Safety Data Sheet

Document Group:	32-7152-5	**Version Number:**	1.01
Issue Date:	10/21/13	**Supercedes Date:**	10/21/13

SECTION 1: Identification

1.1. Product identifier
3M™ Roll Coat Color CF4850-015 Opaque Blue

Product Identification Numbers
75-0302-4282-2

1.2. Recommended use and restrictions on use

Recommended use
Ink

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Traffic Safety and Security Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification
Carcinogenicity: Category 1A.
Flammable Liquid: Category 3.
Reproductive Toxicity: Category 2.
Skin Corrosion/Irritation: Category 2.
Specific Target Organ Toxicity (repeated exposure): Category 1.
Specific Target Organ Toxicity (single exposure): Category 1.
Specific Target Organ Toxicity (central nervous system): Category 3.
Acute Toxicity (inhalation): Category 3.
Skin Sensitizer: Category 1A.

2.2. Label elements
Signal word
Danger

Symbols
Flame | Skull and crossbones | Exclamation mark | Health Hazard |

Pictograms

Hazard Statements
Flammable liquid and vapor.

Toxic if inhaled.
Causes skin irritation.
May cause an allergic skin reaction.
May cause drowsiness or dizziness.
Suspected of damaging fertility or the unborn child.
May cause cancer.

Causes damage to organs:
sensory organs |

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

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.
Do not eat, drink or smoke when using this product.
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 ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
IF exposed: Call a POISON CENTER or doctor/physician.
Get medical advice/attention if you feel unwell.
In case of fire: Use a fire fighting agent suitable for flammable liquids and solids 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
May cause an allergic respiratory reaction in sensitive people.

38% of the mixture consists of ingredients of unknown acute oral toxicity.

53% of the mixture consists of ingredients of unknown acute inhalation toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Oligomer 17171	Trade Secret*	10 - 40
Heavy aromatic solvent naphtha (Petroleum)	64742-94-5	5 - 30
Light aromatic solvent naphtha (Petroleum)	64742-95-6	5 - 15
Titanium dioxide	13463-67-7	7 - 13
Alkyl amine polymer (NJ TSR # 04499600-5252P)	Trade Secret*	7 - 13
Vinyl polymer (NJ TSR # 04499600-5238P)	Trade Secret*	1 - 10
C.I. Pigment blue 15	147-14-8	1 - 10
1-Methoxy-2-propyl acetate	108-65-6	3 - 7
Cyclohexanone	108-94-1	3 - 7
1,2,4-Trimethylbenzene	95-63-6	1 - 5
Trimethylbenzene	25551-13-7	0 - 5
Xylene	1330-20-7	0 - 3
Butyl alcohol	71-36-3	0 - 3
Diethylene glycol butyl ether	112-34-5	0 - 3
Ethylbenzene	100-41-4	< 0.6
Diethylaminoethanol	100-37-8	< 0.6
Mesitylene	108-67-8	< 0.6
Naphthalene	91-20-3	< 0.3
Formaldehyde	50-00-0	< 0.2
Methyl alcohol	67-56-1	< 0.2
1,2,3-Trimethylbenzene	526-73-8	< 0.2
Benzene	71-43-2	< 0.03

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. 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 for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately 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 and solids 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

Substance	Condition
Hydrocarbons	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Chloride	During Combustion
Oxides of Nitrogen	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. An appropriate aqueous film forming foam (AFFF) 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

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. Use explosion-proof electrical/ventilating/lighting equipment. 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 (eg. gloves, respirators…) as required.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep container tightly closed. Keep cool. Protect from sunlight. Store away from heat. Store away from acids. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Diethylaminoethanol	100-37-8	Amer Conf of Gov. Indust. Hyg.	TWA:2 ppm	Skin Notation
Diethylaminoethanol	100-37-8	US Dept of Labor - OSHA	TWA:50 mg/m3(10 ppm)	Skin Notation
Ethylbenzene	100-41-4	Amer Conf of Gov. Indust. Hyg.	TWA:20 ppm	
Ethylbenzene	100-41-4	Chemical Manufacturer Rec Guid	TWA:25 ppm;STEL:75 ppm	
Ethylbenzene	100-41-4	US Dept of Labor - OSHA	TWA:435 mg/m3(100 ppm)	
1-Methoxy-2-propyl acetate	108-65-6	American Indust. Hygiene Assoc	TWA:50 ppm	
1-Methoxy-2-propyl acetate	108-65-6	Chemical Manufacturer Rec Guid	TWA:10 mg/m3;STEL:90 ppm	
Benzene, trimethyl-	108-67-8	Amer Conf of Gov. Indust. Hyg.	TWA:25 ppm	
Cyclohexanone	108-94-1	Amer Conf of Gov. Indust. Hyg.	TWA:20 ppm;STEL:50 ppm	Skin Notation
Cyclohexanone	108-94-1	US Dept of	TWA:200 mg/m3(50 ppm)	

