

TAIWAN RESIBON ABRASIVE PRODUCTS CO., LTD.
38 LANE 224, YENPING N. ROAD,
SEC 5, TAIPEI 111, TAIWAN, R.O.C.
TEL: 886 2 28129316 FAX: 886 2 28122950

MATERIAL SAFETY DATA SHEET
For Organic Bonded Abrasives

Section 1.0 IDENTIFICATION

1.1 Products: Grinding wheels with Aluminum Oxide for Metal

1.2 Manufacturer or distributor

TAIWAN RESIBON ABRASIVE PRODUCTS CO., LTD.
 38 LANE 224, YEN-PING N. ROAD,
 SEC 5, TAIPEI 111, TAIWAN, R.O.C.

1.3 Contact: Operations Manager

1.4 Phone No: +886 2 28129316
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1.5 Date prepared: Oct 22th, 2015

Section 2.0 HAZARDOUS INGREDIENTS

2.1 Abrasive

| Common name | Chemical name | CAS NO. | OSHA | ACGIH | CARCINOGEN | % By Wgt |
|---------------|----------------------|------------|--------------|--------------|------------|-------------|
| | | | PEL mg/m3 | TLV mg/m3 | | |
| Alpha alumina | Aluminum oxide | 1344-28-1 | 15 | 10 | N | 40-85% |
| Cryolite | Sodium alum fluoride | 15096-52-3 | 2.5 | 2.5 | N | 1-15% |

2.2 Binder system

| Common name | Chemical name | CAS NO. | OSHA | ACGIH | CARCINOGEN | % by Wgt |
|-------------|-------------------------------|-----------|--------------|--------------|------------|-----------------|
| | | | PEL mg/m3 | TLV mg/m3 | | |
| Resin | Phenol-formaldehyde (PNOR) | 9003-35-4 | 15 | 10 | N | 10-20% |
| graphite | | 7782-42-5 | 10 | 10 | N | (cured) 0-5% |

2.3 Reinforcing

| | | | | | | |
|-------------|-----------|------------|----|----|---|---------------|
| Fiberglass | | | | | | |
| Fabric mesh | Amorphous | 65997-17-3 | 15 | 10 | N | Less than 15% |

Section 3.0 PHYSICAL CHARACTERISTICS

| | |
|-------------------------|--|
| 3.1 Boiling point | N/A |
| 3.2 Vapor Pressure | N/A |
| 3.3 Vapor density | N/A |
| 3.4 Specific gravity | Greater than 1 |
| 3.5 Solubility in water | Insoluble |
| 3.6 Melting point | N/A |
| 3.7 Evaporation rate | N/A |
| 3.8 Appearance & odor | Formed solid with little or no odor. Some odor may be produced in use. |

Section 4.0 FIRE AND EXPLOSION HAZARD

| | |
|--------------------------------------|------|
| 4.1 Flash point | N/A |
| 4.2 Flammable limits | N/A |
| 4.3 Extinguishing media | N/A |
| 4.4 Fire fighting procedures | N/A |
| 4.5 Unusual fire & explosion hazards | None |

Section 5.0 REACTIVITY DATE

- 5.1 Stability Fully stable
- 5.2 Condition to avoid None
- 5.3 Materials to avoid Strong acids
- 5.4 Hazardous decomposition or by-products

This product will not decompose. Dusts are generated while in use, which will consist of degradation products from the wheel and from the work piece.

Section 6.0 HEALTH HAZARD DATE

6.1 Routes of entry:

The principal routes of entry are inhalation, ingestion, eyes, and skin.

6.2 Inhalation:

Regular exposure to grinding dusts may cause respiratory problems, mucous membran irritation, or aggravate pre-existing conditions. Prolonged exposure to fluorides may cause skeletal or dental fluorosis. Prolonged exposure to silica may cause silicosis or cancer but no reports of definitive test results showing that these health problems have been caused by grinding wheel dusts have been found.

6.3 Ingestion

Ingestion is unlikely and is not recommended, but no adverse affects are known.

6.4 Eye contact

Dusts may irritate the eyes. If irritation occurs, flush the eyes with water and obtain medical attention.

6.5 Skin contact

Prolonged dust exposure may cause skin irritation. If this occurs, wash with soap and water and obtain medical attention.

Section 7.0 FIRST AID MEASURES

- 7.1 Inhalation: Remove to fresh air. If breathing has stopped, give artificial respiration. Get Medical attention immediately.
- 7.2 Eye Contact: Wash with large amounts of water. Obtain first aid and medical assistance, if needed.
- 7.3 Skin contact: Wash affected areas with soap and water. if irritation persists, obtain medical assistance.
- 7.4 Ingestion: Obtain medical assistance and call poison control center.

Section 8.0 HANDLING PROCEDURES

- 8.1 Handle and store with care to prevent breakage or crushing
- 8.2 If dropped or spilled, inspect carefully to detect and remove cracked or broken pieces.
- 8.3 Clean up using normal housekeeping methods.
- 8.4 Dispose of broken items and pieces to the applicable landfill in conformance with state or local regulations.

Section 9.0 CONTROL MEASURES

9.1 Ventilation

Use in a well ventilated area. Additional local exhausts are recommended to keep dust concentrations below the permissible levels.

9.2 Respiratory

NIOSH approved respirators may be required if exposure exceeds Recommended Exposure Limits (REL).

9.3 Protective clothing and equipment

Goggles or safety glasses with side shields are recommended. Long sleeved shirts should be worn during grinding. Aprons, face shields and gloves may be worn as desired.

Section 10.0 SPECIAL PRECAUTIONS

- 10.1** Avoid breathing grinding dust.
- 10.2** Avoid skin and eye contact with grinding dust.
- 10.3** Wear ear plugs or muffs while grinding.
- 10.4** Refer to ANSI B7.1 for additional precautions relative to handling, storage, and safe use of abrasive wheels.

Section 11.0 (See attached product listing)

MSDS CATEGORY 1 SECTION 11

075592-0 9"x1/4"x5/8"-11 A24R