



Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier

3M™ Roll Coat Color 4818VM Opaque White

Product Identification Numbers

42-0025-6729-7, 75-0301-9896-6

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

Flammable Liquid: Category 3.

Skin Corrosion/Irritation: Category 2.

Carcinogenicity: Category 2.

Specific Target Organ Toxicity (single exposure): Category 1.

Specific Target Organ Toxicity (repeated exposure): Category 1.

2.2. Label elements

Signal word

Danger

Symbols

Flame | Exclamation mark | Health Hazard |

Pictograms



Hazard Statements

Flammable liquid and vapor.

Causes skin irritation.

Suspected of causing cancer.

Causes damage to organs:
sensory organs |

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

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.

Wear protective gloves and eye/face protection.

Do not eat, drink or smoke when using this product.

Wash thoroughly after handling.

Response:

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

If skin irritation 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 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.

3% of the mixture consists of ingredients of unknown acute oral toxicity.

8% of the mixture consists of ingredients of unknown acute dermal toxicity.
8% of the mixture consists of ingredients of unknown acute inhalation toxicity.

SECTION 3: Composition/information on ingredients

| Ingredient | C.A.S. No. | % by Wt |
|---|---------------|--------------------------|
| Long oil alkyd resin 292077 | Trade Secret* | 30 - 60 |
| Titanium dioxide | 13463-67-7 | 15 - 40 Trade Secret * |
| Stoddard solvent | 8052-41-3 | 10 - 30 Trade Secret * |
| Barium sulfate | 7727-43-7 | 3 - 7 |
| Alkyl amine polymer (New Jersey Trade Secret Registry # 04499600-5252P) | Trade Secret* | 3 - 7 |
| Acrylic copolymer | Unknown | 1 - 5 |
| Alumina trihydrate | 21645-51-2 | 1 - 5 |
| Silica | 7631-86-9 | 1 - 5 |
| Butyl alcohol | 71-36-3 | 1 - 5 Trade Secret * |
| 1-Methoxy-2-propyl acetate | 108-65-6 | 1 - 5 |
| Xylene | 1330-20-7 | 0.5 - 1.5 Trade Secret * |
| Triethylamine | 121-44-8 | 0.5 - 1.5 Trade Secret * |
| Ethylbenzene | 100-41-4 | < 0.3 Trade Secret * |
| Formaldehyde | 50-00-0 | < 0.1 Trade Secret * |

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:

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 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

Carbon monoxide
Carbon dioxide

Condition

During Combustion
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. 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 | CMRG | TWA:25 ppm;STEL:75 ppm | |
| Ethylbenzene | 100-41-4 | OSHA | TWA:435 mg/m3(100 ppm) | |
| 1-Methoxy-2-propyl acetate | 108-65-6 | AIHA | TWA:50 ppm | |
| 1-Methoxy-2-propyl acetate | 108-65-6 | CMRG | TWA:10 mg/m3;STEL:90 ppm | |
| Triethylamine | 121-44-8 | ACGIH | TWA:1 ppm;STEL:3 ppm | A4: Not class. as human carcin, Skin Notation |
| Triethylamine | 121-44-8 | OSHA | TWA:100 mg/m3(25 ppm) | |
| Xylene | 1330-20-7 | ACGIH | TWA:100 ppm;STEL:150 ppm | A4: Not class. as human carcin |
| Xylene | 1330-20-7 | CMRG | TWA:50 ppm;STEL:75 ppm | |
| Xylene | 1330-20-7 | OSHA | TWA:435 mg/m3(100 ppm) | |
| Titanium dioxide | 13463-67-7 | ACGIH | TWA:10 mg/m3 | A4: Not class. as human carcin |
| Titanium dioxide | 13463-67-7 | CMRG | TWA(as respirable dust):5 mg/m3 | |
| Titanium dioxide | 13463-67-7 | OSHA | TWA(as total dust):15 mg/m3 | |
| Aluminum, insoluble compounds | 21645-51-2 | ACGIH | TWA(respirable fraction):1 mg/m3 | A4: Not class. as human carcin |
| Formaldehyde | 50-00-0 | ACGIH | CEIL:0.3 ppm | A2: Suspected human carcin., Sensitizer |
| Formaldehyde | 50-00-0 | CMRG | TWA:0.5 ppm | |
| Formaldehyde | 50-00-0 | OSHA | TWA:0.75 ppm;STEL:2 ppm | 29 CFR 1910.1048 |
| Butyl alcohol | 71-36-3 | ACGIH | TWA:20 ppm | |
| Butyl alcohol | 71-36-3 | OSHA | TWA:300 mg/m3(100 ppm) | |
| Silica | 7631-86-9 | CMRG | TWA(as respirable dust):3 mg/m3 | |
| SILICA, AMORPHOUS | 7631-86-9 | OSHA | TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft. | |
| Barium sulfate | 7727-43-7 | ACGIH | TWA(inhalable fraction):5 mg/m3 | |
| Barium sulfate | 7727-43-7 | OSHA | TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3 | |
| Stoddard solvent | 8052-41-3 | ACGIH | TWA:100 ppm | |
| Stoddard solvent | 8052-41-3 | OSHA | TWA:2900 mg/m3(500 ppm) | |

