



**3M** Science.  
Applied to Life.™

3M™ Cubitron™ II Flexible Grinding Wheels

**Engineered with safety in mind.**

Providing the comfortability of a fibre disc and the versatility of a grinding wheel.

**CUBITRON™ II**



## 3M™ Cubitron™ II Flexible Grinding Wheels

**Designed to grind faster, last longer with less vibration than a standard grinding wheel.**

3M™ Cubitron™ II Flexible Grinding Wheels help to reduce vibration exposure due to their lighter wheel construction and plastic backing pad.

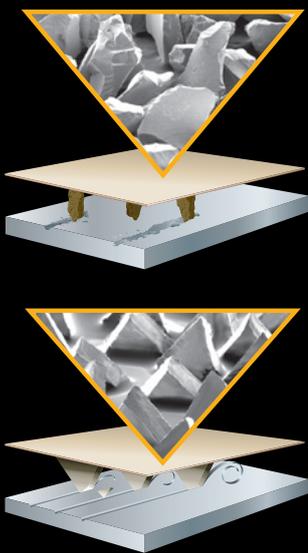
Engineered with 3M's Precision Shaped Ceramic Grain, they cut faster helping to reduce operator trigger time.

**Ideal for:**

- ▶ Scale removal
- ▶ Grinding
- ▶ Blending
- ▶ Beveling
- ▶ Deburring
- ▶ ...and more!

## How 3M Precision Shaped Ceramic Grain technology works:

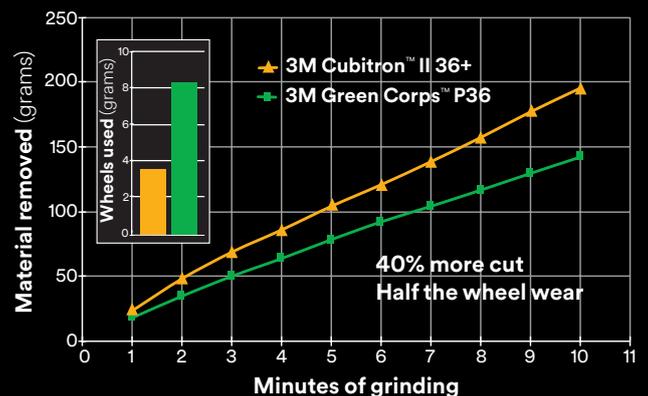
3M's revolutionary Precision Shaped Ceramic Grain technology is an advanced abrasive construction featuring microreplicated shapes that slice through metal to cut faster and last longer than conventional abrasives.



Conventional ceramic abrasive grain tends to "plough" through the metal, causing heat to build up in the workpiece and the abrasive — resulting in a slower cut and shorter disc life.

3M Precision Shaped Ceramic Grain uses 3M microreplication technology to form sharp peaks that easily "slice" through metal — cutting cooler, faster and lasting longer than conventional abrasive grain.

## More cut — longer life



Data from internal testing on 1018 carbon steel using 100mm flexible grinding wheels.

## What 3M Precision Shaped Ceramic Grain technology means for you:

- ▶ **Faster cut** — produce more parts per hour, less trigger time
- ▶ **Longer life** — for a lower cost per grind
- ▶ **Requires less pressure** — allows the abrasive to do more of the hard work
- ▶ **Safer operation** — less exposure to vibration, easier to use, smooth running



# What is hand-arm vibration (HAV)?

HAV comes from the transfer of vibration from powered tools and equipment to an operator's hand, which can lead to tingling and numbness in the operator's fingers.

HAV depends on a number of factors, including the amount and length of exposure to vibration, working conditions and environment. It is potentially a likely occurrence in industries such as heavy engineering and metal fabrication with regular use of power tools. Best practice is to keep this exposure to a minimum.

## Smooth running

The risk of suffering from HAV depends in the main on both:

- ▶ the magnitude of vibration to which the individual is exposed and
- ▶ the time of exposure (both in terms of hours per day and years of work).

You can reduce the exposure of operators to vibration by using abrasives specifically designed to reduce this effect. The table below shows what effect simply changing the abrasive has to operator HAV exposure.

Vibration testing (internal testing)	Vibration measurement (m/s <sup>2</sup> )		Exposure points per hour (grinding)	Time to reach Exposure Action Value 100 points (EAV)
	Freemspin	Grinding		
3M™ Cubitron™ II Flexible Grinding Wheel	4.3	3.4	23	4hrs 20mins
3M™ Standard Grinding Wheel	5.4	6.0	72	1hr 23mins

Measurements of acceleration taken with a Larson Davies HVM100. Exposure points per hour calculated using Health and Safety Executive (HSE) calculator (Version 4.3 January 2014). Using the 3M™ Cubitron™ II Flexible Grinding Wheel gives 72/23 = 3.1x more grinding time (trigger time) than a standard wheel (DCGW) before the action value is reached. Keeping below the action value is recommended by the HSE.

## How can 3M help?

A number of 3M's abrasive products, including the 3M™ Cubitron™ II Flexible Grinding Wheels, have increased flexibility and better balance characteristics.

They can contribute to a reduction in the level of vibration generated to hand and arm. In addition, they can help reduce operator fatigue, reduce trigger time, improve the workplace environment and improve surface finish productivity.

# 3M™ Cubitron™ II Flexible Grinding Wheels

## Ordering information

Part number	Size (mm)	Grade	Max. RPM	Discs per inner	Discs per outer	Back-up pads included per inner
51740	100 × 3 × 16	36+	15,200	50	200	2
51741	115 × 3 × 22.23	36+	13,200	50	200	2
51742	115 × 3 × 22.23	80+	13,200	50	200	2
51743	125 × 3 × 22.23	36+	12,000	50	200	2
51744	125 × 3 × 22.23	80+	12,000	50	200	2
51745	180 × 4 × 22.23	36+	8,500	20	100	2

## Accessories – back up pad for flexible grinding wheels

Part number	Size (mm)	Use with	Discs per inner	Discs per outer
60642	86 × 22	115 / 125mm disc	5	100
60643	117 × 22	180mm disc	5	100



For safety, optimum performance and durability, always use a back up pad with all flexible grinding wheels.

## Stay safe on the job with 3M™ PPE



3M™ Headgear  
G500



3M™ PELTOR™  
X4 Ear Defender  
Helmet Mounted



3M™ GoggleGear™  
500 Series



3M™ Aura™ 9332+  
Valved Respirator



3M™ E-A-R™  
Ultrafit™ Earplugs



For more information please contact your local 3M Representative or 3M Distributor.  
Visit [3M.co.uk/metalworking](http://3M.co.uk/metalworking)

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