Safety Data Sheet

Document Group:	44-5680-2	**Version Number:**	2.01
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SECTION 1: Identification

1.1. Product identifier
3M™ Industrial Grade Nepheline Syenite - 200 Dry (Little Rock, AR)

Product Identification Numbers
98-0213-4293-0
7010402668

1.2. Recommended use and restrictions on use

Recommended use
Industrial use
Restrictions on use

For industrial/occupational use only. Not for consumer sale or use. This product must be used in compliance with applicable health and safety regulations and standards.

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Industrial Mineral Products
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
Acute Toxicity (oral): Category 4.
Reproductive Toxicity: Category 1B.
Carcinogenicity: Category 1A.
Specific Target Organ Toxicity (repeated exposure): Category 1.

2.2. Label elements
Signal word
Danger

Symbols

Exclamation mark | Health Hazard |

Pictograms

Hazard Statements
Harmful if swallowed.
May damage fertility or the unborn child.
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:
Rinse mouth.
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
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.

47% of the mixture consists of ingredients of unknown acute oral toxicity.
47% of the mixture consists of ingredients of unknown acute dermal toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Feldspar-Group Minerals	68476-25-5	55 - 90 Trade Secret *
Illite	12173-60-3	<= 15 Trade Secret *
Mica-Group Minerals	12001-26-2	<= 15 Trade Secret *
Nepheline	1302-72-3	1 - 10 Trade Secret *
Pyroxene-Group Minerals	12174-37-7	2 - 10 Trade Secret *
Amphibole-Group Minerals	1318-09-8	<= 5 Trade Secret *
Ceramic	66402-68-4	< 5 Trade Secret *
Zeolites (Naturally Occurring)	1318-02-1	<= 5 Trade Secret *
Ilmenite	12168-52-4	<= 4 Trade Secret *
Magnetite	1309-38-2	<= 4 Trade Secret *

Kaolin	1332-58-7	< 3 Trade Secret *
Sodalite	1302-90-5	<= 3 Trade Secret *
Sodium Silicate	1344-09-8	< 2 Trade Secret *
Titanium Dioxide	13463-67-7	< 2 Trade Secret *
Chlorite-Group Minerals	1318-59-8	<= 1 Trade Secret *
Quartz Silica	14808-60-7	<= 1 Trade Secret *
C.I. Pigment Blue 28	1345-16-0	< 0.5 Trade Secret *
Carbon Black	1333-86-4	< 0.5 Trade Secret *
Chromium(III) Oxide (Cr2O3)	1308-38-9	< 0.5 Trade Secret *
Oil	64742-52-5	< 0.5 Trade Secret *
Sodium Tetraborate Decahydrate	1303-96-4	< 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

Target organ effects following prolonged or repeated exposure. See Section 11 for additional details.

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
Not applicable.

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 breathe dust/fume/gas/mist/vapors/spray. 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. 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. Solids can generate static electricity charges when transferred and in mixing operations sufficient to be an ignition source. Evaluate the need for precautions, such as grounding and bonding, low energy transfer of material (e.g. low speed, short distance), or inert atmospheres. Do not handle until all safety precautions have been read and understood.

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
Mica-Group Minerals	12001-26-2	ACGIH	TWA(respirable fraction):0.1 mg/m3	
Mica-Group Minerals	12001-26-2	OSHA	TWA:20 millions of particles/cu. ft.	
Sodium Tetraborate Decahydrate	1303-96-4	ACGIH	TWA(inhalable fraction):2 mg/m3;STEL(inhalable fraction):6 mg/m3	A4: Not class. as human carcin
CHROMIUM (II) COMPOUNDS	1308-38-9	OSHA	TWA(as Cr):0.5 mg/m3	
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(3+), soluble salts	1308-38-9	ACGIH	TWA(as Cr(III), inhalable fraction):0.003 mg/m3	A4: Not class. as human carcin, Dermal/Respiratory Sensitizer
Chromium, insoluble salts	1308-38-9	OSHA	TWA(as Cr):1 mg/m3	
Aluminum, insoluble compounds	1318-02-1	ACGIH	TWA(respirable fraction):1	A4: Not class. as human

