



## Safety Data Sheet

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### SECTION 1: Identification

#### 1.1. Product identifier

3M 6000 Copper Granules  
- 6000W (Wausau, WI)

#### Product Identification Numbers

98-0213-5624-5  
7010400551

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Roofing granules for roofing shingles.

#### 1.3. Supplier's details

<b>MANUFACTURER:</b>	3M
<b>DIVISION:</b>	Industrial Mineral Products
<b>ADDRESS:</b>	3M Center, St. Paul, MN 55144-1000, USA
<b>Telephone:</b>	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.  
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.

65% of the mixture consists of ingredients of unknown acute oral toxicity.  
65% of the mixture consists of ingredients of unknown acute dermal toxicity.

**SECTION 3: Composition/information on ingredients**

Ingredient	C.A.S. No.	% by Wt
Meta-Rhyolite (composition varies naturally, typically contains feldspars, pyroxene, biotite, magnetite, ilmenite, hematite and calcite)	Mixture	90 - 95 Trade Secret *
Quartz (a component of Meta-Rhyolite)	14808-60-7	20 - 35 Trade Secret *
Ceramic	66402-68-4	1 - 3 Trade Secret *
Copper (I) Oxide	1317-39-1	2 - 3 Trade Secret *
Chromium (III) Oxide	1308-38-9	< 0.5 Trade Secret *
Oil	64742-52-5	< 0.5 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:**

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**

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**

Non-combustible. Use a fire fighting agent suitable for surrounding fire.

**5.2. Special hazards arising from the substance or mixture**

None inherent in this product.

**5.3. Special protective actions for fire-fighters**

No special protective actions for fire-fighters are anticipated.

**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**

Collect as much of the spilled material as possible. Use wet sweeping compound or water to avoid dusting. Sweep up. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. 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**

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. Use personal protective equipment (gloves, respirators, etc.) as required. Granules are not respirable. Dust generated during handling may contain respirable material. 3M does not recommend material handling methods that could

damage the coating or base mineral. In particular, roofing granules should not be conveyed pneumatically, via screw conveyors, or used as a sand blasting media. These uses can cause coating and base mineral attrition which may lead to increased levels of dust generation. For industrial/occupational use only. Not for consumer sale or use. Avoid release to the environment.

**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.

<b>Ingredient</b>	<b>C.A.S. No.</b>	<b>Agency</b>	<b>Limit type</b>	<b>Additional Comments</b>
CHROMIUM (III) COMPOUNDS	1308-38-9	ACGIH	TWA(as Cr(III), inhalable fraction):0.003 mg/m3;TWA(as Cr):0.5 mg/m3	A4: Not class. as human carcin
CHROMIUM (III) COMPOUNDS	1308-38-9	OSHA	TWA(as Cr):0.5 mg/m3	
Chromium, insoluble salts	1308-38-9	OSHA	TWA(as Cr):1 mg/m3	
COPPER COMPOUNDS	1317-39-1	ACGIH	TWA(as Cu dust or mist):1 mg/m3;TWA(as Cu, fume):0.2 mg/m3	
Quartz (a component of Meta-Rhyolite)	14808-60-7	ACGIH	TWA(respirable fraction):0.025 mg/m3	A2: Suspected human carcin.
Quartz (a component of Meta-Rhyolite)	14808-60-7	OSHA	TWA Table Z-1(respirable):0.05 mg/m3;TWA Table Z-3(respirable):0.1 mg/m3	
Paraffin oil	64742-52-5	OSHA	TWA(as mist):5 mg/m3	
PETROLEUM DISTILLATES	64742-52-5	OSHA	TWA:2000 mg/m3(500 ppm)	

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 local exhaust ventilation at transfer points. 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:

Safety Glasses with side shields

#### 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 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

Black, Gray

Specific Physical Form:

Granules

Odor

Slight Oily

Odor threshold

Not Applicable

pH

[Details:CONDITIONS: SL BASIC]Not Applicable

Melting point

Not Applicable

Boiling Point

Not Applicable

Flash Point

No flash point

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

Specific Gravity

2.60 - 2.75 [Ref Std:WATER=1]

Solubility in Water

Negligible

Solubility- non-water

Not Applicable

Partition coefficient: n-octanol/ water

Not Applicable

Autoignition temperature

Not Applicable

Decomposition temperature

Not Applicable

Viscosity

Not Applicable

Percent volatile

Nil

## 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

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Hazardous polymerization will not occur.

