Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice (Safe Work Australia, December 2011)

SECTION 1: Identification

1.1. Product identifier
3M Process Colour 885I, Black

Product Identification Numbers
75-0301-1089-6

1.2. Recommended use and restrictions on use

Recommended use
Professional printing ink for use in traffic safety systems.

For Industrial or Professional use only.

1.3. Supplier's details
Address: 3M Australia - Building A, 1 Rivett Road, North Ryde NSW 2113
Telephone: 136 136
E Mail: productinfo.au@mmm.com
Website: www.3m.com.au

1.4. Emergency telephone number
EMERGENCY: 1800 097 146 (Australia only)

SECTION 2: Hazard identification

This product is classified as a hazardous chemical according to the Model Work Health and Safety Regulations, 2011, in accordance with applicable State and Territory legislation.

Refer to Section 14 of this Safety Data Sheets for product Dangerous Goods Classification.

2.1. Classification of the substance or mixture
Flammable liquid: Category 3.
Serious Eye Damage/Irritation: Category 1.
Carcinogenicity: Category 2.

2.2. Label elements
The label elements below were prepared in accordance with the Code of Practice on Preparation of Safety Data Sheets for

Hazardous Chemicals (Safe Work Australia, December 2011). This information may be different from the actual product label.

Signal word
Danger

Symbols
Flame |Corrosion |Health Hazard |

Pictograms

Hazard statements

H226	Flammable liquid and vapour.
H318	Causes serious eye damage.
H351	Suspected of causing cancer.

Precautionary statements

Prevention:

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical, ventilating and lighting equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P280G	Wear respiratory protection and eye/face protection.

Response:

P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTRE or doctor/physician.
P370 + P378	In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

Storage:

P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

Disposal:

P501	Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

2.3. Other assigned/identified product hazards
None known.

2.4. Other hazards which do not result in classification
Causes mild skin irritation.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Weight
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	88917-22-0	30 - 60
Acrylic polymers	Trade Secret	10 - 30
2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate	28262-63-7	10 - 30
1-Methoxy-2-propyl acetate	108-65-6	5 - 10
Cyclohexanone	108-94-1	5 - 10
Vinyl acetate-vinyl alcohol-vinyl chloride polymer	Trade Secret	3 - 7
Carbon black	1333-86-4	1 - 5
(3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	2386-87-0	< 0.5
Ethylbenzene	100-41-4	< 0.2
n-Butyl methacrylate	97-88-1	< 0.2

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

Serious damage to the eyes (corneal cloudiness, severe pain, tearing, ulcerations, and significantly impaired or loss of vision).

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	Condition
Hydrocarbons.	During combustion.
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.
Hydrogen Chloride	During combustion.
Hydrogen Fluoride	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. Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

Hazchem Code: •3Y

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 vapours 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 dykes 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 that is resistant to polar solvents. 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 authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
For industrial/occupational use only. Not for consumer sale or use. 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. Avoid breathing dust/fume/gas/mist/vapours/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 release to the environment. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. Use personal protective equipment (eg. gloves, respirators…) 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 vapour 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

oxidising 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	CAS Nbr	Agency	Limit type	Additional comments
Ethylbenzene	100-41-4	ACGIH	TWA:20 ppm	A3: Confirmed animal carcinogen.
Ethylbenzene	100-41-4	Australia OELs	TWA(8 hours):434 mg/m3(100 ppm);STEL(15 minutes):543 mg/m3(125 ppm)	
1-Methoxy-2-propyl acetate	108-65-6	AIHA	TWA:50 ppm	
1-Methoxy-2-propyl acetate	108-65-6	Australia OELs	TWA(8 hours):274 mg/m3(50 ppm);STEL(15 minutes):548 mg/m3(100 ppm)	SKIN
Cyclohexanone	108-94-1	ACGIH	TWA:20 ppm;STEL:50 ppm	A3: Confirmed animal carcinogen. Danger of cutaneous absorption.
Cyclohexanone	108-94-1	Australia OELs	TWA(8 hours):100 mg/m3(25 ppm)	SKIN
Carbon black	1333-86-4	ACGIH	TWA(inhalable fraction):3 mg/m3	A3: Confirmed animal carcinogen.
Carbon black	1333-86-4	Australia OELs	TWA(8 hours): 3 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
Australia OELs : Australia. Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment
CMRG : Chemical Manufacturer's Recommended Guidelines
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling
Sen: Sensitiser
Sk: Absorption through the skin may be a significant source of exposure.

