

3M Science.
Applied to Life.™

Grind Less, Weld More.

**3M Winning Combinations
for Weld Preparation & Removal**

Welder's Choice

3M™ Adflo™ Powered
Air Purifying Respirator

3M™ Speedglas™
G5-01 Welding Helmet

3M™ Electric
Angle Grinder

3M™ Cubitron™
Fibre Disc

Transform your work with 3M's total solution of abrasives and personal protective equipment for welders and help your team reach new levels of productivity, confidence, and safety.

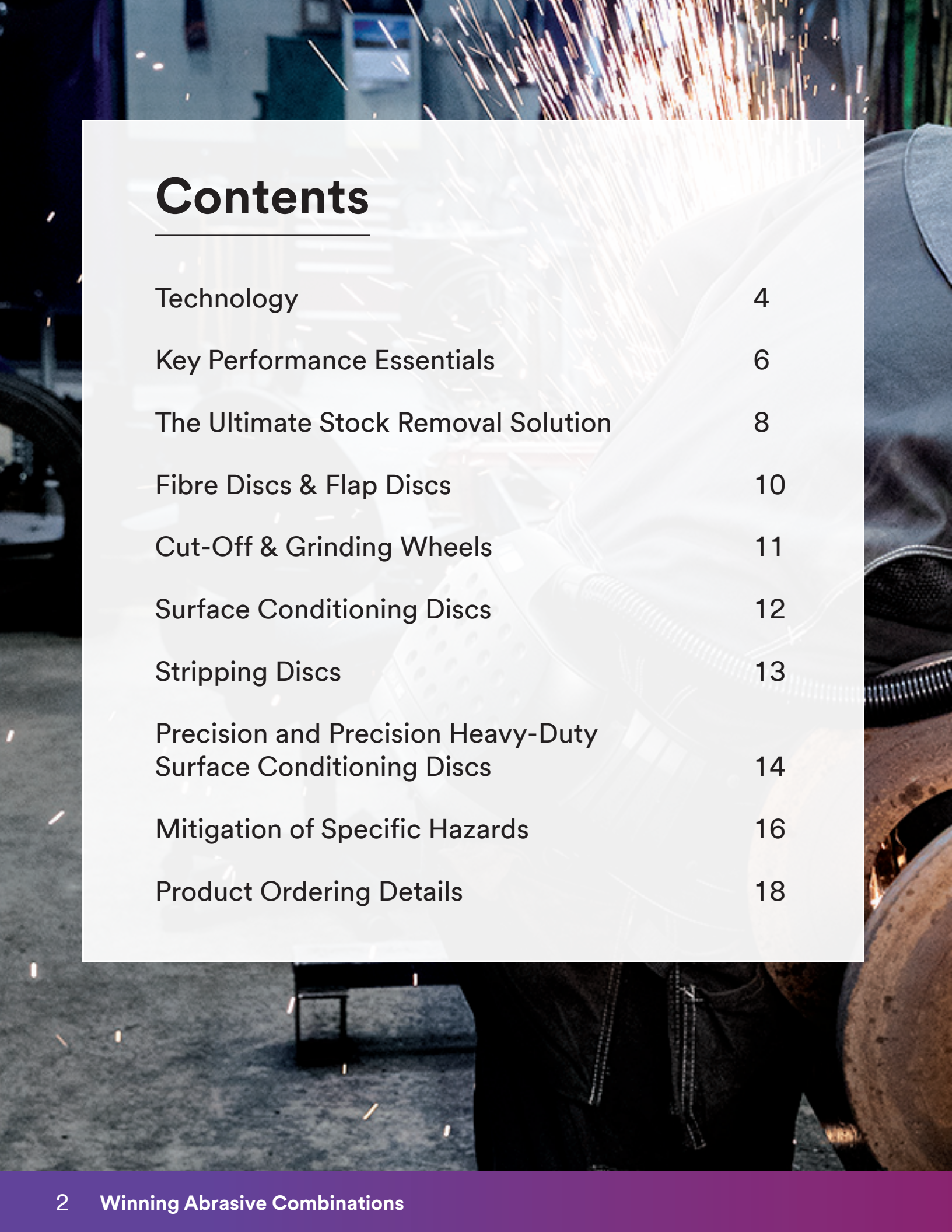
Scotch-Brite™

3M

Cubitron™ 3
Performance Abrasives

3M

Speedglas™
Welding Safety

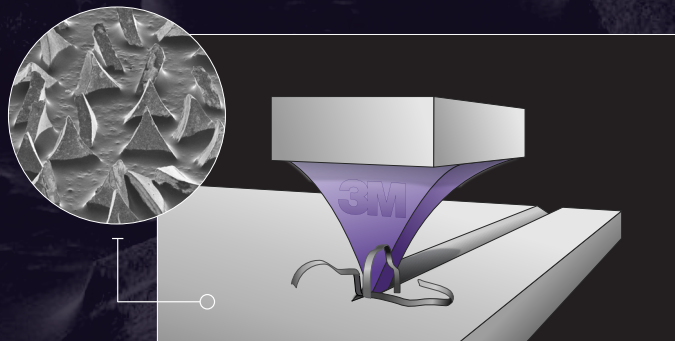


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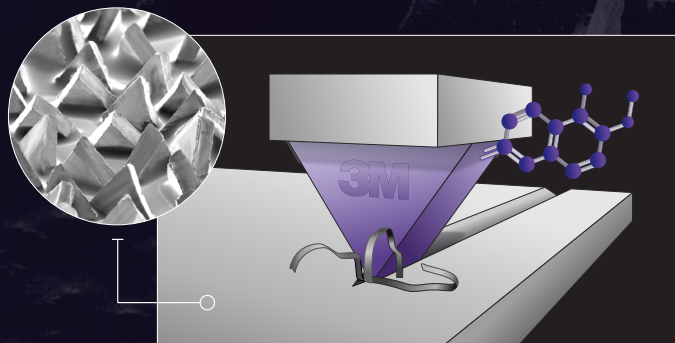


Technology That Transforms How Work Gets Done

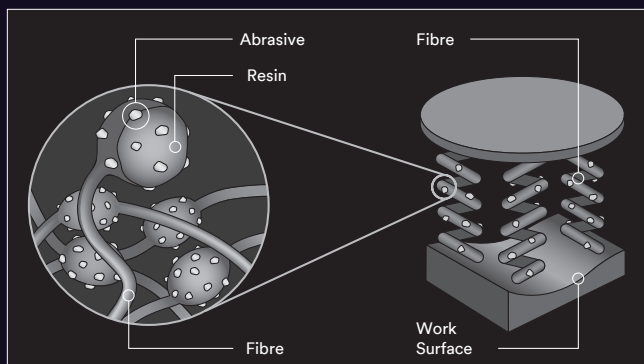


Cubitron™ 3
Performance Abrasives

Re-engineered precision-shaped ceramic grain using a proprietary breakthrough in grain shape with curved sides.



