

MATERIAL SAFETY DATA SHEET																																																			
- Format by FEPA as per EC Directive 91/155/CEE and ISO-Standard 11014 -																																																			
COMPANY: Master Abrasives Ltd. ADDRESS: Long March Ind. Est. Daventry NN11 4PG PHONE: 01327 703813 AUTHORISED PERSON: A B Collins <div style="text-align: center;">Quality Manager</div> Position: e-mail bcollins@master-abrasives.co.uk	Issue Date: <div style="text-align: center;">06/05/2016</div>																																																		
IMPORTANT NOTICE: The abrasive products are inert products which do not create any risk when handled or stored. When used on grinding machines they require specific measures to protect the operators. During the grinding operation 90% or more of the particulates of the dust come from the material being ground, and for wet grinding, from aerosols generated by the grinding fluid. Specific attention must therefore be given to the nature of the part and of the fluid and the appropriate equipment to extract these generated materials must be installed.																																																			
1. PRODUCT IDENTIFICATION <div style="text-align: center;">Organic Bonded Grinding & Cut-off Wheels</div>																																																			
2. COMPOSITION/INFORMATION OF INGREDIENTS																																																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Chemical Name</th> <th style="width: 15%;">%</th> <th style="width: 30%;">CAS Number</th> <th style="width: 25%;">PEL</th> </tr> </thead> <tbody> <tr> <td>Aluminium Oxide⁻</td> <td>60.0 – 95.0</td> <td>1344-28-1</td> <td>15mg/M³ ¹</td> </tr> <tr> <td>Silicon Carbide</td> <td>55.0 – 95.0</td> <td>409-21-2</td> <td>15mg/M³ ¹</td> </tr> <tr> <td>Zirconium Oxide</td> <td>0.0 – 9.0</td> <td>1314-23-4</td> <td>5mg/M³ (as Zr)</td> </tr> <tr> <td>Phenol/Formaldehyde Binder*</td> <td>5.0 – 20.0</td> <td>None Found</td> <td>None Found</td> </tr> <tr> <td>Fibreglass ‡</td> <td>0.0 – 7.0</td> <td>65997-17-3</td> <td>15mg/M³</td> </tr> <tr> <td>Graphite</td> <td>0.0 – 2.0</td> <td>7782-42-5</td> <td>15 mppcf</td> </tr> <tr> <td>Calcium Oxide</td> <td>0.0 – 3.0</td> <td>1305-78-8</td> <td>5mg/M³</td> </tr> <tr> <td>Fluorides †**</td> <td>1.0 – 15.0</td> <td>Various</td> <td>2.5mg/M³ (as F)</td> </tr> <tr> <td>Calcium Compounds**</td> <td>1.0 – 12.0</td> <td>Various</td> <td>15mg/M³ ¹</td> </tr> <tr> <td>Sulphates & Sulphides**</td> <td>0.0 – 15.0</td> <td>Various</td> <td>15mg/M³ ¹</td> </tr> <tr> <td>Rubber</td> <td>0.0 – 2.0</td> <td>78-79-5</td> <td>None Found</td> </tr> </tbody> </table> <p>Aluminium Oxide is at least 96% pure, usually containing other metallic oxides as impurities. * Free Phenol (108-95-2)(PEL&TLV: 5ppm) and free Formaldehyde(50-00-0) (PEL:0.75ppm, TLV:1ppm) may be present in trace amounts ** Substance is a compound and/or mixture † Maximum Fluoride Content, as F is 9.05%. Fluoride may be released in trace amounts under normal use. ‡ Present only in fibreglass reinforced wheels. r As Total Dust, 5mg/M³ respirable fraction.</p>				Chemical Name	%	CAS Number	PEL	Aluminium Oxide ⁻	60.0 – 95.0	1344-28-1	15mg/M ³ ¹	Silicon Carbide	55.0 – 95.0	409-21-2	15mg/M ³ ¹	Zirconium Oxide	0.0 – 9.0	1314-23-4	5mg/M ³ (as Zr)	Phenol/Formaldehyde Binder*	5.0 – 20.0	None Found	None Found	Fibreglass ‡	0.0 – 7.0	65997-17-3	15mg/M ³	Graphite	0.0 – 2.0	7782-42-5	15 mppcf	Calcium Oxide	0.0 – 3.0	1305-78-8	5mg/M ³	Fluorides †**	1.0 – 15.0	Various	2.5mg/M ³ (as F)	Calcium Compounds**	1.0 – 12.0	Various	15mg/M ³ ¹	Sulphates & Sulphides**	0.0 – 15.0	Various	15mg/M ³ ¹	Rubber	0.0 – 2.0	78-79-5	None Found
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3. HAZARDS IDENTIFICATION Dust generated from the intended use of this product may contain trace amounts of inorganic fluorides. Excessive exposure to fluorides has been shown in NIOSH studies to increase bone density. Dust generated from the intended use of this product may contain trace levels of phenolic resins which may under excessive exposure cause skin sensitization and airway obstruction.																																																			
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<p>4.</p>	<p>FIRST AID MEASURES</p> <p>APPLICABLE WHEN ABRASIVE PRODUCTS ARE IN USE ON MACHINES</p> <p>The following recommendations are basic rules during a grinding operation; they must be followed in conjunction with the information appearing in the Safety data sheets of the material ground and of the grinding fluid when used.</p> <ul style="list-style-type: none"> - Dust inhalation Remove from exposure, seek medical service if symptoms persist: - Eye: Remove from exposure and flush with clean water. If symptoms persist seek medical advice. - Skin: Dust may irritate some individuals. Wash effected area with soap and water. - Ingestion: Non toxic but should be avoided.