		Labor - OSHA		
Diethylene glycol butyl ether	112-34-5	Amer Conf of Gov. Indust. Hyg.	TWA(inhalable fraction and vapor):10 ppm	
Diethylene glycol butyl ether	112-34-5	Chemical Manufacturer Rec Guid	TWA:35 ppm	
Xylene	1330-20-7	Amer Conf of Gov. Indust. Hyg.	TWA:100 ppm;STEL:150 ppm	
Xylene	1330-20-7	Chemical Manufacturer Rec Guid	TWA:50 ppm;STEL:75 ppm	
Xylene	1330-20-7	US Dept of Labor - OSHA	TWA:435 mg/m3(100 ppm)	
Titanium dioxide	13463-67-7	Amer Conf of Gov. Indust. Hyg.	TWA:10 mg/m3	
Titanium dioxide	13463-67-7	Chemical Manufacturer Rec Guid	TWA(as respirable dust):5 mg/m3	
Titanium dioxide	13463-67-7	US Dept of Labor - OSHA	TWA(as total dust):15 mg/m3	
Trimethylbenzene	25551-13-7	Amer Conf of Gov. Indust. Hyg.	TWA:25 ppm	
Formaldehyde	50-00-0	Amer Conf of Gov. Indust. Hyg.	CEIL:0.3 ppm	Sensitizer
Formaldehyde	50-00-0	Chemical Manufacturer Rec Guid	TWA:0.5 ppm	
Formaldehyde	50-00-0	US Dept of Labor - OSHA	TWA:0.75 ppm;STEL:2 ppm	29 CFR 1910.1048
Benzene, trimethyl-	526-73-8	Amer Conf of Gov. Indust. Hyg.	TWA:25 ppm	
Heavy aromatic solvent naphtha (Petroleum)	64742-94-5	Chemical Manufacturer Rec Guid	TWA:17 ppm(100 mg/m3)	
Light aromatic solvent naphtha (Petroleum)	64742-95-6	Chemical Manufacturer Rec Guid	TWA:50 ppm(245 mg/m3)	
Methyl alcohol	67-56-1	Amer Conf of Gov. Indust. Hyg.	TWA:200 ppm;STEL:250 ppm	Skin Notation
Methyl alcohol	67-56-1	US Dept of Labor - OSHA	TWA:260 mg/m3(200 ppm)	
Butyl alcohol	71-36-3	Amer Conf of Gov. Indust. Hyg.	TWA:20 ppm	
Butyl alcohol	71-36-3	US Dept of Labor - OSHA	TWA:300 mg/m3(100 ppm)	
Benzene	71-43-2	Amer Conf of Gov. Indust. Hyg.	TWA:0.5 ppm;STEL:2.5 ppm	Skin Notation

Benzene	71-43-2	US Dept of Labor - OSHA	TWA:1 ppm;TWA:10 ppm;STEL:5 ppm;CEIL:25 ppm	29 CFR 1910.1028
Naphthalene	91-20-3	Amer Conf of Gov. Indust. Hyg.	TWA:10 ppm;STEL:15 ppm	Skin Notation
Naphthalene	91-20-3	US Dept of Labor - OSHA	TWA:50 mg/m3(10 ppm)	
Benzene, trimethyl-	95-63-6	Amer Conf of Gov. Indust. Hyg.	TWA:25 ppm	

Amer Conf of Gov. Indust. Hyg. : American Conference of Governmental Industrial Hygienists
American Indust. Hygiene Assoc : American Industrial Hygiene Association
Chemical Manufacturer Rec Guid : Chemical Manufacturer's Recommended Guidelines
US Dept of Labor - 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
None required.

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: Polymer laminate

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:
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

General Physical Form:	Liquid
Specific Physical Form:	Liquid

Odor, Color, Grade:	Solvent odor, blue, liquid
Odor threshold	*No Data Available*
pH	*Not Applicable*
Melting point	*Not Applicable*
Boiling Point	>=243 ºF
Flash Point	96 ºF [*Test Method:* Tagliabue Closed Cup]
Evaporation rate	0.23 - 1 [*Ref Std:* BUOAC=1]
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	0.9 %
Flammable Limits(UEL)	11.7 %
Vapor Pressure	<=5.1 mmHg [@ 68 ºF]
Vapor Density	2.6 - 4.8 [*Ref Std:* AIR=1]
Density	0.87 - 0.9 g/ml [@ 20 ºC]
Specific Gravity	0.87 - 0.9 [*Ref Std:* WATER=1]
Solubility in Water	Negligible
Solubility- non-water	*No Data Available*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	670 - 870 ºF
Decomposition temperature	*No Data Available*
Viscosity	2,000 - 3,000 centipoise
Volatile Organic Compounds	600 - 700 g/l
Percent volatile	60.00 % weight

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

Substance	**Condition**
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

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

Allergic Respiratory Reaction in sensitive people: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest.

May cause target organ effects after inhalation.

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

Eye Contact:
Contact with the eyes during product use is not expected to result in significant irritation.

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:
Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

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:
Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

Neurological Effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and/or changes in blood pressure and heart rate.

