protection Cocure Films**

- Game-changing technology for erosion and abrasion protection of composite parts
- Processing temperatures up to 400 °F and service temperatures up to 250 °F
- Able to be cocured with composite parts or post bonded with structural adhesives (built-in erosion protection)



# **Urethane Repair Pastes**

- Urethane paste designed for durable erosion resistance equivalent to original 3M film
- In-place repairability of cured 3M Cocure film helps reduce waste and downtime
- No intentionally added solvent in composition helps reduce shrinkage and rework



## Fan Track Abradable / Void Fillers

- Increases engine efficiency due to effective fan blade sealing
- Compound is sandable within 3 hours of mixing to reduce cycle time
- Numerous OEM approvals





# Propulsion Nacelle

# Structural Adhesive Surfacing and Lightning Strike Protection Films

- Resistant to effects of humidity exposure during manufacture
- Cocure compatible with most epoxy composite pre-preg systems
- On both metal and composite substrates



# **Paint Replacement Films**

- Fluoropolymer film is inherently resistant to chemicals and environmental agents to provide excellent substrate protection and long-term color stability
- Acrylic adhesive provides high initial adhesion and long-term holding power to a variety of substrates
- Meets industry flame resistance requirements for aircraft interiors, and has successfully been used in general aviation, commercial and military aircraft applications
- Usable for surface protection and paint replacement applications



### **Thermoformed Boots**

- Hundreds of pre-formed shapes to meet your needs and prevents damage caused by rain and sand
- UV-stable polyurethane holds its clarity and minimal yellowing over time
- Virtually no reduction in transmissivity





# **Propulsion Nacelle - Top Products**

## **Surface Pre-Treatment**

3M<sup>™</sup> Surface Pre-Treatment AC-130-2 – Sol-gel based surface preparation for adhesive bonding of aluminum alloys, stainless steel and titanium. Reduces hazardous materials from the bonding surface preparation process

### Structural Adhesive Bond Primers

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Primer EC-3917– Solvent based, chromated inhibitor. Complimentary to both 250°F (120°C) and 350°F (175°C) cure adhesive films

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesives Primer EC-3924B – Solvent based, chromated inhibitor. Complimentary to 250°F (120°C) cure adhesive films

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Primer EW-5005 – Water based, non-chromated inhibitor. Appropriate for use with AC 130-2 sol gel surface prep. Complimentary to both 250°F (120°C) and 350°F (175°C) cure adhesive films

### Structural Adhesive Films and Pastes

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 163-2

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 3109-2

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 191

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesive EC-3448

# **Core Splice Structural Adhesive Films**

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Core Splice Film AF 3002

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Core Splice Film AF 3024– Highest expansion and lowest density of core splice films in our portfolio. Dual cure 250°F (120°C) or 350°F (175°C)

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Core Splice Film AF 3028

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Core Splice Film AF 3074 FST – Low Density Expanding Core Splice Film with FST (Flame, Smoke, Toxicity) Resistance

# Advanced Composite Protection Cocure films

3M<sup>™</sup> Polyurethane Protective Tape 8730NA – (12 mil thick)

3M<sup>™</sup> Polyurethane Protective Tape 8732NA – (24 mil thick)

3M<sup>™</sup> Polyurethane Protective Tape 8734NA – (6 mil thick)

## **Urethane Repair Pastes**

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Repair Paste 2110 – black repair paste used with our black protective tapes

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Repair Paste 2220 – clear repair paste used with our transparent tapes, also perfect for edge sealing

### Fan Track Abradable / Void Fillers

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Core Splice Adhesive EC-3524 B/A 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Core Splice Adhesive EC-3500 B/A - Superior compressive strength of 6000 psi with only 0.64 g/cm density

# Structural Adhesive Surfacing and Lightning Strike Protection Films

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Composite Surfacing Film AF 325 M & AF 325LS

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Composite Surfacing Film AF 191XSA

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Composite Surfacing Film AF 536

# **Paint Replacement Films**

3M<sup>™</sup> Surface Protection Film 3952 – *Provided without adhesive for cocure applications* 

3M<sup>™</sup> Paint Replacement Tape 5004 – Designed as a paint replacement. Excellent moisture barrier and Skydrol<sup>™</sup> hydraulic fluid resistant

