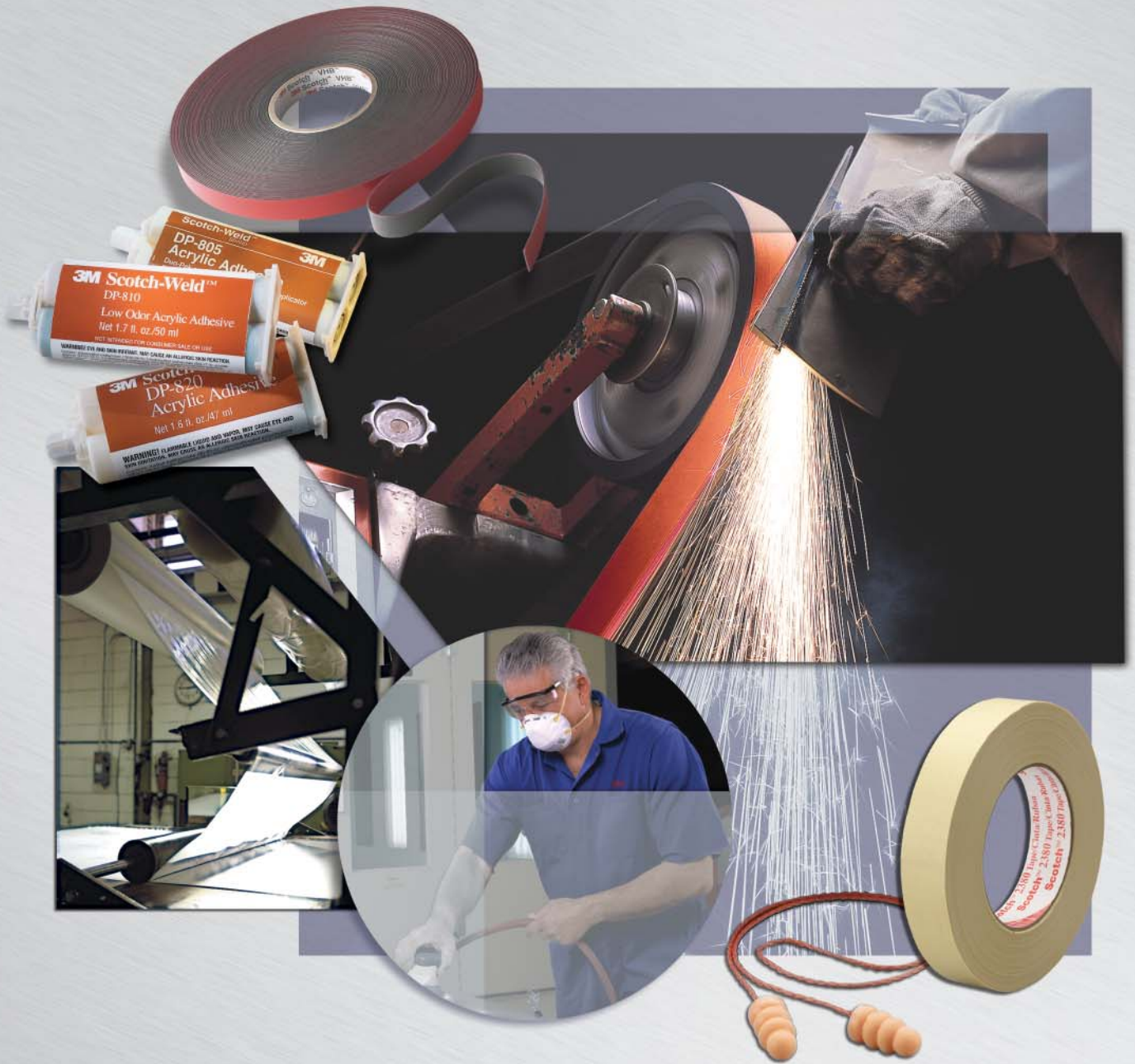




Industrial Products for Stainless Steel



To Search:

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This guide was created with your processes in mind.

From preparing surfaces for welding to packaging your final products, 3M understands the steps required to manufacture stainless steel products. With a full range of industrial products from abrasives and tapes to adhesives and safety products, 3M has a solution for nearly every challenge you face.

How this guide is organized for you:

①—By Tasks

Grinding stainless steel? Looking for a way to mask a surface from weld spatter? Need a packaging solution? This guide is broken down into sections based on the task you're trying to accomplish.

A product selection guide at the front of each section will help you choose the best starting points based on criteria such as tool type, type of steel, or specific task goals.

②—By Product Type

Know for sure that you need an abrasive disc? Looking specifically for options in hearing protection? Use the Table of Contents to find the product type you need and quickly learn more. You'll find all the information you need to order these products from your distributor of choice.

③—By Application

Do you have a very specific application, such as manufacturing scullery sinks or storage tanks? The last section in this guide lays out 3M's recommended processes for these applications, including process steps, tools, and starting points for products and grades, with convenient cross references to the pages where those products are explained in detail.

Need to contact us?

If you need more information or help locating a 3M distributor in the contiguous 48 states:

Call: 1-800-362-3550

Fax: 1-651-733-9175

E-Mail: 3MIndustrial@mmm.com



3M Industrial Products for Stainless Steel



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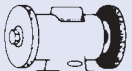
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Grind Surfaces of Storage Tanks Heads


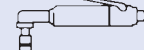

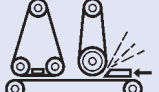

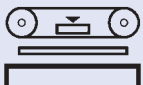
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Cleaning

	Heavy Duty	Moderate	Light
Offhand 	Scotch-Brite™ Hand Pad 7440	Scotch-Brite™ Hand Pad 7447	Scotch-Brite™ Hand Pad 7445
Straight Shaft Grinder 	3M™ Radial Bristle Discs and Brushes Scotch-Brite™ Clean & Strip Discs	3M™ Radial Bristle Discs and Brushes	3M™ Radial Bristle Discs and Brushes
Bench Motor/ Floor Lathe/ Pedestal Grinder 	3M™ Radial Bristle Brush, T-A, 6"	3M™ Radial Bristle Brush, T-A, 6" Scotch-Brite™ EXL Unitized Wheel, 2A MED	3M™ Radial Bristle Brush, T-A, 6" Scotch-Brite™ EXL Unitized Wheel, 2S FIN

Grinding

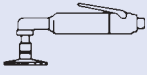
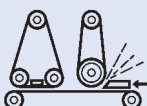
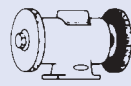
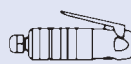

Stock Removal • Dimensioning • Weld Grinding • Weld Leveling

	Heavy Duty	Moderate	Light
Right Angle Disc Grinder 	3M™ Fibre Disc 985C grades 36–60	3M™ Fibre Disc 785C grades 36–60	3M™ Fibre Disc 785C grades 36–60
Right Angle Die Grinder 	3M™ Roloc™ Fibre Disc 985C	3M™ Roloc™ Disc 777F grades 36–60	3M™ Roloc™ Disc 777F grades 36–60
Backstand 	3M™ Belt 977F or 577F grades 24–60	3M™ Belt 777F grades 36–60	3M™ Belt 777F grades 36–60
Flat Finisher 		3M™ Belt 777F or 361F grades 36–60	3M™ Belt 777F grades 36–60
Centerless 	3M™ Belt 977F or 967F (dry) or 966F (wet) grades 36–60	3M™ Belt 777F grades 36–60	
Stroke Sander 		3M™ Belt 747D grades 50–60	3M™ Belt 747D grades 50–60

Abrasives Selection Guides

Deburring

Deburring • Edge Radiusing • Surface Prep • Scale Removal

	Large Burrs	Medium Burrs	Small Burrs
Right Angle Die Grinder 	Scotch-Brite™ Roloc™ EXL Unitized Wheel 8A CRS 3M™ Roloc™ Disc 777F grades 80–120	Scotch-Brite™ Roloc™ EXL Unitized Wheel 6A MED	Scotch-Brite™ Roloc™ EXL Unitized Wheel 2A MED
Flat Finisher 	Scotch-Brite™ LS Surface Conditioning Belt A CRS	Scotch-Brite™ LS Surface Conditioning Belt A MED	Scotch-Brite™ LS Surface Conditioning Belt A MED
Bench Motor/ Floor Lathe/ Pedestal Grinder 	Scotch-Brite™ EXL Deburring Wheel 8A MED Scotch-Brite™ Surface Conditioning Belt A CRS 3M™ Radial Bristle Brush, T-A, 6" grade 50	Scotch-Brite™ EXL Deburring Wheel 9S FIN Scotch-Brite™ Surface Conditioning Belt A MED 3M™ Radial Bristle Brush, T-A, 6" grade 80	Scotch-Brite™ EXL Deburring Wheel 8S FIN Scotch-Brite™ Surface Conditioning Belt A MED 3M™ Radial Bristle Brush, T-A, 6" grade 120
Die Grinder 	Scotch-Brite™ EXL Unitized Deburring Wheel 8A CRS	Scotch-Brite™ EXL Unitized Deburring Wheel 6A MED	Scotch-Brite™ EXL Unitized Deburring Wheel 2A MED
Portable File Belt Machine 		Scotch-Brite™ Surface Conditioning Belt A MED 3M™ Coated Abrasive Belt 777F grades 60–180	Scotch-Brite™ Surface Conditioning Belt A MED 3M™ Coated Abrasive Belt 777F grades 60–180

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Application Profiles

Blend Surfaces of Food Service Equipment

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Blend Weld Seams


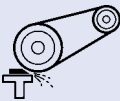
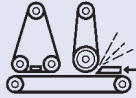


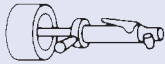

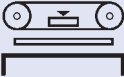
- Storage Tank Shells from Pre-finished Sheets 54
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Set Grain Pattern on Scullery Sinks

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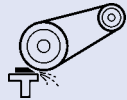
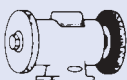
Blending

Setting the Grain • Refining Grindlines

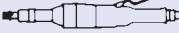
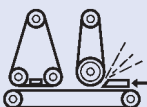

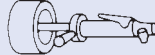
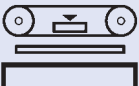

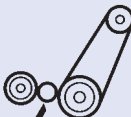
Right Angle Disc Grinder 	3M™ Fibre Disc 785C grades 60–150
Backstand 	3M™ Belt 777F or 977F or 707E (flexible) grades 60–150
Flat Finisher 	3M™ Belt 777F or 977F grades 60–150
Portable File Belt Machine 	3M™ Belt 777F or 977F grades 60–150
Centerless 	3M™ Belt 777F grades 60–150
Pneumatic Drum Sander 	3M™ Belt 777F or 977F grades 60–150
Offhand 	Scotch-Brite™ Hand Pad 7446 or 7447
Stroke Sander 	3M™ Belt 747D grades 60–150

Finishing

Surface Refinement • Polishing • Painting Prep • Cleaning • Finishing

	#3 mill finish	#4 mill finish	Other
Backstand 	Scotch-Brite™ Surface Conditioning Belt, A CRS	Scotch-Brite™ Surface Conditioning Belt, A MED	Scotch-Brite™ SE Surface Conditioning Belt, A FIN 3M™ Trizact™ Belt 237AA grades A16–A6
Bench Motor/ Floor Lathe/ Pedestal Grinder 	Scotch-Brite™ Multi-Finishing Wheel, 2S CRS 3M™ Radial Bristle Brush, T-C, 6" grades 80/120/220 Scotch-Brite™ Metal Finishing Wheel, CRS	Scotch-Brite™ Multi-Finishing Wheel, 2S MED 3M™ Radial Bristle Brush, T-C, 6" grades 400/6 micron/1 micron Scotch-Brite™ Metal Finishing Wheel, MED	Scotch-Brite™ Multi-Finishing Wheel, 2S FIN Scotch-Brite™ Metal Finishing Wheel, 5A MED

Abrasives Selection Guides

Finishing (cont.)	#3 Mill Finish	#4 Mill Finish	Other
Straight Shaft Grinder 	Scotch-Brite™ Multi-Finishing Wheel, 2S CRS Scotch-Brite™ Metal Finishing Unitized Wheel, 6A CRS	Scotch-Brite™ Multi-Finishing Wheel, 2S MED Scotch-Brite™ Metal Finishing Unitized Wheel, 5A MED	Scotch-Brite™ Multi-Finishing Wheel, 2F FIN Scotch-Brite™ Metal Finishing Unitized Wheel, 5A MED
Flat Finisher 	Scotch-Brite™ LS Surface Conditioning Belt, A CRS	Scotch-Brite™ LS Surface Conditioning Belt, A MED	Scotch-Brite™ SE Surface Conditioning Belt, A FIN 3M™ Belt 777F, 461F and 361F grades P180 and finer 3M™ Trizact™ Belt 237AA, A45-A6
Portable Belt Grinder 	Scotch-Brite™ Surface Conditioning Belt, A CRS	Scotch-Brite™ Surface Conditioning Belt, A MED	Scotch-Brite™ SE Surface Conditioning Belt, A FIN
Pneumatic Drum Sander 	Scotch-Brite™ Surface Conditioning Belt, A CRS	Scotch-Brite™ Surface Conditioning Belt, A MED	Scotch-Brite™ SE Surface Conditioning Belt, A FIN
Stroke Sander 	Scotch-Brite™ Surface Conditioning FB Belt, A CRS	Scotch-Brite™ Surface Conditioning FB Belt, A MED	Scotch-Brite™ SE Surface Conditioning FB Belt, A FIN
Offhand 			Scotch-Brite™ Hand Pad 7447 or 7448
Centerless 	Scotch-Brite™ Surface Conditioning Belt, A CRS	Scotch-Brite™ Surface Conditioning Belt, A MED	Scotch-Brite™ SE Surface Conditioning Belt, A FIN 3M™ Trizact™ Belt 237AA, A100-A6

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Polish OD and ID of Tubing for Fittings and Manways

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Repair Handling Marks on Food Service Equipment

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Coated Abrasive Belts

3M™ Belt 977F

- Premium 3M™ Cubitron™ Abrasive Grain cloth belt constructed on heavy weight, water resistant polyester cloth backing.
- Resin bonded for heat resistance.
- Features grinding aid for cooler grinding.
- Can be run wet or dry.
- Use with contact wheel durometer 65-85, serrated 1:1.
- Better option for longer seams and welds.

Size: WxL	Grade	UPC	Min.	Case
1/2" x 24"	80	051144-85754-8	50	200
1" x 72"	60	051144-85381-6	*P 50	200
1" x 132"	80	051144-85768-5	*P 25	200
2" x 72"	36	051144-85389-2	*P 10	50
	60	051144-85383-0	*P 25	50
	80	051144-84008-3	*P 25	50
2" x 132"	24	051144-84502-6	P 10	50
	36	051144-83522-5	*P 10	50
	50	051144-85015-0	*P 10	50
	60	051144-85384-7	*P 25	50
	80	051144-85769-2	*P 25	50
2-1/2" x 60"	60	051144-85385-4	P 25	50
	80	051144-85770-8	*P 25	50
3" x 132"	40	051144-82798-5	*P 5	25
	80	051144-85378-6	P 25	25
4" x 132"	36	051144-85390-8	P 5	25
	50	051144-85386-1	P 5	25
	80	051144-85379-3	*P 25	25
6" x 132"	40	051144-85387-8	*P 25	25



3M™ Belt 777F

- Cubitron abrasive grain cloth belt constructed on water resistant polyester cloth backing.
- Resin bonded for heat resistance.
- Features grinding aid for cooler grinding.
- Easiest to break down among premium abrasives.
- Use with softer contact wheel, durometer 45-55, serrated 1:1.
- Better for shorter welds and seams.



Size: WxL	Grade	UPC	Min.	Case
1/8" x 18"	80	051144-84282-7	* 50	200
1/8" x 24"	60	051144-80976-9	* 50	200
	80	051144-80485-6	* 50	200
	120	051144-85825-5	50	200
1/4" x 18"	60	051144-84403-6	* 50	200
	80	051144-85318-2	* 50	200
1/4" x 24"	40	051144-84412-8	* 50	200
	50	051144-81061-1	50	200
	60	051144-80253-1	* 50	200
	80	051144-77642-9	* 50	200
	120	051144-82229-4	* 50	200
1/2" x 12"	80	051144-85372-4	* 50	200
1/2" x 18"	36	051144-84301-5	* 50	200
	40	051144-84409-8	* 50	200
	60	051144-80551-8	* 50	200
	80	051144-80232-6	* 50	200
	120	051144-84304-6	* 50	200
	1/2" x 24"	36	051144-77643-6	* 50
40		051144-82342-0	* 50	200
50		051144-77408-1	* 50	200
60		051144-77065-6	* 50	200
80		051144-77491-3	* 50	200
120		051144-81064-2	* 50	200
3/4" x 18"		36	051144-84302-2	* 50
	40	051144-84408-1	50	200
	60	051144-84404-3	* 50	200
	80	051144-77992-5	* 50	200
	120	051144-84303-9	* 50	200
	3/4" x 20-1/2"	36	051144-85752-4	50
60		051144-80486-3	* 25	200
80		051144-80686-7	* 50	200
1" x 18"	80	051144-85319-9	* 50	200
1" x 30"	36	051144-82252-2	P 50	200
	60	051144-84410-4	*P 50	200
	80	051144-77407-4	*P 50	200
1" x 42"	40	051144-76527-0	*P 50	200
	60	051144-77512-5	*P 50	200
	80	051144-14895-0	*P 25	200
	100	051144-85830-9	P 50	200

Abrasives

3M™ Belt 777F (cont.)

Size: WxL	Grade	UPC	Min.	Case
1" x 72"	60	051144-76517-1	P	25
	120	051144-84316-9	*P	50
1" x 132"	60	051144-85337-3	P	200
1-1/2" x 60"	60	051144-84416-6	*P	25
	80	051144-76731-1	*P	25
	100	051144-85763-0	P	25
	120	051144-82022-1	*P	25
2" x 30"	60	051144-85330-4	P	10
2" x 48"	36	051144-76738-0	*P	10
	60	051144-76519-5	*P	25
	80	051144-14896-7	*P	25
	120	051144-85393-9	P	25
2" x 60"	36	051144-77663-4	*P	10
	60	051144-77152-3	*P	25
	80	051144-84296-4	*P	25
	120	051144-85377-9	*P	25
2" x 72"	36	051144-76531-7	*P	10
	50	051144-76523-2	*P	10
	60	051144-80286-9	*P	25
	80	051144-14884-4	*P	25
	120	051144-81767-2	*P	25
2" x 132"	36	051144-14264-4	P	10
	50	051144-14899-8	*P	10
	60	051144-76734-2	*P	25
	80	051144-14534-8	*P	25
	100	051144-84401-2	P	25
	120	051144-81687-3	*P	25
	180	051144-84315-2	*P	25
2-1/2" x 48"	60	051144-85766-1	*P	25
2-1/2" x 60"	36	051144-76532-4	*P	10
	40	051144-77825-6	*P	10
	50	051144-84417-3	P	10
	60	051144-76680-2	*P	25
	80	051144-76686-4	*P	25
120	051144-84400-5	P	25	
2-1/2" x 72"	50	051144-82350-5	P	10
	80	051144-82312-3	*P	25
3" x 10-11/16"	60	051144-82251-5	*	200
	120	051144-85821-7	*	50
3" x 72"	80	051144-84286-5	*	25
3" x 90"	60	051144-85833-0	P	25
	80	051144-77776-1	P	25
3" x 132"	36	051144-76533-1	*P	5
	40	051144-14281-1	P	25
	50	051144-84419-7	*P	5
	60	051144-76520-1	*P	25
	80	051144-76514-0	*P	25
	100	051144-85764-7	P	25
	120	051144-80028-5	*P	25
	180	051144-85762-3	*P	25

3M™ Belt 777F (cont.)