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

OSHA : United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

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

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 formaldehyde and particulates

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

| | |
|--|---|
| General Physical Form: | Liquid |
| Specific Physical Form: | Liquid |
| Odor, Color, Grade: | Solvent with slight amine odor White Liquid |
| Odor threshold | <i>No Data Available</i> |
| pH | <i>Not Applicable</i> |
| Melting point | <i>Not Applicable</i> |
| Boiling Point | >=243 °F |
| Flash Point | 109 °F [<i>Test Method:</i> Tagliabue Closed Cup] |
| Evaporation rate | <i>No Data Available</i> |
| Flammability (solid, gas) | Not Applicable |
| Flammable Limits(LEL) | <i>No Data Available</i> |
| Flammable Limits(UEL) | <i>No Data Available</i> |
| Vapor Pressure | 5.1 mmHg [@ 68 °F] |
| Vapor Density | <i>No Data Available</i> |
| Density | 0.8 g/ml |
| Specific Gravity | 0.8 [<i>Ref Std:</i> WATER=1] |
| Solubility In Water | Slight 10 % [<i>Details:</i> Slight (less than 10%)] |
| Solubility- non-water | <i>No Data Available</i> |
| Partition coefficient: n-octanol/ water | <i>No Data Available</i> |
| Autoignition temperature | <i>No Data Available</i> |
| Decomposition temperature | <i>No Data Available</i> |
| Viscosity | 4,500 - 6,500 centipoise |

Volatile Organic Compounds
Percent volatile
VOC Less H₂O & Exempt Solvents

275 - 375 g/l
Approximately 33 % weight
No Data Available

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 acids

Strong oxidizing agents

10.6. Hazardous decomposition products

| <u>Substance</u> | <u>Condition</u> |
|------------------|------------------|
| 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:

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:

Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain.

Eye Contact:

Vapors released during curing may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy 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:

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

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.

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> |
|--------------------------|--------------------------|---------------------------------|---|
| Ethylbenzene | 100-41-4 | Grp. 2B: Possible human carc. | International Agency for Research on Cancer |
| 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 |
| Formaldehyde | 50-00-0 | Cancer hazard | OSHA Carcinogens |
| 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 > 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 |
| Stoddard solvent | Inhalation-Vapor | | LC50 estimated to be 20 - 50 mg/l |
| Stoddard solvent | Dermal | Rabbit | LD50 > 3,000 mg/kg |
| Stoddard solvent | Ingestion | Rat | LD50 > 5,000 mg/kg |
| Barium sulfate | Ingestion | Rat | LD50 > 15,000 mg/kg |
| Silica | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| Silica | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 0.691 mg/l |
| Silica | Ingestion | Rat | LD50 > 5,110 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 |
| Butyl alcohol | Dermal | Rabbit | LD50 3,402 mg/kg |
| Butyl alcohol | Inhalation- | Rat | LC50 24 mg/l |