			mg/m3	carcin
DUST, INERT OR NUISANCE	1332-58-7	OSHA	TWA(as total dust):15 mg/m3;TWA(as total dust):50 millions of particles/cu. ft.(15 mg/m3);TWA(respirable fraction):5 mg/m3;TWA(respirable fraction):15 millions of particles/cu. ft.(5 mg/m3)	
Kaolin	1332-58-7	ACGIH	TWA(respirable fraction):2 mg/m3	A4: Not class. as human carcin
KAOLIN, TOTAL DUST	1332-58-7	OSHA	TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3	
Carbon Black	1333-86-4	ACGIH	TWA(inhalable fraction):3 mg/m3	A3: Confirmed animal carcin.
Carbon Black	1333-86-4	OSHA	TWA:3.5 mg/m3	
Cobalt, inorganic compounds	1345-16-0	ACGIH	TWA(as Co, inhalable fraction):0.02 mg/m3;TWA(as Co):0.02 mg/m3	A3: Confirmed animal carcin., Dermal/Respiratory Sensitizer
Titanium Dioxide	13463-67-7	ACGIH	TWA(Respirable nanoscale particles):0.2 mg/m3;TWA(Respirable finescale particles):2.5 mg/m3	A3: Confirmed animal carcin.
Titanium Dioxide	13463-67-7	OSHA	TWA(as total dust):15 mg/m3	
Quartz Silica	14808-60-7	ACGIH	TWA(respirable fraction):0.025 mg/m3	A2: Suspected human carcin.
Quartz Silica	14808-60-7	OSHA	TWA Table Z-1(respirable):0.05 mg/m3;TWA Table Z-3(respirable):0.1 mg/m3;TWA concentration(respirable):0.1 mg/m3(2.4 millions of particles/cu. ft.)	
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
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.
Gloves made from the following material(s) are recommended: Nitrile Rubber

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	Gray
Specific Physical Form:	Powder
Odor	Odorless
Odor threshold	*No Data Available*
pH	*No Data Available*
Melting point	*No Data Available*
Boiling Point	*No Data Available*
Flash Point	No flash point
Evaporation rate	*No Data Available*
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	*No Data Available*
Flammable Limits(UEL)	*No Data Available*
Vapor Pressure	*No Data Available*
Vapor Density	*No Data Available*
Specific Gravity	2.55 - 2.70 [*Ref Std:*WATER=1]
Solubility In Water	*No Data Available*
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*

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
Carbon monoxide	Not Specified
Carbon dioxide	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:
May be harmful in contact with skin.
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:
Harmful if swallowed. Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May cause additional health effects (see below).

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.

Reproductive/Developmental Toxicity:
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Carcinogenicity:
Contains a chemical or chemicals which can cause cancer.

Ingredient	CAS No.	Class Description	Regulation
Silica, Crystalline (Respirable Size)	14808-60-7	Known To Be Human Carcinogen.	National Toxicology Program Carcinogens
Cobalt and cobalt compounds except organic cobalt-containing agents (such as Vitamin B12)	1345-16-0	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
Carbon black	1333-86-4	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
Silica dust, crystalline, in the form of quartz or cristobalite	14808-60-7	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
Titanium dioxide	13463-67-7	Grp. 2B: Possible human carc.	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 >2,000 - =5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >300 - =2,000 mg/kg
Feldspar-Group Minerals	Dermal		LD50 estimated to be 2,000 - 5,000 mg/kg
Feldspar-Group Minerals	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Mica-Group Minerals	Dermal		LD50 estimated to be > 5,000 mg/kg
Mica-Group Minerals	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Zeolites (Naturally Occurring)	Dermal	Rabbit	LD50 > 2,000 mg/kg
Zeolites (Naturally Occurring)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 4.57 mg/l
Zeolites (Naturally Occurring)	Ingestion	Rat	LD50 > 5,000 mg/kg
Magnetite	Dermal		LD50 estimated to be > 5,000 mg/kg
Magnetite	Ingestion	Rat	LD50 > 10,000 mg/kg
Ceramic	Dermal		LD50 estimated to be > 5,000 mg/kg
Ceramic	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Kaolin	Dermal		LD50 estimated to be > 5,000 mg/kg
Kaolin	Ingestion	Human	LD50 > 15,000 mg/kg
Sodium Silicate	Dermal	Rabbit	LD50 > 4,640 mg/kg
Sodium Silicate	Ingestion	Rat	LD50 500 mg/kg
Chlorite-Group Minerals	Dermal		LD50 estimated to be > 5,000 mg/kg
Chlorite-Group Minerals	Ingestion		LD50 estimated to be > 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
Titanium Dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Titanium Dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
Titanium Dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg
Chromium(III) Oxide (Cr2O3)	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Chromium(III) Oxide (Cr2O3)	Inhalation-	Rat	LC50 > 5.41 mg/l