Re-engineered precision-shaped ceramic grain using proprietary breakthrough in molecular bonded technology.



Scotch-Brite™

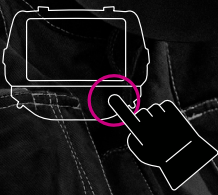
3M™ Precision-Shaped Grain and nonwoven abrasives combine the benefits of two 3M technologies. A transformation in speed and life without sacrificing the smooth finish expected from Scotch-Brite™ products.



Easy Switching Is Just a Tap Away

3M™ Speedglas™ G5-03 Welding Helmets

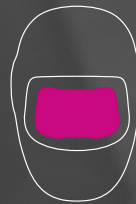
Tap on the side of the welding helmet, with or without a glove, to easily switch between grind (or cut) mode and weld mode.



1 Use the interface on the welding filter to set if you want to use TAP function with grind or cut mode.



2 TAP three times on the side of the welding helmet to switch between GRIND and WELD mode or CUT and WELD mode.



3 The welding filter will switch to desired setting.



4 Tap three times again and the welding filter switches back to welding mode.



Speedglas™
Welding Safety

With 3M™ Speedglas™ Natural Colour Technology colours appear brighter and more realistic in both the light and dark states. A more realistic view may enable:

Accuracy

Recognize colour and contrast and see more details when using the welding filter.

Productivity

Better focus on the welding setup, welding technique and inspection of just-completed welds.

Quality

May help to increase the quality and precision of the welds.



Key Performance Essentials

Up to

40%

**MORE
SPEED***

When using these products together to undertake an end-to-end welding process

Up to

81%

**REDUCTION
IN VIBRATION
(HAV)****

When using these products together to undertake an end-to-end welding process

Up to

68%

**REDUCTION
IN NOISE****

When using these products together to undertake an end-to-end welding process

*Process time recorded during testing in a selected metal fabrication processes. Performance solution of 3M™ Cubitron™ fibre disc and 3M™ Adflo™ Powered Air Purifying Respirator System with 3M™ Speedglas™ GS-01 Series Welding Helmet and hearing protection compared to a conventional solution of high-quality ceramic grinding wheel and 3M™ Speedglas™ 100 Series Welding Helmet with separate half face piece respirator, grinding shield, hearing protection, and safety glasses.

**Exposure to hand-arm vibration and noise recorded during testing in a selected metal fabrication process has been based on 3M™ Cubitron™ fibre disc testing vs. high-quality ceramic grinding wheel - also in line with independent testing by Fraunhofer Institute.

This story captures hand-arm vibration and noise levels, and completion times during a single challenge. Other welding and grinding activities may produce different experiences - results may vary.

Always follow local regulation and guidance when selecting PPE and follow the specific User instructions of your PPE.

Finish it Faster.

with winning
combinations
from 3M.

Superior Protection and Welder Safety

The advantages of our cutting edge abrasive grain technology delivers measurable benefits for our customers.

Paired with 3M's advanced PPE—such as Speedglas™ welding helmets and Adflo™ respirators—welders get superior protection from sparks, particulates, and UV exposure. Comfortable, ergonomic designs enhance safety and visibility, enabling longer, more effective work sessions. Together, 3M abrasives and PPE streamline stock removal with unmatched performance and protection.



Productivity Delivered

Enhanced Productivity

With a significantly faster cut rate, this technology helps manufacturers to process more parts with smaller workforces, helping boost efficiency and output.

Safety Built In

Improved Worker Safety

Reduced hand-arm vibration and noise prioritize the well-being of employees, helping employers develop better working conditions.

Sustainably Forward

Sustainability at the Core

Longer-lasting abrasives and eco-friendly packaging align with the industry's sustainability objectives, helping to reduce carbon footprints and waste.

Weld Preparation and Removal

– Process Map

STEP 1 A

Weld Preparation:
Cleaning and Removal

STEP 1 B

Weld Preparation:
Beveling (If Needed)



Thick Gauge

Scotch-Brite™



Scotch-Brite™ Clean
and Strip XT Pro Disc

3M

Cubitron™ 3
Performance Abrasives



3M™ Cubitron™ 3
Depressed Centre
Grinding Wheel



3M™ Cubitron™ 3
Fibre Disc 1182C



Thin Gauge

Scotch-Brite™



Scotch-Brite™ Clean
and Strip XT Pro Disc





Fast Cut



Long Life



Increased
Productivity



Increased
Safety

STEP 2

Weld Removal

Cutting

3M

3M

Cubitron™ 3
Performance Abrasives



3M™ Cubitron™ 3
Depressed Centre
Grinding Wheel



3M™ Cubitron™ 3
Fibre Disc 1182C



3M™ Flap Disc 769F

3M

Cubitron™ 3
Performance Abrasives



3M™ Cubitron™ 3
Cut-Off Wheel

Welding

3M

3M

Cubitron™ 3
Performance Abrasives



3M™ Flap Disc 769F



3M™ Cubitron™ 3
Fibre Disc 1182C

3M

Cubitron™ 3
Performance Abrasives



3M™ Cubitron™ 3
Cut-Off Wheel

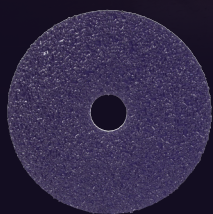


Cubitron™ 3
Performance Abrasives



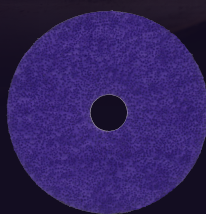
Fibre Discs

Breakthroughs in technology are redefining the limits of cut rate and total stock removal, with a focus on prioritizing productivity, safety, sustainability and optimizing automation.



