

	MRAT 034	<h2 style="text-align: center;">Dust from grinding metal</h2>	Applicable to: cast, high speed or tool steels; mild steel - surface only	See also: 035 042
Process(es) covered:		<p><i>Tool grinding:</i> The profiling and sharpening of tool bits for metal turning and shaping operations and the sharpening of drills.</p> <p><i>Surface grinding:</i> The completion of a workpiece to a very high standard of surface finish and flatness to close tolerance.</p>		

Control Measures

- Wear a dust mask to standard FFP3 (Refer to GL310 - A guide to the use of Respiratory Protective Equipment (RPE) in school D&T and science) whenever grinding for more than a couple of minutes
- Wear eye protection giving protection to at least BS EN 166 F (see Further information) when grinding.
- If the grinder is not fitted with a transparent guard, goggles to the higher standard, BS EN 166 B 4, must be used.
- Only a competent person, who has had the relevant specialist training, may change abrasive wheels, which is a hazardous activity.

Immediate Remedial Measures:

Dust is in the eye	Irrigate immediately with water for several minutes, telling the casualty to hold eyelids apart.
A particle could be in the eye	<p>Tell the casualty not to rub the eye, sit them down facing the light with the head leaning back. Stand behind the casualty to look for the particle in the eye. If it is over the iris or pupil, DO NOT ATTEMPT TO MOVE IT. Tell the casualty to hold a gauze pad over the eye and close the other one. Send for an ambulance to take the casualty to hospital.</p> <p>If the particle is visible over the white of the eye, the corner of a moistened handkerchief can be used to remove it. Call 111 and seek medical attention.</p>
Injury to the eye	If there is any sign of injury to the eye, tell the casualty to hold a gauze pad over the eye and close the other one. Take the casualty to hospital as quickly as possible.

Storage	
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Disposal	
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Risk Assessment

Hazards:

Dust	Abrasive material from wheels and fine particles of ground material are irritating to the eyes and to the respiratory system. Inhalable dust has an LTEL (8 hrs) of 10 mg m ³ , which will not be exceeded during normal operations.
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Risks:

Dust	The eyes must be protected. The dust created is an irritant to the respiratory system in the event of long periods of exposure. However, the dust is dense and settles relatively quickly. If large numbers of tools are to be prepared, so that the operation continues for more than an hour, wear a suitable dust mask.

Further Information:

- Eye protection originating outside the UK may not be marked 'BS' (British Standard) but should include 'EN' (European Norm). The CLEAPSS guide R135 *Eye and face Protection* has a table of equivalences.
- Should grinding wheels contain abnormally hazardous materials, an appropriate warning will be shown on the wheel. This should be repeated on the grinder itself.