Size: WxL	Grade	UPC	Min.	Case
3-1/2" x 15-1/2"	36	051144-77336-7	*	50
	50	051144-77334-3	*	50
	60	051144-77476-0	*	5
	80	051144-77333-6	*	10
	100	051144-84306-0	*	10
	120	051144-84307-7	*	10
4" x 36"	180	051144-85320-5	*	10
	60	051144-81187-8	P	10
4" x 90"	80	051144-80254-8	P	10
	180	051144-85829-3	P	25
4" x 132"	36	051144-76534-8	P	5
	60	051144-80707-9	P	25
	80	051144-76515-7	*P	25
	120	051144-81443-5	*P	25
6" x 48"	36	051144-82313-0	*P	10
	40	051144-77927-7	P	10
	50	051144-80176-3	*P	10
	60	051144-76679-6	*P	20
	80	051144-76733-5	*P	20
	120	051144-82153-2	*P	20
6" x 60"	60	051144-77443-2	*P	20
6" x 132"	80	051144-84311-4	P	20
6" X 168"	60	051144-84421-0	*P	20
6" x 264"	80	051144-84601-6	P	10
36" x 75"	60	051144-83632-1	*P	2
37" x 60"	80	051144-77351-0	*P	2
	120	051144-80450-4	*P	5
	150	051144-81770-2	*P	5
37" x 75"	80	051144-82930-9	*P	2
	120	051144-84947-5	*P	5
	150	051144-85361-8	P	5
52" x 75"	80	051144-80344-6	P	2



* = Standard Stock Item P = Primary Belt Line

Coated Abrasive Belts

3M™ Belt 361F

- Aluminum oxide belt constructed on heavy weight, water resistant polyester cloth backing.
- Resin bonded for heat resistance.
- Can be run wet or dry.

Size: WxL	Grade	UPC	Min.	Case
2" x 60"	80	051144-80573-0	P	25 50
2-1/2" x 72"	P120	051144-83909-4	*P	25 50
4" x 36"	80	051144-77489-0	P	10 50
6" x 60"	60	051144-76398-6	P	20 20
6" x 168"	P150	051144-76465-5	P	20 20
12" x 144"	P120	051144-72824-4	*P	10 10
37" x 60"	60	051144-76906-3	P	2 2
	80	051144-14773-1	*P	2 2
	P100	051144-14905-6	*P	5 5
	P120	051144-11519-8	*P	5 5
	P150	051144-76939-1	*P	5 5
	P180	051144-11515-0	P	5 5
37" x 75"	P220	051144-76923-0	*P	5 5
	80	051144-81655-2	P	2 2
	P100	051144-81215-8	P	5 5
	P120	051144-76942-1	P	5 5
	P150	051144-80037-7	P	5 5
52" x 75"	P180	051111-51215-9	P	5 5
	P220	051111-51216-6	P	5 5
	P120	051144-77941-3	P	5 5

Contact your distributor or 3M Rep for additional sizes and grades.

3M™ Belt 461F

- Silicone carbide belt constructed on heavy weight, water resistant polyester cloth backing.
- Resin bonded for heat resistance.
- Can be run wet or dry.

Size: WxL	Grade	UPC	Min.	Case
4" x 36"	P120	051144-77047-2	P	10 50
4" x 54"	80	051144-81661-3	*P	25 50
4" x 132"	36	051144-11708-6		5 25
	80	051144-04353-8		5 25
	P120	051144-04351-4	*	5 25

Contact your distributor or 3M Rep for additional sizes and grades.

The following coated abrasive belts can be custom ordered in many sizes through your local distributor.

3M™ Belt 577F

- Alumina zirconia belt constructed on heavy weight, water resistant polyester cloth backing.
- Resin bonded for heat resistance.
- Features grinding aid for cooler grinding.
- Can be run wet or dry.

3M™ Belt 707E

- Premium 3M™ Cubitron™ Abrasive Grain belt constructed on JE weight, flexible rayon cloth backing.
- Features grinding aid for cooler grinding.

3M™ Belt 747D

- Cubitron abrasive grain cloth belt constructed on X weight, durable cloth backing.
- Resin bonded for heat resistance.
- Features grinding aid for cooler grinding.
- Ideal product for stroke sanders.
- Platen compatible.

3M™ Belt 967F

- Premium Cubitron abrasive grain belt constructed on heavy weight, water resistant polyester cloth backing.
- Resin bonded for heat resistance.
- Features an improved supersize grinding aid for less part burning.
- Ideal for high pressures.
- **This product should only be run dry.**

3M™ Belt 966F

- Premium Cubitron abrasive grain belt constructed on heavy weight, water resistant polyester cloth backing.
- Resin bonded for heat resistance.
- Great for wet applications.
- Ideal for centerless applications.

3M™ Belt 964F

- Premium Cubitron abrasive grain belt constructed on heavy weight, water resistant polyester cloth backing.
- Resin bonded for heat resistance.
- Can be run wet or dry.
- Ideal for low to medium pressures.

3M™ Trizact™ Belt 237AA

- Aluminum oxide belt constructed on X weight, durable, semi-flexible cloth backing.
- Features a grinding aid for cooler grinding.
- Microreplicated construction delivers consistent, predictable finishes.
- Help reduce polishing process steps.

Abrasives

Scotch-Brite™ Surface Conditioning Belts

Scotch-Brite Surface Conditioning Belts

- Premium surface conditioning belt used for cleaning, finishing, blending and deburring applications.
- Reinforced backing offers good flexibility.
- Aluminum oxide mineral.

A VFN – Blue
A MED – Maroon
A CRS – Brown



Size: WxL	Grade	UPC	Min./Case	
1/4" x 18"	A MED	048011-14276-0	*	20
1/4" x 24"	A CRS	048011-13132-0	*	20
	A MED	048011-13131-3	*	20
1/2" x 12"	A MED	048011-17515-7	*	20
	A VFN	048011-19688-6	*	20
1/2" x 18"	A CRS	048011-08858-7	*E	20
	A MED	048011-08857-0	*E	20
	A VFN	048011-08856-3	*E	20
	S SFN	048011-08855-6	*	20
1/2" x 24"	A CRS	048011-05741-5	*E	20
	A MED	048011-03998-5	*E	20
	A VFN	048011-04299-2	*E	20
3/4" x 18"	A CRS	048011-13639-4	*E	20
	A MED	048011-15899-0	*E	20
	A VFN	048011-14543-3	*E	20
3/4" x 20-1/2"	A MED	048011-15897-6	*	20
1" x 18"	A CRS	048011-14278-4	*	10
	A MED	048011-14398-9		10
	A VFN	048011-17517-1		10
1" x 30"	A CRS	048011-08887-7	*	10
	A MED	048011-08898-3	*	10
	A VFN	048011-08920-1	*	10
1" x 42"	A MED	048011-04189-6	*E	10
	A VFN	048011-04190-2	*E	10
2" x 48"	A MED	048011-08915-7	*E	10
	A VFN	048011-04295-4	*E	10
2" x 60"	A MED	048011-08916-4	*	10
2" x 72"	A MED	048011-00580-5	*E	10
	A VFN	048011-00579-9	*E	10
2" x 132"	A MED	048011-03999-2	*E	5
	A VFN	048011-04297-8	*E	5
2-1/2" x 60"	A MED	048011-00581-2	*	10
2-3/4" x 15-1/2"	A CRS	048011-05022-5	*E	10
	A MED	048011-05227-4	*E	10
3" x 10-11/16"	A CRS	048011-05820-7	*E	10
	A MED	048011-05783-5	*E	10
	A VFN	048011-09650-6	*E	10

Scotch-Brite Surface Conditioning Belts (cont.)

Size: WxL	Grade	UPC	Min./Case	
3" x 18"	A MED	048011-14285-2	*E	10
	A VFN	048011-14550-1	*E	10
3" x 21"	A MED	048011-08906-5	*	10
3" x 24"	A CRS	048011-08880-8	*E	10
	A MED	048011-00583-6	*E	10
	A VFN	048011-04298-5	*E	10
3" x 72"	A MED	048011-14548-8	*	10
3" x 118"	A MED	048011-00584-3	*	5
	A VFN	048011-15404-6	*	5
3" x 132"	A CRS	048011-05023-2	*E	5
	A MED	048011-00568-3	*E	5
	A VFN	048011-04289-3	*E	5
	S SFN	048011-08893-8	*	5
3-1/2" x 15-1/2"	A CRS	048011-05016-4	*E	10
	A MED	048011-05228-1	*E	10
	A VFN	048011-05643-2	*E	10
	S SFN	048011-05644-9	*	10
4" x 132"	A CRS	048011-05018-8	*	5
	A MED	048011-00570-6	*	5
	A VFN	048011-04281-7	*	5
6" x 48"	A CRS	048011-05019-5	*E	5
	A MED	048011-00590-4	*E	5
	A VFN	048011-04283-1	*E	5

Contact your distributor or 3M Rep for additional sizes and grades.

Scotch-Brite SE Surface Conditioning Belts

- Coarse, tough, aggressive belt for heavy duty deburring and finishing.
- Reinforced blue backing offers good flexibility.
- Aluminum oxide mineral.

A FIN – Green
A MED – Maroon
A CRS – Brown



Size: WxL	Grade	UPC	Min./Case	
1/4" x 18"	A CRS	048011-18495-1	*	20
1/2" x 18"	A CRS	048011-18087-8	*	20
	A MED	048011-18480-7	*	20
	A FIN	048011-30006-1	*	20
1/2" x 24"	A CRS	048011-18088-5	*	20
	A MED	048011-18479-1	*	20
	A FIN	048011-30007-8	*	20
3/4" x 18"	A CRS	048011-19697-8	*	20
3-1/2" x 15-1/2"	A CRS	048011-18089-2	*	10
	A MED	048011-18478-4	*	10
	A FIN	048011-30008-5		10

Contact your distributor or 3M Rep for additional sizes and grades.

* = Standard Stock Item E = Express Plus Item P = Primary Belt Line

Scotch-Brite™ Surface Conditioning Belts

Scotch-Brite LS Surface Conditioning Belts

- Firm, stretch-resistant backing suited for high belt tensions.
- Aluminum oxide mineral.
 - A VFN – Blue
 - A MED – Maroon
 - A CRS – Brown



Size: WxL	Grade	UPC	Min./Case
1" x 72"	A MED	048011-13942-5	* 10
1" x 90"	A CRS	048011-17046-6	10
	A VFN	048011-17745-8	* 10
1" x 132"	A MED	048011-15145-8	* 5
2" x 18-15/16"	A MED	048011-15943-0	* 10
2" x 132"	A MED	048011-13945-6	* 5
	A VFN	048011-13944-9	* 5
3" x 132"	A CRS	048011-13949-4	5
	A MED	048011-13948-7	* 5
	A VFN	048011-13947-0	* 5
4" x 132"	A MED	048011-13951-7	* 5
	A VFN	048011-13950-0	* 5
6" x 48"	A MED	048011-14534-1	* 5
37" x 60"	A CRS	048011-14538-9	1
	A MED	048011-14537-2	* 1
	A VFN	048011-17877-6	1

Scotch-Brite FB Surface Conditioning Belts

- Smooth, tough, stretch-resistant nylon film backing works well with platens.
- Aluminum oxide mineral.

Size: WxL	Grade	UPC	Min./Case
1" x 42"	A MED	048011-16275-1	10
2" x 48"	A MED	048011-16287-4	10
2" x 60"	A MED	048011-18870-6	10
2" x 72"	A MED	048011-16288-1	10
	A VFN	048011-18866-9	10
2" x 132"	A MED	048011-16289-8	5
2-1/2" x 60"	A MED	048011-16293-5	10
3" x 132"	A CRS	048011-16302-4	5
	A MED	048011-16301-7	5
	A VFN	048011-16300-0	5
4" x 132"	A CRS	048011-16317-8	5
	A MED	048011-16316-1	5
	A VFN	048011-16315-4	5
6" x 48"	A MED	048011-16330-7	5

Fibre Discs

3M™ Fibre Disc 985C

- Premium 3M™ Cubitron™ Abrasive Grain disc constructed on a fibre backing.
- Features grinding aid for cooler grinding.
- More aggressive cut and longer life than 785C disc.
- Use with correct tool (3-1/2 HP, 6,000 RPM) and backup pad (red ribbed).

Size: DxCH	Grade	UPC	Min./Case
5" x 7/8"	36	051111-55767-9	* 25/100
	50	051111-55780-8	* 25/100
	60	051111-55776-1	* 25/100
	80	051111-55779-2	* 25/100
7" x 7/8"	24	051111-55971-0	* 25/100
	36	051111-55972-7	* 25/100
	40	051111-55804-1	* 25/100
	50	051111-55973-4	* 25/100
	60	051111-55974-1	* 25/100
	80	051111-55975-8	* 25/100

Contact your distributor or 3M Rep for additional sizes and grades.

3M™ Fibre Disc 785C

- A premium Cubitron abrasive grain disc constructed on a fibre backing.
- Features a grinding aid for cooler grinding.
- Runs well under lower pressures.



Size: DxCH	Grade	Maximum RPM	UPC	Min./Case
5" x 7/8"	24	12,000	051144-13931-6	* E 25/100
	36	12,000	051144-13930-9	* E 25/100
	50	12,000	051144-13928-6	* E 25/100
	60	12,000	051144-13977-4	* 25/100
	80	12,000	051144-13926-2	* E 25/100
	P100	12,000	051144-80654-6	* 25/100
	P120	12,000	051144-80655-3	* 25/100
7" x 7/8"	24	8,500	051144-13937-8	* E 25/100
	36	8,500	051144-13936-1	* E 25/100
	50	8,500	051144-13934-7	* E 25/100
	60	8,500	051144-13933-0	* E 25/100
	80	8,500	051144-13932-3	* E 25/100
	P100	8,500	051144-80656-0	* 25/100
	P120	8,500	051144-80657-7	* 25/100
9-1/8" x 7/8"	24	6,500	051144-13943-9	* 25/100
	36	6,500	051144-13942-2	* 25/100
	50	6,500	051144-13940-8	* 25/100
	80	6,500	051144-13938-5	* 25/100

Contact your distributor or 3M Rep for additional sizes and grades.

Abrasives

Accessories — Fibre Discs

3M™ Disc Pad Face Plates — Ribbed

- Lightweight, excellent balance, and low profile for better grinding and finishing control.
- Full size plates give firm support to disc edge.
- Tapered to minimize flare and wild scratches.
- Ribbed face plate results in cooler running disc.
- Higher pressure on the ribbed sections prolongs disc life.



Size: Dia.	Density/Color	Maximum RPM	UPC	Min./Case
5"	Extra Hard-Red	12,000	051144-81732-0	* E 1/25
	Hard-Black	12,000	051144-81733-7	* E 1/25
	Medium-Gray	12,000	051144-81734-4	* E 1/25
	Soft-White	12,000	051144-81735-1	* 1/25
7"	Extra Hard-Red	8,500	051144-80514-3	* E 1/25
	Hard-Black	8,500	051144-80515-0	* E 1/25
	Medium-Gray	8,500	051144-80516-7	* E 1/25
	Soft-White	8,500	051144-80517-4	* 1/25
9"	Extra Hard-Red	6,500	051144-81728-3	* 1/25
	Hard-Black	6,500	051144-81729-0	* 1/25

3M™ Disc Pad Face Plates

- Backup system for fibre discs or surface conditioning discs.
- Lightweight, excellent balance, and low profile for better grinding and finishing control.
- Resists chunking, reduces edge wear and prolongs disc life.
- Tapered to to minimize flare and wild scratches.

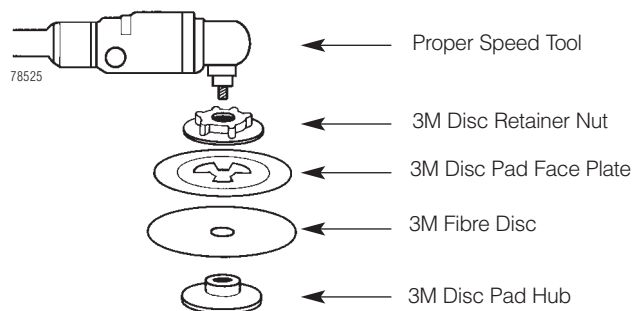


Size: Dia.	Density/Color	Maximum RPM	UPC	Min./Case
4-1/2"	Hard-Black	13,000	051144-14270-5	* E 1/25
	Medium-Gray	13,000	051144-13325-3	* E 1/25
5"	Hard-Black	12,000	051144-45206-4	* 1/25
	Medium-Gray	12,000	051144-45207-1	* 1/25
	Soft-White	12,000	051144-45208-8	* 1/25
7"	Hard-Black	8,500	051144-45192-0	* 1/25
	Medium-Gray	8,500	051144-45193-7	* 1/25
	Soft-White	8,500	051144-45194-4	* 1/25
9"	Hard-Black	6,500	051144-45195-1	* 1/25

3M Disc Pad Face Plates

Color	Density	Application
● Red	Extra Hard	Heavy grinding. (Ribbed only)
● Black	Hard	Heavy metal removal, large welds, etc.
● Gray	Medium	General purpose grinding and finishing. Normal flexibility.
○ White	Soft	Finishing operations, flexible, follows contours.

* = Standard Stock Item E = Express Plus Item



3M™ Disc Pad Hubs

- Backup system for fibre discs or surface conditioning discs.
- Lightweight, excellent balance, and low profile for better grinding and finishing control.
- Durable plastic hubs have 5/8"-11 threaded metal insert and can be used with most face plates.



Size: Dia.xThread	Description	UPC	Min./Case
2-1/2" x 5/8"-11	Use with all size face plates	051144-45205-7	* E 1/10
2-1/2"	Use with all size face plates, tool shaft length 1/2" or less	051144-88743-9	* E 1/10
4-1/2" x 5/8"-11	Use with 7" face plates only	051144-45190-6	* E 1/10

3M™ Disc Retainer Nuts

- Use with all 3M disc pad face plates, disc pads, and 3M disc pad hubs.
- 5/8"-11 threaded arbor hole.
- Available in three depths.



Size: Depth	UPC	Min./Case
3/8"	051144-05622-4	* E 1
1/2"	051144-05621-7	* E 1
5/8"	051144-05620-0	* E 1

3M™ Disc Holder Adaptor No. 9

- Converts grinders with M10-1.25, M10-1.5, or 3/8"-24 external threaded shafts to a 5/8"-11 external threaded shaft.



Size: Thread	UPC	Min./Case
M10-1.25 INT	048011-22971-3	* E 10
M10-1.50 INT	048011-22972-0	* E 10
3/8"-24 INT	048011-22970-6	* E 10

Abrasives

3M™ Roloc™ Discs

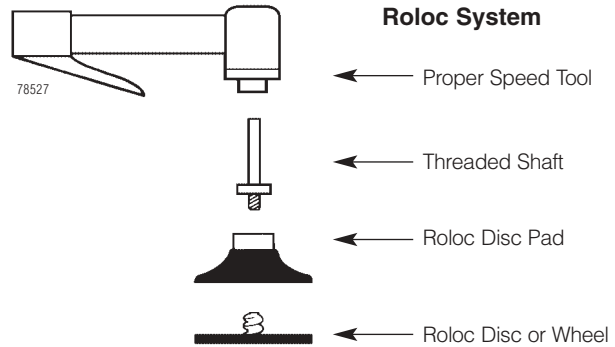
3M™ Roloc™ Disc 777F

- Constructed on water resistant polyester cloth backing.
- Features 3M™ Cubitron™ Abrasive Grain.
- Use for deburring, blending, finishing, removing tool marks, and die polishing on all types of metal.
- Resin bonded for heat resistance.
- Features grinding aid for cooler grinding.
- Can be run wet or dry.
- Locks securely in place with just a half twist... another half twist and they're off.
- Each disc is color coded by grade:



3M™ Roloc™ Disc Button Color/Grade Chart

● 24 — Black	● 100 — Blue
● 36 — Brown	○ 120 — White
● 50 — Green	● 150 — Black
● 60 — Orange	● 180 — Brown
● 80 — Yellow	● 240 — Green



Size: Dia.	Grade	UPC	Min./Case
Roloc			
1"	36	051144-76622-2	* 50/500
	50	051144-76623-9	* 50/500
	60	051144-76624-6	* 50/500
	80	051144-76625-3	* 50/500
	P120	051144-80510-5	* 50/500
1-1/2"	36	051144-76626-0	* 50/500
	50	051144-76627-7	* 50/500
	60	051144-76628-4	* 50/500
	80	051144-14660-4	* 50/500
	P120	051144-80511-2	* 50/500
2"	36	051144-76629-1	* 50/200
	50	051144-76630-7	* 50/200
	60	051144-76433-4	* 50/200
	80	051144-14661-1	* 50/200
	P100	051144-80508-2	* 50/200
	P120	051144-80512-9	* 50/200
3"	36	051144-76631-4	* 50/200
	50	051144-76632-1	* 50/200
	60	051144-76633-8	* 50/200
	80	051144-76634-5	* 50/200
	P100	051144-80509-9	* 50/200
	P120	051144-80513-6	* 50/200

Contact your distributor or 3M Rep for additional sizes and grades.