**3M™ Cubitron™ 3
Fibre Disc 1182C**

For carbon steel



**3M™ Cubitron™ 3
Fibre Disc 1187C**

Includes grinding aid
for stainless steel

11-Series Discs & Roloc™

Grade	36+	60+	80+
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- ✓ Beveling
- ✓ Surface Grinding
- ✓ Flame Cut Smoothing
- ✓ Weld Grinding

1182C, 36+ up to

3X

**Faster Initial
Cut Rate¹**

vs. Competitive High-
Quality Grinding Wheel

1182C, 36+ up to

60%

**More Life
More Speed²**

vs. 3M™ Cubitron™ 2
Fibre Disc 982C, 36+

1182C up to

88% Less Vibration
Exposure³

70% Less Noise
Energy⁴

vs. Competitive High-Quality Grinding Wheel

Flap Discs



3M™ Flap Disc 769F

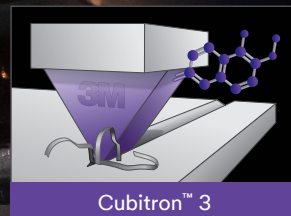
Ideal for use on carbon steel,
stainless steel, and other
heat-sensitive alloys

- ✓ Weld Removal
- ✓ Finishing
- ✓ Blending
- ✓ Deburring
- ✓ Surface Preparation
- ✓ Deburring Edges
- ✓ Weld Preparation
- ✓ Sanding
- ✓ Edge Beveling
- ✓ Weld Grinding

Grade	40+	60+	80+	120+
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Cubitron™ 3
Performance Abrasives



Cut-Off and Grinding Wheels

Using re-engineered Precision-Shaped Grain with new molecular bonding technology and sharp, angular structures that continuously fracture to form sharp points to wear evenly, run cool and optimise mineral breakdown.



**3M™ Cubitron™ 3
Cut-Off Wheels**

For carbon and stainless steel

Up to
3X More Life⁷
10% More Speed⁷
vs. 3M™ Cubitron™ 2
Cut-Off Wheels

Up to
33% Less Vibration⁸
vs. Competitive
Ceramic Grain Wheels

- ✓ For ultra-fast cutting through sheet metal, metal tubing and more



**3M™ Cubitron™ 3 Depressed
Centre Grinding Wheels**

For carbon and stainless steel

Designed for exceptional life and speed in heavy-duty grinding applications on stainless steel, mild steel and other specialist alloys.

Up to
50% More Life⁹
14% More Speed⁹
vs. 3M™ Cubitron™ 2 Depressed
Centre Grinding Wheels

Up to
33% Less Vibration¹⁰
vs. Competitive
Ceramic Grain Wheels

- ✓ Beveling
- ✓ Surface Grinding
- ✓ Weld Grinding
- ✓ Gouging
- ✓ Flame Cut Smoothing



**3M™ Cubitron™ 3
Cut & Grind Wheels**

For carbon and stainless steel

Fast and versatile — designed to be used both as a grinding wheel and as a cut-off wheel on stainless steel, mild steel and other specialist alloys.

Up to
5% More Speed¹¹
vs. 3M™ Cubitron™ 2
Cut & Grind Wheels



Better Balance



More Speed

We've reformulated the product to further improve ergonomics vs. Cubitron™ 2

- ✓ All the combined applications of grinding and cut-off wheels



Surface Conditioning Discs



For surface finishing after heavy grinding.

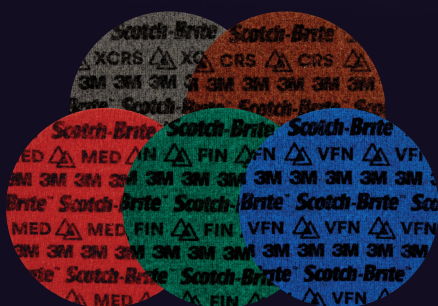
Contains 3M Precision-Shaped Grain for fast cut and long life.

Expanded grades for a large range of applications.

Balance of conformability and durability.

Bright, vivid colours help to identify easier.

- ✓ Light Grinding
- ✓ Deburring
- ✓ Blending
- ✓ Refining
- ✓ Cleaning
- ✓ Finishing



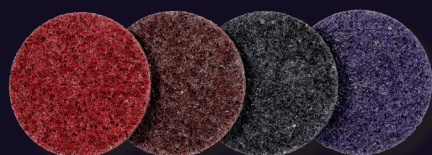
Scotch-Brite™ Precision Surface Conditioning Discs

△ 3M Precision-Shaped Grain

Grades	VFIN	FIN	MED
	CRS	XCRS	

Up to **40% More Speed¹²** | Up to **2X More Life¹³**
vs. Competitive CRS Discs

Attachment Types



Scotch-Brite™ Precision Heavy Duty Surface Conditioning Discs

△ 3M Precision-Shaped Grain

Grades	MED	CRS
	XCRS	XCRS

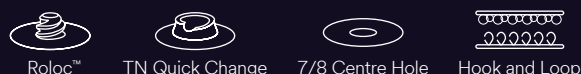
Grinds and blends in one step.

Fast aggressive cut, long life and consistent finish.

Durable construction resists edge wear.

- ✓ Light Grinding
- ✓ Blending
- ✓ Deburring
- ✓ Edge Break

Attachment Types





Safety
Built In

No steel wires or high impact particles that could injure workers.

Stripping Discs

For cleaning after heavy grinding.

Quickly removes rust, paint, mill scale, coatings from metal and leaves a fine finish.

Silicon carbide mineral cuts aggressively with low sparking.

Maintains workpiece shape.



Scotch-Brite™ Clean and Strip XT Pro Disc

Silicon Carbide Mineral

Grade S XCS

Up to
90% Less Vibration¹⁴
vs. Crimped Wire Cup Brushes

Up to
54% More Speed¹⁴

Attachment Types



Roloc™



TN Quick Change



Centre Hole



5/8-11

- ✓ Finishing
- ✓ Surface Preparation
- ✓ Light Scale Removal
- ✓ Coating Removal



Scotch-Brite™ Clean and Strip XT Pro Extra Cut Disc

Aluminium Oxide Mineral

Grade A XCS

Heavy rust / rust pit removal without leaving divots, ideal for weld refinement and removing weld discolouration.