#### Thermoformed Boots

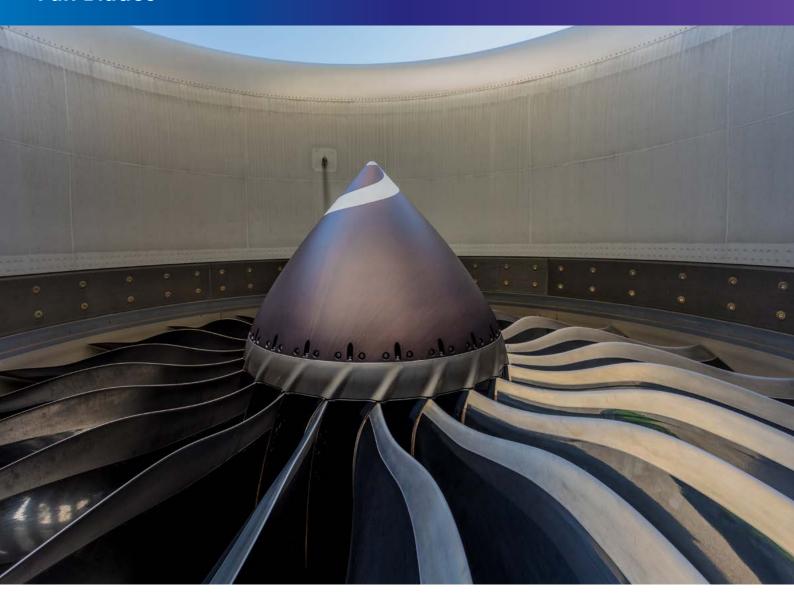
FP 151, FP 231, FP 232

### **Protect Your Crew**

Products that work as hard as you do. From the most basic to the most specialized needs, 3M offers the health and safety protection you and your workers need most, so everyone can perform at their best.



# Propulsion Fan Blades



Structural adhesive bonding for high temperature applications and bonded-in composite erosion protection solutions are just the start. Learn more about 3M fan blade/cold-side engine applications.



# Propulsion Fan Blades

### **Surface Pre-Treatment**

- Helps reduce labor time and water usage
- Eliminates chromates from surface treatment process
- Allows for out-of-tank preparation of metal substrates



### **Structural Adhesive Bond Primers**

- Corrosion inhibitive pigment allows for increased service life
- Protect high-cost surface preparation helps preserve Chemical Surface Preparation Prior to bonding
- Water based and non-chromate options available



### Structural Adhesive Films

- High fracture toughness and peel strength
- Excellent pre-bond humidity performance on composite substrates
- Available in multiple cure temperatures



# **Structural Adhesive Composite Surfacing Films**

- Cocure compatible with most epoxy composite prepreg systems
- Smooth surfacing with minimal pinholes and imperfections
- Available in multiple cure temperatures





# Propulsion Fan Blades

# **Advanced Composite Protection Cocure Films**

- Game-changing technology for erosion and abrasion protection of composite parts
- Processing temperatures up to 400°F and service temperatures up to 250°F
- Able to be cocured with composite parts or post bonded with structural adhesives (built-in erosion protection)



# **Urethane Repair Pastes**

- Urethane paste designed for durable erosion resistance equivalent to original 3M film
- In-place repairability of cured 3M cocure film helps reduce waste and downtime
- Composition helps reduce shrinkage and rework



# **Composite Resins**

- One-part epoxy system for resin transfer molding
- High service temperature
- High compression strength



# **Propulsion Fan Blades – Top Products**

### **Surface Pre-Treatment**

3M<sup>™</sup> Surface Pre-Treatment AC-130-2 – Sol-gel based surface preparation for adhesive bonding of aluminum alloys, stainless steel and titanium

### **Structural Adhesive Bond Primers**

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Primer EC-3917 – Solvent based, chromated inhibitor. Complimentary to both 250°F (120°C) and 350°F (175°C) cure adhesive films

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesives Primer EC-3924B – Solvent based, chromated inhibitor Complimentary to 250°F (120°C) cure adhesive films

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Primer EW-5005 – Water based, non-chromated inhibitor Appropriate for use with AC 130-2 sol gel surface prep. Complimentary to both 250°F (120°C) and 350°F (175°C) cure adhesive films

## **Structural Adhesive Films**

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 191 – 350°F (175°C) cure

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 163-2 – 250°F (120°C) cure

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 3109-2 – *Dual cure 250°F (120°C) or 350°F (175°C)* 