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/vapours/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:
Full face shield.
Indirect vented goggles.

Select and use eye protection in accordance with AS/NZS 1336. Eye protection should comply with the performance specifications of AS/NZS 1337.

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

Select and use gloves according to AS/NZ 2161.

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.
Select and use respirators according to AS/NZS 1715. Respirators should comply with AS/NZS 1716 performance specifications. For information about respirators, call 3M on 1800 024 464.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Specific Physical Form:	Liquid.
Colour	Black
Odour	Sweet Ether
Odour threshold	*No data available.*
pH	*Not applicable.*
Melting point/Freezing point	*Not applicable.*
Boiling point/Initial boiling point/Boiling range	>=140 ºC
Flash point	42.2 ºC [*Test Method:*Tagliabue closed cup]
Evaporation rate	<=0.4 [*Ref Std:*BUOAC=1]
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	1.1 % volume
Flammable Limits(UEL)	8.6 % volume
Vapour pressure	<=493.3 Pa [@ 20 ºC]
Vapor Density and/or Relative Vapor Density	*No data available.*
Density	0.95 g/ml
Relative density	0.95 [*Ref Std:*WATER=1]
Water solubility	*No data available.*
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Autoignition temperature	*No data available.*
Decomposition temperature	*No data available.*
Viscosity/Kinematic Viscosity	1,000 - 1,200 mPa-s [*Details:*DTM-300 (#3 @ 30 rpm)]
Volatile organic compounds (VOC)	600 - 800 g/l [*Details:*As Packaged.]
Percent volatile	65 - 75 %
VOC less H2O & exempt solvents	*No data available.*
Molecular weight	*Not applicable.*

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. Conditions to avoid
Sparks and/or flames.

10.4. Possibility of hazardous reactions
Hazardous polymerisation will not occur.

10.5 Incompatible materials
Strong acids.
Strong oxidising agents.

10.6 Hazardous decomposition products

Substance	Condition
None known.	

Dust created by grinding, sanding, or machining may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

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 labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

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

Inhalation
Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. May cause additional health effects (see below).

Skin contact
Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Eye contact
Corrosive (eye burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Ingestion
Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. May cause additional health effects (see below).

Additional Health Effects:

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation-Vapour(4 hr)		No data available; calculated ATE >50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	Dermal	Rat	LD50 > 2,000 mg/kg
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.7 mg/l
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	Ingestion	Rat	LD50 > 5,000 mg/kg
2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate	Dermal		LD50 estimated to be > 5,000 mg/kg
2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
1-Methoxy-2-propyl acetate	Dermal	Rabbit	LD50 > 5,000 mg/kg
1-Methoxy-2-propyl acetate	Inhalation-Vapour (4 hours)	Rat	LC50 > 28.8 mg/l
1-Methoxy-2-propyl acetate	Ingestion	Rat	LD50 8,532 mg/kg
Cyclohexanone	Dermal	Rabbit	LD50 >794, <3160 mg/kg
Cyclohexanone	Inhalation-Vapour (4 hours)	Rat	LC50 > 6.2 mg/l
Cyclohexanone	Ingestion	Rat	LD50 1,296 mg/kg
Vinyl acetate-vinyl alcohol-vinyl chloride polymer	Dermal	Rabbit	LD50 > 8,000 mg/kg
Vinyl acetate-vinyl alcohol-vinyl chloride polymer	Ingestion	Rat	LD50 > 8,000 mg/kg
Carbon black	Dermal	Rabbit	LD50 > 3,000 mg/kg
Carbon black	Ingestion	Rat	LD50 > 8,000 mg/kg
(3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Dermal	Rabbit	LD50 > 23,400 mg/kg
(3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Ingestion	Rat	LD50 5,000 mg/kg
Ethylbenzene	Dermal	Rabbit	LD50 15,433 mg/kg
Ethylbenzene	Inhalation-Vapour (4 hours)	Rat	LC50 17.4 mg/l
Ethylbenzene	Ingestion	Rat	LD50 4,769 mg/kg
n-Butyl methacrylate	Dermal	Rabbit	LD50 > 2,000 mg/kg
n-Butyl methacrylate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 27 mg/l
n-Butyl methacrylate	Ingestion	Rat	LD50 > 2,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	Rabbit	No significant irritation

