



3 Ways to Save Time, Money, & Materials When Masking for Aerospace

Paint Stripping | Surface Preparation | Priming and Painting

Saunders Solutions: Aerospace

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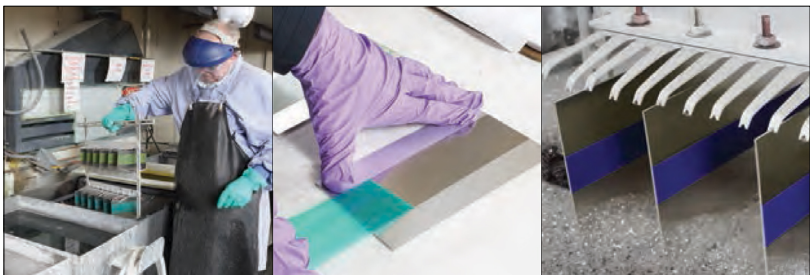
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Introduction:

Exterior and interior painting is not only necessary to the aesthetic and personalization of your aircraft, it also aids in protection from elements and corrosion, making it a very essential part of aerospace engineering. As such a fundamental step in the overall assembly, coating and painting the exterior and interior portions of a plane is no quick, easy, or cheap process for aerospace manufacturers and engineering crews. From washing and prepping the surfaces, to applying basecoats and primers, many hours and materials are required to meet the industry standard.

A key element in ensuring that this is carried out correctly is masking off areas of your plane which you do not wish to paint or coat. Masking your aircraft can be the most time-consuming step in the preparation process, as there are many intricate pieces and structures that could be harmed by paint chemicals, or simply don't require paint for design purposes. Aside from the amount of time it takes to complete, much of the tape roll ends up going to waste since specific sizes and shapes are cut out to properly protect each portion of the aircraft.



Aircraft Masking Process

What makes these processes so challenging and time-consuming?

Reducing the structural weight of your aircraft is essential to reducing operational costs and meeting specific industry standards. Just one extra coat can add unnecessary weight in addition to increasing production time for your crew. Preparation for this is imperative as many areas of your aircraft need to be protected from paint color, chemicals, and harmful blasting processes. Damage to these areas could result in costly replacements and/or rework for engineers.

In one case study, it took a professional aerospace crew of 2 employees working 3 entire shifts each to mask a portion of their aircraft before painting and coating could even begin. That's 48 hours total of applying the necessary tape material, cutting it off, and making adjustments. After we offered them a project specific solution, they were able to cut this down to just 1 employee and 6 hours of masking preparation work.



How can Saunders cut time for your next masking project?

Saunders specializes in offering solutions that are designed to speed up the application process and save valuable time without sacrificing the quality of your aerospace paint stripping, priming and coating projects.

The experts at Saunders understand that choosing which tapes and materials to use, along with how to efficiently apply them, is critical to a smooth-running operation. It is our goal to offer the aerospace industry time, money, and material saving solutions.

Let's Cut to the Chase with Time Saving Solutions

Challenge 1: Masking for Paint Stripping

Chemical paint strippers get underneath paint, softening and dissolving the layers for removal. Before paint stripping can begin, certain parts of your aircraft must be properly masked to prevent stripping chemicals from damaging vital equipment and polycarbonate windows. This can lead to hours of labor, but it is imperative to the integrity of your aircraft.

Key Processes:

Masking for Anodizing:

Electrochemical process that converts the metal surface into a decorative, durable, corrosion-resistant, anodic oxide finish.

Masking for Electroplating:

Coating a metal object with a thin layer of another metal by means of electrolysis.

Masking for Heat Shielding:

For appliances and other machines with a motor, engine, or concentrated heat source where you need to control heat and shield it away from sensitive substrates.

Recommended Tape for the Job:

3M™ Aluminum Foil Tapes 425 & 427

Ideal for:

- Polycarbonate Windows
- Antennas
- Lap Joints
- Wheel Parts



Key Features:

- Resists flame, moisture, weather, and most chemicals
- Thermally conductive for heating and cooling efficiency and heat and light reflective

Saunders' Time Saving Solution

Kit Assembly:

A value added service to package various components to create a unique part set.