Aluminium oxide mineral cuts to bare metal quickly.

Resists chunking and loading, and performs well on edges.

Attachment Types



Roloc™



TN Quick Change



Centre Hole



5/8-11

- ✓ Cleaning
- ✓ Surface Preparation
- ✓ Finishing



Scotch-Brite™ Precision Heavy Duty Surface Conditioning Discs

Tough enough for heavy
duty use.



Watch introduction and demo videos at
[Youtube.com/3MAbrasives](https://www.youtube.com/3MAbrasives)

1

2X Longer Lasting on Mild Steel

compared to competitive premium
nonwoven abrasives — while offering
edge durability and shape retention
during edge wear*

2

3X More Parts Processed on Mild Steel

than competitive premium
nonwoven abrasives*

3

Fast and Durable Long-lasting on parts with sharp edges

Heavy duty discs for applications
that require a more aggressive and
durable product

High-Pressure Applications

An extension of 3M's Precision Surface Conditioning Disc family, this heavy duty option is designed for durability, long product life, and consistent performance. These discs last longer than competitive premium nonwoven abrasives while offering edge durability and shape retention during edge wear.

- Light Grinding
- Blending
- Deburring
- Refining
- Edge Breaking

The heavy duty
family identified by
the black backing
and white font.



PSG technology
built into the
product.

Tech Tip

Ever wondered what grit
mineral is in your nonwoven?

Now including the size of PSG to better understand
the positioning of our grades of Precision Heavy Duty
Surface Conditioning Discs.



Tech Tip

Try hook and loop discs with our new **Scotch-Brite™ Universal Surface Conditioning Back-up Pad**. Designed to optimise the performance of nonwoven abrasive discs. It comes packaged with everything you need for quick and easy tool attachment, including three attachment nuts and an optional snap-in centre post. Low-profile design fits within most grinder guards.



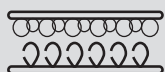
CUTTING POWER FOR HEAVY DUTY JOBS.

Medium Finish/Less Aggressive

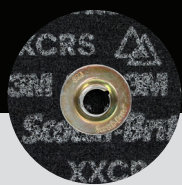
Coarser Finish/Most Aggressive



3M™ Hook and Loop – No Hole Disc



3M™ Hook and Loop – Center Hole Disc



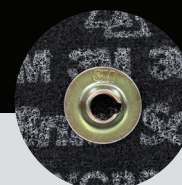
TN Quick Change



Roloc™ TS



Roloc™ TR

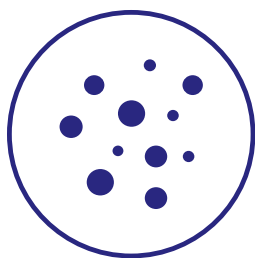


Roloc™ TSM

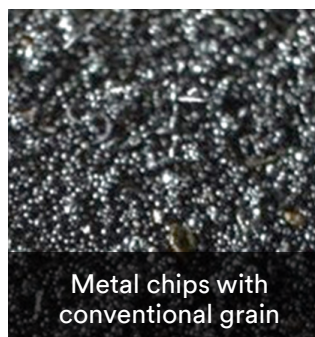


How Our Technology Supports the Mitigation of Specific Hazards – Grinding Applications

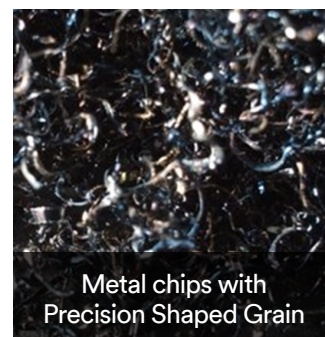
Airborne particles



By slicing not ploughing through metal, the chips produced by 3M Precision Shaped Grain are larger, longer and heavier – meaning particles stay airborne for less time.



Metal chips with conventional grain



Metal chips with Precision Shaped Grain

Hand-arm vibration

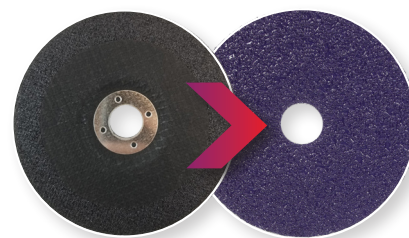


Up to
88%
reduction in
vibration
exposure*

Less vibration generated by the abrasive disc itself
Reduced trigger time on the vibrating tool due to cut speed
Less applied pressure is required due to cutting efficiency



Cubitr^{on}™ 3
Performance Abrasives



Switch from a depressed centre grinding wheel to a 3M™ Cubitr^{on}™ 3 Fibre Disc for grinding tasks.

The change in form and the speed of getting the job done can significantly reduce vibration and noise exposure.

Noise



Up to
70%
reduction in
noise energy*

Less vibration leads to less noise generated
Reduced trigger time on the noisy tool
Different abrasive construction lowers noise levels

*Performance testing is a typical weld preparation process; 3M Cubitr^{on} 3 Fibre Disc average compared to the average result of 10 globally selected high-quality competitive Type 27 grinding wheels including ceramic grain products, according to independent testing by Fraunhofer Institute – January 2024.

Tools That Take It to the Next Level.

The new 3M™ Electric Grinder is available in 115mm, fixed speed. Designed with robust components, this grinder is built for durability in the harshest industrial conditions. A powerful and long-lasting tool you need to get more done.

- ▶ 1900 W power
- ▶ Available in fixed speed
- ▶ Excellent ergonomic design
- ▶ Restart protection
- ▶ Direct cooling for a long service life
- ▶ Overload protection
- ▶ Kickback control
- ▶ Adjustable guard
- ▶ Robust design and components provide durability in industrial conditions
- ▶ Accessories for maximum functionality and flexibility

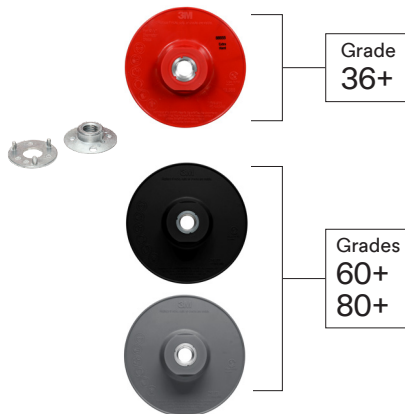


Get the full system advantage.