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	C.A.S. No.	Class Description	Regulation
Benzene	71-43-2	Cancer hazard	OSHA Carcinogens

Benzene	71-43-2	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
Benzene	71-43-2	Known human carcinogen	National Toxicology Program Carcinogens
Ethylbenzene	100-41-4	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
Formaldehyde	50-00-0	Cancer hazard	OSHA Carcinogens
Formaldehyde	50-00-0	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
Formaldehyde	50-00-0	Known human carcinogen	National Toxicology Program Carcinogens
Naphthalene	91-20-3	Anticipated human carcinogen	National Toxicology Program Carcinogens
Naphthalene	91-20-3	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

Acute Toxicity

Name	Route	Species	Value
Overall product	Inhalation-Vapor(4 hr)		Data not available or insufficient for classification; calculated ATE 2 - 10 mg/l
Overall product	Ingestion		Data not available or insufficient for classification; calculated ATE > 5,000 mg/kg
Heavy aromatic solvent naphtha (Petroleum)	Dermal	Rabbit	LD50 > 2,000 mg/kg
Heavy aromatic solvent naphtha (Petroleum)	Ingestion	Rat	LD50 > 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
Light aromatic solvent naphtha (Petroleum)	Dermal	Rabbit	LD50 > 2,000 mg/kg
Light aromatic solvent naphtha (Petroleum)	Inhalation-Vapor (4 hours)	Rat	LC50 > 5.2 mg/l
Light aromatic solvent naphtha (Petroleum)	Ingestion	Rat	LD50 > 5,000 mg/kg
Alkyl amine polymer (NJ TSR # 04499600-5252P)	Dermal	Rabbit	LD50 > 5,000 mg/kg
Alkyl amine polymer (NJ TSR # 04499600-5252P)	Ingestion	Rat	LD50 5,400 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
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
Trimethylbenzene	Dermal	Rabbit	LD50 > 3,160 mg/kg
Trimethylbenzene	Inhalation-Vapor (4 hours)	Rat	LC50 18 mg/l
Trimethylbenzene	Ingestion	Rat	LD50 3,400 mg/kg
Diethylene glycol butyl ether	Dermal	Rabbit	LD50 2,764 mg/kg
Diethylene glycol butyl ether	Ingestion	Rat	LD50 7,292 mg/kg
Vinyl polymer (NJ TSR # 04499600-5238P)	Dermal	Rabbit	LD50 > 8,000 mg/kg
Vinyl polymer (NJ TSR # 04499600-5238P)	Ingestion	Rat	LD50 > 8,000 mg/kg
C.I. Pigment blue 15	Ingestion	Rat	LD50 10,000 mg/kg
Butyl alcohol	Dermal	Rabbit	LD50 3,402 mg/kg
Butyl alcohol	Inhalation-Vapor (4 hours)	Rat	LC50 24 mg/l
Butyl alcohol	Ingestion	Rat	LD50 2,290 mg/kg
1,2,4-Trimethylbenzene	Dermal	Rabbit	LD50 > 3,160 mg/kg
1,2,4-Trimethylbenzene	Inhalation-Vapor (4 hours)	Rat	LC50 18 mg/l
1,2,4-Trimethylbenzene	Ingestion	Rat	LD50 3,400 mg/kg
Xylene	Dermal	Rabbit	LD50 > 4,200 mg/kg
Xylene	Inhalation-Vapor (4 hours)	Rat	LC50 29 mg/l

Xylene	Ingestion	Rat	LD50 3,523 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
Diethylaminoethanol	Dermal	Rabbit	LD50 880 mg/kg
Diethylaminoethanol	Inhalation-Vapor (4 hours)	Rat	LC50 4.5 mg/l
Diethylaminoethanol	Ingestion	Rat	LD50 1,300 mg/kg
Mesitylene	Dermal	Rabbit	LD50 > 3,160 mg/kg
Mesitylene	Inhalation-Vapor (4 hours)	Rat	LC50 18 mg/l
Mesitylene	Ingestion	Rat	LD50 3,400 mg/kg
Naphthalene	Dermal	Human	LD50 estimated to be 2,000 - 5,000 mg/kg
Naphthalene	Inhalation-Vapor	Human	LC50 estimated to be 20 - 50 mg/l
Naphthalene	Ingestion	Human	LD50 estimated to be 300 - 2,000 mg/kg
Methyl alcohol	Dermal		LD50 estimated to be 1,000 - 2,000 mg/kg
Methyl alcohol	Inhalation-Vapor		LC50 estimated to be 10 - 20 mg/l
Methyl alcohol	Ingestion		LD50 estimated to be 50 - 300 mg/kg
1,2,3-Trimethylbenzene	Dermal	Rabbit	LD50 > 3,160 mg/kg
1,2,3-Trimethylbenzene	Inhalation-Vapor (4 hours)	Rat	LC50 18 mg/l
1,2,3-Trimethylbenzene	Ingestion	Rat	LD50 3,400 mg/kg
Formaldehyde	Dermal	Rabbit	LD50 270 mg/kg
Formaldehyde	Inhalation-Gas (4 hours)	Rat	LC50 470 ppm
Formaldehyde	Ingestion	Rat	LD50 800 mg/kg
Benzene			Data not available or insufficient for classification