Size: Dia.	Grade	UPC	Min./Case
Roloc TP			
1"	50	051144-76764-9	50/500
	80	051144-76773-1	50/500
1-1/2"	50	051144-76765-6	50/500
	80	051144-76774-8	* 50/200
2"	60	051144-76770-0	50/200
	80	051144-76774-8	* 50/200
	80	051144-76775-5	* 50/200
3"	36	051144-76763-2	50/200
	60	051144-76771-7	50/200
	80	051144-76775-5	* 50/200
Roloc TS			
1"	80	051144-76752-6	50/500
	60	051144-76749-6	50/500
	80	051144-76753-3	50/500
2"	36	051144-76742-7	* 50/200
	50	051144-76746-5	* 50/200
	60	051144-76750-2	* 50/200
	80	051144-76754-0	* 50/200
	80	051144-76755-7	* 50/200
3"	36	051144-76743-4	* 50/200
	50	051144-76747-2	50/200
	60	051144-76751-9	* 50/200
	80	051144-76755-7	* 50/200
	80	051144-76755-7	* 50/200
	80	051144-76755-7	* 50/200
Roloc TSM (Metal Button)			
2"	36	051111-49949-8	* 50/200
	60	051111-50253-2	* 50/200
	80	051111-50254-9	* 50/200
	P100	051111-50255-6	50/200
	P120	051111-50256-3	* 50/200
	P120	051111-50256-3	* 50/200

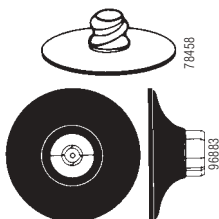
Contact your distributor or 3M Rep for additional sizes and grades.

Abrasives

Accessories — 3M™ Roloc™ Discs

3M™ Roloc™ TR Disc Pads

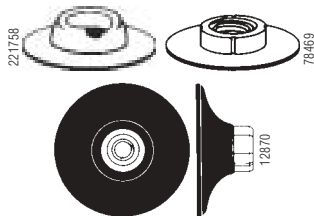
- For use with 3M Roloc and Roloc TR discs.
- Rubber backup pads.
- Available in different diameters and degrees of hardness for various grinding applications.
- Internally threaded to receive any standard 1/4"–20 thread shaft.



Size: Dia.	Density	Maximum RPM	UPC	Min./Box
1"	Medium	30,000	051144-45101-2 *E	5
1-1/2"	Medium	30,000	051144-45099-2 *E	5
	Hard	30,000	051144-45100-5 *E	5
2"	Medium	25,000	051144-45095-4 *E	5
	Hard	25,000	051144-45096-1 *E	5
3"	Medium	18,000	051144-45092-3 *E	5
	Hard	20,000	051144-45091-6 *E	5

3M™ Roloc™ TS Disc Pads

- For use with 3M Roloc TS, Roloc TSM discs and "screw on" abrasive discs.



Size: Dia.	Density	Maximum RPM	UPC	Min./Box
1-1/2"	Medium	30,000	051144-77729-7 *E	5
	Hard	30,000	051144-77728-0 *E	5
2"	Medium	25,000	051144-14211-8 *E	5
	Hard	25,000	051144-14212-5 *E	5
3"	Medium	18,000	051144-14215-6 *E	5
	Hard	20,000	051144-14216-3 *E	5

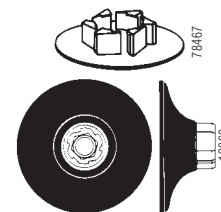
Optimum Tool Speeds (RPM)

Maximize 3M™ Roloc™ Coated Abrasive Disc Cut Rates and Life

Material	Disc Size (Diameter)		
	1-1/2"	2"	3"
Stainless	20,000 RPM	15,000 RPM	10,000 RPM
Aluminum	20,000 RPM	15,000 RPM	10,000 RPM
Steel	30,000 RPM	20,000 RPM	15,000 RPM
Titanium	9,000 RPM	7,000 RPM	4,500 RPM
Glass	9,000 RPM	7,000 RPM	4,500 RPM
Composites	15,000 RPM	10,000 RPM	8,000 RPM

3M™ Roloc™ TP Disc Pads

- For use with 3M Roloc TP discs and with "press on" type abrasive discs.



Size: Dia.	Density	Maximum RPM	UPC	Min./Box
2"	Medium	25,000	051144-14197-5 *E	5
	Hard	25,000	051144-14198-2 *E	5
3"	Medium	18,000	051144-14201-9 *E	5
	Hard	20,000	051144-14202-6 *E	5

3M™ Threaded Shaft — 1/4"

- Needed with all 3M™ Roloc™ Disc Pads.

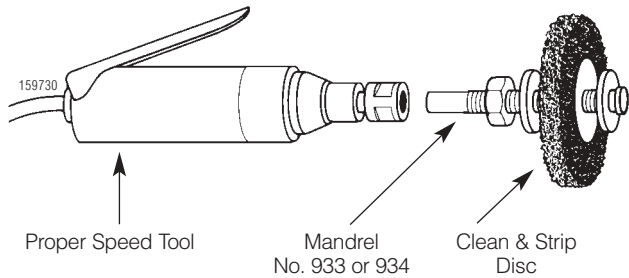
Size: Dia.xThread	UPC	Min./Box
1/4" x 1/4"—20 Thread	051144-45102-9 *E	1

* = Standard Stock Item E = Express Plus Item

Clean & Strip Discs

Scotch-Brite™ Clean & Strip Discs

- Handles tough cleaning and stripping jobs with an extra coarse, open web.
- Designed to work faster and safer than wire brushes.
- Can be used single or multiple loaded onto a spindle and used on edge.
- Use for stripping paint from metal surfaces, inspecting welds, removing coatings and preparing surfaces for recoating, cleaning concrete molds and forms, general plant maintenance.
- Silicon carbide mineral.
- Color: Black.



Accessories — Clean & Strip Discs

3M™ Mandrels No. 933 and 934

- Corrosion protected.
- Machined to industrial standards for thread size and shaft diameters.
- Furnished complete with washers to fit available disc sizes.



Size: DxC	Grade	Maximum RPM	UPC	Discs/ Case
2" x 1/4"	S XCS	12,000	048011-00931-5	* 100
3" x 1/4"	S XCS	8,500	048011-00935-3	* 50
3" x 1/2"	S XCS	8,500	048011-00937-7	* 50
4" x 1/4"	S XCS	6,000	048011-07460-3	* 25
4" x 3/8"	S XCS	6,000	048011-00940-7	* 25
4" x 1/2"	S XCS	6,000	048011-00941-4	* E 25
4" x 5/8"	S XCS	6,000	048011-00942-1	* 25
5" x 1/2"	S XCS	5,000	048011-00943-8	* 25
6" x NH	S XCS	4,000	048011-00945-2	* 15
6" x 1/4"	S XCS	4,000	048011-00946-6	* 15
6" x 3/8"	S XCS	4,000	048011-00947-6	* 15
6" x 1/2"	S XCS	4,000	048011-00948-3	* E 15
6" x 5/8"	S XCS	4,000	048011-00949-0	* 15
6" x 7/8"	S XCS	4,000	048011-00950-6	* 15
7" x 5/8"	S XCS	3,500	048011-00954-4	* 15
7" x 7/8"	S XCS	3,500	048011-00955-1	* 15
8" x 1/2"	S XCS	3,000	048011-00957-5	* E 15
8" x 5/8"	S XCS	3,000	048011-00958-2	* 15

Size	Product	UPC	Units/ Case
2" x 1/4" shank 1" washer Use with 2"-3" dia. discs	933	048011-13968-5	* 5
3-1/16" x 1/4" shank 2-1/2" washer Use with 3"-6" dia. discs	934	048011-04021-9	* 1

Scotch-Brite™ Clean & Strip XT Discs

- Stronger and tougher than original clean & strip discs.
- Extra coarse for more aggressive applications.



Size: DxC	Grade	Maximum RPM	UPC	Discs/ Case
4" x 1/4"	S XCS	6,000	048011-27657-1	* 25
4" x 1/2"	S XCS	6,000	048011-27663-2	25
6" x 1/2"	S XCS	4,000	048011-25790-7	* 15
8" x 1/2"	S XCS	3,000	048011-27658-8	15

Abrasives

Unitized Wheels

Scotch-Brite™ EXL Unitized Deburring Wheels

- Excellent for deburring and polishing a wide range of metals, plastics, and composites.
- Cool running allows more pressure to be applied.
- Cleaner than buffs and compounds.
- Eliminates danger of loose-flying wires.



51730

Size: DxWxAH	Grade	Maximum RPM	UPC	Min./ Case
1" x 1" x 3/16"	2A MED	25,100	048011-15527-2	*E 50
	2S FIN	30,100	048011-13713-1	*E 50
	6A MED	35,100	048011-14063-6	*E 50
	8A MED	35,100	048011-13753-7	*E 50
	8A CRS	35,100	048011-13752-0	*E 50
3" x 1/4" x 3/8"	2A MED	12,100	048011-16054-2	*E 40
	2S FIN	12,100	048011-14750-5	*E 40
	4A FIN	18,100	048011-14751-2	*E 40
	6A MED	18,100	048011-15118-2	*E 40
	6S FIN	18,100	048011-14752-9	*E 40
	8A MED	18,100	048011-14753-6	*E 40
6" x 1/2" x 1"	2A MED		048011-16545-5	* 4
	2S FIN		048011-14379-8	* 4
6" x 1" x 1"	2A MED		048011-16544-8	* 2
	2S FIN		048011-13743-8	* 2

For 1", use Mandrel No. 936 or 946.

For 3", use Mandrel No. 990.

Scotch-Brite™ Roloc™ EXL Unitized Wheels

- Strong efficient products for edge deburring and finishing.
- Use with 3M™ Roloc™ holders on a straight shaft or right-angle tool.



179831

Size: Dia.	Grade	Maximum RPM	UPC	Min./ Case
2"	8A CRS	22,100	048011-17194-4	*E 60
	6A MED	22,100	048011-17190-6	*E 60
	2A MED	22,100	048011-17185-2	*E 60
	2S FIN	22,100	048011-17183-8	*E 60
3"	8A CRS	15,100	048011-17195-1	*E 40
	6A MED	15,100	048011-17191-3	*E 40
	2A MED	15,100	048011-17186-9	*E 40
	2S FIN	15,100	048011-17184-5	*E 40

* = Standard Stock Item E = Express Plus Item

Scotch-Brite™ Metal Finishing Unitized Wheels

- Durable unitized construction for blending and satin finishing.



202464

Size: DxWxAH	Grade	Maximum RPM	UPC	Min./ Case
3" x 1/4" x 3/8"	5A MED	12,500	048011-29234-2	*E 40
	6A CRS	12,500	048011-29235-9	*E 40
6" x 1/2" x 1"	5A MED	6,000	048011-29257-1	*E 4
6" x 1" x 1"	5A MED	6,000	048011-29259-5	*E 2

For 3", use Mandrel No. 990.

Accessories — Unitized Wheels

3M™ Mandrels No. 936, 946 and 990

- Designed for use with Scotch-Brite unitized wheels.



14362

No. 936 and 946

Maximum Operating Speed:

936	22,200 RPM
946	35,200 RPM
990	18,200 RPM



14363

No. 990

Size	Product	UPC	Min./ Case
2-1/16" x 1/4" shank	936	048011-04018-9	*E 5
3/4" washer Plastic			
1-3/4" x 1/4" shank	946	048011-05726-2	*E 5
1/2" washer Steel			
1-3/4" x 1/4" shank	990	048011-15012-3	*E 5
Use with 3" wheel			

3M™ Roloc™ Holder

- Plastic holder for use with 3M Roloc unitized wheels.



51732

Size: LxShaft Dia.	Maximum RPM	UPC	Min./ Case
1" x 1/4"	25,000	048011-15408-4	*E 5

Abrasives

Wheels

Scotch-Brite™ EXL Deburring Wheels

- Use to clean, finish, blend, deburr, or polish all types of metals, composites, and glass.



Size: DxWxAH	Grade	Maximum RPM	UPC	Min./Case
6" x 1/2" x 1"	8A MED	6,000	048011-13616-5	*E 4
	8S FIN	6,000	048011-09548-6	*E 4
	9S FIN	6,000	048011-05790-3	*E 4
6" x 1" x 1"	8A MED	6,000	048011-13617-2	*E 3
	8S FIN	6,000	048011-09549-3	*E 3
	9S FIN	6,000	048011-05132-1	*E 3
8" x 1/2" x 3"	8A MED	4,500	048011-17459-4	*E 4
	8S FIN	4,500	048011-14629-4	*E 4
	9S FIN	4,500	048011-05791-0	*E 4
8" x 1" x 3"	8A MED	4,500	048011-13619-6	*E 3
	8S FIN	4,500	048011-09551-6	*E 3
	9S FIN	4,500	048011-05135-2	*E 3
8" x 2" x 3"	8A MED	4,500	048011-13620-2	*E 2
	8S FIN	4,500	048011-09552-3	*E 2
	9S FIN	4,500	048011-05136-9	*E 2

Scotch-Brite™ Metal Finishing Wheel

- Highly conformable.
- Provides a uniform and consistent satin or antique finish.
- Used effectively to blend and match #3 or #4 mil finishes.



Size: DxWxAH	Grade	Maximum RPM	UPC	Min./Case
6" x 1" x 1"	4A MED	6,000	048011-01860-7	* 3
	4A CRS	6,000	048011-01861-4	* 3
	5A MED	6,000	048011-01862-1	* 3
	5A CRS	6,000	048011-01863-8	* 3
	6A MED	6,000	048011-01865-2	* 3
	6A CRS	6,000	048011-01866-9	* 3
6" x 2" x 1"	4A MED	6,000	048011-01867-6	* 2
	4A CRS	6,000	048011-01868-3	* 2
	5A MED	6,000	048011-01869-0	* 2
	5A CRS	6,000	048011-01888-1	* 2
	6A MED	6,000	048011-01889-8	* 2
	6A CRS	6,000	048011-01870-6	2

Scotch-Brite™ Multi-Finishing Wheels

- Produces uniform grain finishes on stainless steel and other metals.
- Highly conformable.
- Tough enough to finish edges and welds.

Size: DxWxAH	Grade	Maximum RPM	UPC	Min./Case
6" x 1" x 1"	2S CRS	6,000	048011-13170-2	*E 3
	2S MED	6,000	048011-13171-9	*E 3
	2S FIN	6,000	048011-13172-6	*E 3
6" x 2" x 1"	2S CRS	6,000	048011-13176-4	*E 2
	2S MED	6,000	048011-13177-1	*E 2
	2S FIN	6,000	048011-13178-8	*E 2
8" x 1" x 3"	2S CRS	4,500	048011-13182-5	*E 3
	2S MED	4,500	048011-13183-2	*E 3
	2S FIN	4,500	048011-13184-9	*E 3
8" x 2" x 3"	2S CRS	4,500	048011-13185-6	*E 2
	2S MED	4,500	048011-13186-3	*E 2

Accessories — Wheels

3M™ Flange Adaptor No. 3

- Use with 6" wheels.
- Reduces 1" inside diameter cores, flanges or wheels to fit shafts smaller than 1".

Size: ODxD	UPC	Min./Case
1" x 1/2"	048011-09152-5	*E 1 Pair
1" x 5/8"	048011-09153-2	*E 1 Pair
1" x 3/4"	048011-09154-9	*E 1 Pair

3M™ Flange Adaptor No. 5

- Use with 6" wheels.
- Telescoping wheel adaptors 1" and 1/2" wide to reduce 1" wheel cores to fit 5/8".
- Must be used with side flanges.



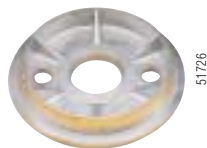
Size: ODxD	UPC	Min./Case
1" x 1/2" x 1/2"	048011-16859-3	*E 1 Pair
1" x 1" x 1/2"	048011-16860-9	*E 1 Pair

Abrasives

Accessories — Wheels (cont.)

3M™ Flange Adaptor No. 356/365

- Use with 8" wheels.
- Reduces wheel cores and internal diameters to fit smaller shaft sizes.
- Spun aluminum with taper locking feature to automatically center the flange inside the core of the wheel.
- Range of sizes.



Size: DxW	UPC	Min./Case
No. 356 — Use with wheels that are 1" or 2" wide		
3" x 1/2"	048011-03896-4 *E	1
3" x 5/8"	048011-03897-1 *E	1
3" x 1-1/4"	048011-03900-8 *E	1
No. 365 — Use with wheels that are 1/2" wide		
3" x 1/2"	048011-18410-4 *E	1
3" x 5/8"	048011-18411-1 *E	1
3" x 1-1/4"	048011-18415-9 *E	1

Flap Wheels

3M™ Mounted Flap Wheels 244E

- Aluminum oxide — XE wt. Cloth.
- General purpose.
- Consistent finish and uniform cut.
- Can be shaped to fit any contour.
- Available with 1/4" straight or 1/4"-20 threaded shank.



Size: DxWxShank	Grade	Maximum RPM	UPC	Min./Case
T83 Mounted — 1/4" straight				
1" x 1" x 1/4"	60	30,000	051144-35475-7 *E	10
	80	30,000	051144-35476-4 *E	10
	120	30,000	051144-35477-1 *E	10
1" x 1" x 1/4"	60	30,000	051144-35475-7 *E	10
	80	30,000	051144-35476-4 *E	10
	120	30,000	051144-35477-1 *E	10
1-1/2" x 1/2" x 1/4"	60	25,000	051144-96808-4 *E	10
	80	25,000	051144-96809-1 *E	10
	120	25,000	051144-96810-7 *E	10

3M™ Mounted Flap Wheels 244E (cont.)

Size: DxWxShank	Grade	Maximum RPM	UPC	Min./Case
2" x 1" x 1/4"	60	25,000	051144-14623-9 *E	10
	80	25,000	051144-14624-6 *E	10
	120	25,000	051144-14625-3 *E	10
2-1/2" x 1" x 1/4"	60	23,000	051111-49626-8 *E	10
	80	23,000	051144-14640-6 *E	10
	120	23,000	051144-14641-3 *E	10
3" x 1/2" x 1/4"	60	20,000	051144-14643-7 *E	10
	80	20,000	051144-14644-4 *E	10
	120	20,000	051144-14645-1 *E	10
3" x 1" x 1/4"	60	20,000	051144-14655-0 *E	10
	80	20,000	051144-14656-7 *E	10
	120	20,000	051144-14657-4 *E	10



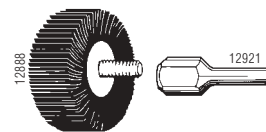
T84 Mounted — 1/4"-20 thread

1" x 1" x 1/4"-20	60	30,000	051144-35467-2 *E	10
	80	30,000	051144-35468-9 *E	10
	120	30,000	051144-35469-6 *E	10
1-1/2" x 1" x 1/4"-20	60	25,000	051111-49627-5 *E	10
	80	25,000	051144-35465-8 *E	10
	120	25,000	051111-49700-5 *E	10
2" x 1" x 1/4"-20	60	25,000	051144-14575-1 *E	10
	80	25,000	051144-14576-8 *E	10
	120	25,000	051144-14577-5 *E	10
2-1/2" x 1" x 1/4"-20	60	23,000	051144-14591-1 *E	10
	80	23,000	051144-14592-8 *E	10
	120	23,000	051144-14593-5 *E	10
3" x 1/2" x 1/4"-20	60	20,000	051144-96882-4 *E	10
	80	20,000	051144-96883-1 *E	10
	120	20,000	051144-96884-8 *E	10
3" x 1" x 1/4"-20	60	20,000	051144-14607-9 *E	10
	80	20,000	051144-14608-6 *E	10
	120	20,000	051144-14609-3 *E	10

Accessories — Flap Wheels

3M™ Wheel Adaptor No. 81A

- Use with 3M™ Mounted Flap Wheels 244E, T48.
- 1/4" diameter shank and a 1/4"-20 internal thread acceptor end.