<p>5.</p>	<p>FIRE FIGHTING MEASURES</p> <p>Water, Powder, Foam, Sand, Co2, etc can be used if compatible with operating conditions. Fumes from burning cured Phenol/Formaldehyde resin contain trace formaldehyde which can cause eye, nose and throat irritation. The short term exposure limit for formaldehyde is 2ppm. Use full protective clothing and a positive pressure self contained breathing apparatus.</p>
<p>6.</p>	<p>ACCIDENTAL RELEASE MEASURES</p> <p>NOT APPLICABLE</p>
<p>7.</p>	<p>HANDLING AND STORAGE</p> <p>The following recommendations should be followed to prevent damage to abrasive products which may create a risk of rupture when in use.</p> <ul style="list-style-type: none"> - Fragile products: handle and store with care. - Store in a cool dry place. - For detailed recommendations refer to the FEPA SAFETY CODE and safety leaflets
<p>8.</p>	<p>EXPOSURE CONTROL/PERSONAL PROTECTION</p> <p>NOT APPLICABLE WHEN ABRASIVES ARE HANDLED OR STORED.</p> <p>When using abrasive products, refer to grinding machines instructions and to the rules to prevent accidents in the work place.</p> <p>For safe use of abrasives refer to the FEPA SAFETY CODE safety leaflets and national regulations.</p>
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8.1	The following personal protective equipment should be used dependent on the operation and the material being ground.	
	- Eye protection:	Machine guarding and safety goggles or face shield with a minimum protection level of EN166 Grade B are recommended
	- Dust protection:	Use of respirators complying with EN149 is recommended
	- Hand protection:	Use of barrier cream or protective gloves
	- Ears protection:	Use of ear muffs or equivalent
	- Skin protection:	Use of suitable protective clothing
8.2	Hygiene measures:	No specific requirements
9.	PHYSICAL AND CHEMICAL PROPERTIES	
9.1	Physical state:	Solid
9.2	Colour:	Variable
9.3	Odour:	Not Applicable(may give slight odour)
9.4	pH:	Not Applicable
9.5	Change of physical state:	Not Applicable
9.6	Specific Gravity:	2.0 to 4.0
9.7	Bulk Density:	Not Applicable
9.8	Vapour pressure:	Not Applicable
9.9	Flash point:	Not Applicable
9.10	Explosion properties:	Not Applicable
9.11	Viscosity:	Not Applicable
9.12	Solubility in water:	Trace possible
10.	STABILITY AND REACTIVITY	
	Abrasives are stable and non reactive when handled or stored.	
10.1	Conditions to avoid.	Excessive heat or humidity
10.2	Materials to avoid:	Strong acids strong bases. Strong oxidising agents may modify the mechanical characteristics of the product and create safety hazards when used on machines.
10.3	Hazardous decomposition products: During use, dust and decomposing organic fumes are generated which may contain trace amounts of phenol, formaldehyde and fluorides. In most cases, the material removed from the workpiece will be significantly greater than the grinding wheel components. Coolants or other surface residues may produce other decomposition products.	
10.4	Other indications:	Not Applicable
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11.	TOXICOLOGICAL INFORMATION
	<p>NOT APPLICABLE WHEN HANDLED OR STORED.</p> <p>According to the experience gathered for many years, the abrasives when properly used have no adverse effect on health. Refer to the preliminary note about dust and aerosols of grinding fluids.</p>
12.	ECOLOGICAL INFORMATION
12.1	Mobility: Not Applicable
12.2	Persistence and degradability: Not Applicable
12.3	Bio accumulative potential: Not Applicable
12.4	Ecotoxicity: Not Applicable
13	DISPOSAL CONSIDERATIONS
	<p>After use abrasives may be contaminated with hazardous materials (particles of material ground or cooling agents) and should be disposed of in accordance with national and local regulations.</p>
14.	TRANSPORT
	<p>The abrasives are not dangerous products and no specific regulations for any type of transportation are required. Protect from rain and excessive temperature and humidity.</p> <p>No special precautions necessary other than to insure that no damage to the product occurs.</p>
15.	REGULATORY INFORMATION
	<p>EC Regulations: NONE, no specific marking required under EC directive N° 88/379</p> <p>National or Local Regulations: Refer to relevant texts.</p>
16.	INFORMATION
	<p>The above indications are based on existing practice and do not constitute a guarantee. The Laws and Regulations must be strictly followed by the users who remain responsible for the use of the abrasives.</p>
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