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Heavy aromatic solvent naphtha (Petroleum)	Rabbit	Irritant
Titanium dioxide	Rabbit	No significant irritation
Light aromatic solvent naphtha (Petroleum)	Rabbit	Irritant
Alkyl amine polymer (NJ TSR # 04499600-5252P)		Data not available or insufficient for classification
1-Methoxy-2-propyl acetate	Rabbit	No significant irritation
Cyclohexanone	Rabbit	Mild irritant
Trimethylbenzene	Rabbit	Irritant
Diethylene glycol butyl ether		Data not available or insufficient for classification
Vinyl polymer (NJ TSR # 04499600-5238P)		No significant irritation
C.I. Pigment blue 15	Rabbit	No significant irritation
Butyl alcohol	Rabbit	Mild irritant
1,2,4-Trimethylbenzene	Rabbit	Irritant
Xylene	Rabbit	Mild irritant
Ethylbenzene	Rabbit	Mild irritant
Diethylaminoethanol	Rabbit	Corrosive
Mesitylene	Rabbit	Irritant
Naphthalene	Rabbit	Minimal irritation
Methyl alcohol	Rabbit	Mild irritant
1,2,3-Trimethylbenzene	Rabbit	Irritant
Formaldehyde	official classification	Corrosive
Benzene		Data not available or insufficient for classification

Serious Eye Damage/Irritation

Name	Species	Value
Heavy aromatic solvent naphtha (Petroleum)	Rabbit	Mild irritant

Titanium dioxide	Rabbit	No significant irritation
Light aromatic solvent naphtha (Petroleum)	Rabbit	Mild irritant
Alkyl amine polymer (NJ TSR # 04499600-5252P)		Data not available or insufficient for classification
1-Methoxy-2-propyl acetate	Rabbit	Mild irritant
Cyclohexanone	Rabbit	Severe irritant
Trimethylbenzene	Rabbit	Mild irritant
Diethylene glycol butyl ether		Data not available or insufficient for classification
Vinyl polymer (NJ TSR # 04499600-5238P)		No significant irritation
C.I. Pigment blue 15	Rabbit	No significant irritation
Butyl alcohol	Rabbit	Severe irritant
1,2,4-Trimethylbenzene	Rabbit	Mild irritant
Xylene	Rabbit	Mild irritant
Ethylbenzene	Rabbit	Moderate irritant
Diethylaminoethanol	Rabbit	Corrosive
Mesitylene	Rabbit	Mild irritant
Naphthalene	Rabbit	No significant irritation
Methyl alcohol	Rabbit	Moderate irritant
1,2,3-Trimethylbenzene	Rabbit	Mild irritant
Formaldehyde	official classification	Corrosive
Benzene		Data not available or insufficient for classification

Skin Sensitization

Name	Species	Value
Heavy aromatic solvent naphtha (Petroleum)	Guinea pig	Not sensitizing
Titanium dioxide	Human and animal	Not sensitizing
Light aromatic solvent naphtha (Petroleum)	Guinea pig	Not sensitizing
Alkyl amine polymer (NJ TSR # 04499600-5252P)		Data not available or insufficient for classification
1-Methoxy-2-propyl acetate	Guinea pig	Not sensitizing
Cyclohexanone	Guinea pig	Not sensitizing
Trimethylbenzene	Guinea pig	Not sensitizing
Diethylene glycol butyl ether		Data not available or insufficient for classification
Vinyl polymer (NJ TSR # 04499600-5238P)		Data not available or insufficient for classification
C.I. Pigment blue 15	Human	Not sensitizing
Butyl alcohol	Human	Not sensitizing
1,2,4-Trimethylbenzene	Guinea pig	Not sensitizing
Xylene		Data not available or insufficient for classification
Ethylbenzene	Human	Not sensitizing
Diethylaminoethanol	Guinea pig	Not sensitizing
Mesitylene	Guinea pig	Not sensitizing
Naphthalene		Data not available or insufficient for classification
Methyl alcohol	Guinea pig	Not sensitizing
1,2,3-Trimethylbenzene	Guinea pig	Not sensitizing
Formaldehyde	Guinea pig	Sensitizing
Benzene		Data not available or insufficient for classification

Respiratory Sensitization

Name	Species	Value
Heavy aromatic solvent naphtha (Petroleum)		Data not available or insufficient for classification
Titanium dioxide		Data not available or insufficient for classification
Light aromatic solvent naphtha (Petroleum)		Data not available or insufficient for classification
Alkyl amine polymer (NJ TSR # 04499600-5252P)		Data not available or insufficient for classification

1-Methoxy-2-propyl acetate		Data not available or insufficient for classification
Cyclohexanone		Data not available or insufficient for classification
Trimethylbenzene		Data not available or insufficient for classification
Diethylene glycol butyl ether		Data not available or insufficient for classification
Vinyl polymer (NJ TSR # 04499600-5238P)		Data not available or insufficient for classification
C.I. Pigment blue 15		Data not available or insufficient for classification
Butyl alcohol		Data not available or insufficient for classification
1,2,4-Trimethylbenzene		Data not available or insufficient for classification
Xylene		Data not available or insufficient for classification
Ethylbenzene		Data not available or insufficient for classification
Diethylaminoethanol		Data not available or insufficient for classification
Mesitylene		Data not available or insufficient for classification
Naphthalene		Data not available or insufficient for classification
Methyl alcohol		Data not available or insufficient for classification
1,2,3-Trimethylbenzene		Data not available or insufficient for classification
Formaldehyde	Human	Some positive data exist, but the data are not sufficient for classification
Benzene		Data not available or insufficient for classification