Size: Shaft Dia.	UPC	Min./Case
1/4"	051144-45081-7 *E	1

* = Standard Stock Item E = Express Plus Item

Bench Area Products

3M™ Radial Bristle Brushes, T-A

- Excellent replacement for wire brushes — no flying wires.
- Use on bench motors for general purpose cleaning applications.
- Very strong and flexible.
- More aggressive than the T-C model.
- Comes complete with adapters for multiple shaft sizes. (1/2", 5/8", 3/4", 7/8", 1", 2")
- Maximum RPM: 10,000



159129

Size: DxW	Grade/Color	UPC		Min./Case
6" x 1/2"	36 – Dark Brown	048011-27603-8	*E	5
	50 – Green	048011-27605-2	*E	5
	80 – Yellow	048011-27606-9	*E	5

3M™ Radial Bristle Brushes, T-C

- Uniform finish even around protrusions, detail grooves, patterns and other hard to reach areas.
- Maximum RPM: 10,000

Size: DxW	Grade/Color	UPC		Min./Case
6" x 1/2"	80 – Yellow	048011-33215-4	*	5
	120 – White	048011-33212-3	*	5
	220 – Red	048011-33213-0	*	5
	400 – Blue	048011-33214-7	*	5
	6 micron – Peach	048011-33216-1	*	5
	1 micron – Lt. Green	048011-33217-8	*	5

3M™ Roloc™ Radial Bristle Discs

- Flexible bristles conform to the part and clean without removing base material, reducing damage and rework.
- Unique bristle pattern reaches tight or awkward areas such as grooves and along 90° angles.
- Remove adhesive, paint and other coatings, discoloration, heavy oxides, and surface contaminants.
- Deburr and blend.
- Clean and prepare surfaces before and after welding.



14394

Size: Dia.	Grade	Maximum RPM	UPC		Min./Case
3"	50	25,000	048011-24276-7	*	40
	80	25,000	048011-24277-4	*	40
	120	25,000	048011-24278-1	*	40

3M™ Bristle Discs

- High maximum operating speed for most right angle tools.
- Removes paint, stains, adhesives, weld burns, rust, heavy oxides, and surface contaminants from large areas.
- Features 3M™ Cubitron™ Abrasive Grain.
- Available in three grades.
- Includes backup pad with 5/8"–11 interface.

Size: Dia.	Grade	Maximum RPM	UPC		Min./Case
4-1/2"	50	12,000	048011-24241-5	*E	5
	80	12,000	048011-24242-2	*E	5
	120	12,000	048011-24243-9	*E	5

3M™ Cartridge Rolls 241D, Full Taper

- Aluminum oxide — X wt. Cloth.
- General purpose.
- Use with screw-type mandrels.
- Maximum RPM: 24,000



51754

Size: DxLxCH	Grade	UPC		Min./Case
3/8" x 1" x 1/8"	P60	051144-97239-5	E	50/200
	P80	051144-97240-1	E	50/200
	P120	051144-97242-5	E	50/200
	P180	051144-97244-9	E	50/200
3/8" x 1-1/2" x 1/8"	P60	051144-97248-7	E	50/200
	P80	051144-97249-4	E	50/200
	P120	051144-97251-7	E	50/200
1/2" x 1" x 1/8"	P60	051144-97257-9	E	50/200
	P120	051144-97259-3	E	50/200
1/2" x 1-1/2" x 1/8"	P60	051144-14034-3	E	50/200
	P80	051144-14033-6	E	50/200
	P120	051144-14032-9	E	50/200
	P180	051144-97267-8	E	50/200

Scotch-Brite™ Stars

- Use for polishing I.D.'s of pipe and tubing.
- Conformable construction.
- Variety of sizes.
- Use with 3M™ Mandrel No. 944.



51751

Size: Dia.	Grade	Maximum RPM	UPC		Min./Case
1-1/2"	A VFN	24,000	048011-13800-8	*E	100
	A CRS	24,000	048011-13370-6	*E	100
2"	A VFN	24,000	048011-13803-9	*E	100
	A CRS	24,000	048011-13371-3	*E	100
3"	A VFN	18,000	048011-13802-2	*E	50
	A CRS	18,000	048011-13372-0	*E	50
4"	A VFN	18,000	048011-13804-6	*E	50
	A CRS	18,000	048011-13373-7	*E	50

Abrasives

3M™ Square Pads 241D

- Ideal for fast grind-blending on channels, fillets, corners or spotting on flat surfaces.
- Corners gradually wear down, maintaining constant exposure of fresh abrasive.



14447

Size: LxWxCH	Grade	UPC		Min./ Case
2" x 2" x 1/2"	80	051144-97709-3	E	50/100
	120	051144-97710-9	E	50/100
2" x 2" x 3/8"	60	051144-97711-6	E	50/100
	80	051144-97712-3	E	50/100
	120	051144-97713-0	E	50/100
2-1/2" x 2-1/2" x 3/8"	80	051144-97716-1	E	50/100
2-1/2" x 2-1/2" x 1/2"	60	051144-97717-8	E	50/100
	80	051144-97718-5	E	50/100
3" x 3" x 1/4"	60	051144-97721-5	E	50/100
	80	051144-97722-2	E	50/100
	120	051144-97723-9	E	50/100
3" x 3" x 3/8"	60	051144-97719-2	E	50/100
	80	051144-97720-8	E	50/100

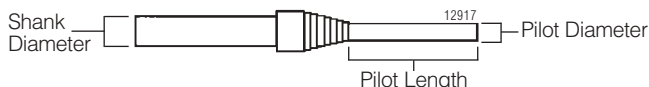
Accessories — Bench Area Products

3M™ Mandrels, Screw-Type

- Screw-type mandrels for securing 3M cartridge rolls to tool.
- 1/4" shank diameter.



51755



Size: Pilot D x Pilot L x Shank D	UPC		Min./ Case
1/8" x 1" x 1/4"	051144-45119-7	*E	1

Maximum Operating RPMs

24,000 RPM: 1/2" and smaller cartridge roll diameter.
16,000 RPM: 5/8"-3/4" cartridge roll diameter.

3M™ Mandrel No. 944

- Use with Scotch-Brite™ Stars.
- 1/4"-20 external thread.



51746

Size:	Maximum RPM	UPC		Min./ Case
1/4" shank	25,100	048011-13928-9	*E	1

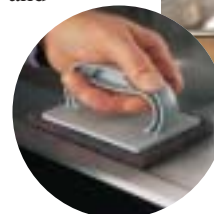
Hand Pads

Scotch-Brite™ Hand Pads

- Excellent products for hand finishing and cleaning.
- Ideal for paint prep and general cleaning.



144371



14469

Size: WxL	Cat. No.	Color/ Grade	UPC	Min./ Case
6" x 9"	7440	Tan A MED	048011-04050-9	*E 40
		White F SFN	048011-16976-7	* 60
6" x 9"	7446	Gray S MED	048011-04051-6	*E 40
6" x 9"	7447	Maroon A VFN	048011-04029-5	*E 60
6" x 9"	7448	Light Gray S ULF	048011-04028-8	*E 60

Accessories — Hand Pads

Scotch-Brite™ Pad Holder No. 961

- Use with Scotch-Brite hand pads or roll material cut to 4" x 6".
- Provides increased leverage and eliminates "finger" marks.



51766

Size: WxL	UPC		Min./Case
3-1/2" x 4-3/4"	048011-09493-4	*E	10

Surface Conditioning Products

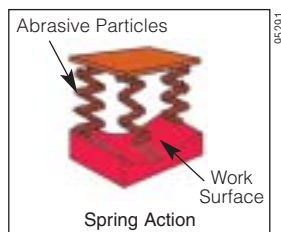
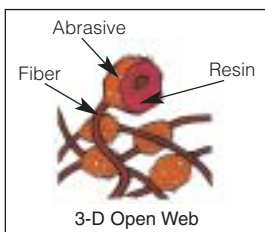
● Scotch-Brite™ Products

3M™ Scotch-Brite™ Surface conditioning products are built from three basic components: mineral, resin, and fiber. They are comprised of synthetic fibers and abrasive particles, bonded together to form a material that conforms to flat or irregular surfaces and gets into hard-to-reach areas. Scotch-Brite products produce high quality and consistent finishes, along with safe operating conditions.

Synthetic fibers and abrasive particles are combined and bonded to form the conformable, three-dimensional, open-web materials which make up surface conditioning products. Surface conditioning is an operation that modifies the surface of a workpiece without removing or damaging the base material.

Customers benefit from using Scotch-Brite surface conditioning products over other products. The exceptional performance characteristics of open-web technology have been demonstrated time after time in countless factories and shops.

- Controlled abrasive action helps prevent undercutting or gouging, so there is less chance of disturbing critical tolerances.
- Fresh abrasive is continually exposed to the work surface to deliver consistent, uniform results and to provide long product life.
- Uniform, close-tolerance construction results in smooth-running wheels, reducing operator fatigue.
- The open web allows air to circulate for cool operation so there is less risk of warping or discoloring the part.
- The open web is non-loading to provide a consistent surface preparation and finishing action and long product life.
- Conformable action of the web allows the wheels to follow contours and edges and to maintain uniform contact with the surface.
- Synthetic fibers eliminate the danger of loose flying wires commonly associated with wire brushes.



● Applications

Scotch-Brite surface conditioning products can be used for a wide variety of application, including deburring, cleaning, blending, and finishing. They are quick and efficient while maintaining dimensional integrity and improving surface quality. The products speed up jobs, yield consistent results, and help minimize production costs.



● Construction

There are a number of variables to consider when selecting Scotch-Brite surface conditioning products, including size, density, mineral type, and grade. The sequence of size parameters is critical. Dimensions should always be indicated as follows:

- Cleaning Brushes (Bonded) Diameter x Width x Core Size
- Cleaning Brushes (Bolt-Thru) Diameter x Width x Center Hole
Number of Keyways, Placement,
Keyway Size (Width x Depth)
- Flap Brushes Diameter x Width x Center Hole
- Discs Diameter x Center Hole
- Sheets/Rolls/Belts Width x Length
- Unitized Wheels Diameter x Width x Center Hole
- Cup Wheels Diameter x Shank Size
- Wheels Diameter x Width x Core Size
- Bristle Discs Diameter x Trim x Grade



Density

Density is the hardness of the product. The density is represented by a number ranging from 2 to 9. The higher the number, the harder the product. Softer products (2–5) are used for decorative finishing. They conform more readily to the surface contours and generate a more uniform finish. Harder products (6–9) are used for more difficult cleaning and deburring applications.

Mineral

The mineral type refers to the abrasive media found in the product. Mineral types are aluminum oxide (A), silicon carbide (S), flint (F), garnet (G), and talc (T).

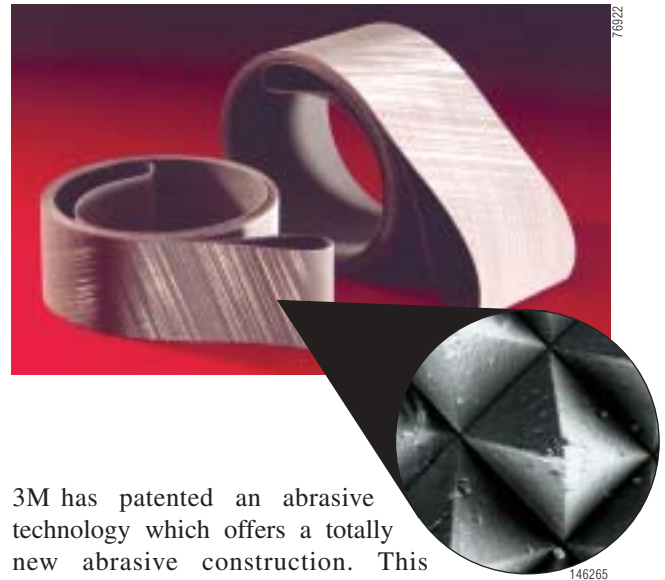
Grade

Product grade refers to aggressiveness as it relates to the size of the abrasive mineral. Grades are represented by a three-letter code and consist of the following: extra coarse (XCS), coarse (CRS), medium (MED), fine (FIN), very fine (VFN), super fine (SFN), and ultra fine (ULF).

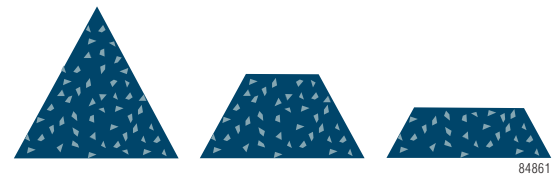
● Markets

The proper conditioning of a surface plays a critical role in manufacturing products as diverse as delicate medical instruments and jet airplane wings. Industries such as metal fabrication, plastic manufacturing, and woodworking depend upon surface conditioning products that can produce parts and materials within critical tolerances.

3M™ Trizact™ Abrasives



3M has patented an abrasive technology which offers a totally new abrasive construction. This construction involves an advanced technology called microreplication, which offers unprecedented consistency and precision to the abrasive surface. These types of abrasives are known as *Trizact abrasives*. And they have enabled the metalworking industry to achieve new levels of quality, longevity, cut rate, efficiency, and economy. Trizact abrasives are likely to provide abrasive benefits to a wide variety of market applications beyond metalworking.



3M™ Trizact™ Abrasives have three-dimensional structures containing multiple layers of abrasive mineral. As these pyramid-like structures wear, fresh, sharp mineral is exposed.

Lubricants

Grinding operations often require the use of lubricants. Primarily, lubricants reduce heat and improve cooling and remove swarf — the fragments generated during the grinding operation. They also help ensure a quality finish in certain metalworking applications. Following are some common lubricants and their specific uses.

● Water

Water is the most common lubricant used in a grinding operation. Water will carry away more heat than any other coolant. It is highly effective on glass, ceramic, and thermoplastics when over-heating would result in cracking or melting of the workpiece. The amount of water may vary from an air-water mist to a heavy flood, depending on the operation.

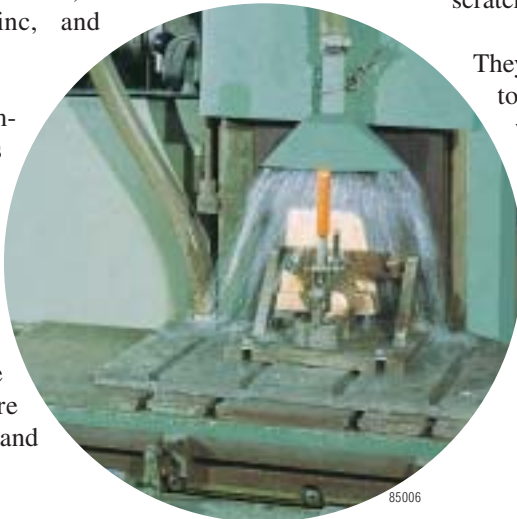
● Water Solutions

Another common lubricant is a water solution which includes water mixed with one or several chemical additives. These chemical additives include wetting agents and rust inhibitors. Water solutions are effective for swarf and heat removal. They are generally used for all metals.

● Soluble Oil

A soluble oil is an emulsifying oil which forms an emulsion when added to water. The resulting mixture is milky or creamy white. Soluble oils are formulated for grinding and finishing materials such as aluminum, stainless steel, carbon steel, nickel alloys, titanium, zinc, and aluminum die cast.

Soluble oils are commonly used in ratios from one part oil to 10 to 60 parts water. They are used with waterproof constructions. They are very popular to use because they radically reduce the possibility of fire and smoke hazards, and they improve cooling.



● Straight Mineral Oil

Commercial mineral oils are often used because they are stable and do not react with or stain the workpiece. They are better than soluble oil for grinding steel but not as effective as blended cutting oils. Straight mineral oils are used when other cutting oils would cause a discoloration to alloys of copper, brass, nickel, or bronze.

● Sulfurized and Chlorinated Cutting Oils

Sulfurized and chlorinated cutting oils are composed of 50% — and sometimes more — of mineral oil plus additives. The sulfur is bonded to a fatty oil to make a sulfur base that is then added to the mineral oil. Additives such as sulfur and chlorine are effective at belt speeds as high as 8,000 S.F.P.M.

Metallic oxide and metallic film lubrication are formed from sulfurized and chlorinated cutting oils in the presence of heat generated during a cut. These coatings provide a low shear strength film which aids lubrication and also prevents the freshly cut metal from welding to the abrasive grain. Antiweld agents are particularly effective when grinding austenitic stainless steels, which have a tendency to gall and reweld in machining operations.

● Grease Sticks

Grease sticks are used to improve the finish by filling the space between the abrasive granules. This reduces grain penetration, and is done to fine finish grades to reduce the scratch of new belts.

They also inhibit loading because they provide a base to which materials such as aluminum and solder will not firmly adhere. Grease stick application is followed by applications of solvent to maintain a free cutting surface.

Finally, grease sticks reduce grinding heat. The application of grease sticks to the belt surface reduces the surface temperature of the part being finished or polished. This reduces streaking and “orange peel,” providing a more uniform finish.

Abrasives General Information

Contact Wheels

In order to obtain maximum productivity from an abrasive belt, it is necessary to choose the appropriate contact wheel. The determining factors are hardness, the pattern of serration, and the size of the wheel itself. Following are guidelines for choosing the appropriate contact wheel.

● General Guidelines

Hard Contact Wheel

A hard contact wheel will cut at a faster rate and for a greater period of time than a soft wheel. It is best to choose as hard a wheel as is compatible with the shape of the workpiece and finish requirements. Hard wheels (80 to 100 durometer) can be used most effectively where stock removal is the important consideration, usually for coarse and medium grades of coated abrasives.

Soft Contact Wheel

A soft contact wheel improves finish, reduces scratch depth, and creates a more uniform surface. Soft rubber or cloth composition wheels are used for grinding contoured surfaces where conformability is required.

Serrated Wheel

Serrated wheels increase the rate of cut and use the belt more completely. They are particularly effective for grinding surfaces where belt failure is due to dulling. Serrated wheels are available in a variety of slotting patterns.

A good beginning recommendation is a standard 45° scoop serration which has a 1/2" land and groove. If belt failure is due to dulling, better results will be obtained by using a narrower land and wider groove, such as a 3/8" land and a 3/4" groove pattern. If belt failure is due to grain loss, a wider land and narrower groove is indicated.

Reducing Contact Wheel Diameter

Reducing the contact wheel diameter increases the depth of scratch. Small diameter wheels should be used where the shape of the workpiece requires the smaller diameter. For general purpose work, a 14" diameter wheel is most satisfactory.

Increasing Contact Wheel Diameter

Increasing the contact wheel diameter increases the ability of the belt to conform to contoured shapes.



● Specific Recommendations

The following chart highlights common situations and recommended wheel solutions.

Typical Situation	Wheel Recommendations
Belt Dulling Prematurely	Use a greater groove-to-land ratio. Use a narrow land (i.e., 3/8" to 1/4"). Use a wheel of greater hardness.
Belt Losing Grain Prematurely	Reduce groove-to-land ratio. Use a wider land. If wheel is below 50 durometer, use a harder wheel if the surface contour permits.
Deep Scratches	Reduce groove-to-land ratio. Use a wider land. Reduce wheel hardness. (Note: Scratch can very often be reduced by increasing speed or using a finer grade abrasive.)
Failure to Generate Contour	Reduce wheel hardness. Increase groove-to-land ratio. (Note: Conformability will improve by reducing belt speed and, depending on product, by supplying a softer flex abrasive.)