# Structural Adhesive Composite Surfacing Films

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Composite Surfacing Film AF 325 M & AF 325LS – Available in white and blue versions

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Composite Surfacing Film AF 536 – Multiple film weight options available. Can be cured at either 250°F (120°C) or 350°F (175°C)

# Advanced Composite Protection Cocure Films

3M<sup>™</sup> Polyurethane Protective Tape 8730NA – (12 mil thick)

3M<sup>™</sup> Polyurethane Protective Tape 8732NA – (24 mil thick)

3M<sup>™</sup> Polyurethane Protective Tape 8734NA – (6 mil thick)

# **Urethane Repair Pastes**

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Repair Paste 2110 – black repair paste used with our black protective tapes

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Repair Paste 2220 – clear repair paste used with our transparent tapes, also could be used for edge sealing

## **Composite Resins**

3M<sup>™</sup> Matrix Resin 4891 – For structural parts requiring high compression strength and high temperature performance

3M™ Matrix Resin 2896



# Propulsion Rotor Blades



3M has long been the supplier of choice for challenging helicopter rotor blade bonding and surface protection applications. Learn more.



# Propulsion Rotor Blades

### **Surface Pre-Treatment**

- Helps reduce labor time and water usage
- Eliminates chromates from surface treatment process
- Allows for out-of-tank preparation of metal substrates



### **Structural Adhesive Bond Primers**

- Corrosion inhibitive pigment allows for increased service life
- Protect high-cost surface preparation Helps Preserve Chemical Surface Preparation Prior to Bonding
- Water based and non-chromate options available



### Structural Adhesive Films

- High fracture toughness and peel strength
- Excellent pre-bond humidity performance on composite substrates
- Available in multiple cure temperatures



# **Core Splice Structural Adhesive Films**

- Thermally expanding films for gap filling
- High performance over a broad range of temperature
- Excellent shear strength even at elevated temperatures



# Propulsion Rotor Blades

# **Advanced Composite Protection Cocure Films**

- Game-changing technology for erosion and abrasion protection of composite parts
- Processing temperatures up to 400 °F and service temperatures up to 250 °F
- Able to be cocured with composite parts or post bonded with structural adhesives (built-in erosion protection)



# **Polyurethane Protection Films and Tapes**

- Highly durable, long service life
- Meets several OEM specifications
- Protect rotor blades to avoid replacement



# **Urethane Repair Pastes**

- Urethane paste designed for durable erosion resistance equivalent to original 3M film
- In-place repairability of cured 3M cocure film helps reduce waste and downtime
- Helps reduce labor time and water usage



### Thermoformed Boots

- Hundreds of pre-formed shapes to meet your needs and prevents damage caused by rain and sand
- UV-stable polyurethane holds its clarity and minimal yellowing over time
- Virtually no reduction in transmissivity



# **Propulsion Rotor Blades - Top Products**

## **Surface Pre-Treatment**

3M<sup>™</sup> Surface Pre-Treatment AC-130-2 – Sol-gel based surface preparation for adhesive bonding of aluminum alloys, stainless steel and titanium

### **Structural Adhesive Bond Primers**

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesives Primer EC-3924B – Solvent based, chromated inhibitor. Complimentary to 250°F (120°C) cure adhesive films

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Primer EC-3917– solvent based, chromated inhibitor. Complimentary to both 250°F (120°C) and 350°F (175°C) cure adhesive films

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesives Primer EC-1660

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Primer EW-5005 – Water based, non-chromated inhibitor. Appropriate for use with AC 130-2 sol gel surface prep. Complimentary to both 250°F (120°C) and 350°F (175°C) cure adhesive films

### Structural Adhesive Films

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 3109-2 – *Dual cure 250°F (120°C) or 350°F (175°C)* 

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 163-2 – 250°F (120°C) cure

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Adhesive Film AF 191 – 350°F (175°C) cure

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesive AF 30

# **Core Splice Structural Adhesive Films**

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Core Splice Film AF 3024

3M™ Scotch-Weld™ Structural Core Splice Film AF 3002

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Structural Core Splice Film AF 3028

3M™ Scotch-Weld™ Structural Core Splice Film AF 3074FST

# Advanced Composite Protection Cocure Films

3M<sup>™</sup> Polyurethane Protective Tape 8730NA – (12 mil thick)