Our experts can provide masking kits per your specific part(s) with custom-cut shapes for immediate application. We diagnose, pre-assemble, or consolidate parts under one single part number; eliminating the need to apply tape to parts, cut to it to required shape, leaving unused material from the tape role.

MEASURE



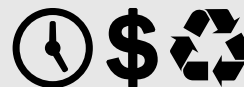
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APPLY



SAVE



Challenge 2: Masking for Surface Preparation

Shot peening is used to stretch and repair surface objects. When assembling your aircraft, finishing and polishing the surface is conducive to the appearance and also the aerodynamics. Before the peening & blasting process can begin it is required that intricate portions of the aircraft are masked off with a protective material so that they are not affected by the shaping and correction of this critical step.

Key Processes:

Peening:

Working a metal's surface, often in preparation for further surface treatments, to clean and improve the strength and durability of metal against fatigue and corrosion.

Blasting:

Blasting with shot (shot peening) and light (laser peening) are common methods.

Recommended Tape for the Job:

3M™ Sandblast Stencil Splice Free 1532

Ideal for:

- Metal Alloys
- Airframes & Structural Alloys
- Wing Spar Webs, Flap Tracks & Ribs
- Landing Gears, Camshafts, Connecting Rods



Key Features:

- Conformable for use on irregular surfaces
- Excellent choice for intricate designs and detailing
- Provides superb blast resistance against a variety of blasting media including aluminum oxide grit, shot peen, glass bead and plastic media

Saunders' Time Saving Solution

Digital Cutting:

Uses blades to convert substrates with tight tolerances.

Our experts understand how reducing errors and application time can lead to lower cost and material waste, so we offer a solution by digitally cutting tapes, customized specifically for your project. By aiding in trouble-free application, precision, and product identification, digital cutting your chosen tape roll let's your workers start peening and blasting sooner and eliminates multiple steps in the preparation process.

MEASURE



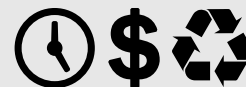
CONTACT



APPLY



SAVE



Challenge 3: Masking for Priming & Painting

Aircrafts require very specific paint coating weights and properties. If the paint is not applied correctly to the required portions of your craft, it can negatively affect the performance and necessary protection against elements and corrosion. When masking in preparation for Painting and Priming, non-decorative areas of your aircraft must be properly masked to prevent paint blow-by on unwanted parts and materials.

Key Processes:

Priming and Painting:

Priming and painting component parts of airplanes at temperatures of 175-300°F.

Low/Medium Temperature Bake Liquid Painting:

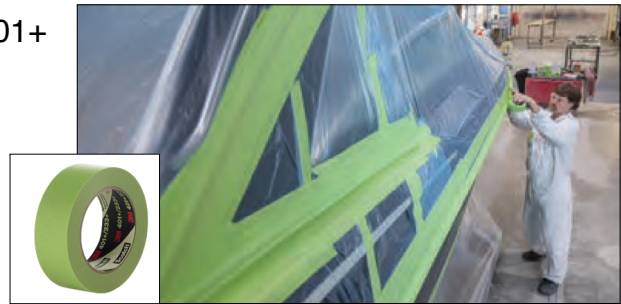
Aircraft is masked after assembly and then painted and cured at temperatures up to 180°F.

Recommended Tape for the Job:

3M™ High Performance Green Masking Tape 401+

Ideal for:

- Inorganic Surfaces
- Temporary Sealing & Holding
- Parts needing greater conformability masking for single bake application up to 250°F



Key Features:

- Removes cleanly in one piece with no adhesive residue
- Withstands surface temperatures up to 250°F/121°C for 30 mins
- Green backing improves visibility
- Remains in place around corners and over irregular surfaces

Saunders' Time Saving Solution

Die Cutting & Kiss Cutting:

Die Cutting creates custom individual shapes. Kiss Cutting leaves custom shapes on a carrier liner so parts are supplied in roll or sheet formats.

