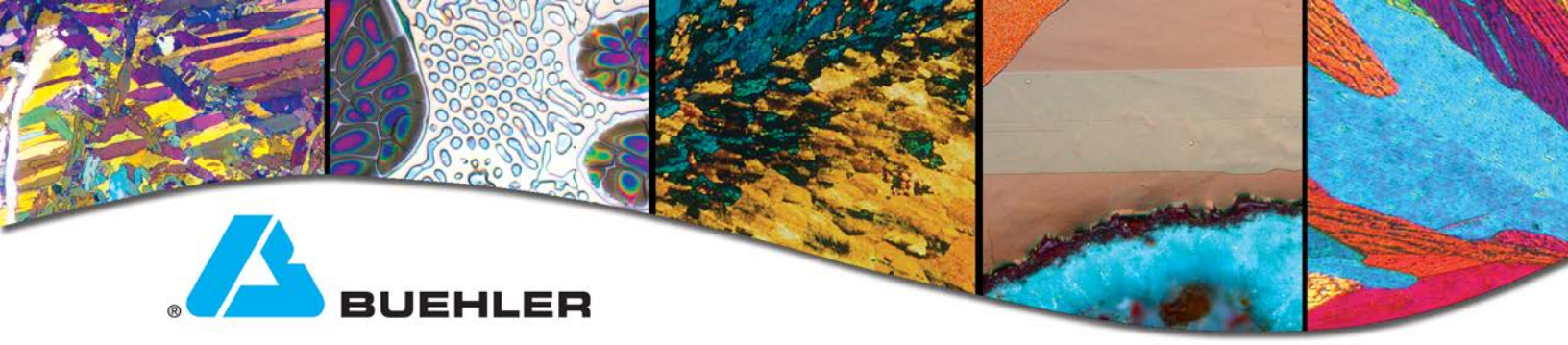

MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: MICROPOLISH II ALUMINA POWDER

IDENTIFICATION NUMBER: 40-6321-016/080 & 40-6323-016/080

PRODUCT USE/CLASS: Polishing Powder

SUPPLIER:

BUEHLER, a division of Illinois Tool Works Inc.

41 WAUKEGAN ROAD

LAKE BLUFF, IL 60044

EMERGENCY: 800-424-9300

INFORMATION: 847-295-6500

PREPARER: Technical Department, 847-295-6500

PREPARE DATE: 4/03/2012, 03 April 2012

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	WT/WT%
01	Aluminum oxide (de-agglomerated)	1344-28-1	70.0-100.0

ITEM	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL – CEILING	COMPANY TLV-TWA	SKIN
01	10 mg/m^3	N.E.	5 mg/m^3	N.E.	N.E.	NO
(SEE SECTION 16 FOR ABBREVIATION LEGEND)						

MSDS NUMBER: 9114305

SECTION 3 – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Expected to be a low hazard for normal industrial handling

ACUTE EFFECTS – EYE CONTACT: Nuisance Dust. Dust may cause mechanical eye irritation

ACUTE EFFECTS - SKIN CONTACT: Repeated or prolonged skin contact may cause irritation.

ACUTE EFFECTS – INHALATION: Nuisance Dust. Material is irritating to mucous membranes and upper respiratory tract. May cause lung injury.

ACUTE EFFECTS - INGESTION: May be harmful if swallowed. Ingestion of large amounts mat cause gastrointestinal tract irritation.

CHRONIC OVEREXPOSURE EFFECTS: Individuals with pre-existing skin disorders or eye problems or impaired liver or kidney function may be more susceptible to the effects of chemical.

OTHER INFORMATION: Target Organs: Respiratory passages at high temperatures, eyes, skin.

PRIMARY ROUTE(S) OF ENTRY: Inhalation at high temperatures, eye contact, skin contact.

SECTION 4 – FIRST AID MEASURES

EYE CONTACT: Immediately flush eyes with plenty of water. Get medical attention if irritation persists.