1-Methoxy-2-propyl acetate	Rabbit	No significant irritation
Cyclohexanone	Rabbit	Irritant
Vinyl acetate-vinyl alcohol-vinyl chloride polymer	Professional judgement	No significant irritation
Carbon black	Rabbit	No significant irritation
(3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Rabbit	Minimal irritation
Ethylbenzene	Rabbit	Mild irritant
n-Butyl methacrylate	Rabbit	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	Rabbit	No significant irritation
1-Methoxy-2-propyl acetate	Rabbit	Mild irritant
Cyclohexanone	In vitro data	Corrosive
Vinyl acetate-vinyl alcohol-vinyl chloride polymer	Professional judgement	No significant irritation
Carbon black	Rabbit	No significant irritation
(3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Rabbit	Mild irritant
Ethylbenzene	Rabbit	Moderate irritant
n-Butyl methacrylate	Rabbit	Mild irritant

Skin Sensitisation

Name	Species	Value
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	Guinea pig	Not classified
1-Methoxy-2-propyl acetate	Guinea pig	Not classified
Cyclohexanone	Guinea pig	Not classified
(3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Guinea pig	Sensitising
Ethylbenzene	Human	Not classified
n-Butyl methacrylate	Guinea pig	Sensitising

Respiratory Sensitisation

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	In Vitro	Not mutagenic
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	In vivo	Not mutagenic
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
Carbon black	In Vitro	Not mutagenic
Carbon black	In vivo	Some positive data exist, but the data are not sufficient for classification
(3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	In vivo	Not mutagenic
(3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	In Vitro	Some positive data exist, but the data are not sufficient for classification
Ethylbenzene	In vivo	Not mutagenic
Ethylbenzene	In Vitro	Some positive data exist, but the data are not

		sufficient for classification
n-Butyl methacrylate	In Vitro	Not mutagenic
n-Butyl methacrylate	In vivo	Not mutagenic