3M™ Polyurethane Protective Tape 8732NA – (24 mil thick)

3M<sup>™</sup> Polyurethane Protective Tape 8734NA – (6 mil thick)

# Polyurethane Protection Films and Tapes

3M™ Polyurethane Protective Tape 8545HS

3M<sup>™</sup> Polyurethane Protective Tape 8542HS

3M<sup>™</sup> Polyurethane Protective Tape 8999 K11 Rotor Blade Protection Kit

UH-60M: SJ8542HS FP641 Patch

3M™ Polyurethane Protective Boot SJ 8542 HSFP637 Boot

3M<sup>™</sup> Polyurethane Protective Boot SJ8542HS FP-641 (UH-60M)

# **Urethane Repair Pastes**

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Repair Paste 2110 – black repair paste used with our black protective tapes

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Repair Paste 2220 – clear repair paste used with our transparent tapes, also perfect for edge sealing

### **Thermoformed Boots**

FP 637, FP 532, FP 557, FP 558, FP 595



# One source. Many solutions. 3M Aircraft MRO Heavy Check



From adhesives to abrasives and films, from tapes to safety products, 3M has a deep and extensive offering of solutions tailored specifically for the aerospace industry.

# **Aircraft MRO Heavy Check Applications**



### **Abrasives**

Engineered to last longer, 3M's diverse and distinct family of abrasives help return surfaces to their original state.

- Abrasives for Structural Repair
- Light Corrosion and Sealant Removal
- Sand Fairings and Flight Control Surfaces
- Abrasives for Composites
- Decal and Placard Removal on Metal
- Metal Stress Relieving



## **Aircraft Graphics**

3M™ graphics and films help preserve and enhance an aircraft's appearance.

o Interior



### **Aircraft Painting**

Achieve a clean and smooth surface to apply paint and decorative livery with a breadth of 3M™ aircraft painting solutions.

- Chemically Strip and/or Sand
- Surface Preparation and Primer Application
- Base Coat and Paint Application, Striping, Livery and Clear Coat
- Detail Finish and Repair



### Cleaning

Prevent corrosion and inspire confidence with an extensive offering of 3M™ products that will help you clean surfaces inside and out.

- General Cleaning
- o Interior
- Exterior
- Seat Track Cleaning
- o Borehole Cleaning
- Oxygen Line Cleaning



#### **Composite Repair**

To ensure the strongest and longest lasting bond, rely on 3M and our vast offering of tapes, abrasives and adhesives designed for composite maintenance.

- o Tapes for Composite Repair
- Adhesives for Composite Repair
- 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesives and Accessories



### **Corrosion Management**

Preventing and removal of corrosion is critical in ensuring the long-term viability of an aircraft. Rely on 3M's corrosion management solutions.

- Wet Area Corrosion Prevention
- Corrosion Removal

# **Aircraft MRO Heavy Check Applications**



# **Electrical Systems and Maintenance**

Protecting electrical systems from the elements ensures critical systems function properly. Trust 3M electrical tapes to get the job done.

Tapes



### **Engine Overhaul**

Engine overhaul is key to prolonging the life of an aircraft and making the aircraft safer to fly. 3M offers excellent solutions for your engine overhaul needs.

- Metal Stress Relieving
- o Surface Protection Film Repair
- Abradable Compound
- Fluid Containment



### **Personal Safety**

Help protect employees during the heavy check process with 3M products for personal safety. Our robust catalogue of personal protective equipment can help your team get the job done safely.

- High Noise Environments
- Fall Protection Safety
- Head, Eye and Face Protection
- Respiratory Exposures
- Welding Safety
- Confined Spaces



# Sealing, Bonding and Joining

Proper sealing of critical aircraft parts and structure ensures effective bonding and joining of nonstructural components. We offer a variety of solutions designed to work in the harshest conditions.

- Sealants
- Sealant Removal
- Bonding
- Joining
- o Cargo Compartment Sealing
- Decorative Laminate Bonding



# Specialty and Processing Aid Tapes

To deliver maximum efficiency during the heavy check process, rely on 3M™ tapes to ensure parts are properly labelled, protected and processed.