3M™ Electric Grinder



3M™ Disc Back-up Pads
ideal use



TECH TIP:

Combine with 3M™ Fibre Disc Back-up Pads and 3M™ Electric Grinder to optimise performance of 3M™ Cubitron™ 3 Fibre Discs 1182C and 1187C including abrasive life, cut rate and consistency.



Cut-Off Wheels

3M™ Cubitron™ 3 Cut-Off Wheels – T1



3M ID	Dia x Thk x Ah (In)	Max RPM
T1		
7100303860	3" x 0.035" x 1/4"	21,000
7100303859	3" x 0.035" x 3/8"	21,000
7100303858	3" x 0.045" x 3/8"	21,000
7100303857	4" x 0.035" x 3/8"	21,000
7100304004	4" x 0.045" x 3/8"	21,000
7100342887	4" x 0.06" x 3/8"	21,000
7100304005	4" x 1/8" x 3/8"	21,000
7100304307	4.5" x 0.04" x 7/8"	13,300
7100304006	4.5" x 0.045" x 7/8"	13,300
7100304007	5" x 0.045" x 7/8"	12,250
7100313190	6" x 0.045" x 7/8"	10,200
7100313189	7" x 0.045" x 7/8"	8,500

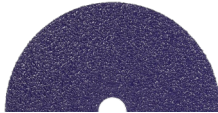
3M™ Cubitron™ 3 Cut-Off Wheels – T27



3M ID	Dia x Thk x Ah (In)	Max RPM
T27		
7100304308	4-1/2" x 0.045" x 7/8"	13,300
7100304009	4-1/2" x 0.125" x 7/8"	13,300
7100304010	5" x 0.045" x 7/8"	12,250
7100304011	5" x 0.09" x 7/8"	12,250
7100304009	5" x 0.125" x 7/8"	12,250
7100313201	6" x 0.045" x 7/8"	10,200
7100313191	7" x 0.09" x 7/8"	8,500
7100313192	4-1/2" x 0.045" x 5/8-11"	13,300
T27 Quick Change		
7100313187	4-1/2" x 1/8" x 5/8-11"	13,300
7100313200	4-1/2" x 0.09" x 5/8-11"	13,300
7100313192	4-1/2" x 0.045" x 5/8-11"	13,300
7100313188	6" x 0.045" x 5/8-11"	10,200
7100312963	7" x 0.09" x 5/8-11"	8,500

Fibre Discs

3M™ Cubitron™ 3 Fibre Disc 1182C



3M ID	Dia (in)	Grade	Max RPM
7100309791	4" x 5/8"	36+	15,000
7100309797	4" x 7/8"	36+	15,000
7100309799	4-1/2" x 7/8"	36+	13,300
7100309793	5" x 7/8"	36+	12,000
7100309903	6" x 7/8"	36+	10,000
7100309904	7" x 7/8"	36+	8,600
7100310797	9-1/8" x 7/8"	36+	6,600
7100349591	4-1/2" x 7/8"	60+*	13,300
7100349588	5" x 7/8"	60+*	12,000
7100349577	6" x 7/8"	60+*	10,000
7100349579	7" x 7/8"	60+*	8,600
7100349565	9-1/8" x 7/8"	60+*	6,600
7100349584	4-1/2" x 7/8"	80+*	13,300
7100349603	5" x 7/8"	80+*	12,000
7100349578	7" x 7/8"	80+*	12,000
7100349575	9-1/8" x 7/8"	80+*	6,600
TN Quick Change			
7100310727	4-1/2"	36+	13,300
7100310728	5"	36+	12,000
7100310729	7"	36+	8,600
7100349673	4-1/2"	60+*	13,300
7100349678	5"	60+*	12,000
7100349568	7"	60+*	8,600
7100349669	4-1/2"	80+*	13,300
7100349675	5"	80+*	12,000
7100349580	7"	80+*	8,600

3M ID	Dia (in)	Grade	Max RPM
GL Quick Change			
7100310730	4-1/2"	36+	13,300
7100310795	5"	36+	12,000
7100309796	7"	36+	8,600
7100349574	5"	60+*	12,000
7100349674	7"	60+*	8,600
7100349576	5"	80+*	12,000
7100349677	7"	80+*	8,600

Grinding Wheels

3M™ Cubitron™ 3 Depressed Centre Grinding Wheel



3M ID	Dia x Thk x Ah (In)	Max RPM
T27		
7100303965	4" x 1/4" x 3/8"	15,300
7100303964	4" x 1/4" x 5/8"	15,300
7100303966	4-1/2" x 1/4" x 7/8"	13,300
7100303967	5" x 1/4" x 7/8"	12,250
7100313193	6" x 1/4" x 7/8"	10,200
7100313198	7" x 1/4" x 7/8"	8,500
7100313202	9" x 1/4" x 7/8"	6,650
T27 Quick Change		
7100312968	4-1/2" x 1/4" x 5/8-11" INT	13,300
7100312967	5" x 1/4" x 5/8-11" INT	12,250
7100312966	6" x 1/4" x 5/8-11" INT	10,200
7100312965	7" x 1/4" x 5/8-11" INT	8,500
7100312964	9" x 1/4" x 5/8-11" INT	6,650

