



## Safety Data Sheet

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### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Process Color 990 Series Special Color CF0990-023 Gray

#### Product Identification Numbers

75-0301-6281-4

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

##### Recommended use

Ink

#### 1.3. Supplier's details

<b>MANUFACTURER:</b>	3M
<b>DIVISION:</b>	Traffic Safety and Security Division
<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

Flammable Liquid: Category 3.  
Serious Eye Damage/Irritation: Category 2A.  
Skin Sensitizer: Category 1B.  
Carcinogenicity: Category 2.  
Specific Target Organ Toxicity (central nervous system): Category 3.  
Specific Target Organ Toxicity (repeated exposure): Category 2.

#### 2.2. Label elements

##### Signal word

Warning

##### Symbols

Flame | Exclamation mark | Health Hazard |

##### Pictograms



### Hazard Statements

Flammable liquid and vapor.

Causes serious eye irritation.

May cause an allergic skin reaction.

May cause drowsiness or dizziness.

Suspected of causing cancer.

May cause damage to organs through prolonged or repeated exposure:  
sensory organs |

### Precautionary Statements

#### Prevention:

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Ground/bond container and receiving equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Keep container tightly closed.

Use explosion-proof electrical/ventilating/lighting equipment.

Do not breathe dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.

Wear protective gloves and eye/face protection.

Wash thoroughly after handling.

Contaminated work clothing must not be allowed out of the workplace.

#### Response:

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

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.

If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

IF exposed or concerned: Get medical advice/attention.

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

#### Storage:

Store in a well-ventilated place. Keep container tightly closed.

Keep cool.

Store locked up.

#### Disposal:

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

### 2.3. Hazards not otherwise classified

None.

2% of the mixture consists of ingredients of unknown acute oral toxicity.  
 4% of the mixture consists of ingredients of unknown acute dermal toxicity.  
 6% of the mixture consists of ingredients of unknown acute inhalation toxicity.

### SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Titanium dioxide	13463-67-7	15 - 40 Trade Secret *
Vinyl polymer (New Jersey Trade Secret Registry # 04499600-5238P)	Trade Secret*	10 - 30
1-Methoxy-2-propyl acetate	108-65-6	10 - 30
Cyclohexanone	108-94-1	10 - 30 Trade Secret *
Dipropylene glycol methyl ether acetate	88917-22-0	5 - 10
(3',4'-Epoxy cyclohexylmethyl) 3,4-epoxy cyclohexanecarboxylate	2386-87-0	0.1 - 5 Trade Secret *
Trace chemicals & additives	Trade Secret*	0.1 - 5
Alkyd resin 3261 (NJ TSR # 04499600-6267P)	Trade Secret*	0.5 - 1.5
Carbon black	1333-86-4	0.1 - 1.0 Trade Secret *
2,4-Dihydroxybenzophenone	131-56-6	0.1 - 1.0 Trade Secret *
Bis(2,2,6,6-tetramethyl-4-piperidinyl) sebacate	52829-07-9	< 0.2 Trade Secret *
Ethylbenzene	100-41-4	< 0.2 Trade Secret *

NJTS or NJTSRN: New Jersey Trade Secret Registry Number.

\*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:**

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

**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 flammable liquids such as dry chemical or carbon dioxide to extinguish.

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

Closed containers exposed to heat from fire may build pressure and explode.

### Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Chloride	During Combustion

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

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. 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. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. 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. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

### 6.3. Methods and material for containment and cleaning up

Contain spill. Cover spill area with a fire-extinguishing foam designed for use on solvents, such as alcohols and acetone, that can dissolve in water. An AR - AFFF type foam is recommended. 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 using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

For industrial or professional use only. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. 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. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. Use personal protective equipment (gloves, respirators, etc.) as required. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapor accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer.