	Dust/Mist (4 hours)		
Chromium(III) Oxide (Cr2O3)	Ingestion	Rat	LD50 > 5,000 mg/kg
C.I. Pigment Blue 28	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
C.I. Pigment Blue 28	Ingestion	Rat	LD50 > 10,000 mg/kg
C.I. Pigment Blue 28	Inhalation-Dust/Mist (4 hours)	similar compounds	LC50 > 5.06 mg/l
Oil	Dermal	Rabbit	LD50 > 2,000 mg/kg
Oil	Ingestion	Rat	LD50 > 5,000 mg/kg
Carbon Black	Dermal	Rabbit	LD50 > 3,000 mg/kg
Carbon Black	Ingestion	Rat	LD50 > 8,000 mg/kg
Sodium Tetraborate Decahydrate	Dermal	Rabbit	LD50 > 2,000 mg/kg
Sodium Tetraborate Decahydrate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.03 mg/l
Sodium Tetraborate Decahydrate	Ingestion	Rat	LD50 5,560 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Feldspar-Group Minerals	Professional judgement	No significant irritation
Zeolites (Naturally Occurring)	Rabbit	No significant irritation
Magnetite	Rabbit	No significant irritation
Ceramic	Rabbit	No significant irritation
Kaolin	Professional judgement	No significant irritation
Sodium Silicate	Rabbit	Corrosive
Chlorite-Group Minerals	Professional judgement	No significant irritation
Quartz Silica	Professional judgement	No significant irritation
Titanium Dioxide	Rabbit	No significant irritation
Chromium(III) Oxide (Cr2O3)	Rabbit	No significant irritation
C.I. Pigment Blue 28	Rabbit	No significant irritation
Oil	Rabbit	Minimal irritation
Carbon Black	Rabbit	No significant irritation
Sodium Tetraborate Decahydrate	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Zeolites (Naturally Occurring)	Rabbit	Mild irritant
Ceramic	Rabbit	Mild irritant
Kaolin	Professional judgement	No significant irritation
Sodium Silicate	Rabbit	Corrosive
Chlorite-Group Minerals	Professional judgeme	No significant irritation

	nt	
Titanium Dioxide	Rabbit	No significant irritation
Chromium(III) Oxide (Cr2O3)	Rabbit	No significant irritation
C.I. Pigment Blue 28	In vitro data	No significant irritation
Oil	Rabbit	Mild irritant
Carbon Black	Rabbit	No significant irritation
Sodium Tetraborate Decahydrate	Rabbit	Severe irritant

Skin Sensitization

Name	Species	Value
Sodium Silicate	Mouse	Not classified
Titanium Dioxide	Human and animal	Not classified
Chromium(III) Oxide (Cr2O3)	similar compounds	Not classified
C.I. Pigment Blue 28	similar compounds	Not classified
Oil	Guinea pig	Not classified
Sodium Tetraborate Decahydrate	Guinea pig	Not classified

Respiratory Sensitization

Name	Species	Value
C.I. Pigment Blue 28	Professional judgement	Not classified

Germ Cell Mutagenicity

Name	Route	Value
Magnetite	In Vitro	Not mutagenic
Ceramic	In Vitro	Some positive data exist, but the data are not sufficient for classification
Sodium Silicate	In Vitro	Not mutagenic
Sodium Silicate	In vivo	Not mutagenic
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
Titanium Dioxide	In Vitro	Not mutagenic
Titanium Dioxide	In vivo	Not mutagenic
Chromium(III) Oxide (Cr2O3)	In vivo	Not mutagenic
Chromium(III) Oxide (Cr2O3)	In Vitro	Some positive data exist, but the data are not sufficient for classification
C.I. Pigment Blue 28	In Vitro	Not mutagenic
Carbon Black	In Vitro	Not mutagenic
Carbon Black	In vivo	Some positive data exist, but the data are not sufficient for classification
Sodium Tetraborate Decahydrate	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Ceramic	Inhalation	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Kaolin	Inhalation	Multiple animal	Not carcinogenic