#### 10.4. Conditions to avoid

None known.

#### 10.5. Incompatible materials

None known.

#### 10.6. Hazardous decomposition products

Substance

None known.

Condition

Not Specified

## 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:

Respiratory Tract Irritation: 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.

#### Ingestion:

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

#### 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.

#### 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, CRYST AIRRESP	14808-60-7	Known human carcinogen	National Toxicology Program Carcinogens
Quartz (a component of Meta-Rhyolite)	14808-60-7	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer

**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	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Quartz (a component of Meta-Rhyolite)	Dermal		LD50 estimated to be > 5,000 mg/kg
Quartz (a component of Meta-Rhyolite)	Ingestion		LD50 estimated to be > 5,000 mg/kg
Copper (I) Oxide	Dermal	Rat	LD50 > 2,000 mg/kg
Copper (I) Oxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 5 mg/l
Copper (I) Oxide	Ingestion	Rat	LD50 470 mg/kg
Ceramic	Dermal		LD50 estimated to be > 5,000 mg/kg
Ceramic	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Oil	Dermal	Rabbit	LD50 > 2,000 mg/kg
Oil	Ingestion	Rat	LD50 > 5,000 mg/kg
Chromium (III) Oxide	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Chromium (III) Oxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.41 mg/l
Chromium (III) Oxide	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
Quartz (a component of Meta-Rhyolite)	Professional judgement	No significant irritation
Ceramic	Rabbit	No significant irritation
Oil	Rabbit	Minimal irritation
Chromium (III) Oxide	Rabbit	No significant irritation

**Serious Eye Damage/Irritation**

Name	Species	Value
Ceramic	Rabbit	Mild irritant
Oil	Rabbit	Mild irritant
Chromium (III) Oxide	Rabbit	No significant irritation

**Skin Sensitization**

Name	Species	Value
Oil	Guinea pig	Not classified
Chromium (III) Oxide	similar compounds	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 (a component of Meta-Rhyolite)	In Vitro	Some positive data exist, but the data are not sufficient for classification
Quartz (a component of Meta-Rhyolite)	In vivo	Some positive data exist, but the data are not sufficient for classification
Ceramic	In Vitro	Some positive data exist, but the data are not sufficient for classification
Chromium (III) Oxide	In vivo	Not mutagenic
Chromium (III) Oxide	In Vitro	Some positive data exist, but the data are not sufficient for classification

**Carcinogenicity**

Name	Route	Species	Value
Quartz (a component of Meta-Rhyolite)	Inhalation	Human and animal	Carcinogenic
Ceramic	Inhalation	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Oil	Ingestion	Rat	Not carcinogenic
Oil	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Chromium (III) Oxide	Ingestion	Rat	Not carcinogenic

**Reproductive Toxicity**

**Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test Result	Exposure Duration
Chromium (III) Oxide	Ingestion	Not classified for female reproduction	Rat	NOAEL 2,000 mg/kg/day	90 days
Chromium (III) Oxide	Ingestion	Not classified for male reproduction	Rat	NOAEL 2,000 mg/kg/day	90 days
Chromium (III) Oxide	Ingestion	Not classified for development	Rat	NOAEL 2,000 mg/kg/day	90 days

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Oil	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Chromium (III) Oxide	Inhalation	respiratory system	Not classified	Rat	NOAEL 40 mg	

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Quartz (a component of Meta-Rhyolite)	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Ceramic	Inhalation	pulmonary fibrosis	Not classified	Multiple animal species	NOAEL not available	
Ceramic	Inhalation	respiratory system	Not classified	Human	NOAEL not available	occupational exposure
Chromium (III) Oxide	Inhalation	immune system   respiratory system   hematopoietic	Not classified	Rat	NOAEL 44 mg/m3	90 days



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		system   liver   kidney and/or bladder				
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#### 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.