### 7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store away from acids. 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
Ethylbenzene	100-41-4	ACGIH	TWA:20 ppm	A3: Confirmed animal carcin.
Ethylbenzene	100-41-4	OSHA	TWA:435 mg/m <sup>3</sup> (100 ppm)	
Ethylbenzene	100-41-4	CMRG	TWA:25 ppm;STEL:75 ppm	
1-Methoxy-2-propyl acetate	108-65-6	CMRG	TWA:10 mg/m <sup>3</sup> ;STEL:90 ppm	
1-Methoxy-2-propyl acetate	108-65-6	AIHA	TWA:50 ppm	
Cyclohexanone	108-94-1	ACGIH	TWA:20 ppm;STEL:50 ppm	A3: Confirmed animal carcin., Skin Notation
Cyclohexanone	108-94-1	OSHA	TWA:200 mg/m <sup>3</sup> (50 ppm)	
Carbon black	1333-86-4	OSHA	TWA:3.5 mg/m <sup>3</sup>	
Carbon black	1333-86-4	ACGIH	TWA(inhalable fraction):3 mg/m <sup>3</sup>	A3: Confirmed animal carcin.
Carbon black	1333-86-4	CMRG	TWA:0.5 mg/m <sup>3</sup>	
Titanium dioxide	13463-67-7	ACGIH	TWA:10 mg/m <sup>3</sup>	A4: Not class. as human carcin
Titanium dioxide	13463-67-7	CMRG	TWA(as respirable dust):5 mg/m <sup>3</sup>	
Titanium dioxide	13463-67-7	OSHA	TWA(as total dust):15 mg/m <sup>3</sup>	
Bis(2,2,6,6-tetramethyl-4-piperidiny) sebacate	52829-07-9	CMRG	TWA:1 mg/m <sup>3</sup>	
Dipropylene glycol methyl ether acetate	88917-22-0	Manufacturer determined	TWA:100 ppm;STEL:150 ppm	Skin Notation

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. Use explosion-proof ventilation 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**

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. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.

Gloves made from the following material(s) are recommended: Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

**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**

<b>General Physical Form:</b>	Liquid
<b>Specific Physical Form:</b>	Liquid
<b>Odor, Color, Grade:</b>	Solvent odor, gray, liquid
<b>Odor threshold</b>	<i>No Data Available</i>
<b>pH</b>	<i>Not Applicable</i>
<b>Melting point</b>	<i>Not Applicable</i>
<b>Boiling Point</b>	>=284 °F
<b>Flash Point</b>	111 °F [ <i>Test Method: Tagliabue Closed Cup</i> ]
<b>Evaporation rate</b>	<=1 [ <i>Ref Std: BUOAC=1</i> ]
<b>Flammability (solid, gas)</b>	Not Applicable
<b>Flammable Limits(LEL)</b>	1.1 % volume
<b>Flammable Limits(UEL)</b>	12.75 % volume
<b>Vapor Pressure</b>	<=3.7 mmHg [ <i>@ 20 °C</i> ]
<b>Vapor Density</b>	<=3.4 [ <i>Ref Std: AIR=1</i> ]
<b>Density</b>	0.95 g/ml
<b>Specific Gravity</b>	0.95 [ <i>Ref Std: WATER=1</i> ]
<b>Solubility In Water</b>	<i>Not Applicable</i>
<b>Solubility- non-water</b>	<i>No Data Available</i>
<b>Partition coefficient: n-octanol/ water</b>	<i>No Data Available</i>
<b>Autoignition temperature</b>	<i>No Data Available</i>
<b>Decomposition temperature</b>	<i>No Data Available</i>
<b>Viscosity</b>	1,300 - 1,500 centipoise
<b>Volatile Organic Compounds</b>	740 - 790 g/l
<b>Percent volatile</b>	65 - 80 % weight
<b>VOC Less H2O &amp; Exempt Solvents</b>	<i>No Data Available</i>

**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

## 10.5. Incompatible materials

Strong oxidizing agents

## 10.6. Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
Hydrocarbons	During Storage

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:**

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause target organ effects after inhalation.

#### **Skin Contact:**

May be harmful in contact with skin.

