



SAFETY DATA SHEET

Microgrit Aluminum Oxide, Alumina Series

Section 1: Chemical Product and Company Information

1.1 Product Identifier

Common Name: Microgrit Aluminum Oxide, Alumina Series
Trade Name: Microgrit A-17; Microgrit PXA; Microgrit A-13; Microgrit WA; Microgrit A; Microgrit WCA; Microgrit PLP; Microgrit GB; Microgrit CR.3; Microgrit P 3; Microgrit DD; Microclear ECO; Microclear EC; Microclear Extreme; Microgrit MPT1; Microclear Ultra; Microclear 100.4; Microgrit EXP 8

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Product Use: Lapping and polishing, wear-resistant coating.
Uses Advised Against: None identified

1.3 Details of the Supplier of the Substance or Mixture

Manufacturer/Supplier:

Micro Abrasives Corporation
720 Southampton Road
P.O. Box 669
Westfield, MA 01085
Tel: 413-562-3641
Fax: 413-562-7409

Micro Abrasives Europe GmbH
Ernst-Barlach-Weg 11
D-25451 Quickborn
Germany

Contact:

Holger Brandt
Phone: +49 (0)4106 626 98 55
Fax : +49(0)4106 626 98 56

Sapphire Powder
971122
725007
725008
725009
725010

1.4 Emergency Telephone Number

In United States, Canada, Puerto Rico, and the U.S. Virgin Islands: 1 (800) 255-3924
Outside the United States: +01 or +001 (813) 248-0585 (Call collect if necessary)
In China: (020) 84616908, Contact Person: Mr. Jacky Cheng

Email: SDS@microgrit.com

Website: <http://www.microgrit.com>

SDS Date of Preparation/Revision: March 2, 2015

Section 2: Hazards Identification

2.1 Classification of the Substance or Mixture

EU CLP Classification (1272/2008): Not classified as hazardous

EU Classification (1999/45/EC): Not classified as dangerous

GHS Classification: Not classified as dangerous

US OSHA Classification (29CFR1910.1200): Not classified as dangerous

Refer to Section 16 for Full Text of EU Classes and R Phrases

2.2 Label Elements:

Not Hazardous in accordance with the Globally Harmonized System for the Classification and Labeling of Chemicals (GHS)

Supplemental Labeling: Prolonged exposure to elevated noise levels during operations may affect hearing. A greater hazard, in most cases, is the exposure to the dust/fumes from the material or paint/coatings being processed. Most of the dust generated during abrasive processing is from the base material or coatings and the potential hazard from this exposure must be evaluated. This dust may present a fire or dust explosion hazard and may present a serious health hazard.

2.3 Other Hazards: None identified

SAFETY DATA SHEET

Microgrit Aluminum Oxide, Alumina Series

Section 3: Composition/Information on Ingredients

Component	CAS Number/ EINECS Number.	Amount	EU/GHS Classification (1272/2008)
Aluminum Oxide	1344-28-1 / 215-691-6 Reach Registration Number 01-2119529248-35-0063	60-100%	Not dangerous / Not hazardous

Refer to Section 16 for Full Text of EU/GHS Classes and R Phrases/H Statements if applicable

Section 4: First Aid Measures

4.1 Description of First Aid Measures

First Aid

Eyes: Remove contact lenses if present and easy to do. Flush eyes thoroughly with large amounts of water, holding eyelids open. If irritation persists, seek medical attention.

Skin: Wash skin with soap and water. If irritation or other symptoms develop, seek medical attention.

Ingestion: Do not induce vomiting. Rinse mouth with water. Seek medical attention if large amount is swallowed or if you feel unwell.

Inhalation: Move person to fresh air. If breathing is difficult, have qualified personnel administer oxygen. Seek medical attention if irritation or other symptoms persist.

See Section 11 for more detailed information on health effects.

4.2 Most Important symptoms and effects, both acute and delayed: Dust may cause eye and respiratory irritation. Prolonged inhalation of high concentration of dust may cause adverse effects on the lungs. Exposure to dust generated from processing the base material or coatings may present additional health hazards.

4.3 Indication of any immediate medical attention and special treatment needed: Immediate medical attention should not be required.