Surface Conditioning Discs

Scotch-Brite™
Precision Heavy
Duty Surface
Conditioning Disc



3M ID	Dia x Ctr Hole (in)	Grade	Max RPM
Hook and Loop – No Hole			
7100358156	4" x NH	Medium	13,000/15,000*
7100358858	4" x NH	Coarse	13,000/15,000*
7100358883	4" x NH	Extra Coarse	13,000/15,000*
7100358857	4" x NH	X-Extra Coarse	13,000/15,000*
7100358157	4-1/2" x NH	Medium	13,000/13,300*
7100358903	4-1/2" x NH	Coarse	13,000/13,300*
7100358872	4-1/2" x NH	Extra Coarse	13,000/13,300*
7100358902	4-1/2" x NH	X-Extra Coarse	13,000/13,300*
7100358923	5" x NH	Medium	10,000/12,000*
7100358904	5" x NH	Coarse	10,000/12,000*
7100358924	5" x NH	Extra Coarse	10,000/12,000*
7100358905	5" x NH	X-Extra Coarse	10,000/12,000*
7100358925	6" x NH	Medium	10,000
7100358906	6" x NH	Coarse	10,000
7100358926	6" x NH	Extra Coarse	10,000
7100358871	6" x NH	X-Extra Coarse	10,000
7100358859	7" x NH	Medium	8,000
7100358898	7" x NH	Coarse	8,000
7100358890	7" x NH	Extra Coarse	8,000
7100358854	7" x NH	X-Extra Coarse	8,000

3M ID	Dia x Ctr Hole (in)	Grade	Max RPM
Hook and Loop – Centre Hole			
7100358860	4" x 5/8"	Medium	15,000
7100358855	4" x 5/8"	Coarse	15,000
7100358861	4" x 5/8"	Extra Coarse	15,000
7100358887	4" x 5/8"	X-Extra Coarse	15,000
71003588967	4-1/2" x 7/8"	Medium	13,300
7100358856	4-1/2" x 7/8"	Coarse	13,300
7100359465	4-1/2" x 7/8"	Extra Coarse	13,300
710035946	4-1/2" x 7/8"	X-Extra Coarse	13,300
7100359473	5" x 7/8"	Medium	12,000
7100359468	5" x 7/8"	Coarse	12,000
7100359474	5" x 7/8"	Extra Coarse	12,000
7100359469	5" x 7/8"	X-Extra Coarse	12,000
7100358893	7" x 7/8"	Medium	8,600
7100358886	7" x 7/8"	Coarse	8,600
7100358899	7" x 7/8"	Extra Coarse	8,600
7100359475	7" x 7/8"	X-Extra Coarse	8,600
TN Quick Change			
7100358891	4-1/2" x 5/8-11"	Medium	13,300
7100358888	4-1/2" x 5/8-11"	Coarse	13,300
7100358862	4-1/2" x 5/8-11"	Extra Coarse	13,300
7100358889	4-1/2" x 5/8-11"	X-Extra Coarse	13,300
7100358897	5" x 5/8-11"	Medium	12,000
7100358884	5" x 5/8-11"	Coarse	12,000
7100358892	5" x 5/8-11"	Extra Coarse	12,000
7100358885	5" x 5/8-11"	X-Extra Coarse	12,000
7100358900	7" x 5/8-11"	Medium	8,600
7100358894	7" x 5/8-11"	Coarse	8,600
7100358901	7" x 5/8-11"	Extra Coarse	8,600
7100358895	7" x 5/8-11"	X-Extra Coarse	8,600

*Tinnerman Nut (TN) Quick-Change Attachment

Stripping Discs

Scotch-Brite™
Clean and Strip
XT Pro Disc



3M ID	Dia x AH (in)	Grade	Max RPM
T27			
7100175393	4-1/2" x 7/8"	S XCS	13,300
7100176095	6" x 1/2"	S XCS	4,000
7100177515	7" x 3-1/8"	S XCS	3,600
7100175122	7" x 7/8"	S XCS	8,600
T27 Quick Change			
7100175252	4-1/2" x 5/8-11"	S XCS	13,300
7100177482	5" x 5/8-11"	S XCS	12,000
7100175474	7" x 5/8-11"	S XCS	8,600
TN Quick Change			
7100175464	4-1/2" x 5/8-11"	S XCS	13,300
7100175514	7" x 5/8-11"	S XCS	8,600
Roloc™ TR			
7100175521	2" x NH	S XCS	18,000
7100173795	3" x NH	S XCS	15,000
7100176094	4" x NH	S XCS	11,000

Scotch-Brite™
Clean and Strip
XT Pro Extra Cut Disc



3M ID	Dia x AH (in)	Grade	Max RPM
T27			
7100176086	4" x 1/4"	A XCS	9,000
7100175515	4-1/2" x 7/8"	A XCS	13,300
7100176140	6" x 1/2"	A XCS	4,000
7100177517	7" x 3-1/8"	A XCS	3,600
7100175508	7" x 7/8"	A XCS	8,600
T27 Quick Change			
7100175520	4-1/2" x 5/8-11"	A XCS	13,300
7100177492	5" x 5/8-11"	A XCS	12,000
7100175493	7" x 5/8-11"	A XCS	8,600
TN Quick Change			
7100175465	4-1/2" x 5/8-11"	A XCS	13,300
7100175522	7" x 5/8-11"	A XCS	8,600
Roloc™ TR			
7100179815	2" x NH	A XCS	18,000
7100173790	3" x NH	A XCS	15,000
7100173796	4" x NH	A XCS	11,000



Available in additional sizes, grades, and attachment types.
Scan the code for full product details.

Flap Discs

3M™ Flap Disc 769F



3M ID	Dia x Ctr Hole (in)	Grade	Max RPM
T27			
7100177446	4.5" x 7/8"	40+	13,300
7100178023	4.5" x 7/8"	60+	13,300
7100178016	4.5" x 7/8"	80+	13,300
7100178092	4.5" x 7/8"	120+	13,300
7100178012	5" x 7/8"	40+	12,000
7100178125	5" x 7/8"	60+	12,000
7100250246	5" x 7/8"	80+	12,000
7100248430	7" x 7/8"	60+	8,600
7100178090	7" x 7/8"	120+	8,600
T27 Quick Change			
7100180139	4.5" x 5/8-11"	40+	13,300
7100243877	4.5" x 5/8-11"	60+	13,300
7100243876	4.5" x 5/8-11"	80+	13,300
7100243875	4.5" x 5/8-11"	120+	13,300
7100243883	5" x 5/8-11"	40+	12,000
7100243780	5" x 5/8-11"	60+	12,000
7100243782	5" x 5/8-11"	80+	12,000
7100243781	5" x 5/8-11"	120+	12,000
7100178233	7" x 5/8-11"	40+	8,600
7100178191	7" x 5/8-11"	60+	8,600
7100178236	7" x 5/8-11"	80+	8,600