- Adhesion Testing Tapes
- o Temporary Part Marking
- Metal Processing Tapes
- Welding Protection Tapes
- Media Blasting
- Floor Marking Tapes
- Vibration Damping Tapes



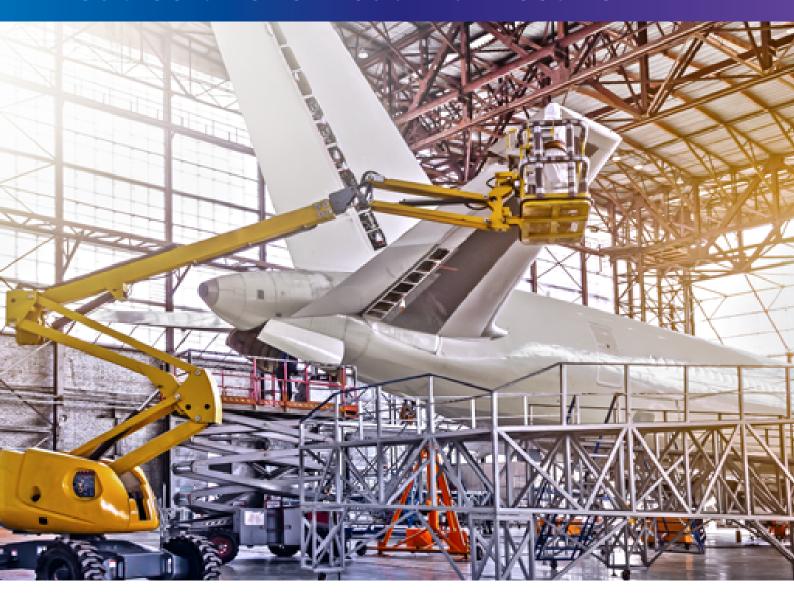
#### **Surface Protection**

Make surfaces look better and last longer with 3M. Our categoryleading solutions help protect and preserve surfaces on aircraft and in your facility.

- Temporary Protection for Parts, Carpets or Facilities
- Erosion Protection and Edge Sealing
- o Chemical Protection
- Impact Protection
- Chafing Protection



# Aircraft Painting Broad solutions. Beautiful Results.



True excellence in aircraft painting requires products that work – not just at a glance, but below the surface and behind the scenes. 3M delivers with a broad range of solutions for performance, reliability and added efficiency from strip/sand to surface prep to sealing.

# You're Fully Covered

# **Chemically Strip and/or Sand**

3M provides the right solutions for comprehensive cleaning, paint removal, masking and sanding procedures.
3M™ Cubitron™, Scotch-Brite™ and Versaflo™ brands, among others, deliver reliable performance and protection inside and outside the aircraft.

- 1. Protecting Aircraft Interior
- 2. Clean & Wash Aircraft
- 3. Masking
- 4. Applying Paint Stripper
- 5. Removing Paint Residue



# **Surface Preparation and Primer Application**

Preparing surfaces for painting requires some of the most precise solutions for aircraft maintenance, repair and operations. 3M provides world-class masking solutions, pre-treatments, primer application equipment and personal protective equipment for almost every phase of the job.

- 1. Remasking
- 2. DeOxidizing Aluminum Surfaces
- 3. Applying Surface PreTreatment
- 4. Applying Primer

# Base Coat and Paint Application, Striping, Livery and Clear Coat

It's not enough just to create the right patterns and colors in the right places. Through our 3M™ Accuspray™ spray gun system and our 3M™ PPS™ Paint Preparation System of disposable paint cups, 3M ensures that you apply coatings quickly and efficiently as well.

- 1. Applying Base Coat
- 2. Painting Stripes & Decorative Livery
- 3. Painting Composite Fairings & Access Panels

# **Detail Finish and Repair**

When the right finish really matters, 3M delivers. Our critical edge masking tapes, time-honored Wetordry™ and Trizact™ abrasives designed specifically for the finishing, high-performance sealants and more provide results that stand up to scrutiny.

