



Safety Data Sheet

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This Safety Data Sheet (SDS) is provided as a courtesy in response to a customer request. This product is not regulated under, and a SDS is not required for this product by the OSHA Hazard Communication Standard (29 CFR 1910.1200) because, when used as recommended or under ordinary conditions, it should not present a health and safety hazard.

However, use or processing of the product not in accordance with the product's recommendations or not under ordinary conditions may affect the performance of the product and may present potential health and safety hazards.

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SECTION 1: Identification

1.1. Product identifier

3M™ Nextel™ Ceramic Fiber 440 with Organic Sizing

Product Identification Numbers

42-0005-4585-7, 42-0005-6601-0, 42-0005-9814-6, 42-0010-8121-7, 42-0015-0202-2, 42-0015-0270-9, 42-0015-0311-1, 44-0005-9685-6, 44-0005-9693-0, 44-0028-0118-9, 44-0028-0120-5, 44-0028-0121-3, 98-0213-3044-8, 98-0213-3342-6, 98-0213-3765-8, 98-0400-0328-1, 98-0400-0378-6, 98-0400-0402-4, 98-0400-0546-8, 98-0400-0582-3, 98-0400-0591-4, 98-0400-0592-2, 98-0400-0602-9, 98-0400-0606-0, 98-0400-0639-1, 98-0400-0648-2, 98-0400-0649-0, 98-0400-0650-8, 98-0400-0652-4, 98-0400-0711-8, 98-0400-1028-6, 98-0400-1772-9, 98-0400-2191-1, 98-0400-2208-3, 98-0400-2209-1, 98-0400-2266-1, 98-0400-2345-3, 98-0400-2354-5, 98-0400-2912-0, 98-0400-3292-6, 98-0400-5920-0, 98-0400-5921-8, 98-0400-5922-6, 98-0400-6504-1, 98-0400-6630-4, 98-0400-6686-6, 98-0400-6846-6, 98-0400-6850-8, 98-0400-6874-8, 98-0400-6882-1
4100009706, 4100013616, 4100008821, 4010045192, 7100035567, 7010321633, 7100042516, 7100041962, 7010321634, 7010402857, 7100041963, 7100037783, 7100041925, 7010402859, 7100041964, 7100041965, 7010353006, 7010402862, 7010402865, 7100037193, 7010353012, 7010320519, 7010402873, 7000059377, 7010402875, 7010353016, 7100041142, 7010402888, 7000059435, 7000059436, 7000059437, 7100046060, 4010038244, 7010353188, 4010043635, 4010034206, 7010400941, 7010402896, 7010400925, 7100046062, 7010304648, 4010044708, 4010043023, 4010037357, 7100040442, 7010320502, 7010321461

1.2. Recommended use and restrictions on use

Recommended use

Ceramic Fiber

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Advanced Materials 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

This product is exempt from hazard classification according to OSHA Hazard Communication Standard, 29 CFR 1910.1200.

2.2. Label elements

Signal word

Not applicable.

Symbols

Not applicable.

Pictograms

Not applicable.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Aluminoborosilicate Fibers	12788-79-3	95 - 100
Organic Sizing	Trade Secret*	0 - 5

*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 are concerned, get medical advice.

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

Material will not burn. Use a fire fighting agent suitable for the 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

Not applicable.

6.2. Environmental precautions

Not applicable.

6.3. Methods and material for containment and cleaning up

Not applicable.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid skin contact with hot material. Avoid breathing of dust created by cutting, sanding, grinding or machining. This product is considered to be an article which does not release or otherwise result in exposure to a hazardous chemical under normal use conditions.

7.2. Conditions for safe storage including any incompatibilities

Not applicable.

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
Organic Sizing	Trade Secret	AIHA	TWA(as aerosol):10 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

Not applicable.

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

During end use:

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.