3M ID	Dia x Ctr Hole (in)	Grade	Max RPM
T29			
7100178130	4.5" x 7/8"	40+	13,300
7100178027	4.5" x 7/8"	60+	13,300
7100178028	4.5" x 7/8"	80+	13,300
7100178091	4.5" x 7/8"	120+	13,300
7100178127	5" x 7/8"	40+	12,000
7100178126	5" x 7/8"	60+	12,000
7100178123	5" x 7/8"	80+	12,000
7100177972	5" x 7/8"	120+	12,000
7100178128	7" x 7/8"	40+	8,600
7100177968	7" x 7/8"	60+	8,600
7100177999	7" x 7/8"	80+	8,600
7100178089	7" x 7/8"	120+	8,600
T29 Quick Change			
7100244822	4.5" x 5/8-11"	40+	13,300
7100243874	4.5" x 5/8-11"	60+	13,300
7100243873	4.5" x 5/8-11"	80+	13,300
7100244822	4.5" x 5/8-11"	120+	13,300
7100243779	5" x 5/8-11"	40+	12,000
7100242991	5" x 5/8-11"	60+	12,000
7100242992	5" x 5/8-11"	80+	12,000
7100243778	5" x 5/8-11"	120+	12,000
7100178192	7" x 5/8-11"	40+	8,600
7100177902	7" x 5/8-11"	60+	8,600
7100177901	7" x 5/8-11"	80+	8,600

Tools

3M™ Electric Angle Grinders



3M ID	Model	Voltage	Disc Size (in)	Switch Type	Variable Speed	RPM Range	Weight (lb)	Amps	Watts	Includes
7100336685	11129	120V	4.5" – 5.0"	Paddle	No	11,500 rpm	6	13	1900	5 in Type 27 Guard, 5 in. Type 1 Guard, Vibration Reduction Side Handle
7100337004	11130	120V	4.5" – 5.0"	Slide	Yes	2,800 – 11,500 max rpm	5.7	13	1900	5 in Type 27 Guard, 5 in. Type 1 Guard, Vibration Reduction Side Handle
7100336788	11131	120V	6"	Paddle	Yes	2,800 – 9,300 max rpm	6.2	13	1900	6 in Type 27 Guard, 6 in. Type 1 Guard, Vibration Reduction Side Handle

Accessories

3M™ Universal Backup Pad



3M ID	Density	Colour	Disc Size – in	Max RPM
7100258731	Extra Hard	Red	4.5"	13,300
7100258733	Extra Hard	Red	5"	12,000
7100258730	Extra Hard	Red	7"	8,600

3M ID	Density	Colour	Disc Size – in	Max RPM
7100363248	Hard	Black	4.5"	13,300
7100362591	Hard	Black	5"	12,000
7100360002	Hard	Black	7"	8,600



3M™ Speedglas™ Heavy Duty Welding Helmet G5-01

Component		Part number	Description
Welding filter	Outer protection plates	52 60 00	Outer protection plate (standard)
		52 70 00	Outer protection plate (scratch)
		52 70 01	Outer protection plate (scratch+)
		52 70 70	Outer protection plate (heat)
	Inner cover plates	52 80 25	Inner cover plate
		52 80 28	Inner cover plate anti-fog
Welding helmet	Visor plate	61 30 00	Visor plate, anti-fog and hard coated
	Face seal	61 40 00	Face seal
	Sweatbands	19 80 16	Sweatband, towelling
		19 80 18	Sweatband, leather
		19 80 17	Sweatband, fleecy cotton
	Airduet breathing tube	61 37 00	Airduet breathing tube (short) incl. Holder

Additional accessory options for G5-01 and G5-03 Pro/Pro Air



A Task light.

B To better enable you to weld when looking down, replace the rigid neck protection with, for example the smaller fabric neck protection.

C Increase coverage of your head, neck and chest by adding the larger fabric head cover and/or the extended fabric neck protection.

D For increased visibility, add the fluorescent yellow extended head cover.

E When you need the durability of leather, attach the leather head cover and the leather neck protection.

F To maximize coverage from sparks add the fabric shroud and the extended or larger fabric head cover.



3M™ Speedglas™ Welding Helmets G5-03 Pro/Pro Air



Component	Part number	Description
	Outer protection plates	52 60 00 Outer protection plate (standard)
		52 70 00 Outer protection plate (scratch)
		52 70 01 Outer protection plate (scratch+)
		52 70 70 Outer protection plate (heat)
	Inner cover plates	52 80 25 Inner cover plate
		52 80 28 Inner cover plate anti-fog
	Face seal	61 40 00 Face Seal
	Sweatbands	19 80 16 Sweatband, Towelling
		19 80 18 Sweatband, Leather
		19 80 17 Sweatband, fleecy cotton
	Airduct breathing tube	61 37 00 Airduct Breathing Tube (short) incl. holder

We recommend use of 3M welding fume disposable or re-usable respirators together with standard welding helmets

Additional accessory options for G5-03 Pro

- A** Safety helmet adapter G5-03 Pro for X5500NVE
- B** Safety helmet adapter G5-03 Pro for G3001NVE and G3501MOR
- C** 3M™ Safety Helmet X5500NVE (non-vented)
- D** 3M™ G3001NVE Safety Helmet
- E** 3M™ G3501MOR High Heat Safety Helmet



Before you choose your protective equipment

<https://www.cdc.gov/niosh/topics/hierarchy>

The Hierarchy of Controls can be used as a guide through the process of mitigating exposures to welding fume.*
The measures towards the top of the list are normally considered to be the most preferable.



Eliminate the hazard

E.g. Use different bonding solutions or find ways to minimize the amount of welding.



Substitute the hazard

E.g. Use a different metal or welding technique that produces less contaminants



Engineering controls

Use engineering controls to isolate workers from the hazard. E.g. local exhaust ventilation (LEV) or on-tool extraction.



Administrative controls

E.g. Introduce dedicated welding areas and regular testing of LEV.