| | | | |
|--------------------|----------------------------|--------|------------------------------------|
| | Vapor (4 hours) | | |
| Butyl alcohol | Ingestion | Rat | LD50 2,290 mg/kg |
| Alumina trihydrate | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| Alumina trihydrate | Ingestion | Rat | LD50 > 5,000 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 |
| Triethylamine | Dermal | Rabbit | LD50 415 mg/kg |
| Triethylamine | Inhalation-Vapor (4 hours) | Rat | LC50 7.2 mg/l |
| Triethylamine | Ingestion | Rat | LD50 460 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 |
| Formaldehyde | Dermal | Rabbit | LD50 270 mg/kg |
| Formaldehyde | Inhalation-Gas (4 hours) | Rat | LC50 470 ppm |
| Formaldehyde | Ingestion | Rat | LD50 800 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|----------------------------|-------------------------|---------------------------|
| Titanium dioxide | Rabbit | No significant irritation |
| Stoddard solvent | Rabbit | Irritant |
| Silica | Rabbit | No significant irritation |
| 1-Methoxy-2-propyl acetate | Rabbit | No significant irritation |
| Butyl alcohol | Rabbit | Mild irritant |
| Alumina trihydrate | Rabbit | No significant irritation |
| Xylene | Rabbit | Mild irritant |
| Ethylbenzene | Rabbit | Mild irritant |
| Formaldehyde | official classification | Corrosive |

Serious Eye Damage/Irritation

| Name | Species | Value |
|----------------------------|-------------------------|---------------------------|
| Titanium dioxide | Rabbit | No significant irritation |
| Stoddard solvent | Rabbit | No significant irritation |
| Barium sulfate | Rabbit | No significant irritation |
| Silica | Rabbit | No significant irritation |
| 1-Methoxy-2-propyl acetate | Rabbit | Mild irritant |
| Butyl alcohol | Rabbit | Severe irritant |
| Alumina trihydrate | Rabbit | No significant irritation |
| Xylene | Rabbit | Mild irritant |
| Ethylbenzene | Rabbit | Moderate irritant |
| Formaldehyde | official classification | Corrosive |

Skin Sensitization

| Name | Species | Value |
|------------------|------------------|-----------------|
| Titanium dioxide | Human and animal | Not sensitizing |
| Stoddard solvent | Guinea pig | Not sensitizing |
| Silica | Human and | Not sensitizing |

| | | |
|----------------------------|------------|-----------------|
| | animal | |
| 1-Methoxy-2-propyl acetate | Guinea pig | Not sensitizing |
| Butyl alcohol | Human | Not sensitizing |
| Alumina trihydrate | Guinea pig | Not sensitizing |
| Ethylbenzene | Human | Not sensitizing |
| Formaldehyde | Guinea pig | Sensitizing |

Respiratory Sensitization

| Name | Species | Value |
|--------------|---------|--|
| Formaldehyde | Human | Some positive data exist, but the data are not sufficient for classification |

Germ Cell Mutagenicity

| Name | Route | Value |
|----------------------------|----------|--|
| Titanium dioxide | In Vitro | Not mutagenic |
| Titanium dioxide | In vivo | Not mutagenic |
| Stoddard solvent | In vivo | Not mutagenic |
| Stoddard solvent | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Silica | In Vitro | Not mutagenic |
| 1-Methoxy-2-propyl acetate | 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 |
| 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 |
| Formaldehyde | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Formaldehyde | In vivo | Mutagenic |

Carcinogenicity

| Name | Route | Species | Value |
|--------------------|---------------|-------------------------|--|
| Titanium dioxide | Ingestion | Multiple animal species | Not carcinogenic |
| Titanium dioxide | Inhalation | Rat | Carcinogenic |
| Stoddard solvent | Dermal | Mouse | Some positive data exist, but the data are not sufficient for classification |
| Stoddard solvent | Inhalation | Human and animal | Some positive data exist, but the data are not sufficient for classification |
| Silica | Not Specified | Mouse | Some positive data exist, but the data are not sufficient for classification |
| Alumina trihydrate | Not Specified | Multiple animal species | Not carcinogenic |
| 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 |
| Formaldehyde | Not Specified | Human and animal | Carcinogenic |