Germ Cell Mutagenicity

Name	Route	Value
Heavy aromatic solvent naphtha (Petroleum)		Data not available or insufficient for classification
Titanium dioxide	In Vitro	Not mutagenic
Titanium dioxide	In vivo	Not mutagenic
Light aromatic solvent naphtha (Petroleum)		Data not available or insufficient for classification
Alkyl amine polymer (NJ TSR # 04499600-5252P)		Data not available or insufficient for classification
1-Methoxy-2-propyl acetate	In Vitro	Not mutagenic
Cyclohexanone	In vivo	Not mutagenic
Cyclohexanone	In Vitro	Some positive data exist, but the data are not sufficient for classification
Trimethylbenzene	In Vitro	Not mutagenic
Diethylene glycol butyl ether		Data not available or insufficient for classification
Vinyl polymer (NJ TSR # 04499600-5238P)		Data not available or insufficient for classification
C.I. Pigment blue 15	In Vitro	Not mutagenic
Butyl alcohol	In vivo	Not mutagenic
Butyl alcohol	In Vitro	Some positive data exist, but the data are not sufficient for classification
1,2,4-Trimethylbenzene	In Vitro	Not mutagenic
Xylene	In Vitro	Not mutagenic
Xylene	In vivo	Not mutagenic
Ethylbenzene	In vivo	Not mutagenic
Ethylbenzene	In Vitro	Some positive data exist, but the data are not sufficient for classification
Diethylaminoethanol	In Vitro	Not mutagenic
Diethylaminoethanol	In vivo	Not mutagenic
Mesitylene	In Vitro	Not mutagenic
Naphthalene		Data not available or insufficient for classification
Methyl alcohol	In Vitro	Some positive data exist, but the data are not sufficient for classification
Methyl alcohol	In vivo	Some positive data exist, but the data are not sufficient for classification
1,2,3-Trimethylbenzene	In Vitro	Not mutagenic
Formaldehyde	In Vitro	Some positive data exist, but the data are not sufficient for classification
Formaldehyde	In vivo	Mutagenic
Benzene		Data not available or insufficient for classification

Carcinogenicity

Name	Route	Species	Value
Heavy aromatic solvent naphtha (Petroleum)	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Titanium dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium dioxide	Inhalation	Rat	Carcinogenic
Light aromatic solvent naphtha (Petroleum)	Inhalation	Mouse	Some positive data exist, but the data are not

			sufficient for classification
Alkyl amine polymer (NJ TSR # 04499600-5252P)			Data not available or insufficient for classification
1-Methoxy-2-propyl acetate			Data not available or insufficient for classification
Cyclohexanone	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Trimethylbenzene			Data not available or insufficient for classification
Diethylene glycol butyl ether			Data not available or insufficient for classification
Vinyl polymer (NJ TSR # 04499600-5238P)			Data not available or insufficient for classification
C.I. Pigment blue 15	Ingestion	Mouse	Not carcinogenic
Butyl alcohol			Data not available or insufficient for classification
1,2,4-Trimethylbenzene			Data not available or insufficient for classification
Xylene	Dermal	Rat	Not carcinogenic
Xylene	Ingestion	Multiple animal species	Not carcinogenic
Xylene	Inhalation	Human	Some positive data exist, but the data are not sufficient for classification
Ethylbenzene	Inhalation	Multiple animal species	Carcinogenic
Diethylaminoethanol			Data not available or insufficient for classification
Mesitylene			Data not available or insufficient for classification
Naphthalene	Inhalation	Multiple animal species	Carcinogenic
Methyl alcohol	Inhalation	Multiple animal species	Not carcinogenic
1,2,3-Trimethylbenzene			Data not available or insufficient for classification
Formaldehyde	Not Specified	Human and animal	Carcinogenic
Benzene			Data not available or insufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Heavy aromatic solvent naphtha (Petroleum)		Data not available or insufficient for classification			
Titanium dioxide		Data not available or insufficient for classification			
Light aromatic solvent naphtha (Petroleum)	Inhalation	Not toxic to female reproduction	Rat	NOAEL 1,500 ppm	2 generation
Light aromatic solvent naphtha (Petroleum)	Inhalation	Not toxic to male reproduction	Rat	NOAEL 1,500 ppm	2 generation
Light aromatic solvent naphtha (Petroleum)	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 500 ppm	2 generation
Alkyl amine polymer (NJ TSR # 04499600-5252P)		Data not available or insufficient for classification			
1-Methoxy-2-propyl acetate	Ingestion	Not toxic to female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
1-Methoxy-2-propyl acetate	Ingestion	Not toxic to male reproduction	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
1-Methoxy-2-propyl acetate	Ingestion	Not toxic to development	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
1-Methoxy-2-propyl acetate	Inhalation	Not toxic to development	Rat	NOAEL 21.6 mg/l	during organogenesis
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
Trimethylbenzene	Inhalation	Some positive female reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.2 mg/l	3 months
Trimethylbenzene	Inhalation	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.2 mg/l	3 months
Trimethylbenzene	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 1.5 mg/l	during gestation
Diethylene glycol butyl ether		Data not available or insufficient for classification			
Vinyl polymer (NJ TSR # 04499600-5238P)		Data not available or insufficient for classification			
C.I. Pigment blue 15	Ingestion	Not toxic to female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
C.I. Pigment blue 15	Ingestion	Not toxic to male reproduction	Rat	NOAEL 1,000 mg/kg/day	42 days
C.I. Pigment blue 15	Ingestion	Not toxic to development	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
Butyl alcohol	Ingestion	Not toxic to female reproduction	Rat	NOAEL 5,000 mg/kg/day	premating & during gestation
Butyl alcohol	Ingestion	Not toxic to male reproduction	Rat	NOAEL 500 mg/kg/day	4 days
Butyl alcohol	Inhalation	Not toxic to male reproduction	Rat	NOAEL 18 mg/l	6 weeks
Butyl alcohol	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 10.6 mg/l	during gestation
1,2,4-Trimethylbenzene	Inhalation	Some positive female reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.2 mg/l	3 months
1,2,4-Trimethylbenzene	Inhalation	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.2 mg/l	3 months
1,2,4-Trimethylbenzene	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 1.5 mg/l	during gestation
Xylene	Ingestion	Not toxic to female reproduction	Mouse	NOAEL 1,000 mg/kg/day	103 weeks
Xylene	Ingestion	Not toxic to male reproduction	Mouse	NOAEL 1,000 mg/kg/day	103 weeks
Xylene	Inhalation	Some positive female reproductive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Xylene	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Mouse	NOAEL Not available	during organogenesis
Xylene	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL Not available	during gestation
Ethylbenzene	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 4.3 mg/l	premating & during gestation