Carcinogenicity

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

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
1-Methoxy-2-propyl acetate	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
1-Methoxy-2-propyl acetate	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
1-Methoxy-2-propyl acetate	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
1-Methoxy-2-propyl acetate	Inhalation	Not classified for development	Rat	NOAEL 21.6 mg/l	during organogenesis
Cyclohexanone	Inhalation	Not classified for female reproduction	Rat	NOAEL 4 mg/l	2 generation
Cyclohexanone	Inhalation	Not classified for male reproduction	Rat	NOAEL 2 mg/l	2 generation
Cyclohexanone	Ingestion	Not classified for development	Mouse	LOAEL 1,100 mg/kg/day	during organogenesis
Cyclohexanone	Inhalation	Not classified for development	Rat	NOAEL 2 mg/l	2 generation
(3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Ingestion	Not classified for development	Rat	NOAEL 125 mg/kg/day	during gestation
Ethylbenzene	Inhalation	Not classified for development	Rat	NOAEL 4.3 mg/l	premating & during gestation
n-Butyl methacrylate	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	44 days
n-Butyl methacrylate	Ingestion	Not classified for female reproduction	Rat	NOAEL 300 mg/kg/day	premating & during gestation
n-Butyl methacrylate	Ingestion	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during gestation
n-Butyl methacrylate	Inhalation	Not classified for development	Rat	NOAEL 1.8 mg/l	during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
1-Methoxy-2-propyl acetate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
1-Methoxy-2-propyl acetate	Ingestion	central nervous system depression	Some positive data exist, but the data are not sufficient for classification	Rat	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	
Cyclohexanone	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
Ethylbenzene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Ethylbenzene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	NOAEL Not available	
n-Butyl methacrylate	Inhalation	respiratory irritation	May cause respiratory irritation		NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	Ingestion	liver | heart | endocrine system | hematopoietic system | kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	4 weeks
1-Methoxy-2-propyl acetate	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 16.2 mg/l	9 days
1-Methoxy-2-propyl acetate	Inhalation	olfactory system	Not classified	Mouse	LOAEL 1.62 mg/l	9 days
1-Methoxy-2-propyl acetate	Inhalation	blood	Not classified	Multiple animal species	NOAEL 16.2 mg/l	9 days
1-Methoxy-2-propyl acetate	Ingestion	endocrine system	Not classified	Rat	NOAEL 1,000 mg/kg/day	44 days
Cyclohexanone	Inhalation	liver | kidney and/or bladder	Not classified	Rabbit	NOAEL 0.76 mg/l	50 days
Cyclohexanone	Ingestion	liver	Not classified	Mouse	NOAEL 4,800 mg/kg/day	90 days
Carbon black	Inhalation	pneumoconiosis	Not classified	Human	NOAEL Not available	occupational exposure
(3',4'-	Ingestion	olfactory system	May cause	Rat	NOAEL 5	90 days

Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate			damage to organs though prolonged or repeated exposure		mg/kg/day	
(3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Ingestion	liver | kidney and/or bladder | hematopoietic system	Not classified	Rat	NOAEL 500 mg/kg/day	90 days
(3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Ingestion	endocrine system | respiratory system	Not classified	Rat	NOAEL 1,113 mg/kg/day	14 days
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	Not classified	Rat	NOAEL 3.4 mg/l	28 days
Ethylbenzene	Inhalation	auditory system	Not classified	Rat	NOAEL 2.4 mg/l	5 days
Ethylbenzene	Inhalation	endocrine system	Not classified	Mouse	NOAEL 3.3 mg/l	103 weeks
Ethylbenzene	Inhalation	gastrointestinal tract	Not classified	Rat	NOAEL 3.3 mg/l	2 years
Ethylbenzene	Inhalation	bone, teeth, nails, and/or hair | muscles	Not classified	Multiple animal species	NOAEL 4.2 mg/l	90 days
Ethylbenzene	Inhalation	heart | immune system | respiratory system	Not classified	Multiple animal species	NOAEL 3.3 mg/l	2 years
Ethylbenzene	Ingestion	liver | kidney and/or bladder	Not classified	Rat	NOAEL 680 mg/kg/day	6 months
n-Butyl methacrylate	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 11 mg/l	28 days
n-Butyl methacrylate	Inhalation	olfactory system	Not classified	Rat	NOAEL 1.8 mg/l	28 days
n-Butyl methacrylate	Inhalation	heart | endocrine system | hematopoietic system | liver | nervous system | respiratory system	Not classified	Rat	NOAEL 11 mg/l	28 days
n-Butyl methacrylate	Ingestion	olfactory system	Not classified	Rat	NOAEL 60 mg/kg/day	90 days
n-Butyl	Ingestion	endocrine	Not classified	Rat	NOAEL 360	90 days

methacrylate		system | hematopoietic system | liver | nervous system | kidney and/or bladder | heart | immune system			mg/kg/day	

Aspiration Hazard

Name	Value
Ethylbenzene	Aspiration hazard

Exposure Levels
Refer Section **8.1 Control Parameters** of this Safety Data Sheet.

Interactive Effects
Not determined.

SECTION 12: Ecological 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. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity

Acute aquatic hazard:
Not acutely toxic to aquatic life by GHS criteria.

Chronic aquatic hazard:
Not chronically toxic to aquatic life by GHS criteria.

