



Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier

3M™ Abrasive Products, Diamond Cloth, 651WY, 658WY

1.2. Recommended use and restrictions on use

Recommended use

Abrasive Product

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

Carcinogenicity: Category 1A.

Specific Target Organ Toxicity (repeated exposure): Category 1.

2.2. Label elements

Signal word

Danger

Symbols

Health Hazard |

Pictograms



Hazard Statements

May cause cancer.

Causes damage to organs through prolonged or repeated exposure:
respiratory system |

Precautionary Statements

Prevention:

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wear protective gloves.
Do not eat, drink or smoke when using this product.
Wash thoroughly after handling.

Response:

IF exposed or concerned: Get medical advice/attention.

Storage:

Store locked up.

Disposal:

Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

SECTION 3: Composition/information on ingredients

| Ingredient | C.A.S. No. | % by Wt |
|-----------------|------------|---------|
| Cloth Backing | 9004-34-6 | 30 - 50 |
| Cured Resin | Mixture | 15 - 35 |
| Quartz Silica | 14808-60-7 | 0 - 22 |
| PSA Backing | Mixture | 0 - 15 |
| QRS: Nylon Loop | Mixture | 0 - 15 |
| Diamond | 7782-40-3 | 1 - 10 |
| Filler | 1317-65-3 | 4 - 8 |
| Copper | 7440-50-8 | 1 - 4 |
| Filler | 1332-58-7 | 0 - 2.5 |

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:

Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye Contact:

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, 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

No critical symptoms or effects. 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**

Carbon monoxide

Carbon dioxide

Condition

During Combustion

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. 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

Not applicable.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

For industrial/occupational use only. Not for consumer sale or use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Use personal protective equipment (gloves, respirators, etc.) as required. Combustible dust may form by action of this product on another material (substrate). Dust generated from the substrate during use of this product may be explosive if in sufficient concentration with an ignition source. Dust deposits should not be allowed to accumulate on surfaces because of the potential for secondary explosions.

7.2. Conditions for safe storage including any incompatibilities

No special storage requirements.

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 |
|--------------------|------------|--------|--|--------------------------------|
| Filler | 1317-65-3 | OSHA | TWA(as total dust):15 mg/m ³ ;TWA(respirable fraction):5 mg/m ³ | |
| Filler | 1332-58-7 | ACGIH | TWA(respirable fraction):2 mg/m ³ | A4: Not class. as human carcin |
| KAOLIN, TOTAL DUST | 1332-58-7 | OSHA | TWA(as total dust):15 mg/m ³ ;TWA(respirable fraction):5 mg/m ³ | |
| Quartz Silica | 14808-60-7 | ACGIH | TWA(respirable fraction):0.025 mg/m ³ | A2: Suspected human carcin. |
| Quartz Silica | 14808-60-7 | OSHA | TWA Table Z-1(respirable):0.05 mg/m ³ ;TWA Table Z-3(respirable):0.1 mg/m ³ ;TWA concentration(respirable):0.1 mg/m ³ (2.4 millions of particles/cu. ft.) | |
| Copper | 7440-50-8 | OSHA | TWA(as Cu, fume):0.1 mg/m ³ ;TWA(as Cu dust or mist):1 mg/m ³ | |
| Cloth Backing | 9004-34-6 | ACGIH | TWA:10 mg/m ³ | |
| Cloth Backing | 9004-34-6 | OSHA | TWA(as total dust):15 mg/m ³ ;TWA(respirable fraction):5 mg/m ³ | |

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

Provide appropriate local exhaust ventilation for sanding, grinding or machining. 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. Provide local exhaust at process emission sources to control exposure near the source and to prevent the escape of dust into the work area. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

8.2.2. Personal protective equipment (PPE)

Eye/face protection

To minimize the risk of injury to face and eyes, always wear eye and face protection when working at sanding or grinding operations or when near such operations. 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:

Safety Glasses with side shields

Skin/hand protection

Wear appropriate gloves to minimize risk of injury to skin from contact with dust or physical abrasion from grinding or sanding.

Respiratory protection

Assess exposure concentrations of all materials involved in the work process. Consider material being abraded when determining the appropriate respiratory protection. Select and use appropriate respirators to prevent inhalation overexposure.

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 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****Appearance****Physical state**

Solid

Color

Brown

Odor

Odorless

Odor threshold*Not Applicable***pH***Not Applicable***Melting point***Not Applicable***Boiling Point***Not Applicable***Flash Point***Not Applicable***Evaporation rate***Not Applicable***Flammability (solid, gas)**

Not Classified

Flammable Limits(LEL)*Not Applicable***Flammable Limits(UEL)***Not Applicable***Vapor Pressure***Not Applicable***Vapor Density***Not Applicable***Density***No Data Available***Specific Gravity***Not Applicable***Solubility In Water***Not Applicable***Solubility- non-water***Not Applicable***Partition coefficient: n-octanol/ water***Not Applicable***Autoignition temperature***Not Applicable***Decomposition temperature***Not Applicable***Viscosity***Not Applicable***SECTION 10: Stability and reactivity****10.1. Reactivity**

This material is considered to be non reactive under normal use conditions.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

None known.

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:

Dust from grinding, sanding or machining may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause additional health effects (see below).

Skin Contact:

Mechanical Skin irritation: Signs/symptoms may include abrasion, redness, pain, and itching.

Eye Contact:

Mechanical eye irritation: Signs/symptoms may include pain, redness, tearing and corneal abrasion.

Dust created by grinding, sanding, or machining may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Ingestion:

No health effects are expected.