Diethylaminoethanol	Inhalation	Not toxic to female reproduction	Rat	NOAEL 0.36 mg/l	14 weeks
Diethylaminoethanol	Inhalation	Not toxic to male reproduction	Rat	NOAEL 0.36 mg/l	14 weeks
Diethylaminoethanol	Inhalation	Not toxic to development	Rat	NOAEL 0.49 mg/l	during organogenesis
Diethylaminoethanol	Ingestion	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	LOAEL 11 mg/kg/day	2 years
Diethylaminoethanol	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 100 mg/kg/day	during gestation
Mesitylene	Inhalation	Some positive female reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.2 mg/l	3 months
Mesitylene	Inhalation	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.2 mg/l	3 months
Mesitylene	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 1.5 mg/l	during gestation
Naphthalene		Data not available or insufficient for classification			
Methyl alcohol	Ingestion	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,600 mg/kg/day	21 days
Methyl alcohol	Ingestion	Toxic to development	Mouse	LOAEL 4,000 mg/kg/day	during organogenesis
Methyl alcohol	Inhalation	Toxic to development	Mouse	NOAEL 1.3 mg/l	during organogenesis
1,2,3-Trimethylbenzene	Inhalation	Some positive female reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.2 mg/l	3 months
1,2,3-Trimethylbenzene	Inhalation	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.2 mg/l	3 months
1,2,3-Trimethylbenzene	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 1.5 mg/l	during gestation
Formaldehyde	Ingestion	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 100 mg/kg	not applicable
Formaldehyde	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 10 ppm	during gestation
Benzene		Data not available or insufficient for classification			

Lactation

Name	Route	Species	Value
Xylene	Ingestion	Mouse	Does not cause effects on or via lactation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Heavy aromatic solvent naphtha (Petroleum)	Inhalation	central nervous system depression	May cause drowsiness or dizziness		NOAEL Not available	
Heavy aromatic solvent naphtha (Petroleum)	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	

Titanium dioxide			Data not available or insufficient for classification			
Light aromatic solvent naphtha (Petroleum)	Inhalation	central nervous system depression	May cause drowsiness or dizziness		NOAEL Not available	
Light aromatic solvent naphtha (Petroleum)	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Light aromatic solvent naphtha (Petroleum)	Ingestion	central nervous system depression	May cause drowsiness or dizziness		NOAEL Not available	
Alkyl amine polymer (NJ TSR # 04499600-5252P)			Data not available or insufficient for classification			
1-Methoxy-2-propyl acetate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
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	
Trimethylbenzene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Trimethylbenzene	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
Diethylene glycol butyl ether			Data not available or insufficient for classification			
Vinyl polymer (NJ TSR # 04499600-5238P)			Data not available or insufficient for classification			
C.I. Pigment blue 15			Data not available or insufficient for classification			
Butyl alcohol	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Butyl alcohol	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
Butyl alcohol	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
1,2,4-Trimethylbenzene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
1,2,4-Trimethylbenzene	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
Xylene	Inhalation	auditory system	Causes damage to organs	Rat	LOAEL 6.3 mg/l	8 hours
Xylene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Xylene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Xylene	Inhalation	eyes	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 3.5 mg/l	not available
Xylene	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL Not available	
Xylene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	
Xylene	Ingestion	eyes	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 250 mg/kg	not applicable
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	

