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 990-14 Lemon Yellow

Product Identification Numbers
75-0300-8081-8

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.
Skin Corrosion/Irritation: Category 2.
Serious Eye Damage/Irritation: Category 1.
Skin Sensitizer: Category 1.
Carcinogenicity: Category 1A.
Specific Target Organ Toxicity (single exposure): Category 2.

Specific Target Organ Toxicity (repeated exposure): Category 2.
Specific Target Organ Toxicity (single exposure): Category 3

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 |Exclamation mark |Health Hazard |

Pictograms

Hazard statements

H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H317	May cause an allergic skin reaction.
H350	May cause cancer.
H336	May cause drowsiness or dizziness.
H371	May cause damage to organs: sensory organs.
H373	May cause damage to organs through prolonged or repeated exposure: nervous system.

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.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280B	Wear protective gloves 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.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
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
May be harmful in contact with skin.
May be harmful if inhaled.
Toxic to aquatic life with long lasting effects.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Weight
Dipropylene glycol methyl ether acetate	88917-22-0	15 - 40
1-Methoxy-2-propyl acetate	108-65-6	10 - 30
Vinyl acetate-vinyl alcohol-vinyl chloride polymer	Trade Secret	10 - 30
Cyclohexanone	108-94-1	10 - 30
Alkyd resin 3261	Trade Secret	3 - 7
Xylene	1330-20-7	3 - 7
2,4-Dihydroxybenzophenone	131-56-6	1 - 5
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	68511-62-6	1 - 5
Ethylbenzene	100-41-4	< 1
Bis (2, 2, 6, 6-tetramethyl-4-piperidinyl) sebacate	52829-07-9	< 0.6
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-	104810-48-2	< 0.4
Polymeric benzotriazole	104810-47-1	< 0.4
Calcium 2-ethylhexanoate	136-51-6	< 0.2
Zinc 2-ethylhexanoate	136-53-8	< 0.2
Phosphonic acid, diphenyl ester	4712-55-4	< 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

Allergic skin reaction (redness, swelling, blistering, and itching). Serious damage to the eyes (corneal cloudiness, severe pain, tearing, ulcerations, and significantly impaired or loss of vision). Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness). Target organ effects. See Section 11 for additional details. Target organ effects following prolonged or repeated exposure. See Section 11 for additional details.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
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.

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. Do not breathe 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. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. 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 carcin., Ototoxicant
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	SKIN

			ppm)	
Xylene	1330-20-7	ACGIH	TWA:20 ppm;STEL:150 ppm	A4: Not class. as human carcin
Xylene	1330-20-7	Australia OELs	TWA(8 hours):350 mg/m3(80 ppm);STEL(15 minutes):655 mg/m3(150 ppm)	

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

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

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	Yellow
Odour	Solvent
Odour threshold	*No data available.*
pH	*Not applicable.*
Melting point/Freezing point	*Not applicable.*
Boiling point/Initial boiling point/Boiling range	>=136.1 ºC
Flash point	42.8 ºC [*Test Method:*Tagliabue closed cup]
Evaporation rate	<=1 [*Ref Std:*BUOAC=1]
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	1 %
Flammable Limits(UEL)	8.6 %
Vapour pressure	<=946.6 Pa [@ 20 ºC]
Vapor Density and/or Relative Vapor Density	>=3.4 [*Ref Std:*AIR=1]
Density	0.97 g/ml [@ 20 ºC]
Relative density	0.97 [*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	1,300 - 1,500 mPa-s
Volatile organic compounds (VOC)	700 - 800 g/l [*Details:*As Packaged.]
Percent volatile	65 - 80 % weight
VOC less H2O & exempt solvents	*No data available.*

SECTION 10: Stability and reactivity

10.1 Reactivity
This material is considered to be non reactive under normal use conditions

10.2 Chemical stability
Stable.

10.3. Conditions to avoid
Sparks and/or flames.

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

10.5 Incompatible materials
Strong oxidising agents.

10.6 Hazardous decomposition products

Substance	**Condition**
None known.	