Section 5: Fire Fighting Measures

5.1 Extinguishing Media: Use any media that is suitable for the surrounding fire. .

5.2 Special Hazards Arising from the Substance or Mixture: This product is not flammable or combustible; however, consideration must be given to the potential fire/explosion hazards from the base material being processed. Many materials create flammable/explosive dusts or turnings when machined or ground.

5.3 Advice for Fire-Fighters: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires involving chemicals.

Section 6: Accidental Release Measures

6.1 Personal Precautions, Protective Equipment and Emergency Procedures: Wear appropriate respirator and protective clothing as needed to avoid eye contact and inhalation of dust.

SAFETY DATA SHEET

Microgrit Aluminum Oxide, Alumina Series

6.2 Environmental Precautions: Avoid contamination of water supplies and environmental releases. Report spills as required to authorities.

6.3 Methods and Material for Containment and Cleaning Up: Carefully collect dry material, avoiding the creation of airborne dust. Place in a suitable container for disposal.

6.4 Reference to Other Sections:

Refer to Section 13 for disposal information and Section 8 for protective equipment.

Section 7: Handling and Storage

7.1 Precautions for Safe Handling:

Avoid breathing dust. Use with adequate ventilation. Avoid contact with the eyes, skin and clothing. Wear suitable gloves, eye protection and appropriate protective clothing according to the operation. Wash thoroughly after handling. Consider potential exposure to components of the materials or coatings being processed. Refer to OSHA's substance specific standards for additional work practice requirements where applicable.

7.2 Conditions for Safe Storage, Including any Incompatibilities: No special storage required.

7.3 Specific end use(s):

Industrial uses: Abrasive

Professional uses: None identified

Section 8: Exposure Controls / Personal Protection

8.1 Control Parameters:

Chemical Name	US OEL	EU IOEL	UK OEL	German OEL	China OEL	Biological Limit Value
Aluminum Oxide	5 mg/m3 TWA (respirable), 15 mg/m3 TWA (total dust) OSHA PEL None Established ACGIH TLV	None Established	4 mg/m3 TWA (respirable dust) 10 mg/m3 TWA (inhalable dust)	1.5 mg/m3 TWA (respirable), 4 mg/m3 TWA (inhalable)	4 mg/m3 TWA	None Established

Note: Consider also components of base materials and coatings being processed.

DNEL:

	Long term Oral Toxicity	Long term Inhalation Toxicity
Aluminum oxide	6.2 mg/kg	15.6 mg/m3

PNEC: None established

DNEL (Derived No-Effect Level): A DNEL is the level of exposure to the substance below which no adverse effects are expected to occur. It is therefore the level of exposure to the substance above which humans should not be exposed. DNEL is a derived level of exposure because it is normally calculated on the basis of available dose descriptors from animal studies such as No Observed Adverse Effect Levels (NOAELs) or benchmark doses (BMDs). This value is derived under EU REACH when a chemical safety assessment is performed as part of registration.

PNEC (Predicted No-Effect Concentration): Concentration of the substance below which adverse effects in the environmental sphere of concern are not expected to occur. This value is derived under EU REACH when a chemical safety assessment is performed as part of registration.

SAFETY DATA SHEET

Microgrit Aluminum Oxide, Alumina Series

8.2 Exposure Controls:

Recommended Monitoring Procedures: None identified.

Appropriate Engineering Controls: Use with adequate general or local exhaust ventilation to maintain exposure levels below the occupational exposure limits.

Personal Protective Measurers

Respiratory Protection: Not necessary unless workplace concentrations of hazardous constituents exceed the exposure limits. If the exposure levels are excessive and irritation or other symptoms are experienced, an approved respirator should be worn. Respirator selection and use should be based on contaminant type, form and concentration. Follow OSHA 1910.134 and ANSI Z88.2 or other applicable regulations and standards and good Industrial Hygiene practice.

Eye Protection: Use safety glasses with side shields or goggles.

Skin Protection: Protective gloves recommended to avoid skin abrasion when handling. Wear protective clothing as required to avoid skin contact when handling.

Other protection: Hearing protection recommended if operation is noisy.

Section 9: Physical and Chemical Properties

9.1 Information on basic Physical and Chemical Properties:

Appearance and Odor: White solid (powder or crystals), odorless.