● Idler

The backstand idler is available with either a 4" or 8" wide balanced pulley. With a 9" diameter pulley and a 10" x 12" base, the idler requires only a small area for installation. The idler is placed behind a lathe that is equipped with a contact wheel. The combination, along with the proper abrasive belt, makes an efficient tool for grinding and finishing at a minimum cost to the user.

Storage

In order to achieve uniform, trouble-free operation, it is extremely important to store and handle coated abrasive products in the manner recommended by the manufacturer. The following guidelines pertain to recommended conditions for proper storage of coated abrasive products.



● Effects of Changes in Relative Humidity

The following effects caused by change in relative humidity will be noted:

- As relative humidity increases, total cut and rates of cut decrease. This ranges from 50%–100% with glue-type bonds, and less than 10%–25% with resin products.

- As relative humidity increases or decreases, coated abrasive products experience dimensional change. The backing changes more than the adhesive bond, causing cupping. High humidity leads to concave cupping, while low humidity causes convex cupping. An item with a fulflex will cup less.

- High relative humidity will cause a softening of the backing, which may lead to creasing or premature mineral loss. Low relative humidity is the major cause of all brittleness complaints. Low moisture content reduces the toughness and tear resistance of backing materials.
- Low relative humidity greatly decreases the flexibility of sheet goods, particularly Wetordry™ abrasives and other paper products. The shift from high summer relative humidity to low relative humidity, such as that found in the heated buildings of winter, creates radical changes in handling characteristics of sheet goods.
- Conditioning takes time. If moisture content is to be raised, it should be done slowly. Overnight periods in most cases, or even longer periods in some cases, are required to reach equilibrium. It is better to prevent low humidity problems by planning ahead with storage under the most desirable conditions available in a plant or area.
- Proper storage and pre-conditioning become increasingly important with additional belt width. It is recommended belts be removed from containers at least 24 hours before use and stored on racks in the area in which the belt is to be used.

● Temperature and Humidity

Temperature and humidity are the two factors which most affect abrasives in storage. Relative humidity is defined as the ratio of the amount of water in the air to what the air could hold at the temperature of observation. Relative humidity is the most important factor to consider in properly storing coated abrasives.

On the other hand, if temperature extremes are avoided, coated abrasives are affected only slightly. It is recommended that coated abrasives be stored at a temperature of 60°–80°F at a relative humidity of 35%–50%. In general, coated abrasives will have their best life and cutting rates at the lowest relative humidity that allows satisfactory handling.

● Changes in Relative Humidity

Changes and variation in relative humidity create more problems than storage at too high or too low a humidity figure. Coated abrasive products are often used across a wide range of humidity conditions. These circumstances are utilized to make product recommendations.

Problems and complaints for storage and handling arise when there is a shift in relative humidity. This can occur indoors at the beginning of the heating season when relative humidity can fall to 10%–15%. The other extreme occurs after a period of prolonged rain or dampness when humidity persists at 80%–90% and over.

Abrasives General Information

Safety

● General Safety Guidelines

Working with abrasive products and machinery can be hazardous to both operators and bystanders. If an abrasive belt breaks in operation, there can be serious injury to the eyes, the face, or other parts of the body not protected by adequate equipment. Grinding sparks and dust particles can also cause serious injury by contact or inhalation.

Always read and follow the instructions for use on all products and machinery before beginning work. Always use appropriate protective glasses, face shields, and body protection. Do not exceed maximum operating RPM of machinery. Use the guards provided with machines. Finally, follow all safety operation procedures posted in work areas. In addition, the following specific safety guidelines should be followed.

● Personal Protective Equipment

Always wear impact-resistant protective glasses and full face shield when involved in or near grinding operations. In addition, always wear safety shoes, arm guards, leather gloves, and aprons.

● Abrasive Belt Equipment Precautions

Always observe the safety recommendations supplied by the manufacturer of your grinder. Never run an abrasive belt or an unfamiliar machine without obtaining and following instructions.

Safe Operating Inspection

Always begin work with an inspection for safe operating conditions, as follows:

- The abrasive belt, idler assembly, and contact wheel should be enclosed within a sheet metal hood to confine flying sparks, grinding dust, and fumes, and to provide protection if a belt should break. An adjustable deflector should be installed within 1/4" of the working surface of the abrasive belt.
- An adequate exhaust system should be used, preferably employing two ducts, one at the grinding area and the other at the idler pulley.

- Additional precautions may be necessary for grinding materials that are flammable or have other hazardous properties. Consult manufacturers of such materials for instructions on grinding and handling.

Use a workpiece fixture whenever possible; the fixture holds the workpiece more securely and affords some protection if the workpiece jams.

Final Check

Make a final check of the following before beginning:

- The grinder spindle for run-out (or wobble).
- The contact wheel for balance, face trueness, and run-out. Make certain the spindle speed of the grinder does not exceed the maximum RPM marked on the wheel.
- The idler pulley spindle for run-out and balance.

● Abrasive Belt Precautions and Use

The following precautions should be regarded concerning the operation of abrasive belts:

- Store abrasive belts prior to use at 35%–50% relative humidity and 60°–80°F.
- Never use an abrasive belt with a nicked or cut edge, a crease, or handling damage.

To begin using the belt, take note of the following guidelines:

- If the belt is not bi-directional, there will be an arrow on the back. The belt should be installed with the arrow running in the direction of the wheel.
- Make sure the abrasive belt fully covers the face of the contact wheel. A partially uncovered contact wheel face will cause snagging and throwing of the workpiece.
- Jog the machine to start abrasive belt tracking. A sudden full power start could cause the belt to track off the machine.
- Check the sound of the running abrasive belt. If a ticking sound or bumping noise occurs, stop the machine and check for possible belt or machine damage.



Safety cont.

Workpiece Placement, Stroke, Speed, and Tension

Present the workpiece to the abrasive belt below the horizontal center line of the contact wheel. Above this line, the workpiece will chatter, and is difficult to hold, with the possibility that the workpiece could be pulled away and cause injury to the operator or the bystanders.

Always use an upward stroke to present the workpiece to the abrasive belt. This method both improves the cutting and increases safety by drawing the hands away from the abrasive belt.

Check with the abrasive belt supplier for information on speeds to be used with varying types of material being ground.

Finally, too much tension can break the belt. Adjust belt tension to the minimum sufficient to ensure good contact with the drive and idler pulley so that the belt will track properly under both start-up and grinding conditions.



● Portable Disc Grinder Equipment Precautions

The following precautions should be observed regarding portable disc equipment usage:

- Never grind without a proper backup pad.
- Never use a backup pad with a Maximum Operating Speed (MOS) lower than the tool speed.
- Never use another grinding disc as a backup pad.
- Never use a disc larger than the diameter specified by the grinder manufacturer.
- Never use a backup pad without first inspecting it for signs of irregularities such as fractures, excessive wear, and nicks and cuts at the edges or in the center hole. Check the pad for concentricity. Use only a pad with marked maximum RPM, and never exceed that maximum RPM.
- If the grinder is equipped with a safety guard, use it. Check the spindle for wobble. Observe all safety recommendations which were supplied by the manufacturer of the grinder.
- Check the disc retainer nut for thread wear. Also check for snug fit and full three-thread contact, except when using quick change or non-wrench systems.

● Grinding Discs and Methods

The following precautions should be observed regarding grinding discs:

- Never use discs which are abnormally curled. Abnormally curled discs indicate improper storage. As with belts, you should store discs prior to use at 35%–50% relative humidity and 60°–80°F.
- Never use discs with nicks, cuts, or tears at the edge or in the center hole.
- Never use a disc that overhangs the backup pad by more than 1/4". Some discs are manufactured with an irregular periphery. The overhang should not exceed 1/4" at the smallest radius.
- Always ease the disc onto the workpiece. Start the grinder just off the workpiece and begin grinding immediately. Operate the grinder with the disc and pad inclined approximately 5°–10° from the work surface. Grind depressions, moldings, lips, and heavy welds with the grinder moving away from the work area, and not into it. Do not store or rest the grinder on the disc and pad.
- Direct grinding sparks downward and away from the face and body. Do not grind near flammable material.
- Always grind in well-ventilated areas and avoid inhalation of dust particles.

Joining Products Selection Guides

Joining

Bonding • Mounting • Attaching • Stiffening • Skinning

For Bonding Stainless Steel To:	3M™ VHB™ Tapes Replace spot welding, rivets, screws and mechanical fasteners.
Most Metals	4611 Series
Most Plastics (not PP or PE)	4941 Series 5952 Series
Painted Metals	5952 Series
Glass	4941 Series with Silane Primer

	3M™ Scotch-Weld™ Structural Adhesives Replace spot welding, rivets, screws and mechanical fasteners. Load bearing adhesives available in Duo-Pak cartridges for low volume assembly and 5 or 10 gallon containers for high volume assembly.
No Surface Preparation	Scotch-Weld™ Acrylic Adhesives 805, 810 or 820
Surface Preparation	Scotch-Weld™ Epoxy Adhesives 420 or 460
Heat Cured System	Scotch-Weld™ Epoxy Adhesive, One-Part 2214 Series

Application Profiles

Form and Assemble, Replacing Welds

- Food Service Equipment . . . 52
- Assembling Storage Tank Fittings and Manways 58
- Scullery Sinks 60

Adhesive Tapes

3M™ VHB™ Tapes

Pressure sensitive adhesive systems on a roll, formulated to have high holding power.

Product Number	Thickness w/o Liner Mils (mm)	Color	Description	Adhesive	Temp. Resist		Solvent Resistance	Relative Adhesion		Application Ideas	Liner
					Min/ Hrs	Days/ Wks		HSE	LSE		
4926	15 (0.4)	Dark Gray	<ul style="list-style-type: none"> Dark gray closed-cell acrylic foam carrier. Conformable. Good adhesion to many painted metals. Plasticizer resistant. UL 746C. 	Acrylic	300°F (149°C)	200°F (93°C)	High	High	Med.	Bond pre-painted metals in truck assembly. Bond acrylic signage applique to metal.	A
4936	25 (0.64)	Dark Gray									A
4936F	25 (0.64)	Dark Gray									B
4941	45 (1.1)	Dark Gray									A
4941F	45 (1.1)	Dark Gray									D
4956	62 (1.6)	Dark Gray									A
4956F	62 (1.6)	Dark Gray									B
4919F	25 (0.64)	Black									A
4947F	45 (1.1)	Black									A
4979F	62 (1.6)	Black									B
5925	25 (0.64)	Dark Gray	<ul style="list-style-type: none"> Gray closed-cell acrylic foam carrier. Conformable. Good adhesion to many painted surfaces including powder coated paint. UL 746C. 	Synthetic	300°F (149°C)	200°F (93°C)	High	High	Med.	Bond trim caps to polycarbonate and acrylic channel letters. Bond and seal polycarbonate viewing windows to painted electrical enclosures. Bond aluminum diamond plate platform to powder coating in scissor lift manufacturing.	D
5952	45 (1.1)	Dark Gray									D
5962	62 (1.6)	Dark Gray									
4611	45 (1.1)	Dark Gray	<ul style="list-style-type: none"> Dark gray closed-cell acrylic foam carrier. High temperature resistance. UL 746C. 	Acrylic	450°F (232°C)	300°F (149°C)	High	High	Low	Pre-powder coat paint applications; steel hat channel stiffeners to steel skin prior to painting. Stainless steel skin to steel frame in food service equipment. Bond aluminum skin to steel support of trucks, vans and ambulances.	D
4646	25 (0.64)	Dark Gray									D
4645	62 (1.6)	Dark Gray									D
4943F	45 (1.1)	Gray	<ul style="list-style-type: none"> Gray conformable foam carrier. Apply as low as 32°F (0°C). 	Acrylic	300°F (149°C)	200°F (93°C)	High	High	Low	Bond cellular phone antennas. Bond automatic toll tags to vehicles.	C
4957F	62 (1.6)	Gray									C

NOTE: Technical information and data provided here should be considered representative or typical only, and should not be used for specification purposes. User should evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of application.

Liner Types:

A — 3 mil 54# Densified Kraft Paper
 B — 5 mil Clear Polyethylene Film
 C — 2 mil Polyester Film

D — 5 mil Red Polyethylene Film
 E — 4 mil 58# Polycoated Kraft Paper
 F — 4 mil Green Polyethylene Film

Relative Adhesion:

HSE — High Surface Energy
 LSE — Low Surface Energy



Joining

Structural Adhesives

3M™ Scotch-Weld™ Structural Adhesives

Load-bearing formulations for metals, rubber, glass and more.

As an alternative to mechanical or fusion fastening, the reasons for Scotch-Weld Adhesives are many: greater design latitude, cleaner lines, material substitution, less machining, lighter weight, more durability, and often less cost.

Whatever properties you need — durable adhesion, flexibility, creep resistance, heat and environmental resistance, void-filling — you'll likely find a Scotch-Weld product to meet your requirements and expectations.

3M also develops dispensing systems to facilitate production in low and high volume assembly. Many two-part 3M formulations are available in Duo-Pak cartridges for dispensing with a manual or pneumatic 3M™ EPX™ Applicator.



Bicycle Frame Assembly

3M™ Scotch-Weld™ Epoxy Adhesive DP-420 bonds steel couplings into aluminum tubing of the frame. Couplings are threaded for easy assembly and disassembly. The toughened epoxy bonds for the long run in high stress areas.



3M™ Scotch-Weld™ Adhesives in Duo-Pak Cartridges

Product (Color) ⁽¹⁾	Features	Mix Ratio (Volume) B:A	Approx. Viscosity 75°F (24°C) CPS	Approx. Worklife at 75°F (24°C)	Average T-Peel ⁽⁴⁾ at 75°F (24°C) PIW	Overlap Shear Strength ⁽⁵⁾ PSI			
						-67°F (-55°C)	75°F (24°C)	180°F (82°C)	250°F (121°C)
DP-420 Off-White	<ul style="list-style-type: none"> • Medium worklife toughened epoxy. • 1–2 hrs. handling strength. • High performance. 	2:1	45,000	20 Min.	50	4500	4500	450	200
DP-420 Black	<ul style="list-style-type: none"> • Black version of DP-420 Off-White. • Tough, durable structural bonds. 	2:1	22,500	15 Min.	50	4500	4500	1200	570
DP-460 Off-White	<ul style="list-style-type: none"> • Long worklife toughened epoxy. • 2–4 hrs. handling strength. • Meets MIL-A-23941A. 	2:1	45,000	60 Min.	60	4500	4500	700	200
DP-460NS Off-White	<ul style="list-style-type: none"> • Non-sag version of DP-460. • Heat curable. • High performance. 	2:1	125,000	60 Min.	60	4900	4650	1360	420
DP-805 Lt. Yellow	<ul style="list-style-type: none"> • High peel and shear strength. • Bonds slightly oily material. • High temperature performance. • Excellent plastic adhesion. 	1:1	110,000	4 Min.	35	2500	3500	2200	200 ⁽⁶⁾
DP-810 Tan	<ul style="list-style-type: none"> • Bonds many metals and plastics without surface preparation. • Extremely fast strength build-up. • Fully cured in 6 hours. 	1:1	20,000	8–10 Min.	30	1200	4200	500	300 ⁽⁶⁾
DP-810NS Tan	<ul style="list-style-type: none"> • Non-sag version of DP-810 • Excellent metal bonds. • High peel/shear strength. 	1:1	90,000	8–10 Min.	30	1200	4200	500	300 ⁽⁶⁾
DP-820 Yellow	<ul style="list-style-type: none"> • High peel and shear strength. • Bonds slightly oily material. • Medium worklife. 	1:1	60,000	15–20 Min.	22	3100	3150	1900	1450 ⁽⁶⁾

NOTE: Technical information and data provided here should be considered representative or typical only, and should not be used for specification purposes.

- (1) Color is mixed if two-part product.
- (2) Brookfield viscometer viscosity values are typical values for the mixed product.
- (3) Time during which adhesive will adequately wet-out on a substrate.

- (4) 180° peel tested on .030" aluminum per ASTM D 1876-61T.
- (5) Tested per ASTM D 1002-64.
- (6) Tested at 200°F (93°C).

3M™ Scotch-Weld™ Epoxy Adhesives, One-Part

Product (Color) ⁽¹⁾	Features	Viscosity	Optimum Cure			Average ⁽¹⁾ T-Peel at 75°F (24°C)	Overlap Shear Strength ⁽²⁾ PSI				
			Time (Min.)	Temp	Pressure (PSI)		-67°F (-55°C)	75°F (24°C)	180°F (82°C)	250°F (121°C)	350°F (177°C)
2214 Regular Gray	<ul style="list-style-type: none"> Aluminum filled heat curing (250°F, 121°C) structural adhesive. Paste consistency. Can bond metals, glass and many plastics. 	Paste	60	250°F (121°C)	10 psi	5 (Alum.) 50 (Steel)	3000	4500	4500	1500	400
2214 Hi-Density Gray	<ul style="list-style-type: none"> Similar to 2214 Regular Adhesive but deaerated and formulated to provide dense, void-free bond lines. 	Paste	60	250°F (121°C)	10 psi	5 (Alum.) 50 (Steel)	3000	4500	4500	1700	400
2214 Hi-Temp Original Gray	<ul style="list-style-type: none"> Provides outstanding performance at elevated temperatures. Excellent sag control. 	Paste	60	250°F (121°C)	10 psi	2 (Alum.) 5 (Steel)	2000	2000	3000	2500	900
2214 Hi-Temp New Formula Gray	<ul style="list-style-type: none"> Version of 2214 Hi-Temp Adhesive with exceptional performance at elevated temperatures. Excellent performance under high temperature and humidity conditions. Resists attack by hot ethylene glycol. 	Paste	60	250°F (121°C)	10 psi	5 (Alum.) 5 (Steel)	2800	2800	2500	2000	1200
2214 Hi-Flex Gray	<ul style="list-style-type: none"> Similar to 2214 Regular Adhesive but deaerated and formulated to provide bonds featuring outstanding shock resistance. 	Paste	60	250°F (121°C)	10 psi	10 (Alum.) 65 (Steel)	2500	4000	2000	450	250
2214 Non-Metallic Filled Cream	<ul style="list-style-type: none"> Cream colored, non-metallic version of 2214 Regular Adhesive. Suggested for electrical applications where insulating qualities are desired. 	Paste	60	250°F (121°C)	10 psi	7 (Alum.) 12 (Steel)	3000	4000	4500	1500	400

NOTE: Technical information and data provided here should be considered representative or typical only, and should not be used for specification purposes.

(1) Tested per ASTM D 1876-61T.
(2) Tested per ASTM D 1002-64.



880004

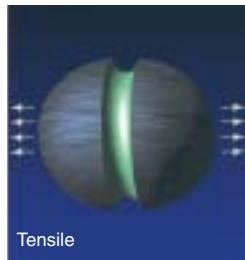
Benefits of Adhesive Technology

● Stress Resistance, Simplification, Economy and More

One of the primary benefits of adhesive is that it holds something together resisting the stress trying to pull it apart. **Most applications combine stresses.**

Tensile Stress

Tensile stress is exerted equally over the entire joint straight and away from the adhesive bond.



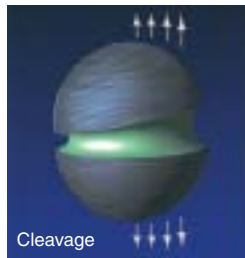
Shear Stress

Shear stress is across the adhesive bond. The bonded materials are being forced to slide over each other.



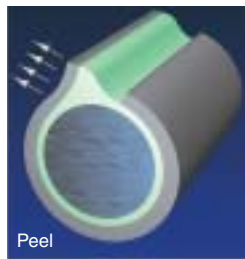
Cleavage Stress

Cleavage stress is concentrated at one edge and exerts a prying force on the bond.



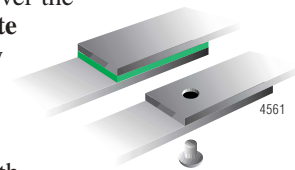
Peel Stress

Peel stress is concentrated along a thin line at the bond's edge. One surface is flexible.