Reproductive Toxicity

Reproductive and/or Developmental Effects

| Name | Route | Value | Species | Test Result | Exposure Duration |
|----------------------------|------------|--|-------------------------|-----------------------|------------------------------|
| Stoddard solvent | Inhalation | Not toxic to development | Rat | NOAEL 2.4 mg/l | during organogenesis |
| Silica | Ingestion | Not toxic to female reproduction | Rat | NOAEL 509 mg/kg/day | 1 generation |
| Silica | Ingestion | Not toxic to male reproduction | Rat | NOAEL 497 mg/kg/day | 1 generation |
| Silica | Ingestion | Not toxic to development | Rat | NOAEL 1,350 mg/kg/day | during organogenesis |
| 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 |
| 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 |
| Alumina trihydrate | Ingestion | Not toxic to development | Rat | NOAEL 768 mg/kg/day | during organogenesis |
| 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 |
| 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 |

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 |
|----------------------------|------------|-----------------------------------|--|-------------------------|---------------------|-------------------|
| Stoddard solvent | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Human and animal | NOAEL Not available | |
| Stoddard solvent | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | | NOAEL Not available | |
| Stoddard solvent | Inhalation | nervous system | Some positive data exist, but the data are not sufficient for classification | Dog | NOAEL 6.5 mg/l | 4 hours |
| 1-Methoxy-2-propyl acetate | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | | NOAEL Not available | |
| 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 | |
| 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 | |
| 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 | |

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 |
| Stoddard solvent | Inhalation | nervous system | Some positive data exist, but the | Rat | LOAEL 4.6 | 6 months |

| | | | | | | |
|----------------------------|------------|--|--|-------------------------|-----------------------|-----------------------|
| | | | data are not sufficient for classification | | mg/l | |
| Stoddard solvent | Inhalation | kidney and/or bladder | Some positive data exist, but the data are not sufficient for classification | Rat | LOAEL 1.9 mg/l | 13 weeks |
| Stoddard solvent | Inhalation | respiratory system | Some positive data exist, but the data are not sufficient for classification | Multiple animal species | NOAEL 0.6 mg/l | 90 days |
| Stoddard solvent | Inhalation | bone, teeth, nails, and/or hair blood liver muscles | All data are negative | Rat | NOAEL 5.6 mg/l | 12 weeks |
| Stoddard solvent | Inhalation | heart | All data are negative | Multiple animal species | NOAEL 1.3 mg/l | 90 days |
| Barium sulfate | Inhalation | pneumoconiosis | Some positive data exist, but the data are not sufficient for classification | Human | NOAEL Not available | occupational exposure |
| Silica | Inhalation | respiratory system silicosis | All data are negative | Human | NOAEL Not available | occupational exposure |
| 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 |
| 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 |
| 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 through 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 | Multiple | NOAEL Not | |

| | | | | | | |
|--------------|------------|--|--|-------------------------|-----------------------|-----------|
| | | | data are not sufficient for classification | animal species | 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 |
| 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 | Rat | NOAEL 109 | 2 years |

| | | | | | | |
|--------------|-----------|--|--|-----|---------------------|---------|
| | | | data are not sufficient for classification | | mg/kg/day | |
| 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 |

Aspiration Hazard

| Name | Value |
|------------------|--|
| Stoddard solvent | Aspiration hazard |
| Butyl alcohol | Some positive data exist, but the data are not sufficient for classification |
| Xylene | Aspiration hazard |
| 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. 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> |
|--------------------------|-------------------------|-----------------------|
| Xylene | 1330-20-7 | 0.5 - 1.5 |
| Butyl alcohol | 71-36-3 | 1 - 5 |
| Ethylbenzene | 100-41-4 | < 0.3 |

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.

| | | | |
|------------------------|-----------|-------------------------|----------|
| Document Group: | 32-3059-6 | Version Number: | 2.00 |
| Issue Date: | 10/15/14 | Supersedes Date: | 06/20/13 |

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