Thermal hazards

Wear heat insulating gloves when handling hot material to prevent thermal burns.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Solid
Odor, Color, Grade:	Textile grade fibers which are equal to or greater than 7 microns in diameter, shiny, white, thread, yarn or fabric.
Odor threshold	<i>Not Applicable</i>
pH	<i>Not Applicable</i>
Melting point	≥ 1800 °C
Boiling Point	<i>Not Applicable</i>
Flash Point	No flash point
Evaporation rate	<i>Not Applicable</i>
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	<i>Not Applicable</i>
Flammable Limits(UEL)	<i>Not Applicable</i>
Vapor Pressure	<i>Not Applicable</i>
Vapor Density	<i>Not Applicable</i>
Density	2.70 - 3.05 g/cm ³
Specific Gravity	2.70 - 3.05 [Ref Std: WATER=1]
Solubility In Water	0.5 - 3.5 % [Details: CONDITIONS: 0.5-3.5% BY WEIGHT]
Solubility- non-water	<i>Not Applicable</i>
Partition coefficient: n-octanol/ water	<i>No Data Available</i>
Autoignition temperature	<i>No Data Available</i>
Decomposition temperature	<i>Not Applicable</i>
Viscosity	<i>Not Applicable</i>
Molecular weight	<i>No Data Available</i>
Volatile Organic Compounds	<i>No Data Available</i>
VOC Less H₂O & Exempt Solvents	<i>No Data Available</i>

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

<u>Substance</u>	<u>Condition</u>
Carbon monoxide	At Elevated Temperatures
Irritant Vapors or Gases	At Elevated Temperatures

Under recommended usage conditions, hazardous decomposition products are not expected. Hazardous decomposition products may occur as a result of oxidation, heating, or reaction with another material.

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:

Vapors from heated material may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Dust from cutting, 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.

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:

Physical Blockage: Signs/symptoms may include cramping, abdominal pain, and constipation.

Additional Health Effects:

Due to their large size (7-15 microns in diameter), Nextel(TM) Ceramic Fibers do not meet the definition of respirable as

defined by WHO convention and ECHA. Because Nextel fibers are considered non-respirable, they are not expected to pose a cancer risk.

Additional Information:

This product, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. However, use or processing of the product in a manner not in accordance with the product's directions for use may affect the performance of the product and may present potential health and safety hazards. Due to their large size (7-15 microns in diameter), Nextel(TM) Ceramic Fibers do not meet the definition of respirable as defined by WHO convention and ECHA. Because Nextel fibers are considered non-respirable, they are not expected to pose a cancer risk.

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
Organic Sizing	Dermal	Rabbit	LD50 > 20,000 mg/kg
Organic Sizing	Ingestion	Rat	LD50 32,770 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Organic Sizing	Rabbit	Minimal irritation

Serious Eye Damage/Irritation

Name	Species	Value
Organic Sizing	Rabbit	Mild irritant

Skin Sensitization

Name	Species	Value
Organic Sizing	Guinea pig	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
Organic Sizing	In Vitro	Not mutagenic
Organic Sizing	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Organic Sizing	Ingestion	Rat	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Organic Sizing	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,125 mg/kg/day	during gestation
Organic Sizing	Ingestion	Not classified for male reproduction	Rat	NOAEL 5699 +/- 1341	5 days

Organic Sizing	Not Specified	Not classified for reproduction and/or development		mg/kg/day NOEL N/A	
Organic Sizing	Ingestion	Not classified for development	Mouse	NOAEL 562 mg/animal/day	during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Organic Sizing	Inhalation	respiratory irritation	Not classified	Rat	NOAEL 1.008 mg/l	2 weeks

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Organic Sizing	Inhalation	respiratory system	Not classified	Rat	NOAEL 1.008 mg/l	2 weeks
Organic Sizing	Ingestion	kidney and/or bladder heart endocrine system hematopoietic system liver nervous system	Not classified	Rat	NOAEL 5,640 mg/kg/day	13 weeks

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.

Prior to disposal, consult all applicable authorities and regulations to insure proper classification. Dispose of waste product in a permitted industrial waste facility. If no other disposal options are available, waste product may be placed in a landfill properly designed for industrial waste.

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

Not applicable

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:** 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.

HMIS Hazard Classification

Health: 0 **Flammability:** 0 **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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