Solubility in Water:	Insoluble	Boiling Point:	2977°C (5390.6°F)
Odor Threshold:	Not applicable	Partition Coefficient:	Not applicable
pH:	Not applicable	Melting Point:	2050 °C (3722°F)
Specific Gravity:	4.0	Vapor Density:	Not applicable
Evaporation Rate:	Not applicable	Vapor Pressure:	Not applicable
Flammability(solid/gas):	Not applicable	Flash Point:	Not applicable
Explosive Limits:	Not applicable	Autoignition Temperature:	Not applicable
Decomposition Temperature:	Not applicable	Viscosity:	Not applicable
Explosive Properties:	None	Oxidizing Properties:	None

9.2 Other Information: None

Section 10: Stability and Reactivity

10.1 **Reactivity:** Not reactive under normal conditions of use and storage.

10.2 **Chemical Stability:** Stable.

10.3 **Possibility of Hazardous Reactions:** A slight rise in temperature may result from contact with water.

10.4 **Conditions to Avoid:** None known.

10.5 **Incompatible Materials:** None known.

10.6 **Hazardous Decomposition Products:** None known. Dust from abrasive processing could contain potentially hazardous components of the base material being processed or coatings applied to the base material.

SAFETY DATA SHEET

Microgrit Aluminum Oxide, Alumina Series

Section 11: Toxicological Information

11.1 Information on Toxicological Effects:

Potential Health Hazards

Inhalation: Breathing dust may cause irritation to the nose, throat and upper respiratory tract.

Skin Contact: May cause abrasive skin irritation.

Eye Contact: May cause abrasive irritation and injury.

Ingestion: Not toxic. Swallowing may cause gastrointestinal disturbances.

Chronic Health Effects: Prolonged inhalation of respirable dust may cause adverse lung effects.

Acute Toxicity Values:

Aluminum Oxide: Oral rat LD50 >10000 mg/kg; LC50 Inhalation rat >2.3 mg/L/4 hr

Skin corrosion/irritation: Aluminum oxide was not a skin irritant in animal studies. Skin contact may result in abrasive injury.

Eye damage/ irritation: Aluminum oxide was not an eye irritant in animal studies. Eye contact may result in abrasive irritation and injury.

Respiratory Irritation: No chemical irritation expected.

Skin Sensitization: Not expected to cause skin sensitization based on human experience.

Respiratory Sensitization: Not expected to be a respiratory sensitizer based on human experience.

Germ Cell Mutagenicity: None of the components have been shown to cause mutagenic activity.

Carcinogenicity: Aluminum oxide is not listed as a carcinogen or potential carcinogen by ACGIH, IARC, NTP, OSHA or the EU CLP.

Developmental / Reproductive Toxicity: No specific data is available; however, this product is not expected to present a risk of adverse reproductive or developmental toxicity.

Specific Target Organ Toxicity (Single Exposure): No specific data is available.

Specific Target Organ Toxicity (Repeated Exposure): Recent studies of alumina refinery employees indicate that current exposures to aluminum compounds are not associated with significant adverse respiratory effects. The small changes in pulmonary functions parameters and respiratory symptoms observed were likely due to exposure to irritants and were not considered clinically significant.

Section 12: Ecological Information

12.1 Toxicity:

Aluminum oxide: NOEC 96 hr Salmo trutta >100 mg/L; NOEC 48 hr daphnia magna >100 mg/L; NOEC 72 hr Selenastrum capricornutum >100 mg/L

12.2 Persistence and degradability: Biodegradation is not applicable to inorganic substances.

SAFETY DATA SHEET

Microgrit Aluminum Oxide, Alumina Series

12.3 Bioaccumulative Potential: No data available.

12.4 Mobility in Soil: No data available.

12.5 Results of PVT and vPvB assessment: None required.

12.6 Other Adverse Effects: None known.

Section 13: Disposal Considerations

13.1 Waste Treatment Methods:

Dispose in accordance with all local, state and national regulations. Local regulations may be more stringent than regional and national requirements. It is the responsibility of the waste generator to determine the toxicity and physical characteristics of the material to determine the proper waste identification and disposal in compliance with applicable regulations