Personal Protective Equipment (PPE)

PPE will still be required for most manual welding due to the hazards involved and the limitations of other controls

3M™ Adflo™ Powered Air Purifying Respirator System



	Part number	Description
Filters	83 60 10	Pre-filter
	83 70 12	Particle filter
	83 75 42	Gas filter A2
	83 72 42	Gas filter A1B1E1
	83 71 10	Odour filter
	83 71 20	Odour filter pad
Breathing tubes	83 40 16	Breathing tube
	83 40 17	Breathing tube heavy-duty rubber
	83 40 18	Breathing tube cover, flame retardant
	83 40 19	Breathing tube, long
Spark arrestor	83 60 00	Spark arrestor

Additional accessory options for Adflo

Heavy duty
back pack BPK-HD



A



B



C

Batteries and charger

A Standard battery

B Heavy duty battery

C Battery charger

What is welding fume?

All welding fume contains particles as well as gases. Welding fume particles vary in size, from particles that are large like grains of sand through to tiny particles that cannot be seen by the naked eye and can easily be inhaled. Welding fume has been reclassified as carcinogenic¹⁾, and exposure to welding fume and other gases associated with welding can cause a range of health issues.

Fast fact:

Poor respiratory protection is the 4th most common workplace violation.²⁾

1) IARC2017 2) Top 10 Most Frequently Cited Standards, OSHA, U.S. Department of Labor, for 2020.

Assess the risk



The type and quantity of welding fume, gases and vapors are determined by the material, welding process, amperage and the welding electrode used.



Consult an expert to identify the hazards levels against country safety standards.

Fast fact:

A qualified health & safety professional or consultant can conduct area and personal exposure monitoring to determine type and concentration of contaminants.

Our range of products, models and colours may vary depending on region and year. For an accurate list of available products visit www.3M.ca or contact your local supplier.

3M helps large casting company improve safety and productivity

Pam Building specialise in the manufacture of cast iron drainage systems for commercial, public, and residential buildings. Operator safety is paramount, and productivity improvements are vital to stay competitive in their market

Up to

87%

LESS vibration exposure

“

We were mainly focused on new tools to reduce hand-arm vibration and hadn't considered the significant impact abrasives could deliver before 3M came to see us.

Matthew Hoar - QEHS & Systems Manager



Cubitron™ 3
Performance Abrasives

3M™ Cubitron™ 3 Cut & Grind Wheels reduced vibration magnitude and shortened the time to process each casting; these combined to help significantly mitigate operator exposure. Furthermore, this lower part processing time meant improved throughput – an important outcome for the production manager.

1. Performance testing in a typical weld preparation process; 3M™ Cubitron™ 3 Fibre Disc 1182C, 36" average compared to the average result of 10 globally selected high-quality competitive type 27 grinding wheels including ceramic grain products, according to independent testing by Fraunhofer Institute, January 2024.
2. The 'total material removed' claim is determined by averaging the amount of metal ground over the entire test method (30 cycles or 30 minutes of grinding). Error bars represent the results with a 95% confidence level.
3. Performance testing in a typical weld preparation process; 3M™ Cubitron™ 3 Fibre disc average compared to the average result of 10 globally selected high-quality competitive type 27 Grinding wheels including ceramic grain products, according to independent testing by Fraunhofer Institute, January 2024.
4. Noise energy operator exposure testing in a typical weld preparation process; Cubitron™ 3 Fibre disc average compared to the average result of 10 globally selected high-quality competitive type 27 Grinding wheels including ceramic grain products, according to independent testing by Fraunhofer Institute, January 2024.
5. Results are based on an automated, 10-minute grinding test on 304 stainless steel using 36" long belts. The total material removed claim is determined by averaging the amount of metal ground over the entire test method (40 cycles or 10 minutes of grinding). Error bars represent the results with a 95% confidence level.
6. Results based on an automated, 10-minute grinding test on 304 stainless steel using 36" long belts. The sustained cut rate claim is determined by averaging the total material removed after 10 cycles minus total material removed after 3 cycles divided by seven cycles. Error bars represent the results with a 95% confidence level.
7. Results are based on an automated, cutting of a 3 mm thick 304 stainless steel sheet. Cut-off wheel geometry was T41 125 mm x 1.6 mm x 22 mm mounted on a 1.5 hp angle grinder with an applied force of 9 lbs. Cut speed was defined by time needed to cut 1 metre of stainless steel. The number of cuts was estimated by the amount of wheel that was used after cutting a distance of 1 metre. End of life is assumed to be 50% of initial wheel mass.
8. Performance testing in a typical weld preparation process or cutting operation; 3M™ Cubitron™ 3 Cut-Off Wheels average compared to the average results of the high-quality competitive ceramic grain competitive wheels tested, according to independent testing, August 2023.
9. Results are based on an automated beveling of 1018 carbon steel bars. Grinding wheel geometry was 115 mm outer diameter mounted on a servo motor with an applied force of 12 lbs. Cut speed was defined by metal removed after 10 minutes of testing life. End of life is assumed to be 50% of the initial wheel mass.
10. Performance testing in a typical weld preparation process or cutting operation; 3M™ Cubitron™ 3 Depressed Centre Grinding Wheels average compared to the average results of the high-quality competitive ceramic grain competitive wheels tested, according to independent testing, August 2023.
11. Results are based on an automated beveling of 1018 carbon steel bars. Grinding wheel geometry was 115 mm outer diameter mounted on a servo motor with an applied force of 12 lbs. Cut speed was defined by metal removed after 10 minutes of testing. The total material removal was estimated based on the amount of wheel that was used for 10 minutes of testing life. End of life is assumed to be 50% of the initial wheel mass.
12. Based on 3M Internal Testing: CRS 3" discs were tested robotically on 304 series stainless steel for 12 minutes, using a 3" 3M™ Hard Back-Up, part number: 45091. One part is equivalent to 20 g of material removed.
13. Based on 3M internal testing: MED 3" discs were tested robotically on 6061 Aluminium until the end of life (end of life is determined to be 50% of the averaged cut rate of the first three minutes) using a 3" 3M™ Hard Back-Up, part number: 45091. One part is equivalent to 20 g of material removed.
14. Hand-arm vibration compared to listed competitor and Scotch-Brite™ Clean and Strip XT Pro Disc, Type 27, according to independent testing by Fraunhofer Institute on October 2021.



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