Material Safety Data Sheet (MSDS)

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

a. Product type: Coated Abrasive Products (BORA-6)
b. Manufacturer : DEERFOS CO.,LTD
c. The department of writer : R&D (Research and Development) Center
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2. HAZARDS IDENTIFICATION

a. The hazard identification is based on a formalistic procedure as the hazard statements of the ingredier
b. The hazard statements of the ingredients are summarizies under section 3.
c. A greater hazard is the exposure to the dust/fumes from the material or coatings.
d. Most of the dust generated during grinding must be evaluated.

3. COMPOSITION /INFORMATION ON INGREDIENTS

Composition	CAS No	Conc. (%)	Classification acc. OSHA Hazard Communication	
			Hazard classes / hazard categories	Hazard statements
ALUNDUM	1344-28-1	13		
ZIRCONIUM OXIDE	1314-23-4	14		
CALCIUM CARBONATE, NATURAL	1317-65-3	4~7		
Cryolite	15096-52-3	13	Acute Tox. 4 STOT wdh. 1	H332 H372
Titanium Dioxide	13463-67-7	2		
WOLLASTONITE(Ca(SiO3))	13983-17-0	0~3		
BORATE(1-),TETRAFLUORO-,POTASSIUM	14075-53-7	8		
PHENOL, POLYMER WITH FORMALDEHYDE	9003-35-4	26	Carc. 1B Acute Tox. 3 Acute Tox. 3 Acute Tox. 3 Skin Corr. 1B Skin Sens. 1	H350 H301 H311 H331 H314 H317
PE	-	18		
	-	1~2		

※ Reference
H350 : May cause cancer
H301 : Toxic if swallowed
H311 : Toxic in contact with skin
H331 : Toxic if inhaled
H332 : Harmful if inhaled
H314 : Causes secere skin burns and eye damage
H317 : May cause an allergic skin reaction
H372 : Causes damage to organs through prolonged or repeated exposure

4. FIRST AID MEASURES

a. Eye Contact
- Do not let the victim rub his eyes.
- Gently rinse the affected eyes with clean water for at least 15 minutes.
- Arrange for transport to the nearest medical facility for examination and treatment by a physician as soon as possible.

b. Skin Contact
- Do not absorbed through skin.(may cause abrasions)
- Obtain first aid or medical assistance, if needed.

c. Inhalation
- Remove to fresh air.
- Apply artificial respiration as needed.
- Obtain first aid or medical assistance.

d. Ingestion
- Obtain first aid or medical assistance, if needed.

5. FIRE FIGHTING MEASURES

a. Extinguishing media
- Dry chemical powder, carbon dioxide, water should be used fires.
- Use extinguishing medias appropriate to the source of the fire.

b. Special fire fighting procedures
- Backing & resin binder will burn or decompose, use respiratory protection.

6. ACCIDENTAL RELEASE MEASURES

No special measures required.

7. HANDLING AND STORAGE

a. Keep temperature at 0℃ - 40℃
b. Keep humidity at 30-60%
c. In use, do not smoke or eat
d. Avoid rough handling or dropping
e. Protect against physical damage

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

a. Control parameters
- Hazardous dust of the workpiece material may be generated during sanding operations.
- National regulations for dust exposures limit values have to be taken into consideration.
- Observe the regional official regulations.