SKIN CONTACT: Wash with soap and water. Get medical attention if irritation develops or persists.

INHALATION: If symptoms occur, remove to fresh air. Medical personnel may administer oxygen if breathing is difficult. Seek medical attention if symptoms persist.

INGESTION: If swallowed, do NOT induce vomiting. Give victim a glass of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

NOTES TO PHYSICIAN: Treat symptomatically.

SECTION 5 – FIRE FIGHTING MEASURES

FLASH POINT: N.A.

LOWER EXPLOSIVE LIMIT: N.A.

UPPER EXPLOSIVE LIMIT: N.A.

AUTOIGNITION TEMPERATURE: N.A.

EXTINGUISHING MEDIA: CO2, Foam, Dry Chemical, Water Spray

UNUSUAL FIRE AND EXPLOSION HAZARDS: Does not burn

SPECIAL FIREFIGHTING PROCEDURES: Fire may produce toxic thermal decomposition products. Wear a self-contained breathing apparatus (SCBA) with a full face-piece operated in pressure-demand or positive-pressure mode.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Cleanup: Absorb spilled liquid with non-reactive absorbent material. Place clean-up material in appropriate disposal containers and dispose of according to local, state and federal requirements.

SECTION 7 – HANDLING AND STORAGE

HANDLING: Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, acids.

STORAGE: Do not store in open or unlabeled containers. Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 24°C (75.2°F).

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

RESPIRATORY PROTECTION: Avoid breathing in mist. Respiratory protection is generally not necessary under normal conditions of use with adequate general ventilation.

SKIN PROTECTION: Avoid skin contact. Wear chemical protective gloves. Depending upon conditions of use, additional protection may be necessary such as a face shield, apron, etc.

EYE PROTECTION: Avoid eye contact. Wear safety glasses or chemical goggles.

OTHER PROTECTIVE EQUIPMENT: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

HYGIENIC PRACTICES: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE:	N.A.	VAPOR DENSITY:	Is lighter than air
ODOR:	None	ODOR THRESHOLD:	N.A.
APPEARANCE:	White powder	EVAPORATION RATE:	Is slower than Butyl Acetate
SOLUBILITY IN H_2O:	Insoluble		
FREEZE POINT:	N.A.	SPECIFIC GRAVITY:	3.8425
VAPOR PRESSURE:	N.A.	pH @ 0.0%:	N.A.
PHYSICAL STATE:	Solid	VISCOSITY:	N.A.
COEFFICIENT OF WATER/OIL DISTRIBUTION:		N.A.	

(SEE SECTION 16 FOR ABBREVIATION LEGEND)

SECTION 10 – STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Heat source. Chlorine Trifluoride reacts violently with Aluminum Oxide producing a flame. Ethylene oxide may polymerize violently when in contact with highly catalytic surfaces such as pure Aluminum Oxide. Reacts with hot chlorinated rubber.

INCOMPATIBILITY: Strong acids and bases.

HAZARDOUS DECOMPOSITION PRODUCTS: No information.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

SECTION 11 – TOXICOLOGICAL PROPERTIES

Toxicological Data on Ingredients: Aluminum oxide LD50: Not available. LC50: Not available.

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity: Not available.

Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

SECTION 13 – DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: If product becomes contaminated, follow disposal instructions for contaminant. Dispose of in accordance with federal, state and local regulations.

Container Disposal: Rinse three times with an appropriate solvent or water. Dispose or recycle the empty container.

SECTION 14 – TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Not a DOT controlled material (United States).	
DOT TECHNICAL NAME: N.A.	HAZARD SUBCLASS: N.A.
DOT HAZARD CLASS: N.A.	PACKAGING GROUP: N.A.
DOT UN/NA CLASS: N.A.	RESP. GUIDE PAGE:
INTERNATIONAL SHIPPING NAME: Not regulated	
INTERNATIONAL ID NUMBER: N.A.	
IMDG CLASS (1°, 2°): N.A.	IMDG PAGE NUMBER: N.A.
IMDG EMS: N.A.	IATA CLASS (1°, 2°): N.A.