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

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 (I) Oxide (Copper compounds except copper	1317-39-1	2 - 3

phthalocyanine compounds substituted with only H  
and/or Cl and/or Br (C32R16CuN8, R=any  
combination of H,Cl,Br))

**FIFRA**

**Status**

Registered

**Registration Number**

10350-526

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

3M 6000 Copper Granules

Built-in control of algae to maintain the beauty of roofing materials

**ACTIVE INGREDIENT**

\*Cuprous oxide (CAS number: 1317-39-1) ..... 2.49%

**OTHER INGREDIENTS** .....97.51%

Total .....100.00%

\*(Equivalent to Metallic copper (CAS number: 7440-50-8)..... 2.21%)

**KEEP OUT OF REACH OF CHILDREN**

**CAUTION**

**PRECAUTIONARY STATEMENTS**

**Engineering Controls**

Use with appropriate local exhaust ventilation and at transfer points to manage particulates.

**Personal Protective Equipment**

Avoid eye and prolonged skin contact. Use gloves (leather, nitrile rubber or polyethylene) and wear protective clothing (long-sleeved shirt, long pants) to reduce skin contact. Safety Glasses with side shields are recommended. Note: Because manufacturing location conditions vary widely, please consult product Safety Data Sheet (SDS) for detailed particulate respiratory protection considerations while manufacturing with this product.

**User Safety Requirements**

Discard disposable PPE at the end of use as directed by manufacturer. For reusable PPE, follow manufacturer's instructions for cleaning and maintenance. If no instructions for washables exist, use detergent and hot water.

**User Safety Recommendations**

User must wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

**STORAGE AND DISPOSAL**

Do not contaminate water, food, or feed by storage and disposal.

**Pesticide Storage:**

Store under ambient conditions.

**Pesticide Disposal:**

To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to an approved waste disposal facility. Since regulations vary, consult applicable regulations or authorities before disposal.

**Pesticide Container Disposal:**

Where appropriate, return empty 2000 pound bulk bags to 3M for reuse.

**Refillable Container.** Refill this container with 3M Copper Granules only. Do not reuse this container for any other purpose. Bags should be emptied of any residual granules prior to refilling. When bag condition warrants disposal, dispose of bag in a sanitary landfill or offer for recycling if available or reconditioning if appropriate.

**DIRECTIONS FOR USE**

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

If granules are to be stored prior to (and during) use, a copy of this label must be made readily accessible to employees when

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they are in their work area(s).

3M 6000 Copper Granules contain cuprous oxide, an effective algaecide for inhibiting the growth of blue-green algae that can stain roofing materials. The granules are treated roofing granules 1-2 mm in diameter made from rock coated with cuprous oxide and sealed in a ceramic shell. The ceramic shell allows a timed release of copper to provide long-lasting algae control that extends the useful life of roofing materials. The granules are colored to match the roofing materials.

3M 6000 Copper Granules should be mixed with standard roofing granules at the rate of 2-12% by weight and processed normally during manufacture of the roofing materials.

#### WARRANTY

3M warrants that 3M 6000 Copper Granules conform to the ingredient statement above.

EPA Reg. No. 10350-526  
EPA Est. No. 10350-WI-002  
( \_\_\_\_\_ lbs)

Net Contents: Bulk shipment; see waybill

### 15.2. State Regulations

Contact 3M for more information.

#### California Proposition 65

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Listing</u>
SILICA, CRYSTALLINE (AIRBORNE PARTICLES OF RESPIRABLE SIZE)	None	Carcinogen
TITANIUM DIOXIDE (AIRBORNE, UNBOUND PARTICLES OF RESPIRABLE SIZE)	13463-67-7	Carcinogen

### 15.3. Chemical Inventories

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:** 1 **Flammability:** 0 **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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some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

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