Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier
3M™ Diamond Compound UB, UBB, UBS

1.2. Recommended use and restrictions on use

Recommended use
Abrasive polishing paste

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Abrasive Systems Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification
Serious Eye Damage/Irritation: Category 2A.

2.2. Label elements
Signal word
Warning

Symbols
Exclamation mark |

Pictograms

Hazard Statements
Causes serious eye irritation.

Precautionary Statements

Prevention:
Wear eye/face protection.
Wash thoroughly after handling.

Response:
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Polyalkylene Glycol Monobutyl Ether	9038-95-3	60 - 95 Trade Secret *
Diamond	7782-40-3	< 30 Trade Secret *
Fumed Silica, Crystalline Free	112945-52-5	5 - 10 Trade Secret *
Lubricant	9005-65-6	1 - 5 Trade Secret *
2-Butoxyethanol	111-76-2	< 0.2 Trade Secret *
4-Methoxyphenol	150-76-5	< 0.2 Trade Secret *

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:
No need for first aid is anticipated.

Eye Contact:
Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

If Swallowed:
Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed
See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion

5.3. Special protective actions for fire-fighters
Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with water. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Avoid eye contact. Avoid breathing of dust created by cutting, sanding, grinding or machining. For industrial/occupational use only. Not for consumer sale or use. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities
Store away from heat. Store away from acids. Store away from strong bases. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
2-Butoxyethanol	111-76-2	ACGIH	TWA:20 ppm	A3: Confirmed animal carcin.

2-Butoxyethanol	111-76-2	OSHA	TWA:240 mg/m3(50 ppm)	SKIN
SILICA, AMORPHOUS	112945-52-5	OSHA	TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.	
4-Methoxyphenol	150-76-5	ACGIH	TWA:5 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls
Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Indirect Vented Goggles

Skin/hand protection
No chemical protective gloves are required.

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Liquid
Odor, Color, Grade:	Mild Characteristic Odor / Opaque paste (Color varies with abrasive type and micron size)
Odor threshold	*No Data Available*
pH	*Not Applicable*
Melting point	>=-85 ºF
Boiling Point	>=392 ºF [*Details:*Decomposes]
Flash Point	>=215 ºF
Evaporation rate	Nil
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	*No Data Available*
Flammable Limits(UEL)	*No Data Available*
Vapor Pressure	>=0.01 mmHg [@ 68 ºF]

Vapor Density	9.3 [*Ref Std:*AIR=1]
Density	*No Data Available*
Specific Gravity	0.971 [*Ref Std:*WATER=1]
Solubility in Water	Complete
Solubility- non-water	*No Data Available*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	*No Data Available*
Decomposition temperature	*No Data Available*
Viscosity	*No Data Available*
Volatile Organic Compounds	0 g/l
Percent volatile	0 %
VOC Less H2O & Exempt Solvents	0 g/l

SECTION 10: Stability and reactivity

10.1. Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
Sparks and/or flames
Heat

10.5. Incompatible materials
Strong oxidizing agents
Strong acids
Strong bases

10.6. Hazardous decomposition products

Substance	Condition
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:
May be harmful if inhaled. Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin Contact:
Contact with the skin during product use is not expected to result in significant irritation.

Eye Contact:
Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Ingestion:
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Inhalation-Dust/Mist(4 hr)		No data available; calculated ATE5 - 12.5 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Polyalkylene Glycol Monobutyl Ether	Dermal	Rabbit	LD50 > 16,960 mg/kg
Polyalkylene Glycol Monobutyl Ether	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5 mg/l
Polyalkylene Glycol Monobutyl Ether	Ingestion	Rat	LD50 4,240 mg/kg
Diamond	Dermal	Rat	LD50 > 2,000 mg/kg
Diamond	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.2 mg/l
Diamond	Ingestion	Rat	LD50 > 2,000 mg/kg
Fumed Silica, Crystalline Free	Dermal	Rabbit	LD50 > 5,000 mg/kg
Fumed Silica, Crystalline Free	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Fumed Silica, Crystalline Free	Ingestion	Rat	LD50 > 5,110 mg/kg
Lubricant	Dermal	Not available	LD50 > 5,000 mg/kg
Lubricant	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.1 mg/l
Lubricant	Ingestion	Rat	LD50 20,000 mg/kg
2-Butoxyethanol	Dermal	Guinea pig	LD50 > 2,000 mg/kg
2-Butoxyethanol	Inhalation-Vapor (4 hours)	Guinea pig	LC50 > 2.6 mg/l
2-Butoxyethanol	Ingestion	Guinea pig	LD50 1,414 mg/kg
4-Methoxyphenol	Dermal	Rat	LD50 > 2,000 mg/kg
4-Methoxyphenol	Ingestion	Rat	LD50 1,600 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Polyalkylene Glycol Monobutyl Ether	Rabbit	Minimal irritation

Diamond	Professional judgement	No significant irritation
Fumed Silica, Crystalline Free	Rabbit	No significant irritation
Lubricant	Rabbit	No significant irritation
2-Butoxyethanol	Rabbit	Irritant
4-Methoxyphenol	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
Polyalkylene Glycol Monobutyl Ether	Rabbit	No significant irritation
Diamond	Professional judgement	No significant irritation
Fumed Silica, Crystalline Free	Rabbit	No significant irritation
Lubricant	Rabbit	No significant irritation
2-Butoxyethanol	Rabbit	Severe irritant
4-Methoxyphenol	Rabbit	Severe irritant

