



Abrasive Products for Aircraft Maintenance Applications

A comprehensive guide to improve quality,
increase productivity and reduce costs



Helping you...the only job we never finish

3M Abrasive Products for rotors, blades, skins, landing gear, windows, and more.

For the many components of an engine and airframe – from engine rotor to fuselage skin – you can select a 3M abrasive product most appropriate for your maintenance requirements. Products include performance-proven 3M coated abrasives, 3M™ Scotch-Brite™ non-woven abrasives and 3M micro abrasives and superabrasives.

From dimensioning to polishing –

3M has the broadest selection available of abrasive types and grades. You can vary abrasive aggressiveness to meet quality and productivity requirements for applications ranging from weld leveling to polishing skins.

With Scotch-Brite non-woven products, for example, controlled abrasive action helps prevent gouging or undercutting for less chance of affecting critical tolerances.

In the full 3M line you'll find products for consistent and cost-effective dimensioning, defect removal, deburring, blending, finishing, corrosion removal, cleaning, polishing, and surface preparation.

Window and canopy repair

You can also readily repair such window damage as deep scratches and light hazing with the 3M™ Finesse-it™ Plastic Repair Kit II. Kit includes everything to finish the job by hand or with power tools.

Peening

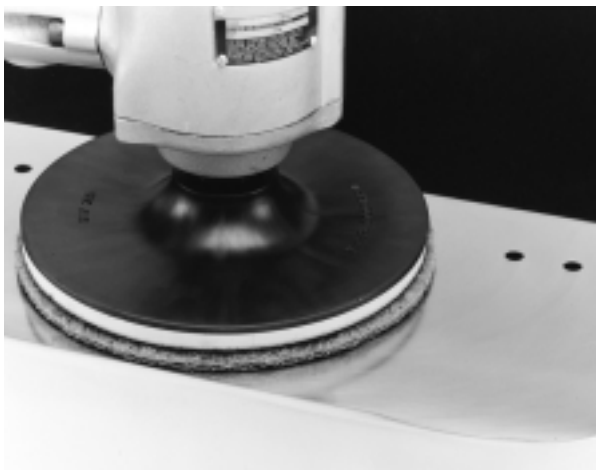
The 3M TC 330 roto-peen flap assembly consists of shot bonded to a flexible flap. For stress relief applications, the flap is rotated at high speed so the shot strikes the component with each revolution. This is cleaner and more precise than loose shot "blasting".



Preparation for coating – 3M™ Stikit™ gold film provides consistent cut and finish for increased productivity in surface coating preparation.



Jet canopy maintenance – 3M™ Imperial™ microfinishing film removes pitting, scratching, and crazing.



Coatings (left) and corrosion removal (right)– Scotch-Brite surface conditioning disc removes coatings and corrosion. Controlled abrasive action helps prevent undercutting or gouging. Fresh abrasive is continually exposed to the work surface for consistent, uniform results.