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	88917-22-0	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	88917-22-0	Green algae	Experimental	72 hours	EC50	>1,000 mg/l
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	88917-22-0	Rainbow trout	Experimental	96 hours	LC50	111 mg/l
Propanol, 1(or 2)-(2-methoxymethylethoxy)-,	88917-22-0	Water flea	Experimental	48 hours	LC50	1,090 mg/l

acetate						
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	88917-22-0	Green algae	Experimental	72 hours	NOEC	1,000 mg/l
2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate	28262-63-7		Data not available or insufficient for classification			N/A
1-Methoxy-2-propyl acetate	108-65-6	Activated sludge	Experimental	30 minutes	EC10	>1,000 mg/l
1-Methoxy-2-propyl acetate	108-65-6	Green algae	Experimental	72 hours	EC50	>1,000 mg/l
1-Methoxy-2-propyl acetate	108-65-6	Rainbow trout	Experimental	96 hours	LC50	134 mg/l
1-Methoxy-2-propyl acetate	108-65-6	Water flea	Experimental	48 hours	EC50	370 mg/l
1-Methoxy-2-propyl acetate	108-65-6	Green algae	Experimental	72 hours	NOEC	1,000 mg/l
1-Methoxy-2-propyl acetate	108-65-6	Water flea	Experimental	21 days	NOEC	100 mg/l
Cyclohexanone	108-94-1	Activated sludge	Experimental	30 minutes	EC50	>1,000 mg/l
Cyclohexanone	108-94-1	Algae or other aquatic plants	Experimental	72 hours	EC50	32.9 mg/l
Cyclohexanone	108-94-1	Fathead minnow	Experimental	96 hours	LC50	527 mg/l
Cyclohexanone	108-94-1	Water flea	Experimental	24 hours	EC50	800 mg/l
Cyclohexanone	108-94-1	Algae or other aquatic plants	Experimental	72 hours	EC10	3.56 mg/l
Vinyl acetate-vinyl alcohol-vinyl chloride polymer	Trade Secret		Data not available or insufficient for classification			N/A
Carbon black	1333-86-4	Activated sludge	Experimental	3 hours	EC50	>=100 mg/l
Carbon black	1333-86-4		Data not available or insufficient for classification			N/A
(3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	2386-87-0	Activated sludge	Experimental	3 hours	EC50	>2,000 mg/l
(3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	2386-87-0	Green algae	Experimental	72 hours	ErC50	>110 mg/l

(3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	2386-87-0	Rainbow trout	Experimental	96 hours	LC50	24 mg/l
(3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	2386-87-0	Water flea	Experimental	48 hours	EC50	40 mg/l
(3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	2386-87-0	Green algae	Experimental	72 hours	NOEC	30 mg/l
Ethylbenzene	100-41-4	Green algae	Estimated	73 hours	EC50	4.36 mg/l
Ethylbenzene	100-41-4	Rainbow trout	Estimated	96 hours	LC50	2.6 mg/l
Ethylbenzene	100-41-4	Water flea	Estimated	48 hours	EC50	3.82 mg/l
Ethylbenzene	100-41-4	Activated sludge	Experimental	49 hours	EC50	130 mg/l
Ethylbenzene	100-41-4	Green algae	Estimated	73 hours	NOEC	0.44 mg/l
Ethylbenzene	100-41-4	Rainbow trout	Estimated	56 days	NOEC	>1.3 mg/l
Ethylbenzene	100-41-4	Water flea	Estimated	7 days	NOEC	0.96 mg/l
n-Butyl methacrylate	97-88-1	Bacteria	Experimental	18 hours	EC50	>254 mg/l
n-Butyl methacrylate	97-88-1	Green algae	Experimental	72 hours	EC50	31.2 mg/l
n-Butyl methacrylate	97-88-1	Medaka	Experimental	96 hours	LC50	5.6 mg/l
n-Butyl methacrylate	97-88-1	Water flea	Experimental	48 hours	EC50	25 mg/l
n-Butyl methacrylate	97-88-1	Green algae	Experimental	72 hours	NOEC	24.8 mg/l
n-Butyl methacrylate	97-88-1	Water flea	Experimental	21 days	NOEC	1.1 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	88917-22-0	Estimated Biodegradation	28 days	Dissolv. Organic Carbon Deplet	90 %removal of DOC	OECD 301F - Manometric respirometry
2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate	28262-63-7	Data not available-insufficient	N/A	N/A	N/A	N/A
1-Methoxy-2-propyl acetate	108-65-6	Experimental Biodegradation	28 days	BOD	87.2 %BOD/ThOD	OECD 301C - MITI test (I)