Diethylaminoethanol	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Diethylaminoethanol	Inhalation	respiratory irritation	May cause respiratory irritation	Rat	NOAEL 0.05 mg/l	14 weeks
Mesitylene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Mesitylene	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
Naphthalene	Ingestion	blood	Causes damage to organs	Human	NOAEL Not available	poisoning and/or abuse
Methyl alcohol	Inhalation	blindness	Causes damage to organs	Human	NOAEL Not available	occupational exposure
Methyl alcohol	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	not available
Methyl alcohol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	6 hours
Methyl alcohol	Ingestion	blindness	Causes damage to organs	Human	NOAEL Not available	poisoning and/or abuse
Methyl alcohol	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
1,2,3-Trimethylbenzene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
1,2,3-Trimethylbenzene	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
Formaldehyde	Inhalation	respiratory system	Causes damage to organs	Rat	LOAEL 128 ppm	6 hours
Formaldehyde	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Benzene			Data not available or insufficient for classification			

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Heavy aromatic solvent naphtha (Petroleum)			Data not available or insufficient for classification			
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
Light aromatic solvent naphtha (Petroleum)			Data not available or insufficient for classification			
Alkyl amine polymer (NJ TSR # 04499600-5252P)			Data not available or insufficient for classification			
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		NOAEL Not available	
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
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	Mouse	NOAEL	90 days

			data are not sufficient for classification		4,800 mg/kg/day	
Trimethylbenzene	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.5 mg/l	3 months
Trimethylbenzene	Inhalation	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.1 mg/l	3 months
Trimethylbenzene	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Trimethylbenzene	Inhalation	liver | kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.2 mg/l	3 months
Trimethylbenzene	Inhalation	heart | endocrine system | immune system	All data are negative	Rat	NOAEL 1.2 mg/l	3 months
Trimethylbenzene	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 600 mg/kg/day	14 days
Trimethylbenzene	Ingestion	liver | immune system | kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	28 days
Diethylene glycol butyl ether			Data not available or insufficient for classification			
Vinyl polymer (NJ TSR # 04499600-5238P)			Data not available or insufficient for classification			
C.I. Pigment blue 15	Ingestion	endocrine system | hematopoietic system | respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	28 days
C.I. Pigment blue 15	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL Not available	not available
Butyl alcohol	Inhalation	blood	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.3 mg/l	3 months
Butyl alcohol	Inhalation	auditory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Butyl alcohol	Inhalation	liver | kidney and/or bladder | respiratory system	Some positive data exist, but the data are not sufficient for classification	Guinea pig	NOAEL Not available	3 months
Butyl alcohol	Inhalation	nervous system	All data are negative	Rat	NOAEL 9.09 mg/l	13 weeks
Butyl alcohol	Ingestion	blood	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 500 mg/kg/day	13 weeks
1,2,4-Trimethylbenzene	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.5 mg/l	3 months
1,2,4-Trimethylbenzene	Inhalation	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.1 mg/l	3 months
1,2,4-Trimethylbenzene	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
1,2,4-Trimethylbenzene	Inhalation	liver | kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.2 mg/l	3 months
1,2,4-Trimethylbenzene	Inhalation	heart | endocrine system | immune system	All data are negative	Rat	NOAEL 1.2 mg/l	3 months
1,2,4-Trimethylbenzene	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 600 mg/kg/day	14 days
1,2,4-Trimethylbenzene	Ingestion	liver | immune system | kidney	Some positive data exist, but the data are not sufficient for	Rat	NOAEL 1,000	28 days

		and/or bladder	classification		mg/kg/day	
Xylene	Inhalation	nervous system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.4 mg/l	4 weeks
Xylene	Inhalation	auditory system	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 7.8 mg/l	5 days
Xylene	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL Not available	
Xylene	Inhalation	heart | endocrine system | hematopoietic system | muscles | kidney and/or bladder | respiratory system	All data are negative	Multiple animal species	NOAEL 3.5 mg/l	13 weeks
Xylene	Ingestion	auditory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 900 mg/kg/day	2 weeks
Xylene	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,500 mg/kg/day	90 days
Xylene	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL Not available	
Xylene	Ingestion	heart | skin | endocrine system | bone, teeth, nails, and/or hair | hematopoietic system | immune system | nervous system | respiratory system	All data are negative	Mouse	NOAEL 1,000 mg/kg/day	103 weeks
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
Diethylaminoethanol	Inhalation	liver | kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.36 mg/l	14 weeks
Diethylaminoethanol	Inhalation	heart | endocrine system | bone, teeth, nails, and/or hair | hematopoietic system | immune system | nervous system | respiratory	All data are negative	Rat	NOAEL 0.36 mg/l	14 weeks

		system				
Diethylaminoethanol	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL 20 mg/kg/day	1 years
Diethylaminoethanol	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 400 mg/kg/day	6 months
Diethylaminoethanol	Ingestion	heart | endocrine system | hematopoietic system | liver | respiratory system	All data are negative	Rat	NOAEL 400 mg/kg/day	2 years
Diethylaminoethanol	Ocular	eyes	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.36 mg/l	14 weeks
Mesitylene	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.5 mg/l	3 months
Mesitylene	Inhalation	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.1 mg/l	3 months
Mesitylene	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Mesitylene	Inhalation	liver | kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.2 mg/l	3 months
Mesitylene	Inhalation	heart | endocrine system | immune system	All data are negative	Rat	NOAEL 1.2 mg/l	3 months
Mesitylene	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 600 mg/kg/day	14 days
Mesitylene	Ingestion	liver | immune system | kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	28 days
Naphthalene	Dermal	blood	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Naphthalene	Dermal	eyes	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Naphthalene	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL .01 mg/l	13 weeks
Naphthalene	Inhalation	blood	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Naphthalene	Inhalation	eyes	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Naphthalene	Ingestion	blood	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Naphthalene	Ingestion	eyes	May cause damage to organs though prolonged or repeated exposure	Rabbit	LOAEL 500 mg/kg/day	15 days
Methyl alcohol	Inhalation	liver	All data are negative	Rat	NOAEL 6.55 mg/l	4 weeks
Methyl alcohol	Inhalation	respiratory system	All data are negative	Rat	NOAEL 13.1 mg/l	6 weeks
Methyl alcohol	Ingestion	liver | nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 2,500 mg/kg/day	90 days
1,2,3-Trimethylbenzene	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.5 mg/l	3 months
1,2,3-Trimethylbenzene	Inhalation	nervous system	Some positive data exist, but the	Rat	LOAEL 0.1	3 months