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

#### **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.

May cause target organ effects after ingestion.

**Target Organ Effects:****Single exposure may cause:**

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

**Prolonged or repeated exposure may cause:**

Olfactory Effects: Signs/symptoms may include decreased ability to detect odors and/or complete loss of smell.

**Carcinogenicity:**

Contains a chemical or chemicals which can cause cancer.

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Class Description</u>	<u>Regulation</u>
Carbon black	1333-86-4	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
Ethylbenzene	100-41-4	Grp. 2B: Possible human carc.	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**

<u>Name</u>	<u>Route</u>	<u>Species</u>	<u>Value</u>
Overall product	Dermal		No data available; calculated ATE 2,000 - 5,000 mg/kg
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE > 50 mg/l
Overall product	Ingestion		No data available; calculated ATE > 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
Vinyl polymer (New Jersey Trade Secret Registry # 04499600-5238P)	Dermal	Rabbit	LD50 > 8,000 mg/kg
Vinyl polymer (New Jersey Trade Secret Registry # 04499600-5238P)	Ingestion	Rat	LD50 > 8,000 mg/kg
Cyclohexanone	Dermal	Rabbit	LD50 948 mg/kg
Cyclohexanone	Inhalation-Vapor (4 hours)	Rat	LC50 > 6.2 mg/l
Cyclohexanone	Ingestion	Rat	LD50 1,296 mg/kg
1-Methoxy-2-propyl acetate	Dermal	Rabbit	LD50 > 5,000 mg/kg
1-Methoxy-2-propyl acetate	Inhalation-Vapor (4 hours)	Rat	LC50 > 28.8 mg/l
1-Methoxy-2-propyl acetate	Ingestion	Rat	LD50 8,532 mg/kg
Dipropylene glycol methyl ether acetate	Dermal	Rat	LD50 > 2,000 mg/kg
Dipropylene glycol methyl ether acetate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.7 mg/l
Dipropylene glycol methyl ether acetate	Ingestion	Rat	LD50 > 5,000 mg/kg
(3',4'-Epoxy cyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Dermal	Rabbit	LD50 > 23,400 mg/kg
(3',4'-Epoxy cyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Ingestion	Rat	LD50 5,000 mg/kg
Alkyd resin 3261 (NJ TSR # 04499600-6267P)	Ingestion		LD50 estimated to be > 5,000 mg/kg
Carbon black	Dermal	Rabbit	LD50 > 3,000 mg/kg
Carbon black	Ingestion	Rat	LD50 > 8,000 mg/kg
2,4-Dihydroxybenzophenone	Ingestion	Rat	LD50 8,600 mg/kg
Ethylbenzene	Dermal	Rabbit	LD50 15,433 mg/kg
Ethylbenzene	Inhalation-Vapor (4 hours)	Rat	LC50 17.4 mg/l
Ethylbenzene	Ingestion	Rat	LD50 4,769 mg/kg

Bis(2,2,6,6-tetramethyl-4-piperidiny)l sebacate	Dermal	Rat	LD50 > 3,170 mg/kg
Bis(2,2,6,6-tetramethyl-4-piperidiny)l sebacate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.5 mg/l
Bis(2,2,6,6-tetramethyl-4-piperidiny)l sebacate	Ingestion	Rat	LD50 3,700 mg/kg

ATE = acute toxicity estimate

### Skin Corrosion/Irritation

Name	Species	Value
Titanium dioxide	Rabbit	No significant irritation
Vinyl polymer (New Jersey Trade Secret Registry # 04499600-5238P)		No significant irritation
Cyclohexanone	Rabbit	Mild irritant
1-Methoxy-2-propyl acetate	Rabbit	No significant irritation
Dipropylene glycol methyl ether acetate	Rabbit	No significant irritation
(3',4'-Epoxy-cyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Rabbit	Minimal irritation
Carbon black	Rabbit	No significant irritation
2,4-Dihydroxybenzophenone	Rabbit	No significant irritation
Ethylbenzene	Rabbit	Mild irritant
Bis(2,2,6,6-tetramethyl-4-piperidiny)l sebacate	Rabbit	No significant irritation