Cyclohexanone	108-94-1	Experimental Biodegradation	14 days	BOD	87 %BOD/ThOD	OECD 301C - MITI test (I)
Vinyl acetate-vinyl alcohol-vinyl chloride polymer	Trade Secret	Data not available-insufficient	N/A	N/A	N/A	N/A
Carbon black	1333-86-4	Data not available-insufficient	N/A	N/A	N/A	N/A
(3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	2386-87-0	Experimental Biodegradation	28 days	CO2 evolution	71 %CO2 evolution/THCO2 evolution (does not pass 10-day window)	OECD 301B - Modified sturm or CO2
(3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	2386-87-0	Experimental Hydrolysis		Hydrolytic half-life	47 hours (t 1/2)	OECD 111 Hydrolysis func of pH
Ethylbenzene	100-41-4	Experimental Biodegradation	28 days	BOD	90-98 %BOD/ThOD	OECD 301F - Manometric respirometry
n-Butyl methacrylate	97-88-1	Experimental Biodegradation	28 days	BOD	88 %BOD/ThOD	OECD 301C - MITI test (I)

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	88917-22-0	Experimental Bioconcentration		Log Kow	0.61	
2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate	28262-63-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
1-Methoxy-2-propyl acetate	108-65-6	Experimental Bioconcentration		Log Kow	0.36	
Cyclohexanone	108-94-1	Experimental Bioconcentration		Log Kow	0.86	
Vinyl acetate-vinyl alcohol-vinyl chloride polymer	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Carbon black	1333-86-4	Data not available or insufficient for	N/A	N/A	N/A	N/A

		classification				
(3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	2386-87-0	Experimental Bioconcentration		Log Kow	1.34	OECD 107 log Kow shke flsk mtd
Ethylbenzene	100-41-4	Experimental BCF - Fish	56 days	Bioaccumulation factor	25.9	
n-Butyl methacrylate	97-88-1	Experimental Bioconcentration		Log Kow	2.88	

12.4. Mobility in soil
Please contact manufacturer for more details

12.5 Other adverse effects
No information available.

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.

SECTION 14: Transport Information

Australian Dangerous Goods Code (ADG) - Road/Rail Transport
UN No.: UN1210
Proper shipping name: PRINTING INK
Class/Division: 3
Sub Risk: Not applicable.
Packing Group: III
Special Instructions: Limited quantity may apply
Hazchem Code: •3Y
IERG: 16

International Air Transport Association (IATA) - Air Transport
UN No.: UN1210
Proper shipping name: PRINTING INK
Class/Division: 3
Sub Risk: Not applicable.
Packing Group: III

International Maritime Dangerous Goods Code (IMDG)- Marine Transport
UN No.: UN1210
Proper shipping name: PRINTING INK
Class/Division: 3
Sub Risk: Not applicable.
Packing Group: III
Marine Pollutant: Not applicable.
Special Instructions: Limited quantity may apply

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Australian Inventory Status:
All components of this product are listed on or exempt from the Australian Inventory of Industrial Chemicals (AIIC). Conditions may apply prior to introduction for direct importers of this product, Please contact 3M Australia on 136 136 for further details.

Poison Schedule: This product is intended for Industrial or Professional Use only and therefore is not packaged and labelled in accordance with the requirements of the Standard for the Uniform Scheduling of Medicines and Poisons.

SECTION 16: Other information

Revision information:
Complete document review.

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Safety Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.
Greenguard ® is a United States based program. The 'Low VOC' reference related to United States Federal and State regulations exemptions for some solvents.

3M Australia SDSs are available at www.3m.com.au