SECTION 15 - REGULATORY INFORMATION

OSHA: Non-hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)

CERCLA – SARA HAZARD CATEGORY: THIS PRODUCT HAS BEEN REVIEWED, AND IS CONSIDERED, UNDER APPLICABLE DEFINITIONS, TO MEET THE FOLLOWING CATEGORIES: NONE

SARA SECTION 313: THIS PRODUCT CONTAINS THE FOLLOWING SUBSTANCES SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 AND 40 CFR PART 372:

---------- CHEMICAL NAME ---------- CAS NUMBER WT/WT % IS LESS THAN

No SARA Section 313 components exist in this product.

TOXIC SUBSTANCE CONTROL ACT: THE CHEMICAL SUBSTANCES IN THIS PRODUCT ARE ON THE TSCA SECTION 8 INVENTORY. THIS PRODUCT CONTAINS THE FOLLOWING CHEMICAL SUBSTANCES SUBJECT TO THE REPORTING REQUIREMENTS OF TSCA 12(B) IF EXPORTED FROM THE UNITED STATES:

---------- CHEMICAL NAME ---------- CAS NUMBER

No components found.

NEW JERSEY RIGHT-TO-KNOW: THE FOLLOWING MATERIALS ARE NON-HAZARDOUS, BUT ARE AMONG THE TOP 5 COMPONENTS IN THIS PRODUCT:

CHEMICAL NAME CAS NUMBER

Aluminum Oxide 1344-28-1

PENNSYLVANIA RIGHT-TO-KNOW: THE FOLLOWING NON-HAZARDOUS INGREDIENTS ARE PRESENT IN THE PRODUCT AT GREATER THAN 3%: NONE

CALIFORNIA PROPOSTION 65: No Proposition 65 chemicals known to exist in this product.

CANADIAN WHMIS: THIS MSDS HAS BEEN PREPARED IN COMPLIANCE WITH CONTROLLED PRODUCT REGULATIONS EXCEPT FOR USE OF THE 16 HEADINGS.

CANADIAN WHMIS CLASS: NONE

COMPONENT RCRA CLASSIFICATIONS: Not regulated

COMPONENT RCRA CODES: No information.

CERCLA RQ VALUE (MINIMUM): None known.

SECTION 16 – OTHER INFORMATION

HMIS RATINGS

HEALTH: 2 FLAMMABILITY: 0 REACTIVITY: 0

PREVIOUS MSDS REVISION DATE: 3/23/2009, 23 March 2009

REASON FOR REVISION: Administrative change for new format. Revised section(s): 1, 2, 3, 6, 7, 10 ,11 ,12, & 16

VOLATILE ORGANIC COMPOUNDS: 0 grams/ltr

LEGEND:

N.A. – NO INFORMATION N.E. – NOT ESTABLISHED N.D. – NOT DETERMINED

ABBREVIATIONS: ACGIH = AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS; OSHA = OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION; TLV-TWA = THRESHOLD LIMIT VALUE – TIME WEIGHTED AVERAGE (8 HOURS); STEL = SHORT-TERM EXPOSURE LIMIT (15 MINUTES); C = CEILING VALUE; PEL = PERMISSIBLE EXPOSURE LIMIT

DISCLAIMER: TO THE BEST OF OUR KNOWLEDGE, THE INFORMATION CONTAINED IN THIS MSDS IS ACCURATE OR IS OBTAINED FROM SOURCES BELIEVED TO BE ACCURATE. HOWEVER, NO LIABILITY, EXPRESSED OR IMPLIED, IS ASSUMED FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION CONTAINED HEREIN. BUYER ASSUMES LIABILITY IN ITS USE OF THE MATERIAL.