### Serious Eye Damage/Irritation

Name	Species	Value
Titanium dioxide	Rabbit	No significant irritation
Vinyl polymer (New Jersey Trade Secret Registry # 04499600-5238P)		No significant irritation
Cyclohexanone	Rabbit	Severe irritant
1-Methoxy-2-propyl acetate	Rabbit	Mild irritant
Dipropylene glycol methyl ether acetate	Rabbit	No significant irritation
(3',4'-Epoxy-cyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Rabbit	Mild irritant
Carbon black	Rabbit	No significant irritation
2,4-Dihydroxybenzophenone	Rabbit	Severe irritant
Ethylbenzene	Rabbit	Moderate irritant
Bis(2,2,6,6-tetramethyl-4-piperidiny)l sebacate	Rabbit	Corrosive

### Skin Sensitization

Name	Species	Value
Titanium dioxide	Human and animal	Not sensitizing
Cyclohexanone	Guinea pig	Not sensitizing
1-Methoxy-2-propyl acetate	Guinea pig	Not sensitizing
Dipropylene glycol methyl ether acetate	Guinea pig	Not sensitizing
(3',4'-Epoxy-cyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Guinea pig	Sensitizing
Ethylbenzene	Human	Not sensitizing
Bis(2,2,6,6-tetramethyl-4-piperidiny)l sebacate	Human	Some positive data exist, but the data are not sufficient for classification

### Respiratory Sensitization

Name	Species	Value
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### Germ Cell Mutagenicity

Name	Route	Value
Titanium dioxide	In Vitro	Not mutagenic
Titanium dioxide	In vivo	Not mutagenic
Cyclohexanone	In vivo	Not mutagenic
Cyclohexanone	In Vitro	Some positive data exist, but the data are not sufficient for classification
1-Methoxy-2-propyl acetate	In Vitro	Not mutagenic
Dipropylene glycol methyl ether acetate	In Vitro	Not mutagenic
Dipropylene glycol methyl ether acetate	In vivo	Not mutagenic
(3',4'-Epoxy-cyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	In vivo	Not mutagenic

(3',4'-Epoxy cyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	In Vitro	Some positive data exist, but the data are not sufficient for classification
Carbon black	In Vitro	Not mutagenic
Carbon black	In vivo	Some positive data exist, but the data are not sufficient for classification
Ethylbenzene	In vivo	Not mutagenic
Ethylbenzene	In Vitro	Some positive data exist, but the data are not sufficient for classification

### Carcinogenicity

Name	Route	Species	Value
Titanium dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium dioxide	Inhalation	Rat	Carcinogenic
Cyclohexanone	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
(3',4'-Epoxy cyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Dermal	Mouse	Not carcinogenic
Carbon black	Dermal	Mouse	Not carcinogenic
Carbon black	Ingestion	Mouse	Not carcinogenic
Carbon black	Inhalation	Rat	Carcinogenic
Ethylbenzene	Inhalation	Multiple animal species	Carcinogenic

### Reproductive Toxicity

#### Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Cyclohexanone	Inhalation	Not toxic to female reproduction	Rat	NOAEL 4 mg/l	2 generation
Cyclohexanone	Inhalation	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 2 mg/l	2 generation
Cyclohexanone	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Mouse	LOAEL 1,100 mg/kg/day	during organogenesis
Cyclohexanone	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 2 mg/l	2 generation
1-Methoxy-2-propyl acetate	Ingestion	Not toxic to female reproduction	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation
1-Methoxy-2-propyl acetate	Ingestion	Not toxic to male reproduction	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation
1-Methoxy-2-propyl acetate	Ingestion	Not toxic to development	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation
1-Methoxy-2-propyl acetate	Inhalation	Not toxic to development	Rat	NOAEL 21.6 mg/l	during organogenesis
Dipropylene glycol methyl ether acetate	Ingestion	Not toxic to male reproduction	Rat	NOAEL 1,000 mg/kg/day	4 weeks
(3',4'-Epoxy cyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Ingestion	Not toxic to female reproduction	Rat	NOAEL 500 mg/kg/day	90 days
(3',4'-Epoxy cyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Ingestion	Not toxic to male reproduction	Rat	NOAEL 500 mg/kg/day	90 days
(3',4'-Epoxy cyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 125 mg/kg/day	during gestation
Ethylbenzene	Inhalation	Some positive developmental data exist, but the data are not sufficient for	Rat	NOAEL 4.3 mg/l	prematuring & during

