
MATERIAL SAFETY DATA SHEET FOR

GRINDING WHEELS AND BONDED ABRASIVES

(Format by FEPA as per EEC Directive 91/55/CEE and rule ISO ST 11014 Page 1)

IMPORTANT NOTICE

Bonded abrasives are inert products which do not create any risk when handled or stored. When used on grinding machines they require specific actions to protect the operators. During a 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 protection devices (exhaust) must be installed.

1. PRODUCT IDENTIFICATION

Product designation : Flat and depressed centre cut-off wheels and grinding discs.

2. COMPOSITION/INFORMATION ON INGREDIENTS

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|-----|---------------|--------------------------|-------------------------------------------------------------------------------------------------------------|
| 2.1 | Abrasive | !
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! | Synthetic Aluminium Oxide
Synthetic Silicon Carbide
Zirconium Oxide + Aluminium Oxide
Others _____ |
| 2.2 | Bond | !

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!
! | VITRIFIED
ORGANIC :

Polymerised synthetic resin
Rubber
Other organic _____ |
| 2.3 | Bond fillers | !
!
!
!
! | Halogen compounds
Carbonates
Oxides
Sulphur compounds
Others _____ |
| 2.4 | Reinforcement | !
! | Glass cloths
Others _____ |
| 2.5 | Elements | | _____ |

3. HAZARDS IDENTIFICATION

- 1.1 Recommended for marking :
NOT APPLICABLE : The bonded abrasives are not dangerous products.
- 3.2 Other rules : NONE.

4. FIRST AID MEASURES

NOT APPLICABLE WHEN BONDED ABRASIVES PRODUCTS NOT IN USE ON MACHINES.

Following recommendations are basic rules during a grinding operation, they must be completed by the information appearing in the Safety Data Sheets of the material ground and of the grinding fluid when used.

- 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 : Remove from exposure. Remove contaminated clothing, wash and thoroughly rinse the affected area.
- Ingestion : No hazardous effect known, seek medical attention.

5. FIRE FIGHTING MEASURES

NONE specific.

6. ACCIDENTAL RELEASE MEASURES

NOT APPLICABLE.

7. HANDLING AND STORAGE

Following recommendations are aimed at preserving the bonded abrasives from damages which may create a risk of rupture when used on a grinding machine.

- Fragile products : handle and store with precaution.
- Store at moderate temperature and humidity.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

NOT APPLICABLE WHEN BONDED ABRASIVES ARE HANDLED OR STORED.

When using abrasive products, refer to grinding machines instructions and to the rules about prevention of professional accidents.

For a safe use of bonded abrasives refer to the FEPA SAFETY CODE.

1.1 Personal protective equipment :

For information when using bonded abrasives on a machine :

- *Eye protection : Machine guarding and safety goggles or face shield
- *Dust protection : Use of dust mask
- *Hand protection : Use of barrier cream or protective gloves
- *Ear protection : Use of ear muffs or equivalent
- *Skin protection : Wear suitable protective clothing
According to the application and the part being ground.

For addition information, refer to national regulations and FEPA SAFETY CODE.

8.2 Hygiene measures : No specific regulations

8.3 Protection against fire and explosions : No specific regulations.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1	Physical state	:	'Solid'
9.2	Colour	:	Variable
9.3	Odour	:	Not applicable (may give off non specific odour in use)
9.4	pH	:	Not applicable
9.5	Change of physical state	:	No applicable
9.6	Density	:	Depending upon product : 0.8 – 3.5
	Bulk Density	:	Not applicable
9.7	Vapour pressure	:	Not applicable
9.8	Flash point	:	Not applicable
9.9	Explosion properties	:	Not applicable
9.10	Viscosity	:	Not applicable
9.11	Solubility in water:	:	Not defined

10. STABILITY AND REACTIVITY

Bonded abrasives are stable and non reactive when handled or stored.

- 1.1 Conditions to avoid :
Excessive heat, humidity or thermal shocks which may mechanically weaken the products and create safety or health hazards when used on machines.
- 1.2 Materials to avoid :
Strong acids, strong bases and strong oxidising agents may modify the characteristics of the products and create safety or health hazards when used on machines.
- 1.3 Hazardous decomposition products :
These products are extremely unlikely to cause problems in normal use.
- 10.4 Other indications : NONE

11. TOXICOLOGICAL INFORMATION

NOT APPLICABLE WHEN HANDLED OR STORED

According to the experience gathered for many years, the bonded abrasives when properly used have no adverse effect on health, refer to the preliminary note about dust and aerosols.

12. ECOLOGICAL INFORMATION

- 1.1 Mobility :
When the bonded abrasives are used, the grinding debris are easily retained within fixed machines or with appropriate screens for portable grinding operations.
- 1.2 Persistence and degradability :
Not bio-degradable.
- 1.3 Bioaccumulative potential : Not applicable.
- 1.4 Ecotoxicity : Not applicable.

13. DISPOSAL CONSIDERATIONS

According to National and local regulations.

14. TRANSPORT

No specific regulations for any type of transportation. Protect from rain and excessive temperature and humidity.

No special precautions necessary other than to insure that no damage to the product occurs.

15. REGULATORY INFORMATION

EEC Regulations : NONE
National or local regulations: NONE

16. OTHER INFORMATION

WARNING !

The above indications are based on the 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 bonded abrasives.