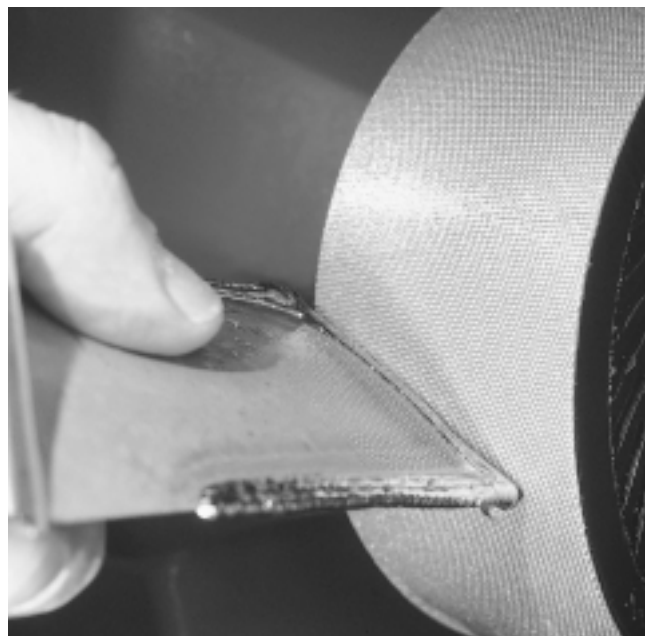


Abrasives/Maintenance Applications Guide

Application	Product	Grade	Equipment
Dimensioning			Stationary or portable belt grinder
•Blade repair; weld grinding and leveling •Vane repair •Brake rotor refurbishing	3M 407E Belt	100-320	
	3M 456 F Belt	80-320	
	3M 6400J TC Belt	250-10 micron	
	3M 707E Belt	80, P100-P240	
	3M 777F Belt	36-60	
	3M 963G Belt	36-60	
	3M 963H Belt	36-60	
3M 977F Belt	36-60		
Defect removal			Small right angle grinder
•Heavy scratches; handling marks (Aluminum, stainless, titanium, composite)	3M 777F Roloc™ Disc	P120	
	Roloc Unitized Wheel	2A-MED	
	Surface Cond. Disc	A-CRS, A-CRS SE	
	Roloc Surf. Cond. Disc	A-CRS	
	3M Stikit™ 255L Disc	P80-P500	Random orbital
	3M 268L – IMFF Disc	100-9 micron	
• Light scratches, handling marks	Roloc Unitized Wheel	2S-FIN	Small right angle grinder
	Roloc Surf. Cond. Disc	S-SF	
	Surface Cond. Disc	S-SF	Right angle grinder
Heavy deburring			
• Large burr removal	3M 361F Belt	80	Belt grinder
	3M 363F Belt	P100-P150	
	3M 353F Belt	P180-P220	
	3M 777F Roloc Disc	60-P120	Small right angle grinder



Jet blade deburring – Scotch-Brite EXL deburring and finishing wheel radiuses leading and trailing edge without chamfering or undercutting.



Jet blade grinding – With aggressive abrasive action, 3M flex diamond belt grinds jet blade welds quickly, saving time and effort.

Application	Product	Grade	Equipment
Corrosion removal			
•Cleaning and removal	Roloc Unitized Wheel	2A-MED, 6A-MED	Small right angle grinder
	Roloc Surf. Cond. Disc	A-MED to A-CRS SE	
	3M 777F Roloc Disc	80-P120	
	Surface Cond. Disc	A-MED to A-CRS SE	Right angle grinder
•Entry and cargo door	Roloc Unitized Wheel	2S-FIN, 2A-MED	Small right angle grinder
	Roloc Surf. Cond. Disc	S-SF to A-CRS SE	
	Surface Cond. Disc	S-SF to A-CRS SE	
•Under lap joints	EXL Unitized Wheel	8A-MED, 8A-CRS	Straight shaft grinder
	Surface Cond. Belt	A-MED	Portable belt grinder with extended arm
•Rivet areas	Roloc Unitized Wheel	2S-FIN	Die grinder
	Finishing Flap Brush	3A-VF	Straight shaft grinder
•Fuel tank	CS 330 Flap Wheel	Not applicable	Straight shaft tool
•Landing gear	Cut & Polish Unitized Wheel	5A-FIN	Die grinder; str. shaft tool
•Exfoliation removal	CS 330 Flap Wheel	Not applicable	Straight shaft tool
	3M 777F Roloc Disc	80-P180	Small right angle grinder
	3M 747D Cartridge Roll	80	Small die grinder
Surface preparation			
•Prior to paint - oxide removal - "depaint" - enhance coating adhesion	Surface Cond. Disc	A-MED, A-CRS	Right angle grinder
	7447 Hand Pad	A-VF	Jitterbug sander
	7440 Hand Pad	A-MED	
	6444 Hand Pad	A-FIN	
	Roloc Surf. Cond. Disc	S-SF to A-CRS	Small right angle grinder
	Roloc Unitized Wheel	2S-FIN, 2A-MED	
	3M Stikit 255L Disc	P80-P500	Random orbital
	3M 266L IMFF Disc	180-9 micron	
•Scuffing prior to coating (paint, epoxy, urethane)	Surface Cond. Disc	A-VF	Right angle grinder
	7447 Hand Pad	A-VF	Jitterbug sander
	6444 Hand Pad	A-FIN	
	3M Stikit 255L Disc	P80-P500	Random orbital
	3M 266L – IMMFF Disc	180-9 micron	
	3M 259F Hookit Disc	80-P180	



Composite repair – 3M Imperial microfinishing film discs provide excellent cut and finish on tough aircraft composite substrates.