		classification			gestation
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**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Cyclohexanone	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Guinea pig	LOAEL 16.1 mg/l	6 hours
Cyclohexanone	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
1-Methoxy-2-propyl acetate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Ethylbenzene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Ethylbenzene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	NOAEL Not available	

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Titanium dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.010 mg/l	2 years
Titanium dioxide	Inhalation	pulmonary fibrosis	All data are negative	Human	NOAEL Not available	occupational exposure
Cyclohexanone	Inhalation	liver   kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rabbit	NOAEL 0.76 mg/l	50 days
Cyclohexanone	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 4,800 mg/kg/day	90 days
1-Methoxy-2-propyl acetate	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 16.2 mg/l	9 days
1-Methoxy-2-propyl acetate	Inhalation	olfactory system	Some positive data exist, but the data are not sufficient for classification	Mouse	LOAEL 1.62 mg/l	9 days
1-Methoxy-2-propyl acetate	Inhalation	blood	All data are negative	Multiple animal species	NOAEL 16.2 mg/l	9 days
1-Methoxy-2-propyl acetate	Ingestion	endocrine system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	44 days
Dipropylene glycol methyl ether acetate	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	4 weeks
Dipropylene glycol methyl ether acetate	Ingestion	heart   endocrine system   hematopoietic system   kidney and/or bladder	All data are negative	Rat	NOAEL 1,000 mg/kg/day	4 weeks
(3',4'-Epoxy)cyclohexylmethyl 3,4-epoxycyclohexanecarboxylate	Ingestion	olfactory system	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 5 mg/kg/day	90 days
(3',4'-Epoxy)cyclohexylmethyl 3,4-epoxycyclohexanecarboxylate	Ingestion	liver   kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 500 mg/kg/day	90 days
(3',4'-Epoxy)cyclohexylmethyl	Ingestion	hematopoietic system	All data are negative	Rat	NOAEL 500 mg/kg/day	90 days

3,4-epoxycyclohexanecarboxylate						
(3',4'-Epoxy)cyclohexylmethyl 3,4-epoxycyclohexanecarboxylate	Ingestion	endocrine system   respiratory system	All data are negative	Rat	NOAEL 1,113 mg/kg/day	14 days
Carbon black	Inhalation	pneumoconiosis	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Ethylbenzene	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.1 mg/l	2 years
Ethylbenzene	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 1.1 mg/l	103 weeks
Ethylbenzene	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 3.4 mg/l	28 days
Ethylbenzene	Inhalation	auditory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 2.4 mg/l	5 days
Ethylbenzene	Inhalation	endocrine system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 3.3 mg/l	103 weeks
Ethylbenzene	Inhalation	bone, teeth, nails, and/or hair   muscles	All data are negative	Multiple animal species	NOAEL 4.2 mg/l	90 days
Ethylbenzene	Inhalation	heart   immune system   respiratory system	All data are negative	Multiple animal species	NOAEL 3.3 mg/l	2 years
Ethylbenzene	Ingestion	liver   kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 680 mg/kg/day	6 months

**Aspiration Hazard**

Name	Value
Ethylbenzene	Aspiration hazard

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.

Incinerate in a permitted waste incineration facility. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. 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): D001 (Ignitable)

## 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.

#### 311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

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>
Ethylbenzene	100-41-4	< 0.2

### 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.

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: 2 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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