			data are not sufficient for classification		mg/l	
1,2,3-Trimethylbenzene	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
1,2,3-Trimethylbenzene	Inhalation	liver | kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.2 mg/l	3 months
1,2,3-Trimethylbenzene	Inhalation	heart | endocrine system | immune system	All data are negative	Rat	NOAEL 1.2 mg/l	3 months
1,2,3-Trimethylbenzene	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 600 mg/kg/day	14 days
1,2,3-Trimethylbenzene	Ingestion	liver | immune system | kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	28 days
Formaldehyde	Dermal	respiratory system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 80 mg/kg/day	60 weeks
Formaldehyde	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 0.3 ppm	28 months
Formaldehyde	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 20 ppm	13 weeks
Formaldehyde	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 15 ppm	3 weeks
Formaldehyde	Inhalation	nervous system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 10 ppm	13 weeks
Formaldehyde	Inhalation	endocrine system | immune system | muscles | kidney and/or bladder	All data are negative	Rat	NOAEL 15 ppm	28 months
Formaldehyde	Inhalation	eyes | vascular system	All data are negative	Rat	NOAEL 14.3 ppm	2 years
Formaldehyde	Inhalation	heart	All data are negative	Mouse	NOAEL 14.3 ppm	2 years
Formaldehyde	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 300 mg/kg/day	2 years
Formaldehyde	Ingestion	immune system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 20 mg/kg/day	4 weeks
Formaldehyde	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 15 mg/kg/day	24 months
Formaldehyde	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 109 mg/kg/day	2 years
Formaldehyde	Ingestion	heart | endocrine system | hematopoietic system | respiratory system | vascular system	All data are negative	Rat	NOAEL 300 mg/kg/day	2 years
Formaldehyde	Ingestion	skin | muscles | eyes	All data are negative	Rat	NOAEL 109 mg/kg/day	2 years
Benzene			Data not available or insufficient for classification			

Aspiration Hazard

Name	Value
Heavy aromatic solvent naphtha (Petroleum)	Aspiration hazard
Titanium dioxide	Not an aspiration hazard

Light aromatic solvent naphtha (Petroleum)	Aspiration hazard
Alkyl amine polymer (NJ TSR # 04499600-5252P)	Not an aspiration hazard
1-Methoxy-2-propyl acetate	Not an aspiration hazard
Cyclohexanone	Not an aspiration hazard
Trimethylbenzene	Aspiration hazard
Diethylene glycol butyl ether	Not an aspiration hazard
Vinyl polymer (NJ TSR # 04499600-5238P)	Not an aspiration hazard
C.I. Pigment blue 15	Not an aspiration hazard
Butyl alcohol	Some positive data exist, but the data are not sufficient for classification
1,2,4-Trimethylbenzene	Aspiration hazard
Xylene	Aspiration hazard
Ethylbenzene	Aspiration hazard
Diethylaminoethanol	Not an aspiration hazard
Mesitylene	Aspiration hazard
Naphthalene	Not an aspiration hazard
Methyl alcohol	Not an aspiration hazard
1,2,3-Trimethylbenzene	Aspiration hazard
Formaldehyde	Not an aspiration hazard
Benzene	Not an 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. As a disposal alternative, utilize an acceptable permitted waste disposal 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): D001 (Ignitable), D018 (Benzene)

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):

Ingredient	C.A.S. No	% by Wt
Diethylene glycol butyl ether (GLYCOL ETHERS)	112-34-5	0 - 3
1,2,4-Trimethylbenzene	95-63-6	1 - 5
Xylene	1330-20-7	0 - 3
Xylene (Benzene, 1,2-dimethyl-)	1330-20-7	0 - 3
Xylene (Benzene, 1,3-dimethyl-)	1330-20-7	0 - 3
Xylene (Benzene, 1,4-dimethyl-)	1330-20-7	0 - 3
Xylene (Benzene, dimethyl-)	1330-20-7	0 - 3
Butyl alcohol	71-36-3	0 - 3
Ethylbenzene	100-41-4	< 0.6
Naphthalene	91-20-3	< 0.3
Formaldehyde	50-00-0	< 0.2

15.2. State Regulations

Contact 3M for more information.

This product does not require warnings under California Proposition 65.

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.

Document Group:	32-7152-5	**Version Number:**	1.01
Issue Date:	10/21/13	**Supercedes Date:**	10/21/13

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