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

Skin contact
May be harmful in contact with skin.
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. May cause additional health effects (see below).

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:

Single exposure may cause target organ effects:
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 target organ effects:
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 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.

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >2,000 - =5,000 mg/kg
Overall product	Inhalation-Vapour(4 hr)		No data available; calculated ATE >20 - =50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Dipropylene glycol methyl ether acetate	Dermal	Rat	LD50 > 2,000 mg/kg
Dipropylene glycol methyl ether acetate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.7 mg/l
Dipropylene glycol methyl ether acetate	Ingestion	Rat	LD50 > 5,000 mg/kg
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
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
Alkyd resin 3261	Dermal		LD50 estimated to be > 5,000 mg/kg
Alkyd resin 3261	Ingestion		LD50 estimated to be > 5,000 mg/kg
Xylene	Dermal	Rabbit	LD50 > 4,200 mg/kg
Xylene	Inhalation-Vapour (4 hours)	Rat	LC50 29 mg/l
Xylene	Ingestion	Rat	LD50 3,523 mg/kg
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.222 mg/l
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	Ingestion	Rat	LD50 > 5,000 mg/kg
2,4-Dihydroxybenzophenone	Dermal		LD50 estimated to be > 5,000 mg/kg
2,4-Dihydroxybenzophenone	Ingestion	Rat	LD50 8,600 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
Bis (2, 2, 6, 6-tetramethyl-4-piperidinyl) sebacate	Dermal	Rat	LD50 > 3,170 mg/kg
Bis (2, 2, 6, 6-tetramethyl-4-piperidinyl) sebacate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.5 mg/l
Bis (2, 2, 6, 6-tetramethyl-4-piperidinyl) sebacate	Ingestion	Rat	LD50 3,700 mg/kg
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H- benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4- hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-	Dermal	Rat	LD50 > 2,000 mg/kg
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H- benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4- hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.8 mg/l
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H- benzotriazol-2-yl)-5-(1,1-	Ingestion	Rat	LD50 > 5,000 mg/kg

dimethylethyl)-4- hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-			
Polymeric benzotriazole	Dermal	Rat	LD50 > 2,000 mg/kg
Polymeric benzotriazole	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.8 mg/l
Polymeric benzotriazole	Ingestion	Rat	LD50 > 5,000 mg/kg
Phosphonic acid, diphenyl ester	Dermal	Rabbit	LD50 > 2,000 mg/kg
Phosphonic acid, diphenyl ester	Ingestion	Rat	LD50 600 mg/kg
Zinc 2-ethylhexanoate	Dermal		LD50 estimated to be > 5,000 mg/kg
Zinc 2-ethylhexanoate	Ingestion	Rat	LD50 > 5,000 mg/kg
Calcium 2-ethylhexanoate	Dermal	Rabbit	LD50 > 5,000 mg/kg
Calcium 2-ethylhexanoate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 1.2 mg/l
Calcium 2-ethylhexanoate	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Dipropylene glycol methyl ether acetate	Rabbit	No significant irritation
Cyclohexanone	Rabbit	Irritant
Vinyl acetate-vinyl alcohol-vinyl chloride polymer	Professional judgement	No significant irritation
1-Methoxy-2-propyl acetate	Rabbit	No significant irritation
Xylene	Rabbit	Mild irritant
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	Rabbit	No significant irritation
2,4-Dihydroxybenzophenone	Rabbit	No significant irritation
Ethylbenzene	Rabbit	Mild irritant
Bis (2, 2, 6, 6-tetramethyl-4-piperidinyl) sebacate	Rabbit	No significant irritation
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-	Rabbit	No significant irritation
Polymeric benzotriazole	Rabbit	No significant irritation
Zinc 2-ethylhexanoate	Rabbit	Mild irritant
Calcium 2-ethylhexanoate	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Dipropylene glycol methyl ether acetate	Rabbit	No significant irritation
Cyclohexanone	In vitro data	Corrosive
Vinyl acetate-vinyl alcohol-vinyl chloride polymer	Professional judgement	No significant irritation
1-Methoxy-2-propyl acetate	Rabbit	Mild irritant
Xylene	Rabbit	Mild irritant
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	Rabbit	No significant irritation
2,4-Dihydroxybenzophenone	Rabbit	Severe irritant
Ethylbenzene	Rabbit	Moderate irritant
Bis (2, 2, 6, 6-tetramethyl-4-piperidinyl) sebacate	Rabbit	Corrosive
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-	Rabbit	No significant irritation
Polymeric benzotriazole	Rabbit	No significant irritation
Zinc 2-ethylhexanoate	Rabbit	Severe irritant
Calcium 2-ethylhexanoate	Rabbit	Corrosive