- 1. Painting Touch-Ups
- 2. Paint Defect Repairs
- 3. Applying Sealants

# A Century of Science. The Full Depth of Solutions.

### Cleaning

3M<sup>™</sup> Doodlebug<sup>™</sup> Pad Holder 6472 Scotch-Brite<sup>™</sup> Aircraft Cleaning Pad

### Abrasives, Sanding and Buffing

3M™ Cubitron™ II Film Disc 775L

3M™ Cubitron™ II Hookit™ Clean Sanding Film Disc 775L

Scotch-Brite™ Hand Pad 7447

3M™ Elite Random Orbital Sanders

Scotch-Brite™ 7447 PRO Disc

3M™ Trizact™ Hookit™ Foam Abrasive Disc 443SA

3M™ Trizact™ Hookit™ Clear Coat Sanding Abrasive Disc 471LA

3M™ Trizact™ Finesse-it™ Film Disc Roll 466LA

3M™ Finesse-it™ Polish - K211

3M<sup>™</sup> Buffers

3M™ Purple Finishing Film Abrasive Disc 260L

3M™ Perfect-It™ EX AC Rubbing Compound

3M<sup>™</sup> Perfect-It<sup>™</sup> EX Machine Polish

3M™ Perfect-It™ EX Ultrafine Machine Polish

3M<sup>™</sup> Hookit<sup>™</sup> Dust Free Sanding Block

3M™ Hookit™ Purple Clean Sanding Abrasive Disc

#### Masking

3M™ High Performance Green Masking Tape 401+

3M<sup>™</sup> Aluminum Foil Tape 425 PL1308

3M™ Aluminum Foil Tape 427

3M™ Plastic Sheeting

3M™ Vinyl Tape 471

3M™ Vinyl Tape 471+

3M™ Paint Masking Tape 231/231A

Scotch® Fine Line Tape 218

3M™ Hand-Masker™ Advanced Masking Film

3M™ Masking Paper

Scotch® Solvent Resistant Masking Tape 226

3M<sup>™</sup> High Performance Masking Tape 232

3M™ Performance Masking Tape 2380

#### **Surface Protection**

3M™ Dirt Trap Protection Material Floor Applicators

3M™ Dirt Trap Protection Material

3M™ Self-Stick Liquid Protection Fabric

3M™ Dirt Trap Protection Material Dispenser

3M<sup>™</sup> Dirt Trap Protection Material Wall Applicator

### **Painting**

3M™ Accuspray™ ONE Spray Gun System with Standard PPS™

3M™ High Power Spray Gun Cleaner

3M<sup>™</sup> PPS<sup>™</sup> Paint Preparation System

3M™ PPS™ Series 2.0 Spray Cup System

3M™ Accuspray™ Regulator and Air Flow Control Valve

3M™ Surface Pre-Treatment AC-131

### Safety Equipment

#### Eye, Hearing and Body Protection

3M™ Disposable Protective Coverall 4540+

3M™ Chemical Protective Coverall 4570

3M™ SecureFit™ Protective Eyewear Family

3M<sup>™</sup> GoggleGear<sup>™</sup> 500 Series GG501SGAF, Clear Scotchgard<sup>™</sup> Anti-fog lens

3M™ E-A-R™ UltraFit™ Earplugs 340-4004

3M<sup>™</sup> E-A-R<sup>™</sup> Reusable Earplugs

3M™ PELTOR™ X4 Earmuffs X4A/37273(AAD), Over-the-Head

3M<sup>™</sup> Ratchet Headgear H8A with 3M<sup>™</sup> Clear Polycarbonate Faceshield WP96

#### Respiratory

3M<sup>™</sup> Versaflo<sup>™</sup> Powered Air Purifying Respirator Painters Kit TR-800-PSK/94248(AAD)

3M<sup>™</sup> Ultimate FX Full Facepiece Reusable Respirator, FF-400 Series

3M™ Organic Vapor/Acid Gas Cartridge/Filter 60923, P100

3M<sup>™</sup> Particulate Respirator 8511, N95

3M<sup>™</sup> Particulate Filter 2097/07184(AAD), P100, with Nuisance Level Organic Vapor Relief

3M™ Rugged Comfort Half Facepiece Reusable Respirator, 6500 Series

#### Fall Protection

3M™ DBI-SALA® Delta™ Vest-Style Resist Web Harness 1110994

3M™ DBI-SALA® Web Scaffold Choker 1201390

3M™ DBI-SALA® Nano-Lok™ Quick Connect Self Retracting Lifeline, Web 3101225

### **Sealants**

3M™ Aerospace Sealant AC-350

3M™ Aerospace Sealant AC-380

3M<sup>™</sup> Aerospace Sealant AC-735

3M<sup>™</sup> Aerospace Sealant AC-770

3M™ Aerospace Sealant AC-251

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# Thank you.

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

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