The following six points elaborate on the advantages of using adhesives for stress resistance and more.

1. Uniform distribution of stress over the entire bonded area can **eliminate stress concentration** caused by rivets, spot welds, and similar mechanical fastening. Lighter, thinner materials can often be used without sacrificing strength.
2. Bonding laminates of **dissimilar materials** can produce combinations superior in strength and performance to either adherent alone. Adhesive flexibility compensates for differences in coefficients of expansion.
3. Elastomeric flexibility **improves resistance to vibration fatigue**.



4. Holes are eliminated **maintaining the integrity** of the bonded material. This can reduce finishing and increase design flexibility.
5. **Continuous contact** between mating surfaces can effectively **bond and seal** against many environmental conditions.
6. **Costs can be lowered** by reducing material requirements and weight, eliminating drilling, welding, screwing, and similar operations.

● Choice of 3M Structural or Non-structural Formulations

To meet requirements for stress resistance, specific substrates, application efficiency and cost, 3M offers a wide range of easy-to-use adhesives in handy sizes with practical dispensing systems.

Structural adhesives bond the load-bearing parts of a product. Usually these are metal, but wood, glass and rigid plastics can also be structurally bonded.

Non-structural adhesives bond materials for insulation, cushioning and paneling, rubber, plastic, fabric, leather, wood, cardboard, and other substrates used in non load-bearing applications.

Application Profiles

Protect from Mild Weld Spatter

- Storage Tank Heads 53
- Storage Tank Shells from Pre-finished Sheets 54
- Storage Tank Shells from 2B Mill Finish Sheets 55
- Assembling Storage Tank Fittings and Manways. 58
- Storage Tank Assembly 59

Masking

Protecting Surfaces • Paint Masking

When choosing a tape for your application, consider:

- Time** — The time the tape will stay on the surface.
- Temp** — The temperatures the tape will see.
- Surface** — The surface to which you're adhering the tape.
- Conditions** — Other conditions, such as exposure to UV, acids, or primers.

Good Starting Points:	Masking Tapes
Surface Protection During Welding, Grinding, and Deburring	Scotch® Performance Flatback Tape 2525 Scotch® High Temperature Masking Tape 2693 Scotch® Premium High Temperature Masking Tape 2393 Scotch® Performance Masking Tape 2380

Good Starting Points:	High Temperature	Medium Temperature
Paint Masking	Scotch® High Temperature Masking Tape 2693 Scotch® Premium High Temperature Masking Tape 2393 Scotch® Performance Masking Tape 2380	Scotch® Performance Masking Tape 233+
Fine Line Paint Masking	Scotch® High Temperature Fine Line Tape 4737S	Scotch® Fine Line Tape 215

Masking

Masking Tapes

Scotch® Fine Line Tape 215

- Very conformable film backed tape.
- Low profile to achieve excellent paint lines on highly contoured surfaces.
- Resists lifting around corners or in depressed areas.
- Ideal for masking over rivets.
- Smooth film backing allows taping over freshly cured acrylic lacquer paint jobs sooner with less chance of imprint damage.
- Tape will give excellent color line separation due to its thinness.
- Will withstand a bake cycle of up to 250°F (121°C) for 40 minutes.



Size: WxL	UPC	Rolls Per Case
1/4" x 60 yds.	021200-60831-5	144
1/2" x 60 yds.	021200-60832-2	72
3/4" x 60 yds.	021200-60753-0	48
1" x 60 yds.	021200-60833-9	36

Scotch® Performance Masking Tape 233+

- High performance crepe paper masking tape for most paint masking applications.
- Excellent transfer resistance to "difficult to remove from" surfaces.
- Better than conventional masking tapes for sunlight resistance. It is still advised that it not be subjected to outdoor exposure or prolonged periods of sunlight. The tape may become difficult to remove.
- Found to remove cleanly at bake temperatures of up to 250°F (121°C) for 30 minutes.



Size:WxL	UPC	Rolls Per Case
3 mm x 55 m	021200-44543-9	144
6 mm x 55 m	051131-26330-7	96
12 mm x 55 m	051131-26332-1	48
18 mm x 55 m	051131-26334-5	48
24 mm x 55 m	051131-26336-9	24
36 mm x 55 m	051131-26338-3	16
48 mm x 55 m	051131-26340-6	12
72 mm x 55 m	051131-26341-3	8
96 mm x 55 m	021200-44608-5	8
144 mm x 55 m	021200-44611-5	4

Scotch® Premium High Temperature Masking Tape 2393

- Smooth, heavy-duty, mini-crepe high temperature masking tape.
- Specifically designed for applications where easy removal after bake is important.
- Will withstand a bake cycle of up to 325°F (163°C) for 30 minutes.
- Can be left on job for an extended period of time and still remove cleanly.
- Backing strength allows tape to be removed pulling through modern tough paints.
- Should not be subjected to outdoor exposure or prolonged exposure to sunlight. Tape may become very difficult to remove.



Size:WxL	UPC	Rolls Per Case
24 mm x 55 m	021200-71302-6	36
36 mm x 55 m	021200-71303-3	24
48 mm x 55 m	021200-71304-0	24

Scotch® Performance Flatback Tape 2525

- High performance, flatback paper tape for use in masking applications where high adhesion strength, high temperature capability and high backing strength are required.
- Will withstand a bake cycle of up to 300°F (149°C) for 1 hour.
- Great for protecting surfaces from mild spatter during welding operations.
- Should not be subjected to outdoor exposure or prolonged exposure to sunlight. Tape may become very difficult to remove.



Size:WxL	UPC	Rolls Per Case
18 mm x 55 m	021200-55566-4	48
24 mm x 55 m	021200-55567-1	36
36 mm x 55 m	021200-55564-0	24
48 mm x 55 m	021200-55563-3	24
72 mm x 55 m	021200-55562-6	12
100 mm x 55 m	021200-55565-7	8

Masking

Scotch® Performance Masking Tape 2380

- Smooth, strong, mini-crepe paper masking tape suitable for most paint masking applications.
- For industrial use where a good paint line is desired and drying conditions range from air dry to oven bake.
- Has been tested on painted steel panels and found to remove cleanly at bake temperatures up to 325°F (163°C) for 30 minutes.
- Unique balance of adhesive and backing provides a high degree of resistance to tearing and slivering on removal.
- Should not be subjected to outdoor exposure or prolonged exposure to sunlight. Tape may become very difficult to remove.



Size:WxL	UPC	Rolls Per Case
6 mm x 55 m	021200-44586-6	144
12 mm x 55 m	021200-44585-9	72
18 mm x 55 m	021200-44584-2	48
24 mm x 55 m	021200-44583-5	36
36 mm x 55 m	021200-44582-8	24
48 mm x 55 m	021200-44581-1	24
72 mm x 55 m	021200-44580-4	12
100 mm x 55 m	021200-44579-8	8

Scotch® High Temperature Fine Line Tape 4737S

- High temperature masking tape for applications where critical paint break lines are required.
- Ideal as a paint maskant for metal surfaces.
- Will withstand bake cycles of up to 325°F (163°C) for 1 hour.
- Smooth trimmed edges and thin structure give a continuous paint line with outstanding color separation.
- Should not be subjected to outdoor exposure or prolonged exposure to sunlight. Tape may become very difficult to remove.
- Solid blue color.



Size: WxL	UPC	Rolls Per Case
1/4" x 36 yds.	021200-72213-4	144
3/8" x 36 yds.	021200-72214-1	96
1/2" x 36 yds.	021200-72215-8	72
3/4" x 36 yds.	021200-72216-5	48
1" x 36 yds.	021200-72173-1	36
2" x 36 yds.	021200-73886-9	24

Scotch® High Temperature Masking Tape 2693

- Smooth, heavy-duty, mini-crepe paper masking tape suitable for most paint masking applications.
- Designed for applications where very aggressive room temperature and high temperature holding is required.
- Can be removed warm or cold from most surfaces without adhesive transfer.
- Found to remove cleanly at bake temperatures of up to 325°F (163°C) for 30 minutes.
- Should not be subjected to outdoor exposure or prolonged exposure to sunlight. Tape may become very difficult to remove.



Size:WxL	UPC	Rolls Per Case
6 mm x 55 m	021200-44558-3	144
12 mm x 55 m	021200-44557-6	72
18 mm x 55 m	021200-42974-3	48
24 mm x 55 m	021200-37629-0	36
36 mm x 55 m	021200-41121-2	24
48 mm x 55 m	021200-37630-6	24
72 mm x 55 m	021200-42979-8	12
100 mm x 55 m	021200-44556-9	8

Surface Protection Selection Guide

Surface Protection

Protects Surfaces from: Scratching • Marring • Chipping

3M™ Protective Tapes

When choosing a protective tape, consider your specific application requirements:

- Conformability
- Adhesion Level
- Environment/UV Exposure
- Break Strength
- Stretch
- Abrasion Resistance/Film Thickness

Surface Finish	Protective Tape Thickness			
	2.5 mil	3.0 mil	4.0 mil	3.0 mil Outdoor UV
#8 Mirrored Chrome	N/A	3105	4112	31U23CUV
304—#2B Stainless Steel	25A26	3126	4126	3W26X
304—#3 Stainless Steel	25A25	3125	4125	3W25X
430 Bright Annealed Stainless Steel	25A10	3110	4112	31U23CUV
Aluminum — Clear Anodized	25A25	3125	4125	3W25X
Bronzed, Brushed or Satin	25A29	3187	4187	3W29X
Mill Polish	25A25	3125	4125	3W25X

NOTE: If tape is applied by hand, a more aggressive adhesive may be necessary. For assistance on choosing the right tape for your application, contact PolyMask Corporation* technical service at 1-800-624-4772, ext. 133 or 153.

Type of Surface	3M™ Clean-Walk Mats
Concrete and Smooth Surfaces	Clean-Walk Unframed Mat 5830
Carpeted Surfaces	Clean-Walk Framed Mat 5840

Application Profiles

Protect Surfaces After Finishing

- o Food Service Equipment . . . 52
- o Storage Tanks 59

* Polymask Corporation is a joint venture of 3M and Sealed Air Corporation and is marketed and sold by 3M.

Surface Protection

3M™ Protective Tapes

These tapes provide temporary protection from scratching, marring and chipping during production, assembly transportation and installation. They offer excellent abrasion resistance and conformability. For the protection of metals surfaces, both 2.5 and 3.0 mil tapes are typical. When more abrasion resistance is warranted, 4.0 mil tapes should be considered.



12800

Product Number	Thickness (Mils)	Description*	UV Resistance	Adhesion	Application
25A10	2.5	Co-extruded polyethylene tape	—	Low-tack adhesive	Use on 430 bright annealed stainless steel.
25A25	2.5	Co-extruded polyethylene tape	—	Medium-tack adhesive	Use on 304-#3; mill polished stainless steel and clear anodized aluminum.
25A26	2.5	Co-extruded polyethylene tape	—	Medium-tack adhesive	Use on 304-#2B stainless steel.
25A29	2.5	Co-extruded polyethylene tape	—	Medium-tack adhesive	Use on bronzed, brushed or satin finishes.
3105	3.0	Polyethylene tape	—	Very low-tack adhesive	Use on #8 mirrored chrome stainless steel.
3110	3.0	Polyethylene tape	—	Very low-tack adhesive	Use on 430 bright annealed stainless steel.
3125	3.0	Polyethylene tape	—	Medium-tack adhesive	Use on 304-#3; mill polished stainless steel and clear anodized aluminum.
3126	3.0	Polyethylene tape	—	Medium-tack adhesive	Use on 304-2B stainless steel.
3187	3.0	Polyethylene tape	—	High-tack adhesive	Use on bronzed, brushed or satin finishes.
31U23CUV	3.0	Polyethylene tape — available in widths from 1/2" up to 48".	Up to 3 months	Low-tack adhesive	Use on #8 mirrored chrome and 430 bright annealed stainless steel.
3W25X	3.0	Co-extruded polyethylene tape	Up to 6 months	Medium-tack adhesive	Use on 304-#3; mill polished stainless steel.
3W26X	3.0	Co-extruded polyethylene tape	Up to 6 months	Medium-tack adhesive	Use on 304-#2B stainless steel.
3W29X	3.0	Co-extruded polyethylene tape	Up to 6 months	Medium-tack adhesive	Use on bronzed, brushed or satin finishes.
4112	4.0	Polyethylene tape	—	Low-tack adhesive	Enhanced surface protection on #8 mirrored chrome and 430 bright annealed stainless steel.
4125	4.0	Polyethylene tape	—	Medium-tack adhesive	Enhanced surface protection on 304-#3; mill polished stainless steel and clear anodized aluminum.
4126	4.0	Polyethylene tape	—	Medium-tack adhesive	Enhanced surface protection on 304-2B stainless steel.
4187	4.0	Polyethylene tape	—	High-tack adhesive	Enhanced surface protection on bronzed, brushed or satin finishes.

* Available in widths from 1/2" up to 72", unless otherwise noted. Roll length is dependent on roll width. Colors are available on select products. For more information regarding availability, colors, minimums and pricing, contact PolyMask Corporation customer service at 1-800-241-2031.

Surface Protection

3M™ Clean-Walk Mats

These mats feature a multi-sheeted adhesive system that captures dirt on contact from shoe soles, wheels and other passing objects. Great everywhere...in shops, manufacturing facilities and warehouses. Reduces dirt passed between high-traffic office and production areas.



3M™ Clean-Walk Mats reduce contaminants passed between high traffic office and production areas:

- Multi-sheeted adhesive mat holds dirt securely.
- Tabbed and numbered sheets remove easily.
- Numbered sheets identify remaining applications.
- Protects and preserves floor and carpeted surface from passing contaminants.

3M™ Clean-Walk Mat 5830

- Unframed mat with adhesive backing for concrete and most smooth surfaces.
- Low profile construction — 1.2 mil sheets mounted to a thin (2.0 mil) flexible base.
- Clear sheets on thin white base.
- Available in three sizes.



Size:WxL	Color Sheets/Base	Sheets/Mat	Min./Case
18" x 36"	Clear/White	30	4
18" x 45"	Clear/White	30	4
25" x 45"	Clear/White	30	4

3M™ Clean-Walk Mat 5840

- Non-skid polystyrene backing on framed mats make them ideal for carpeted surfaces.
- Extends the life of carpets and other floor surfaces.
- Low profile construction — 1.2 mil sheets mounted to 1/8" hard plastic frame.
- White pad on white or black frame.
- Reusable frame — simply adhere a new replacement pad.



Size:LxW	Color Pad/Frame	Sheets/Pad	Min./Case
31.5" x 25.5"	White/White	60	1
(pad & frame)	White/Black	60	1

Replacement Pad — 5842

Size:LxW	Product	Color	Sheets/Pad	Min./Case
30" x 24"	5842	White	60	2



3M™ Protective Tape offers temporary protection from scratching, marring and chipping during production, assembly transportation and installation.

Packaging Selection Guide

Packaging

Shipping • Box Sealing • Bundling • Reinforcing

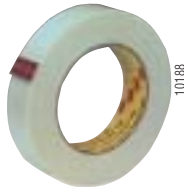
	3M™ Packaging Products
Box Sealing (regular slotted carton)	<p>Scotch® Filament Tape 896</p> <p>Scotch® Box Sealing Tapes 313, 355, 375</p>
Box Sealing L-Clips	<p>Scotch® Filament Tape 8988</p> <p>Scotch® Reinforced Strapping Tape 8651</p> <p>Scotch® Premium Transparent Film Tape 600</p> <p>Scotch® Transparent Film Tape 605</p>
Bundling	<p>Scotch® Reinforced Strapping Tape 862</p>
Reinforcing	<p>Scotch® Reinforced Strapping Tape 8651</p>

Packaging

Box Sealing — Regular Slotted Carton

Scotch® Filament Tape 896

- High performance.
- White polypropylene backing for printing.
- Reinforced with continuous glass filaments.
- Nick resistant.
- 240 lb/inch width tensile strength with good initial adhesion and high shear strength.
- Low stretch for handling ease.



Size: WxL	Color	UPC	Rolls/Case
9 mm x 55 m	White	021200-39854-4	96
12 mm x 55 m	White	021200-39855-1	72
18 mm x 55 m	White	021200-39856-8	48
24 mm x 55 m	White	021200-39857-5	36

Scotch® Box Sealing Tape 313 — Clear

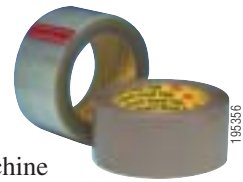
- Clear polypropylene tape with pressure-sensitive acrylic adhesive.
- Bonds instantly, holds through wide temperature swings.
- Resists UV light.
- Tensile strength of 35 lb/inch in machine direction; 56 lb/inch cross direction.



Size: WxL	Color	UPC	Rolls/Case
48 mm x 50 m	Clear	021200-42365-9	36
48 mm x 100 m	Clear	021200-42366-6	36
48 mm x 914 m	Clear	021200-42367-3	6
48 mm x 1500 m	Clear	021200-42469-4	6
72 mm x 50 m	Clear	021200-42369-7	24
72 mm x 100 m	Clear	021200-42370-3	24
72 mm x 914 m	Clear	021200-42371-0	4

Scotch® Box Sealing Tape 355

- Strong polyester tape to instantly seal double and triple walled corrugated cartons including those with high recycled content.
- Tensile strength of 67 lb/inch in machine direction; 69 lb/inch cross direction.
- Water resistant.
- Clear or tan.



Size: WxL	Color	UPC	Rolls/Case
36 mm x 50 m	Clear	021200-72329-2	48
48 mm x 50 m	Clear	021200-72330-8	36
72 mm x 50 m	Clear	021200-72331-5	24
72 mm x 914 m	Clear	021200-72333-9	2
36 mm x 50 m	Tan	051131-06650-2	48
72 mm x 50 m	Tan	021200-72327-8	24
72 mm x 914 m	Tan	021200-39567-3	2

Scotch® Box Sealing Tape 375

- Best performing polypropylene tape to seal heavy or highly recycled corrugated boxes.
- Rubber resin adhesive bonds with more than 12,000 minutes holding power to fiberboard.
- Tensile strength of 35 lb/inch in machine direction; 70 lb/inch cross direction.
- Clear or tan.



Size: WxL	Color	UPC	Rolls/Case
36 mm x 50 m	Clear	021200-72405-3	48
48 mm x 50 m	Clear	021200-72406-0	36
48 mm x 914 m	Clear	021200-72408-4	6
48 mm x 1500 m	Clear	021200-72410-7	3
72 mm x 50 m	Clear	021200-72407-7	24
72 mm x 914 m	Clear	021200-72409-1	4
48 mm x 50 m	Tan	021200-72401-5	36
48 mm x 914 m	Tan	021200-72403-9	6
72 mm x 50 m	Tan	021200-72402-2	24
72 mm x 914 m	Tan	021200-72404-6	4

Packaging

Box Sealing L-Clips

Scotch® Filament Tape 8988

- High performance.
- Polypropylene backing reinforced with continuous glass yarn along the length.
- 380 lb/inch width tensile strength.
- Instant adhesion for fast heavy-duty closure on fiberboard with high recycled content.



Size: WxL	Color	UPC	Rolls/Case
12 mm x 55 m	Clear	021200-40066-7	72
12 mm x 330 m	Clear	021200-42276-8	12
15 mm x 330 m	Clear	021200-42274-4	10
18 mm x 55 m	Clear	021200-40052-0	48
18 mm x 330 m	Clear	021200-42275-1	8
36 mm x 55 m	Clear	021200-40054-4	24

Scotch® Premium Transparent Film Tape 600

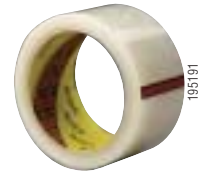
- Paklon™ Film.
- Acrylic adhesive.
- Long aging.
- UV resistant.
- Excellent for various inner pack applications.
- Highly transparent and long aging without yellowing.
- Easy to see/read through.
- Removes cleanly from fabric without leaving residue.
- Good dispensing properties.