Skin Sensitization

Name	Species	Value
Diamond	Professional judgement	Not classified
Fumed Silica, Crystalline Free	Human and animal	Not classified
Lubricant	Guinea pig	Not classified
2-Butoxyethanol	Guinea pig	Not classified
4-Methoxyphenol	Guinea pig	Sensitizing

Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
Diamond	In Vitro	Not mutagenic
Fumed Silica, Crystalline Free	In Vitro	Not mutagenic
Lubricant	In Vitro	Not mutagenic
2-Butoxyethanol	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Polyalkylene Glycol Monobutyl Ether	Ingestion	Rat	Not carcinogenic
Fumed Silica, Crystalline Free	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
Lubricant	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
2-Butoxyethanol	Inhalation	Multiple animal species	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Polyalkylene Glycol Monobutyl Ether	Inhalation	Not classified for male reproduction	Rat	NOAEL 1 mg/l	2 weeks
Fumed Silica, Crystalline Free	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Fumed Silica, Crystalline Free	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Fumed Silica, Crystalline Free	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Lubricant	Ingestion	Not classified for female reproduction	Rat	NOAEL 6,666 mg/kg/day	3 generation
Lubricant	Ingestion	Not classified for male reproduction	Rat	NOAEL 6,666 mg/kg/day	3 generation
Lubricant	Ingestion	Not classified for development	Rat	NOAEL 5,000 mg/kg/day	during organogenesis
2-Butoxyethanol	Dermal	Not classified for development	Rat	NOAEL 1,760 mg/kg/day	during gestation
2-Butoxyethanol	Ingestion	Not classified for development	Rat	NOAEL 100 mg/kg/day	during organogenesis
2-Butoxyethanol	Inhalation	Not classified for development	Multiple animal species	NOAEL 0.48 mg/l	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Polyalkylene Glycol Monobutyl Ether	Ingestion	nervous system	Not classified	Rat	NOAEL Not available	
2-Butoxyethanol	Dermal	endocrine system	Not classified	Rabbit	NOAEL 902 mg/kg	6 hours
2-Butoxyethanol	Dermal	liver	Not classified	Rabbit	LOAEL 72 mg/kg	not available
2-Butoxyethanol	Dermal	kidney and/or bladder	Not classified	Rabbit	LOAEL 451 mg/kg	6 hours
2-Butoxyethanol	Dermal	blood	Not classified	Multiple animal species	NOAEL Not available	
2-Butoxyethanol	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
2-Butoxyethanol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
2-Butoxyethanol	Inhalation	blood	Not classified	Multiple animal species	NOAEL Not available	
2-Butoxyethanol	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
2-Butoxyethanol	Ingestion	blood	Not classified	Multiple animal species	NOAEL Not available	
2-Butoxyethanol	Ingestion	kidney and/or bladder	Not classified	Human	NOAEL Not available	poisoning and/or abuse

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration

Polyalkylene Glycol Monobutyl Ether	Inhalation	endocrine system | hematopoietic system | liver | nervous system	Not classified	Rat	NOAEL 1 mg/l	2 weeks
Polyalkylene Glycol Monobutyl Ether	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 0.005 mg/l	2 weeks
Polyalkylene Glycol Monobutyl Ether	Inhalation	respiratory system	Not classified	Rat	LOAEL 0.001 mg/l	2 weeks
Polyalkylene Glycol Monobutyl Ether	Inhalation	heart	Not classified	Rat	NOAEL 0.5 mg/l	2 weeks
Polyalkylene Glycol Monobutyl Ether	Ingestion	liver | kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 145 mg/kg/day	90 days
Polyalkylene Glycol Monobutyl Ether	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 500 mg/kg/day	2 years
Polyalkylene Glycol Monobutyl Ether	Ingestion	heart | endocrine system | respiratory system	Not classified	Rat	NOAEL 3,770 mg/kg/day	90 days
Fumed Silica, Crystalline Free	Inhalation	respiratory system | silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Lubricant	Ingestion	heart | endocrine system | gastrointestinal tract | bone, teeth, nails, and/or hair | hematopoietic system | liver | immune system | nervous system | kidney and/or bladder | respiratory system	Not classified	Rat	NOAEL 4,132 mg/kg/day	90 days
2-Butoxyethanol	Dermal	blood	Not classified	Multiple animal species	NOAEL Not available	not available
2-Butoxyethanol	Dermal	endocrine system	Not classified	Rabbit	NOAEL 150 mg/kg/day	90 days
2-Butoxyethanol	Inhalation	liver	Not classified	Rat	NOAEL 2.4 mg/l	14 weeks
2-Butoxyethanol	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 0.15 mg/l	14 weeks
2-Butoxyethanol	Inhalation	blood	Not classified	Rat	LOAEL 0.15 mg/l	6 months
2-Butoxyethanol	Inhalation	endocrine system	Not classified	Dog	LOAEL 1.9 mg/l	8 days
2-Butoxyethanol	Ingestion	blood	Not classified	Rat	LOAEL 69 mg/kg/day	13 weeks
2-Butoxyethanol	Ingestion	kidney and/or bladder	Not classified	Multiple animal species	NOAEL Not available	not available

Aspiration Hazard
For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations
Contact 3M for more information.

EPCRA 311/312 Hazard Classifications:

Physical Hazards
Not applicable

Health Hazards
Serious eye damage or eye irritation

15.2. State Regulations
Contact 3M for more information.

15.3. Chemical Inventories
The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

Contact 3M for more information.

15.4. International Regulations
Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification

Health: 2 **Flammability:** 1 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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