Our experts understand how tedious it is to apply masking tape correctly to the necessary areas, so we offer a solution by die cutting tapes and kiss cutting tapes, customized to the sizes and lengths you need. By aiding in the time it takes to measure out the materials needed for your project, pre-cutting your chosen tape roll lets your workers start painting sooner and prevents material excess and waste.



About Saunders

Contact Information:

1-888-932-8836 | info@saunderscorp.com | www.saunderscorp.com

As a division of industrial supply distributor R.S. Hughes, Saunders specializes in converting standardized rolls of pressure sensitive tapes to the customized lengths, widths, and shapes you need to run your business.

Our Commitments:

- We pride ourselves on our level of personal care and quick notes
- We tailor our processes to your unique business needs, with competitive pricing
- We are responsive and there when you need us with fast turnarounds
- We provide you with direct access to experienced converting sales engineers

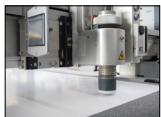
Here at Saunders, we understand how important each step of your aircraft masking process is to the overall assembly. We put great emphasis on the precision and care of our services to assist you in cutting time without sacrificing quality.

Services we offer:



Die Cutting & Kiss Cutting:

Die Cutting creates custom individual shapes. Kiss Cutting leaves custom shapes on a carrier liner so parts are supplied in roll or sheet formats.



Digital Cutting:

Uses blades to convert substrates with tight tolerances. It is a great solution for large format parts and is excellent for prototyping.



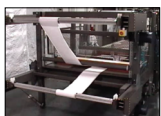
Flexographic Printing:

Uses cylinders, raised rubber plates, and ink to create custom branding, printed liners, and messaging on various substrates.



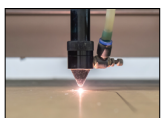
Kitting & Assembling:

Is a value added service to package various components to create a unique part set. We also offer product assembly options.



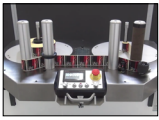
Laminating:

The process of bonding multiple substrates together to achieve improved strength, stability and appearance.



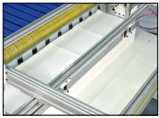
Laser Cutting:

Is a great option for creating intricate shapes out of challenging materials and allows for fast turnarounds with no tooling.



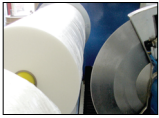
Rewinding:

Creates custom length rolls at desired widths and diameters that can reduce material changeover and eliminate waste.



Sheeting & Cut to Length:

Cuts adhesives and other flexible materials to any conceivable square or rectangular shape commonly with no tooling expense.



Slitting:

Creates rolls by cutting down wider rolls to narrower widths. Depending on the material, widths of 1/16" or narrower can be achieved.

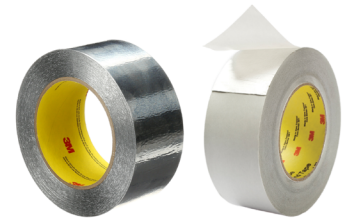
Product Information

We understand that choosing which material is best for your specific masking application can be stressful and take careful time and consideration. We're here to help. If you'd like to see if these tapes are right for your application, call **1-888-932-8836** or email us at info@saunderscorp.com to speak with an expert and request a sample.

Masking for Paint Stripping & Chemicals

3M™ Aluminum Foil Tapes 425 & 427

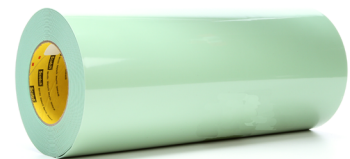
- Resists flame, moisture, weather, and most chemicals
- Thermally conductive for heating and cooling efficiency and heat and light reflective



Masking for Media Blasting & Peening

3M™ Sandblast Stencil Splice Free 1532

- Conformable for use on irregular surfaces
- Excellent choice for intricate designs and detailing
- Provides superb blast resistance against a variety of blasting media including aluminum oxide grit, shot peen, glass bead and plastic media



Masking for Priming & Painting

3M™ High Performance Green Masking Tape 401+

- Removes cleanly in one piece with no adhesive residue
- Withstands surface temperatures up to 250°F/121°C for 30 min
- Green backing improves visibility
- Remains in place around corners and over irregular surfaces



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