Additional Health Effects:

Prolonged or repeated exposure may cause target organ effects:

Silicosis: Signs/symptoms may include breathlessness, weakness, chest pain, persistent cough, increased amounts of sputum, and heart disease.

Pneumoconiosis: Sign/symptoms may include persistent cough, breathlessness, chest pain, increased amounts of sputum, and changes in lung function tests.

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

| <u>Ingredient</u> | <u>CAS No.</u> | <u>Class Description</u> | <u>Regulation</u> |
|--------------------------|-----------------------|---------------------------------|---|
| SILICA, CRYSTAL DUST | 14808-60-7 | Known human carcinogen | National Toxicology Program Carcinogens |

| | | | |
|---------------|------------|--------------------------------|---|
| Quartz Silica | 14808-60-7 | Grp. 1: Carcinogenic to humans | International Agency for Research on Cancer |
|---------------|------------|--------------------------------|---|

Additional Information:

This document covers only the 3M product. For complete assessment, when determining the degree of hazard, the material being abraded must also be considered.

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 | Ingestion | | No data available; calculated ATE >5,000 mg/kg |
| Cloth Backing | Dermal | Rabbit | LD50 > 2,000 mg/kg |
| Cloth Backing | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 5.8 mg/l |
| Cloth Backing | Ingestion | Rat | LD50 > 5,000 mg/kg |
| Quartz Silica | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| Quartz Silica | Ingestion | | LD50 estimated to be > 5,000 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 |
| Filler | Dermal | Rat | LD50 > 2,000 mg/kg |
| Filler | Inhalation-Dust/Mist (4 hours) | Rat | LC50 3 mg/l |
| Filler | Ingestion | Rat | LD50 6,450 mg/kg |
| Copper | Dermal | Rat | LD50 > 2,000 mg/kg |
| Copper | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 5.11 mg/l |
| Copper | Ingestion | Rat | LD50 > 2,000 mg/kg |
| Filler | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| Filler | Ingestion | Human | LD50 > 15,000 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|---------------|------------------------|---------------------------|
| Cloth Backing | Not available | No significant irritation |
| Quartz Silica | Professional judgement | No significant irritation |
| Diamond | Professional judgement | No significant irritation |
| Filler | Rabbit | No significant irritation |
| Copper | Rabbit | No significant irritation |
| Filler | Professional judgement | No significant irritation |

Serious Eye Damage/Irritation

| Name | Species | Value |
|------|---------|-------|
| | | |

| | | |
|---------------|------------------------|---------------------------|
| Cloth Backing | Not available | No significant irritation |
| Diamond | Professional judgement | No significant irritation |
| Filler | Rabbit | No significant irritation |
| Copper | Rabbit | Mild irritant |
| Filler | Professional judgement | No significant irritation |

Skin Sensitization

| Name | Species | Value |
|---------|------------------------|----------------|
| Diamond | Professional judgement | Not classified |

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 |
|---------------|----------|--|
| Quartz Silica | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Quartz Silica | In vivo | Some positive data exist, but the data are not sufficient for classification |
| Diamond | In Vitro | Not mutagenic |

Carcinogenicity

| Name | Route | Species | Value |
|---------------|------------|-------------------------|------------------|
| Quartz Silica | Inhalation | Human and animal | Carcinogenic |
| Filler | Inhalation | Multiple animal species | Not carcinogenic |

Reproductive Toxicity

Reproductive and/or Developmental Effects

| Name | Route | Value | Species | Test Result | Exposure Duration |
|--------|-----------|--------------------------------|---------|---------------------|--------------------------------|
| Filler | Ingestion | Not classified for development | Rat | NOAEL 625 mg/kg/day | prematuring & during gestation |

Target Organ(s)

Specific Target Organ Toxicity - single exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|--------|------------|--------------------|----------------|---------|------------------|-------------------|
| Filler | Inhalation | respiratory system | Not classified | Rat | NOAEL 0.812 mg/l | 90 minutes |

Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|---------------|------------|-----------------|---------------------------------|---------|-------------|-------------------|
| Quartz Silica | Inhalation | silicosis | Causes damage to organs through | Human | NOAEL Not | occupational |

| | | | | | | |
|--------|------------|--------------------|--|-------|---------------------|-----------------------|
| | | | prolonged or repeated exposure | | available | exposure |
| Filler | Inhalation | respiratory system | Not classified | Human | NOAEL Not available | occupational exposure |
| Filler | Inhalation | pneumoconiosis | Causes damage to organs through prolonged or repeated exposure | Human | NOAEL NA | occupational exposure |
| Filler | Inhalation | pulmonary fibrosis | Not classified | Rat | NOAEL 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.

The substrate that was abraded must be considered as a factor in the disposal method for this product. Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility.

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

Not regulated per U.S. DOT, IATA or IMO.

These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M transportation classifications are based on product formulation, packaging, 3M policies and 3M understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling, or marking requirements. The original 3M package is certified for U.S. ground shipment only. If you are shipping by air or ocean, the package may not meet applicable regulatory requirements.

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

Carcinogenicity

Specific target organ toxicity (single or repeated exposure)

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

| <u>Ingredient</u> | <u>C.A.S. No</u> | <u>% by Wt</u> |
|-------------------|------------------|----------------|
| Copper | 7440-50-8 | 1 - 4 |

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

This product is an article as defined by TSCA regulations, and is exempt from TSCA Inventory listing requirements.

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: 0 **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.

HMIS Hazard Classification

Health: *0 **Flammability:** 1 **Physical Hazard:** 0 **Personal Protection:** X - See PPE section.

Hazardous Material Identification System (HMIS® IV) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® IV ratings are to be used with a fully implemented HMIS® IV program. HMIS® is a registered mark of the American Coatings Association (ACA).

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