		species	
Quartz Silica	Inhalation	Human and animal	Carcinogenic
Titanium Dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium Dioxide	Inhalation	Rat	Carcinogenic
Chromium(III) Oxide (Cr2O3)	Ingestion	Rat	Not carcinogenic
C.I. Pigment Blue 28	Inhalation	similar compounds	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
Carbon Black	Dermal	Mouse	Not carcinogenic
Carbon Black	Ingestion	Mouse	Not carcinogenic
Carbon Black	Inhalation	Rat	Carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Sodium Silicate	Ingestion	Not classified for development	Mouse	NOAEL 200 mg/kg/day	during gestation
Chromium(III) Oxide (Cr2O3)	Ingestion	Not classified for female reproduction	Rat	NOAEL 2,000 mg/kg/day	90 days
Chromium(III) Oxide (Cr2O3)	Ingestion	Not classified for male reproduction	Rat	NOAEL 2,000 mg/kg/day	90 days
Chromium(III) Oxide (Cr2O3)	Ingestion	Not classified for development	Rat	NOAEL 2,000 mg/kg/day	90 days
Sodium Tetraborate Decahydrate	Ingestion	Toxic to female reproduction	Rat	NOAEL 17.5 mg boron/kg/day	3 generation
Sodium Tetraborate Decahydrate	Ingestion	Toxic to male reproduction	Rat	NOAEL 17.5 mg boron/kg/day	3 generation
Sodium Tetraborate Decahydrate	Ingestion	Toxic to development	similar compounds	NOAEL 9.6 mg boron/kg/day	during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Sodium Silicate	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
Chromium(III) Oxide (Cr2O3)	Inhalation	respiratory system	Not classified	Rat	NOAEL 40 mg	
Oil	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Sodium Tetraborate Decahydrate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL not available	occupational exposure

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Mica-Group Minerals	Inhalation	pneumoconiosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure

Magnetite	Inhalation	pneumoconiosis	Not classified	Human	NOAEL Not availble	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
Kaolin	Inhalation	pneumoconiosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL NA	occupational exposure
Kaolin	Inhalation	pulmonary fibrosis	Not classified	Rat	NOAEL Not available	
Sodium Silicate	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Dog	LOAEL 2,400 mg/kg/day	4 weeks
Sodium Silicate	Ingestion	endocrine system | blood	Not classified	Rat	NOAEL 804 mg/kg/day	3 months
Sodium Silicate	Ingestion	heart | liver	Not classified	Rat	NOAEL 1,259 mg/kg/day	8 weeks
Quartz Silica	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Titanium Dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.01 mg/l	2 years
Titanium Dioxide	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not available	occupational exposure
Chromium(III) Oxide (Cr2O3)	Inhalation	immune system | respiratory system | hematopoietic system | liver | kidney and/or bladder	Not classified	Rat	NOAEL 44 mg/m3	90 days
Carbon Black	Inhalation	pneumoconiosis	Not classified	Human	NOAEL Not available	occupational exposure
Sodium Tetraborate Decahydrate	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	similar compoun ds	NOAEL not available	
Sodium Tetraborate Decahydrate	Ingestion	kidney and/or bladder	Not classified	similar compoun ds	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.

Dispose of waste product in a permitted industrial waste facility. 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
Acute toxicity
Carcinogenicity
Reproductive toxicity
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):

Ingredient	C.A.S. No	% by Wt
C.I. Pigment Blue 28 (Cobalt compounds)	1345-16-0	Trade Secret < 0.5
C.I. Pigment Blue 28 (Cobalt, inorganic compounds)	1345-16-0	Trade Secret < 0.5

15.2. State Regulations

Contact 3M for more information.

California Proposition 65

Ingredient	C.A.S. No.	Listing
Silica, crystalline (airborne particles of respirable size)	None	Carcinogen
Arsenic	7440-38-2	Carcinogen
CHROMIUM (HEXAVALENT COMPOUNDS)	None	Carcinogen
Nickel (metallic)	7440-02-0	Carcinogen
Lead	7439-92-1	Female reproductive toxin
Lead	7439-92-1	Male reproductive toxin
Lead	7439-92-1	Developmental Toxin
Cobalt metal powder	7440-48-4	Carcinogen
Titanium dioxide (airborne, unbound particles of respirable size)	13463-67-7	Carcinogen
Cadmium and cadmium compounds	None	Carcinogen

Carbon black (airborne, unbound particles of respirable size [= 10 micrometers])	1333-86-4	Carcinogen
Titanium dioxide (airborne, unbound particles of respirable size)	13463-67-7	Carcinogen

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: 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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