Substance	CAS-Nº	Agency	Threshold limits
Zirconium Compounds	1314-23-4	ACGIH	TWA (as Zr): 5mg/m³
			STEL (as Zr): 10mg/m³
		OSHA	TWA (as Zr) : 5mg/cm³
alpha- Alumina	1344-28-4	OSHA	TWA: 15mg/m³ (total dust)
			TWA: 15mg/m³ (respirable fraction)
		CMRG	TWA : 1fiber/cm³
Cryolite	15096-52-3	ACGIH	TWA (as F): 2.5 mg/m³
		OSHA	TWA: 2.5mg/m³ (total dust)
			TWA (as F): 2.5 mg/m³
Titanium Dioxide	13463-67-6	ACGIH	TWA: 10mg/m³
		CMRG	TWA : 5 mg/m³ (raspirable dust)
		OSHA	TWA : 5 mg/m³ (Total dust)
Formaldehyde	50-00-0	ACGIH	TWA: 0.1mg/m³
			STEL : 0.3 mg/m³
		OSHA	TWA : 0.75 mg/m³
			STEL : 2 mg/m³
		NIOSH	TWA : 0.016 mg/m³
Potassium Fluoroborates	14075-53-7	ACGIH	TWA (as F): 2.5 mg/m³
		OSHA	TWA : 2.5 mg/m³ (tatal dust)
			TWA (as F): 2.5 mg/m³

※ Reference
ACGIH : American Conference of governmental Industrial Hygienists
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor-Occupational Safety and Health Administration
NIOSH : National Institute
TWA : Time-Weighted- Averge
STEL : Short Term Exposure Limit

b. As needed, approved dust respirator.
c. Wear protective eye glasses or chemical safety goggles.
d. No precautions other than clean body covering clothing should be needed.
e. As needed, hearing protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

a. Physical state, form : Solid
b. Color : Purple
c. Odor : None
d. Boiling point : N/A
e. Melting point : N/A
f. Solubility in water : N/A
g. Vapor pressure : N/A
h. Specific gravity : N/A

10. STABILITY AND REACTIVITY

a. This material is stable.
b. Hazardous decomposition and polymerization will not occur.
c. Decomposition products : In use, dust and decomposing resin system fumes are generated. In most cases, the material removed from the work piece will be significantly greater than the coated abrasive product components.

11. TOXICOLOGICAL INFORMATION

a. Dust may cause respiratory irritaion
b. Rubbing product across the skin may cause mechanical irritation or abrasions.
c. Dust particles may cause abrasive injury to the eyes.

d. Acute Toxicity

Zicronium Oxide	Oral	＞5000 mg/kg (LD50, rat)
	Inhalation	＞4.3 mg/L/h (LC50, rat)
Aluminium Oxide	Oral	＞5000 mg/kg (LD50, rat)
	Inhalation	＞7.6 mg/L/h (LC50, rat)
Cryolite	Oral	＞10000 mg/kg (LD50, rat)
	Inhalation	＞200 mg/L (LC50, rat)
	Dermal	＞2000 mg/kg (LD50, rabbit)
Formaldehyde	Oral	＞5000 mg/kg (LD50, rat)
	Inhalation	＞0.578 mg/L/4h (LC50, rat)
	Dermal	＞270 mg/kg (LD50, rabbit)
Titanium Dioxide	Dermal	＞10000 mg/kg (LD50, rabbit)
	Inhalation	＞6.82 mg/L/4h (LC50, rat)
	Ingestion	＞10000 mg/kg (LD50, rat)
Potassium Fluoroborate	Oral	＞2000 mg/kg (LD50, rat)

12. ECOLOGICAL EFFECTS

a. This substance is not biodegradable.
b. This substance is not bioaccumulate.
c. This substance is not fish toxicity.

13. DISPOSAL CONSIDERATION

This combustible material may be burned in a chemical incinerator equipped with on afterburner and scrubber.

14. TRANSPORT INFORMATION

No relevant information found

15. REGULATORY INFORMATION

California Proposition 65 :

⚠ WARNING : This product can expose you to Formaldehyde and Titanoum dioxide, which is known t the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

16. OTHER INFORMATION

a. References
- Chemical substances of unknown or variable composition complex reaction products and biological material.
- Coated abrasives modern tool of industry.

b. Other
- The information and recommendations set forth herein are taken from sources believed to be accurate as of the date hereof ; however, DEERFOS CO.,LTD. makes no warranty with respect to the accuracy of the information or the suitability of the recommendations, and assumes no liability to any user thereof.
- Please consult DEERFOS CO.,LTD. for further information.

c. Revision Date : 17. July. 2018

d. Revision Number : 2