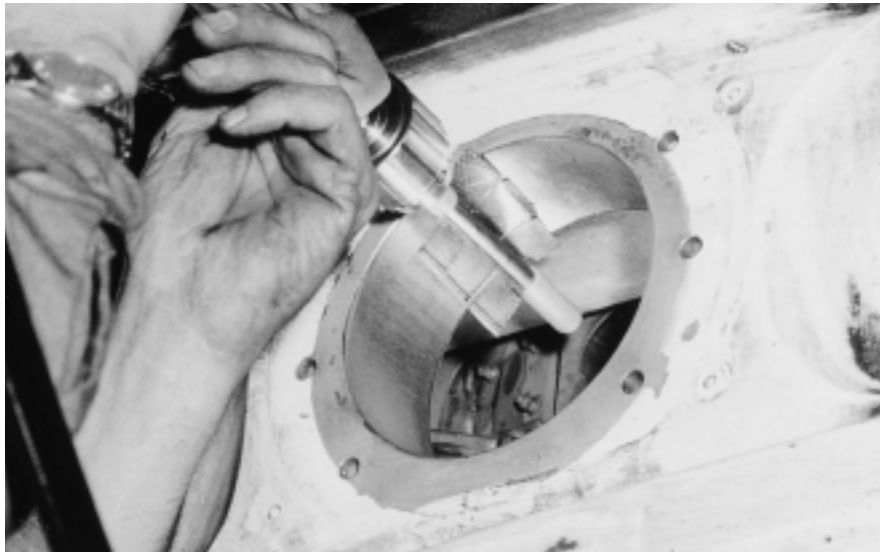
Seat Track Cleaning – Scotch-Brite Roloc surface conditioning discs fit within the seat track to efficiently clean and remove corrosion.

Application	Product	Grade	Equipment
Peening			
<ul style="list-style-type: none"> •Stress control •Stress relief on landing gear bearing holes and bushings •Fuel tank 	3M TC 330 Roto-Peen Flap	Not applicable	Flex shaft tool (electric) Straight shaft tool (air) (See TC 330 Roto-Peening Application Notes)
•Entry and cargo door repair and rework	3M TC 330 Roto-Peen Flap	Not applicable	
	CS 330 Flap Wheel	Not applicable	

NOTE: Information and data provided above should be considered representative or typical only and not for specification purposes. Refer to Technical Data Sheets and product literature for more specific technical data.

CHART CODES: SF = Super Fine. VF = Very Fine. FIN = Fine. MED = Medium. CRS = Coarse. X CRS = Extra Coarse. H.S. = High Strength. A = Aluminum Oxide. S = Silicon Carbide. RX = RX hubs. IMFF = Imperial™ Microfinishing Film. HPFB = High Performance Flap Brush.

11



Landing gear peening – 3M TC 330 roto-peen flap assembly imparts a residual compressive stress to the bearing surface. This surface stress strengthens the material, improving resistance to fatigue fracture and stress corrosion cracking.

13



Defect removal – Save time and money with 3M Roloc coated abrasive discs for efficient removal of deep scratches and defects.

Adhesive removal – Scotch-Brite Roloc surface conditioning discs remove adhesive “squeeze out” and excess without threat of work surface distortion.

12



Removing paint – Scotch-Brite surface conditioning discs remove paint quickly without threat of undercutting the work surface.

14



For more information
and assistance:

Contact your local 3M abrasive products
distributor or 3M.

Contiguous 48 United States

Call..... 1-800-742-9546

Fax..... 1-800-852-4668

Alaska..... 907-522-5200

Canada..... 519-451-2500

Hawaii..... 808-422-2721

Northern Mexico..... 915-599-4685

Puerto Rico..... 809-750-3000

Important Notice:

This brochure is intended to be an introductory summary of 3M coated abrasives and Scotch-Brite surface conditioning products. The information provided is based upon typical conditions and is believed to be reliable, however, due to the wide variety of intervening factors, 3M does not warrant the result will necessarily be obtained. All details concerning product specification and terms of sales are available from 3M.

Read and follow instructions for use. Always use protective glasses, face shields and body protection. Use guards provided with machine. Do not exceed maximum operating RPM. Follow safety operation procedures posted in work area.



Printed on 50% recycled paper, including 10% post-consumer waste paper.



Abrasive Systems Division

3M Center, Building 223-6N-01
St. Paul, MN 55144-1000

61-5001-1739-7

3M Canada

PO BOX 5757
London, Ontario, Canada N6A 4T1

© 3M 1995
Litho in U.S.A. with 3M offset plates.