Section 14: Transport Information

	14.1 UN Number	14.2 UN Proper Shipping Name	14.3 Hazard Class(s)	14.4 Packing Group	14.5 Environmental Hazards
US DOT	None	Not Regulated	None	None	
Canadian TDG	None	Not Regulated	None	None	
EU ADR/RID	None	Not Regulated	None	None	
IMDG	None	Not Regulated	None	None	
IATA/ICAO	None	Not Regulated	None	None	

14.6 Special Precautions for User: None identified

14.7 Transport in Bulk According to Annex II MARPOL 73/78 and the IBC Code: Not determined

Section 15: Regulatory Information

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

INTERNATIONAL INVENTORIES

US EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory or exempt.

Australia: All of the components in this product are listed on the Australian Inventory of Chemical Substances (AICS) or exempt.

Canadian Environmental Protection Act: All of the components in this product are listed on the Domestic Substances List (DSL) or exempt.

China: All of the components in this product are listed on the Inventory of Existing Chemical Substances in China (IECSC) or exempt.

European Union: All the components in this product are listed on the EINECS inventory or exempt.

Japan: All of the components in this product are listed on the Japanese Existing and New Chemical Substances (ENCS) inventory or exempt.

Korea: All of the components in this product are listed on the Korean Existing Chemicals List (KECL) or exempt.

SAFETY DATA SHEET

Microgrit Aluminum Oxide, Alumina Series

New Zealand: All of the components in this product are listed on the New Zealand Inventory of Chemicals (NZIoC) or exempt.

Philippines: All of the components of this product are listed on the Philippines Inventory of Chemicals and Chemical Substances (PICCS) or exempt.

Taiwan: All of the components of this product are listed on the National Existing Chemical Inventory (NECI) in Taiwan or exempt.

United States Regulations

EPA SARA Regulations:

SARA 311/312 Hazard Categories:

- N – Fire Hazard
- N – Sudden Release of Pressure
- N – Reactivity
- N – Acute Health
- N – Chronic Health

SARA 313: This contains the following chemicals above de minimus concentrations subject to the notification or reporting requirements of SARA 313: None

CERCLA Section 103: This product is not subject to CERCLA release reporting. Many states have more stringent spill reporting requirements. Report spills in accordance with all applicable regulations.

RCRA Status: This product, as sold, is not regulated under RCRA as a hazardous waste.

State Requirements

California Proposition 65: This product contains the following chemical known to the State of California to cause cancer: None

Connecticut Carcinogen Substances: None listed.

Florida Essential Chemical List: None listed

Maine Chemicals of High Concern: None listed

Massachusetts Right To Know List: Aluminum oxide

Michigan Critical Materials List: None listed

Minnesota Hazardous Substances: Aluminum oxide

New Jersey Right To Know Hazardous Substances List: Aluminum oxide

New York List of Hazardous Substances: None listed

Ohio Extremely Hazardous Substances List: None Listed

Pennsylvania RTK Hazardous Substance: Aluminum oxide

Rhode Island Hazardous Substances List: None listed

Washington Persistent Bioaccumulative Toxins: None listed

Wyoming Process Safety Management – Highly Hazardous Chemicals: None listed

German Regulations

Substances Hazardous to Water (WGK): NWG

European Union

Regulation (EC) 1907/2006 REACH Article 59(1), Candidate List: None listed

SAFETY DATA SHEET
Microgrit Aluminum Oxide, Alumina Series

Section 16: Other Information

NFPA RATING (NFPA 704)	FIRE: 0	HEALTH: 1	INSTABILITY: 0
HMIS RATING	FIRE: 0	HEALTH: 1	PHYSICAL HAZARD: 0

EU and GHS Classes and Risk Phrases and Hazard Statements for Reference (See Sections 2 and 3):
None

SDS Revision History: Converted to GHS format. All sections revised.

SDS Date of Preparation: 03/02/15

Date of last revision: 03/02/15

This above information is believed to be correct but does not propose to be all inclusive and shall be used only as a guide. MicroAbrasives Corporation shall not be held liable for any damage resulting from handling or from contact with the above product. This information relates only to the product designated herein and does not relate to its use in combination with any other material or process.