Size: WxL	Color	UPC	Rolls/Case
Bulk			
1/2" x 72 yds.	Clear	051131-06679-3	72
1" x 72 yds.	Clear	051131-06681-6	36
1-1/2" x 72 yds.	Clear	051131-06682-3	24
2" x 72 yds.	Clear	051131-06683-0	24
Boxed			
1/2" x 72 yds.	Clear	051131-06821-6	72
3/4" x 72 yds.	Clear	021200-06943-7	48
1" x 72 yds.	Clear	021200-07463-9	36
1-1/2" x 72 yds.	Clear	021200-07464-6	24
2" x 72 yds.	Clear	021200-07465-3	24

Scotch® Transparent Film Tape 605

- Scotchpro™ polypropylene backing.
- Acrylic adhesive.
- Designed for various light-duty packaging applications.
- Attaching, mending, gift wrapping, holding.
- Offers good performance over broad temperature ranges.



Size: WxL	Color	UPC	Rolls/Case
3/8" x 72 yds.	Clear	021200-71359-0	96
1/2" x 72 yds.	Clear	021200-71360-6	72
3/4" x 72 yds.	Clear	021200-71361-3	48
1" x 72 yds.	Clear	021200-71362-0	36

Bundling

Scotch® Reinforced Strapping Tape 862

- General purpose.
- Polypropylene backing reinforced with continuous polypropylene ribbing.
- 120 lb/inch width tensile strength for light-duty strapping and bundling on metallic or fiberboard surfaces.
- Clear or black.



Size: WxL	Color	UPC	Rolls/Case
12 mm x 55 m	Black	021200-72061-1	72
18 mm x 55 m	Black	021200-72060-4	48
9 mm x 55 m	Clear	021200-71162-6	96
12 mm x 55 m	Clear	021200-88296-8	72
18 mm x 55 m	Clear	021200-88297-5	48
24 mm x 55 m	Clear	021200-88298-2	36
48 mm x 55 m	Clear	021200-73085-6	24

Reinforcing

Scotch® Reinforced Strapping Tape 8651

- High performance.
- Stiff polypropylene backing reinforced with polypropylene monofilaments.
- 175 lb/inch width tensile strength with high shear adhesive for L-clip closure of high recycled content fiberboard.



Size: WxL	Color	UPC	Rolls/Case
12 mm x 55 m	Clear	021200-42350-5	72
12 mm x 330 m	Clear	021200-42351-2	12
18 mm x 55 m	Clear	021200-42352-9	48
18 mm x 330m	Clear	021200-42354-3	12

Safety Selection Guide

Safety

Protecting Workers • Reducing Fatigue

	Welding	Grinding Operations
Disposable Respirators	<p>3M™ Particulate Respirator 8515, N95</p> <p>3M™ Particulate Respirators (Adjustable) 8512/8212, N95</p> <p>3M™ Particulate Respirators (plus Ozone) 8514/8214, N95</p>	<p>3M™ Particulate Respirator 8210, N95</p> <p>3M™ Particulate Respirator with Exhalation Valve 8511, N95</p>
Reusable Half Facepiece Respirators	<p>3M™ Half Facepiece Respirators 6000 Series Reusable</p>	
Powered Air/ Supplied Air Respirators	<p>See pages 44–45 for selecting a system.</p>	
Eye Protection	<p>3M™ Protective Eyewear 1700, 1710, 1720, 1730, 1740</p>	
Ear Protection	<p>3M™ Soft Foam Ear Plugs 1120, 1130, 1260, 1270, 1271, 1310</p> <p>3M™ Low Profile Ear Muffs 1425, 1440</p>	
Face Protection	<p>3M™ Face Shield Kit 1631</p>	
Anti-fatigue Matting	<p>3M™ Safety-Walk™ Cushion Matting 3600</p>	

Respirators



RESPIRATOR WARNING!

These respirators help protect against certain airborne contaminants. **Misuse may result in sickness or death.** For proper use, see your supervisor, or *User Instructions* or call 3M at 1-800-243-4630. In Canada, call Technical Service at 1-800-267-4414.

Welding Operations

3M™ Particulate Respirator 8515, N95



- Designed to help provide comfortable, reliable worker protection against airborne particulate contaminants in dusty operations.
- Features the 3M™ Cool Flow™ Exhalation Valve, cake-resistant media, and adjustable M-noseclip.
- Braided headband.

Workplace Applications:

- Welding
- Soldering
- Metal pouring
- Sanding
- Bagging
- Brazing
- Torch cutting
- Grinding
- Sweeping
- Other dusty/hot operations

UPC	Quantity Per Carton	Cartons Per Case	Quantity Per Case
051131-07189-1	10	8	80

3M™ Particulate Respirator 8512, N95



- Designed to help provide comfortable, reliable worker protection against airborne particulate contaminants in welding, brazing, metal pouring and cutting applications.
- Features the Cool Flow exhalation valve, cake-resistant media, adjustable noseclip.
- Fully adjustable straps provide a custom fit.
- Lightweight construction promotes greater worker comfort and acceptance and contributes to increased wear time.

Workplace Applications:

- Welding
- Soldering
- Metal pouring
- Sanding
- Bagging
- Brazing
- Torch cutting
- Grinding
- Sweeping
- Other dusty/hot operations

UPC	Quantity Per Carton	Cartons Per Case	Quantity Per Case
051138-66298-6	10	8	80

3M™ Particulate Respirator 8212, N95, with Faceseal



- Designed for applications such a welding, soldering and other operations where metal fumes may be present.
- Features the Cool Flow exhalation valve, cake-resistant media, and a comfortable faceseal.
- Fully adjustable straps provide a custom fit.

Workplace Applications:

- Welding
- Soldering
- Metal pouring
- Sanding
- Bagging
- Brazing
- Torch cutting
- Grinding
- Sweeping
- Other dusty/hot operations

UPC	Quantity Per Carton	Cartons Per Case	Quantity Per Case
051138-54141-0	10	8	80

3M™ Particulate Respirator 8514, N95, with Nuisance Level Organic Vapor Relief



- Designed for applications such as welding on stainless steel, aluminum, galvanized steel and other applications where ozone* and nuisance level organic vapors** may be present.
- Features the Cool Flow exhalation valve and cake-resistant media.
- Fully adjustable straps provide a custom fit.

UPC	Quantity Per Carton	Cartons Per Case	Quantity Per Case
051138-66299-3	10	8	80

3M™ Particulate Respirator 8214, N95, with Faceseal and Nuisance Level Organic Vapor Relief



- Designed for applications such as welding, soldering and other operations in which metal fumes may be present, including those with ozone* and nuisance level organic vapors**.
- Especially well-suited for foundry operations, lab settings, undercoating and petrochemical operations.
- Features the Cool Flow exhalation valve and cake-resistant media.
- Fully adjustable straps provide a custom fit.

UPC	Quantity Per Carton	Cartons Per Case	Quantity Per Case
051138-66192-7	10	8	80

* 3M recommended for ozone protection up to 10 times the OSHA PEL, or applicable government occupational exposure limits, whichever is lower.

** 3M recommended for relief from nuisance levels of organic vapors. Nuisance level organic vapor refers to concentrations not exceeding the OSHA PEL, or applicable government occupational exposure limits, whichever is lower.

Safety

3M™ Half Facepiece Respirators 6000 Series Reusable

- Use with 3M™ Filters 2000 Series against a variety of gases, vapors and particulate hazards according to NIOSH approvals.
- Low maintenance.
- Replaceable cartridges and filters.



Size	UPC	Product Number	Quantity Per Bag	Bags Per Case
Small	051131-07024-5	6100	1	24
Medium	051131-07025-2	6200	1	24
Large	051131-07026-9	6300	1	24

3M™ Particulate Filter 2091, P100

- NIOSH approved for environments containing certain oil and non-oil based particles.
- Use with 3M Half Facepiece Respirators 6000 Series.



UPC	Quantity Per Bag	Bags Per Case	Quantity Per Case
051131-07000-9	2	50	100

3M™ Particulate Filter 2096, P100, with Nuisance Level Acid Gas Relief

- NIOSH approved for environments containing certain oil and non-oil based particles.
- Protection from nuisance level acid gas.**
- Use with 3M Half Facepiece Respirators 6000 Series.



UPC	Quantity Per Bag	Bags Per Case	Quantity Per Case
051138-54295-0	2	50	100

** 3M recommended for relief from nuisance levels of organic vapors. Nuisance level organic vapor refers to concentrations not exceeding the OSHA PEL, or applicable government occupational exposure limits, whichever is lower.

Grinding Operations

3M™ Particulate Respirator 8210, N95

- Reliable worker protection against certain non-oil based particles during grinding, sanding, sweeping, bagging and other dusty operations.
- Features adjustable noseclip.



Workplace Applications:

- Grinding
- Sanding
- Sweeping
- Bagging
- Other dusty operations

UPC	Quantity Per Carton	Cartons Per Case	Quantity Per Case
051138-46457-3	20	8	160

3M™ Particulate Respirator 8511, N95

- Helps reduce exposure to particles during metal grinding as well as sanding on metal, particle board, dry-wall, non-lead paints, and fiberglass.
- Features 3M™ Cool Flow™ Exhalation Valve and adjustable M-noseclip.



UPC	Quantity Per Carton	Cartons Per Case	Quantity Per Case
051138-54343-8	10	8	80

Accessories — Respirators

3M™ Respirator Cleaning Wipe 504, Alcohol-Free, Individually Packaged

- Sanitary, alcohol-free cleaning wipes.
- Will not damage the facepiece material.
- 8"x10" folded, individually wrapped towelettes stored in a convenient box dispenser.



UPC	Quantity Per Box	Boxes Per Case	Quantity Per Case
051131-07065-8	100	5	500

Safety

Build the 3M™ Positive Pressure Respirator System That's Right for You

Step 1. Choose the 3M Headgear



L-705
Hardhat with Welding and Faceshield



L-905
Helmet with Welding and Faceshield



L-703
Hardhat with Welding Shield

Step 2. Add the 3M Breathing Tube



Breathing Tube L-122

Go to Step 3 on Page 45.

Positive Pressure Air Source

Both the powered-air and supplied-air systems:

- Deliver clean air through the back of the headgear over the head into the breathing zone.
- Create a positive airflow that can result in a higher level of respiratory protection.



OR



POWERED AIR

- Battery-operated, belt-mounted (or vehicle-mounted) blower filters the contaminated, work-site air and delivers it to the worker.
- Allows for greater worker mobility and offers the flexibility to work in a variety of environments.
- Full line of filters/cartridges available for a variety of applications.

SUPPLIED AIR

- Air pump or compressor system configured to deliver clean, filtered air through a supplied air hose.
- Air control devices allow workers to regulate the airflow, as well as cool or heat the air entering the headgear—ideal for working environments with uncomfortable temperatures.



POSITIVE PRESSURE RESPIRATOR WARNING!

Use of 3M™ Positive Pressure Respirators by untrained or unqualified persons, or use not in accordance with the instructions, may adversely affect product performance and result in sickness or death.

3M positive pressure respirators are to be used only by qualified persons properly trained in their use and maintenance, and only in accordance with their operating and maintenance manuals. Each person using these products must first read and understand the operator's manual. The 3M™ L-Series do not provide primary eye and face impact protection. For proper use, see your supervisor, or *User Instructions* or call 3M at 1-800-243-4630. In Canada, call Technical Service at 1-800-267-4414.

Step 3. Choose a Positive Pressure Air Source

FOR POWERED AIR *

OR

FOR SUPPLIED AIR *

A . Choose a PAPR System



GVP-1 Belt-Mounted Assembly

Includes: motor blower, battery pack, charger, flow meter, flow meter adapter, power cord, blower plugs and web belt.



GVP-CB Comfort Belt-Mounted Assembly

Includes: same as GVP-1, but with a comfort belt instead of a web belt.

Indicate belt size: S, M, L, XL or XXL. XXL fits waists up to 46 in. (116.8 cm).

B . Choose a Cartridge/Filter for the PAPR System



GVP-440
HEPA



GVP-441
Organic vapor/HEPA

A . Choose an Air Control Device

HIGH PRESSURE

LOW PRESSURE



Vortex Cooling Assembly V-100**

—allows worker to regulate the airflow and cool air by as much as 50°F (10°C).



Vortemp™ Heating Assembly V-200**

—allows worker to regulate the airflow and warm air by as much as 50°F (10°C).



Air Regulating Valve Assembly V-300**

—allows worker to regulate the airflow to the headgear.



Low Pressure Assembly V-400

—economical adapter regulates the airflow to the headgear.

B . Choose an Air Supply Hose for the Air Control Device

HIGH PRESSURE

LOW PRESSURE



W-9435**
Straight—25, 50 or 100 ft. (7.6, 15.2 or 30.5 m)



W-2929**
Coiled—25, 50 or 100 ft. (7.6, 15.2 or 30.5 m)



W-3020 (Low Pressure)
Straight—25, 50 or 100 ft. (7.6, 15.2 or 30.5 m)

3M™ Supplied Air Components (Optional)

Filter and Regulator Panel W-2806/07006

Filters and regulates air delivered to supplied air respirator. This is an economical system designed to be mounted to the wall.



Portable Compressed Air Filter and Regulator Panel 256-02-00

Four-stage filter process removes limited amounts of carbon monoxide and other contaminants without using large desiccant drying towers. This portable system comes in a durable carrying case.



* See *Positive Pressure Air Source* on page 44 for details.

** Also available with stainless steel fittings.

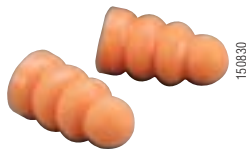
Hearing Protection

**HEARING PROTECTION
WARNING!**

These hearing protection products help reduce exposure to certain noises. To provide proper protection, the hearing protector should be (1) suitable for the job, (2) fitted properly, (3) worn during all times of exposure to noise and (4) replaced when damaged or otherwise necessary. For proper use, see your supervisor, or *User Instructions* or call 3M at 1-800-243-4630. In Canada, call Technical Service at 1-800-267-4414.

3M™ Soft Foam Ear Plug 1120

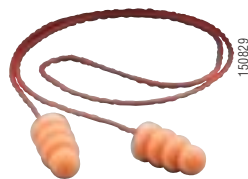
- Soft foam helps reduce pressure in the ear canal for improved comfort.
- Patented articulated shape for improved fit.
- Rolls down small for easier insertion and fit for small ear canals.
- Hypo-allergenic material.
- Bright orange color for visibility.
- Can be combined with ear muffs for additional protection.
- Noise Reduction Rating: 28dB.



UPC	Pairs Per Carton	Cartons Per Case	Pairs Per Case
051131-37062-8	200	5	1000

3M™ Soft Foam Ear Plug 1130, Corded

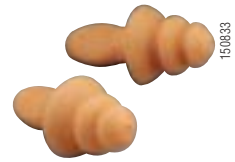
- Soft foam helps reduce pressure in the ear canal for improved comfort.
- Patented articulated shape for improved fit.
- Rolls down small for easier insertion and fit for small ear canals.
- Hypo-allergenic material.
- Bright orange color for visibility.
- Can be combined with ear muffs for additional protection.
- Soft braided polyester cord for convenience.
- Noise Reduction Rating: 28dB.



UPC	Pairs Per Carton	Cartons Per Case	Pairs Per Case
051131-37063-5	100	5	500

3M™ Reusable Ear Plug 1260, Uncorded

- Multi-flanged plugs fit securely in ear canal.
- Washable and reusable.
- Bright orange color for visibility.
- Noise Reduction Rating: 24dB.



UPC	Pairs Per Carton	Cartons Per Case	Pairs Per Case
051131-52845-6	100	5	500

3M™ Reusable Ear Plug 1270, Corded and 1271, with Carrying Case

- Multi-flanged plugs stay securely in ear canal.
- Soft, cloth cord keeps plugs clean and protected.
- Washable and reusable.
- Bright orange color for visibility.
- Model 1271 includes storage case.
- Noise Reduction Rating: 24dB.



UPC	Part Number	Pairs Per Carton	Cartons Per Case	Pairs Per Case
051131-52849-4	1270	100	5	500
Corded with Carrying Case				
051131-52850-0	1271	50	5	250

3M™ Banded Hearing Protector 1310

- Flexible band is easy to use and provides comfort for a wide range of head sizes.
- Replacement tips are designed for comfort and hygiene.
- Noise Reduction Rating: 20dB.



UPC	Part Number	Pairs Per Carton	Cartons Per Case	Pairs Per Case
051138-66003-6	1310	10	5	50
Replacement Pads				
051138-66004-3	1311	20	5	100

3M™ Low Profile Ear Muff 1425

- Economical, dependable, lightweight ear muffs ideal for everyday use.
- Ear cups are easy to adjust for customized fit.
- Recommended for moderately high noise situations (up to 95dBA TWA).
- Noise Reduction Rating: 22dB.



UPC	Pairs Per Sleeve	Sleeves Per Case
051138-76939-5	1	20

3M™ Ear Muff 1440

- Lightweight.
- Padded headband.
- Tension adjustment.
- Contoured ear cushion in multi-position ear cup gives excellent sound insulation.
- Replaceable cushions and molded noise suppression inserts.
- Noise Reduction Rating: 24dB.



UPC	Part Number	Pairs Per Sleeves	Sleeves Per Case
051138-29334-0	1440	1	20

3M™ Ear Muff Replacement Parts Kit 5842

Kit includes:
1 pair of ear cushions; 1 pair of molded noise suppression inserts.

UPC	Part Number	Kits Per Sleeves	Sleeves Per Case
051138-29342-5	1442	1	10

Protective Eyewear

3M™ Eye Protection

- Meets the requirements of ANSI Z87.1.
- Stylish wrap-around design helps provide side protection.
- Hard-coated, polycarbonate lenses offer 99% UV protection.

▲ PROTECTIVE EYEWEAR WARNING!

3M protective eyewear products help provide limited eye and face protection against flying particles. **Misuse or failure to follow warnings and instructions may result in serious personal injury, including blindness, or death.** For proper use, see supervisor, read instructions and warnings on the package, or call 3M OH&ESD Technical Service in the USA at 1-800-243-4630. In Canada, call 1-800-267-4414.

3M™ Visitor Specs 1611

- Eye protection for visitors and other short-term users.
- Can be worn alone or over prescription glasses.



UPC	Glasses Per Bag	Bags Per Carton	Cartons Per Case	Glasses Per Case
051131-37101-4	1	12	25	300

3M™ Protective Eyewear 1700, 1701, 1702

- Lightweight.
- Low profile frameless design.



UPC Description Product Number	Glasses Per Bag	Bags Per Carton	Cartons Per Case	Glasses Per Case
051131-37103-8 Black Frame/Clear Lens 1700	1	12	2	24
051138-76800-8 Smoke Frame/Smoke Lens 1701	1	12	2	24
051138-76801-5 Clear Frame/Clear Lens 1702	1	12	2	24

Protective Eyewear (cont.)

3M™ Protective Eyewear 1710, 1711, 1712

- Contemporary-styled frames.
- 4-position adjustable temples for fit.



UPC Description Product Number	Glasses Per Bag	Bags Per Carton	Cartons Per Case	Glasses Per Case
051131-37104-5 Black Frame/Clear Lens 1710	1	12	2	24
051138-76802-2 Blue Frame/Clear Lens 1711	1	12	2	24
051138-76803-9 Black Frame/Smoke Lens 1712	1	12	2	24

3M™ Protective Eyewear 1740, 1741, 1743

- Stylish, wrap-around lens.
- Comfortable and conformable.
- Offers 99% U.V. protection.
- Lightweight.
- Vinyl nose cushion enhances wearer comfort and fit.



UPC Description Product Number	Glasses Per Bag	Bags Per Carton	Cartons Per Case	Glasses Per Case
051131-37110-6 Black Frame/Clear Lens 1740	1	12	2	24
051131-37111-3 Black Frame/Mirrored Lens 1741	1	12	2	24
051131-37112-0 Black Frame/Amber Lens 1743	1	12	2	24

3M™ Protective Eyewear 1720, 1721, 1722, 1723

- Wrap-around design.
- Non-slip rubber head grip for added comfort.
- 5-position adjustable temple and a soft vinyl nose pad.



UPC Description Product Number	Glasses Per Bag	Bags Per Carton	Cartons Per Case	Glasses Per Case
051138-76804-6 Black Frame/Clear Lens 1720	1	12	2	24
051138-76805-3 Black Frame/Silver-Mirrored Lens 1721	1	12	2	24
051138-76806-0 Red, White, Blue Frame/Clear Lens 1722	1	12	2	24
051138-37109-0 Black Frame/Amber Lens 1723	1	12	2	24

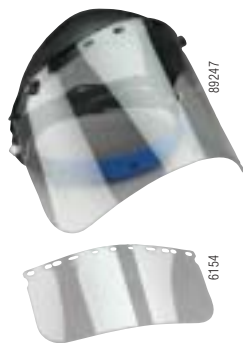
Face Protection

⚠ FACE SHIELD WARNING!

3M face protection products help provide limited eye and face protection against flying particles. **Misuse or failure to follow warnings and instructions may result in serious personal injury, including blindness, or death.** For proper use, see supervisor, read instructions and warnings on the package, or call 3M OH&ESD Technical Service in the USA at 1-800-243-4630. In Canada, call 1-800-267-4414.

3M™ Face Shield Kit 1631/37106(AAD)

- Helps provide additional protection of the face and eyes when protective eyewear is being worn.
- A cam-lock helps hold the face shield in place.
- Features a replaceable, polycarbonate lens for clear vision.
- Meets the requirements of ANSI Z87.1-1989.
- This face shield helps provide secondary face and eye protection only. Always wear primary eye protection appropriate to the hazard in addition to this face shield.
- This face shield helps provide limited face and eye protection against certain flying particles.
- Misuse may result in face and/or eye injury.



UPC	Product Number	Quantity Per Carton	Cartons Per Case	Quantity Per Case
051111-37106-9	1631	1	5	5

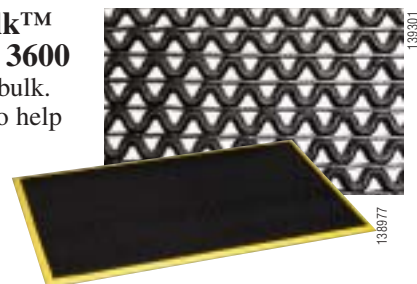
Replacement Lens

051111-37107-6	1632	10	1	10
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Matting

3M™ Safety-Walk™ Cushion Matting 3600

- More loft from less bulk.
- Necessary cushion to help reduce discomfort.
- Superior traction helps prevent slips and mat movement.
- Durable.
- Easy to move.
- Open construction allows water and small debris to pass through.
- Black mat with black or yellow beveled edging.



Size: LxW	Edging Color	UPC	Quantity Per Case
Beveled Edges			
2' x 35"	Yellow; 2 edges	048011-23477-4	4
	Black; 2 edges	048011-23479-8	4
2' x 38"	Yellow; 4 edges	048011-23478-1	4
	Black; 4 edges	048011-23480-4	4
5' x 35"	Yellow; 2 edges	048011-23481-1	1
	Black; 2 edges	048011-23483-5	1
5' x 38"	Yellow; 4 edges	048011-23482-8	1
	Black; 4 edges	048011-23484-2	1
No Edge			
2' x 35"	—	048011-23464-4	4
5' x 35"	—	048011-23465-1	1

Application Profiles

Clean Surfaces

- Food Service Equipment . . . 52
- Storage Tank Fittings and Manways 58
- Storage Tank Assembly . . . 59

After-Market Care of Stainless Steel

Scouring • Cleaning • Polishing

	3M Product
All Purpose Scouring	Scotch-Brite™ Power Pad No. 2000
Griddle Cleaning	Scotch-Brite™ Quick Clean Griddle Cleaning System
Cleaning and Polishing	3M™ Stainless Steel Cleaner and Polish

Scouring Pads

Scotch-Brite™ Power Pad No. 2000

- Ideal for stainless steel.
- Scours up to 4 times faster than conventional commercial scouring products.
- Scratches stainless steel surfaces up to 8 times less than other medium/heavy-duty commercial scouring products.
- Unique bow-tie shape.



221759

Size: WxL	Product Number	UPC	Pads Per Case
5.5" x 3.9"	2000	500-48011-23162-9	20
Bulk — 3 Boxes/Case			
5.5" x 3.9"	2000BP	500-48011-23379-1	3/20

Cleaner and Polish

3M™ Stainless Steel Cleaner and Polish

- Cleans and polishes surfaces to a high gloss.
- Wipes clean.
- Contains no harmful petroleum distillates.
- Authorized by USDA for use in federally inspected meat and poultry plants.



221761

Size: Net Wt.	UPC	Cans Per Case
21 oz. Aerosol	500-48011-26564-8	6
21 oz. Aerosol	500-48011-14002-0	12

Griddle Cleaning System

Scotch-Brite™ Quick Clean Griddle Cleaning System

- Typically cleans in half the time.*
- Powerful griddle cleaning liquid is safe for use on food contact surfaces.**
- Loosens and lifts carbonized grease and food soil upon contact on a hot griddle for easy removal.
- No strong chemical odors or irritating fumes.
- Does not contain caustic soda.



221756

Scotch-Brite™ Quick Clean Griddle System Starter Kit No. 710

- Each Kit Contains:
 - 10 packets Scotch-Brite™ Quick Clean Griddle Liquid No. 700;
 - 1 Scotch-Brite™ Multi-Purpose Pad Holder No. 405;
 - 10 Scotch-Brite™ Griddle Polishing Pads No. 46;
 - 1 Scotch-Brite™ Squeegee No. 410;
 - 1 product use video.

Scotch-Brite™ Quick Clean Griddle Liquid No. 700-40 and 701

- Available in pre-measured packets and quart bottles with graduated markings.

Scotch-Brite™ Griddle Polishing Pad No. 46

- Aggressive cleaning without scratching.
- Polishes while it cleans.

Scotch-Brite™ Multi-Purpose Pad Holder No. 405

- 16" handle reaches back of griddle for easy cleaning.
- Angled handle allows constant pressure and keeps hands away from heat and food soil.
- Holds variety of Scotch-Brite™ hand pads (including No. 46).

Scotch-Brite™ Squeegee No. 410

- Flexible, heat-resistant 7" rubber blade attached to long 17" handle helps to safely squeegee liquid residue into grease trap.

Description/Size	Product Number	UPC	Items Per Case
Starter Kit			
1 Box	710	500-48011-26414-6	1
Griddle Liquid			
3.2 oz. Packet	700-40	500-48011-29603-1	40
1 Quart Bottle	701	500-48011-26012-4	4
Polishing Pad			
LxW: 4" x 5.25"	46	500-48011-19970-7	3/20
Pad Holder			
Base: 4.7" x 2.8"	405	000-48011-34668-7	1
Handle: 16"			
Squeegee			
Base/Blade: 7.8"	410	500-48011-26013-1	1
Handle: 17"			




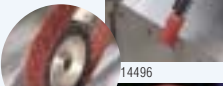







* Versus traditional griddle cleaning products such as grill bricks.

** All ingredients are on the FDA's "generally recognized as safe" (G.R.A.S.) list.

Application Profiles








Food Service — Restaurant Tables and Equipment

	Application	3M Products	Page
Step 1	Stamp/Punch Slots and Holes		
Step 2	Deburr Edges  58854	Right Angle Die Grinder ◦ Scotch-Brite™ Roloc™ EXL Unitized Wheels	15
Step 3	Form, Assemble and Weld  191272	Replace Spot Welds or Mechanical Fasteners ◦ 3M™ VHB™ Tapes	28
Step 4	Level Welds  14379  14496  179577	Die Grinder ◦ 3M™ Tapered Cartridge Roll	18
		Portable File Belt Machine ◦ 3M™ Belt 777F ◦ Scotch-Brite™ Surface Conditioning Belt	6–7 9
		Right Angle Grinder ◦ 3M™ Fibre Disc 785C ◦ 3M™ Roloc™ Disc 777F	10 12
Step 5	Blend and Finish  14396  159730  14499	Pneumatic Drum Sander ◦ Scotch-Brite™ Surface Conditioning Belt	9
		Straight Shaft Grinder ◦ Scotch-Brite™ Multi-Finishing Wheel ◦ Scotch-Brite™ Metal Finishing Unitized Wheel	16 15
		Offhand ◦ Scotch-Brite™ Hand Pad 7446, 7447	19
Step 6	Repair Handling Marks  51686	Stroke Sander ◦ Scotch-Brite™ LS Surface Conditioning Belt ◦ 3M™ Belt 747D	10 8
Step 7	Clean Surfaces  221781	3M™ Stainless Steel Cleaner and Polish	51
Step 8	Surface Protection  157287	3M™ Protective Tapes	36

Application Profiles








Stainless Steel Storage Tanks — Tank Heads

	Application		3M Products	Page
Step 1	Prep Edges for Weld		Right Angle Die Grinder ◦ 3M™ Fibre Discs 785C or 985C	10
			Straight Shaft Grinder ◦ Scotch-Brite™ Clean & Strip Discs	14
Step 2	Weld Plates		Protect from Weld Spattering ◦ Scotch® Masking Tapes 2525, 2693, 2393 or 2380	33–34
Step 3	Level Weld Seams		Right Angle Grinder ◦ 3M™ Fibre Discs 785C or 985C	10
			Walk Behind Abrasive Belt Grinder ◦ 3M™ Belts 777F or 779F — grades 50, 80, 120	6–7
Step 4	Form Tank Head			
Step 5	Grind Tank Head		Abrasive Belt Grinder ◦ 3M™ Belts 777F or 779F — grades 36, 50, 80	6–7
Step 6	Finish and Polish Tank Head		Abrasive Belt Grinder ◦ 3M™ Belts 777F or 779F — grades 80, 120	6–7
			◦ Scotch-Brite™ Surface Conditioning Belts	9
			◦ 3M™ Trizact™ Belt 237AA	8



Stainless Steel Storage Tanks — Shells: Pre-finished Sheets

	Application	3M Products	Page
Step 1	Cut to Length		
Step 2	Apply Protective Tape  178145	Protect from Weld Spattering <ul style="list-style-type: none"> ◦ Scotch® Masking Tapes 2525, 2693, 2393 or 2380 	33–34
Step 3	Weld Pre-finished Sheets		
Step 4	Level Weld Seams  511886	Walk-behind Abrasive Belt Grinder <ul style="list-style-type: none"> ◦ 3M™ Belts 977F or 967F — grades 50–80 	6, 8
Step 5	Blend Weld Seams  511886  95685	Walk-behind Abrasive Belt Grinder <ul style="list-style-type: none"> ◦ 3M™ Belts 777F or 977F — grades 120–150 ◦ 3M™ Trizact™ Belt 237AA — grade A 160 	6–7 8
Step 6	Finish Weld Seams  96783	Walk-behind Abrasive Belt Grinder <ul style="list-style-type: none"> ◦ Scotch-Brite™ Surface Conditioning Belts — grades A MED, A VFN 	9

Application Profiles






Stainless Steel Storage Tanks — Shells: 2B Mill Finish Sheets

	Application	3M Products	Page
Step 1	Cut to Length		
Step 2	Apply Protective Tape  178145	Protect from Weld Spattering <ul style="list-style-type: none"> ◦ Scotch® Masking Tapes 2525, 2693, 2393 or 2380 	33–34
Step 3	Weld Sheets		
Step 4	Level Weld Seams  51686	Walk-behind Abrasive Belt Grinder <ul style="list-style-type: none"> ◦ 3M™ Belts 977F or 967F — grades 50–80 	6, 8
Step 5	Blend Weld Seams  51686 95685	Walk-behind Abrasive Belt Grinder <ul style="list-style-type: none"> ◦ 3M™ Belts 777F or 977F — grades 120–150 ◦ 3M™ Trizact™ Belt 237AA — grade A 160 	6–7 8
Step 6	Finish Weld Seams  96783	Walk-behind Abrasive Belt Grinder <ul style="list-style-type: none"> ◦ Scotch-Brite™ Surface Conditioning Belts — grades A MED, A VFN 	9
Step 7	Polish Shell  51686 95685	Modified Swing Frame Grinder <ul style="list-style-type: none"> ◦ 3M™ Belts 977F or 777F — grade 80 ◦ 3M™ Belts 777F — grades 120/150 ◦ Scotch-Brite™ Surface Conditioning Belts — grades A MED, A VFN 	6–7 6–7 9
		3-Pulley Belt Grinder <ul style="list-style-type: none"> ◦ 3M™ Belts 777F or 977F — grade 80 <i>Satin Finish:</i> <ul style="list-style-type: none"> ◦ 3M™ Belts 777F — grades 120/150 ◦ Scotch-Brite™ Surface Conditioning Belts — grades A MED and A VFN <i>Pharmaceutical Finish:</i> <ul style="list-style-type: none"> ◦ 3M™ Trizact™ Belt 237AA — grades A100–A6 	6–7 6–7 9 8



Stainless Steel Storage Tanks — Shells: Plate Material

	Application	3M Products	Page
Step 1	Prep Edges for Welding 	Right Angle Grinder <ul style="list-style-type: none"> ◦ 3M™ Fibre Discs 785C or 985C — grades 36, 50 	10
		Straight Shaft Grinder <ul style="list-style-type: none"> ◦ Scotch-Brite™ Clean & Strip Discs 	14
Step 2	Weld Plates		
Step 3	Level Weld Seams 	Right Angle Grinder <ul style="list-style-type: none"> ◦ 3M™ Fibre Discs 785C or 985C — grade 50 	10
Step 4	Form Shell		
Step 5	Polish Shell 	Modified Swing Frame Grinder <ul style="list-style-type: none"> ◦ 3M™ Belts 977F — grades 50–80 	6
		<i>Satin Finish:</i> <ul style="list-style-type: none"> ◦ 3M™ Belts 777F — grade 120 ◦ Scotch-Brite™ Surface Conditioning Belts — grades A MED, A VFN 	6–7 9
		<i>Pharmaceutical Finish:</i> <ul style="list-style-type: none"> ◦ 3M™ Trizact™ Belt 237AA — grades A100–A6 	8

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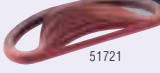
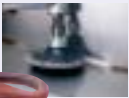

Stainless Steel Storage Tanks — Fittings and Manways

	Application	3M Products	Page
Step 1	<p>Polish OD of Tubings</p>	<p>Centerless</p> <p>#3 Finish:</p> <ul style="list-style-type: none"> 3M™ Belts 777F — grades 80/120 Scotch-Brite™ Surface Conditioning Belts — grade A MED 3M™ Belts 964F — grades 80/120/120 (wet) <p>#4 Finish:</p> <ul style="list-style-type: none"> 3M™ Belts 777F — grade 80/120 Scotch-Brite™ Surface Conditioning Belts — grade SFN 3M™ Belts 964F — grades 100/120/200 (wet) 	<p>6–7</p> <p>9</p> <p>8</p> <p>6–7</p> <p>9</p> <p>8</p>
Step 2	<p>Polish ID of Tubings</p>	<p>Straight Shaft Grinder</p> <ul style="list-style-type: none"> 3M™ Flap Wheels 244E — grades 80–180 Scotch-Brite™ Stars — grades A CRS, A VFN 	<p>17</p> <p>18</p>
Step 3	<p>Polish Fittings and Manways</p>	<p>Die Grinder</p> <ul style="list-style-type: none"> Scotch-Brite™ Metal Finishing Wheel — grade 5A MED Scotch-Brite™ Multi-Finishing Wheel — grades 2S CRS, 2S MED 	<p>16</p> <p>16</p>
		<p>Portable Abrasive Belt Grinder</p> <ul style="list-style-type: none"> 3M™ Belts 777F — grades 50–80 Scotch-Brite™ Surface Conditioning Belts — grades A CRS, A MED 	<p>6–7</p> <p>9</p>

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Stainless Steel Storage Tanks — Fitting and Manway Assembly



	Application	3M Products	Page
Step 1	Prep Surface for Weld  178577	Right Angle Grinder ◦ 3M™ Fibre Discs 785C or 985C — grades 50–80	10
Step 2	Weld Fittings and Manways		
Step 3	Tape Around Weld Areas  178145	Protecting Surfaces Around Weld During Grinding ◦ Scotch® Performance Flatback Tape 2525	33
Step 4	Level Weld Seams  51721  14447	Portable Tool ◦ 3M™ Square Pads — grade 50	19
		Portable Abrasive Belt Grinder ◦ 3M™ Belt 777F — grade 50	6–7
Step 5	Finish Weld Seams  51721  56854	Portable Abrasive Belt Grinder ◦ 3M™ Belt 777F — grade 120	6–7
		Right Angle Die Grinder ◦ Scotch-Brite™ Roloc™ EXL Unitized Wheels	15
Step 6	Remove Tape and Clean Surfaces  221761	3M™ Stainless Steel Cleaner and Polish	51






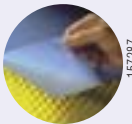
Fittings and Manways for Non-Pressurized Tanks

	Application	3M Products	Page
Step 1	Attach Fittings to Tank  38837	Replace Welds ◦ Scotch-Weld™ Epoxy Adhesives 420 or 460	29

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Stainless Steel Storage Tanks — Tank Head Assembly

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Step 1	Prep Surface for Weld  179577	Right Angle Grinder ◦ 3M™ Fibre Discs 785C or 985C — grades 50–80	10
Step 2	Weld Head to Shell		
Step 3	Tape Around Weld Areas  178145	Protecting Surfaces Around Weld During Grinding ◦ Scotch® Performance Flatback Tape 2525	33
Step 4	Level Weld Seams  51721	Portable Abrasive Belt Grinder ◦ 3M™ Belt 777F or 977F — grades 50–120	6–7
Step 5	Finish Weld Seams  14496	Portable Abrasive Belt Grinder ◦ Scotch-Brite™ Surface Conditioning Belts — grade A MED ◦ 3M™ Trizact™ Belt 237AA — grades A100-A6	9 8
Step 6	Remove Tape and Clean Surfaces  221761	3M™ Stainless Steel Cleaner and Polish	51
Step 7	Surface Protection  157287	3M™ Protective Tapes	36

Application Profiles

Stainless Steel Sinks — Scullery Sinks



	Application	3M Products	Page
Step 1	Cut to Length		
Step 2	Stamp/Punch Slots and Holes		
Step 3	Deburr Edges 	Die Grinder ◦ Scotch-Brite™ EXL Deburring Wheels	16
		Portable File Belt Machine ◦ Scotch-Brite™ Surface Conditioning Belts — grades A CRS, A MED	9
Step 4	Assemble and Weld 	Replace Spot Welds or Mechanical Fasteners ◦ 3M™ VHB™ Tapes ◦ Scotch-Weld™ Epoxy Adhesives 420 or 460	28 29
Step 5	Level Weld Seams 	Die Grinder ◦ 3M™ Square Pads — grade 80	19
		Portable File Belt Machine ◦ 3M™ Belt 777F — grade 80 ◦ Scotch-Brite™ Surface Conditioning Belts — grade A MED	6–7 9
		Right Angle Grinder ◦ 3M™ Fibre Discs 785C or 985C — grades 50/80 ◦ 3M™ Roloc™ Disc 777F — grades 50/80	10 12
Step 6	Set Grain Pattern 	Straight Shaft Grinder ◦ Scotch-Brite™ Metal Finishing Wheel ◦ Scotch-Brite™ Multi-finishing Wheel	16 16
		Pneumatic Drum Sander ◦ 3M™ Belt 777F — grades 80–100 ◦ Scotch-Brite™ Surface Conditioning Belts — grades A MED, A VFN	6–7 9
		In-line Sander ◦ Scotch-Brite™ Hand Pad 7446, 7447	19
Step 7	Remove Discoloration 	Die Grinder ◦ 3M™ Radial Bristle Brushes ◦ Scotch-Brite™ EXL Deburring Wheel — grades 2S FIN, 2A MED	18 16

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