Skin Sensitisation

Name	Species	Value

Dipropylene glycol methyl ether acetate	Guinea pig	Not classified
Cyclohexanone	Guinea pig	Not classified
1-Methoxy-2-propyl acetate	Guinea pig	Not classified
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	similar compounds	Sensitising
Ethylbenzene	Human	Not classified
Bis (2, 2, 6, 6-tetramethyl-4-piperidinyl) sebacate	Guinea pig	Not classified
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-	Guinea pig	Sensitising
Polymeric benzotriazole	Guinea pig	Sensitising

Photosensitisation

Name	Species	Value
Bis (2, 2, 6, 6-tetramethyl-4-piperidinyl) sebacate	Guinea pig	Not sensitizing

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
Dipropylene glycol methyl ether acetate	In Vitro	Not mutagenic
Dipropylene glycol methyl ether acetate	In vivo	Not mutagenic
Cyclohexanone	In vivo	Not mutagenic
Cyclohexanone	In Vitro	Some positive data exist, but the data are not sufficient for classification
1-Methoxy-2-propyl acetate	In Vitro	Not mutagenic
Xylene	In Vitro	Not mutagenic
Xylene	In vivo	Not mutagenic
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	In Vitro	Not mutagenic
Ethylbenzene	In vivo	Not mutagenic
Ethylbenzene	In Vitro	Some positive data exist, but the data are not sufficient for classification
Bis (2, 2, 6, 6-tetramethyl-4-piperidinyl) sebacate	In Vitro	Not mutagenic
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-	In Vitro	Not mutagenic
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-	In vivo	Not mutagenic
Polymeric benzotriazole	In Vitro	Not mutagenic
Polymeric benzotriazole	In vivo	Not mutagenic
Calcium 2-ethylhexanoate	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Cyclohexanone	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient 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
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-	Not specified.	similar compounds	Carcinogenic.

pyrimidinetrione complexes			
Ethylbenzene	Inhalation	Multiple animal species	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
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
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
Xylene	Inhalation	Not classified for female reproduction	Human	NOAEL Not available	occupational exposure
Xylene	Ingestion	Not classified for development	Mouse	NOAEL Not available	during organogenesis
Xylene	Inhalation	Not classified for development	Multiple animal species	NOAEL Not available	during gestation
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	during gestation
Ethylbenzene	Inhalation	Not classified for development	Rat	NOAEL 4.3 mg/l	premating & during gestation
Bis (2, 2, 6, 6-tetramethyl-4-piperidinyl) sebacate	Ingestion	Not classified for male reproduction	Rat	NOAEL 430 mg/kg/day	2 generation
Bis (2, 2, 6, 6-tetramethyl-4-piperidinyl) sebacate	Ingestion	Not classified for development	Rat	NOAEL 130 mg/kg/day	2 generation
Bis (2, 2, 6, 6-tetramethyl-4-piperidinyl) sebacate	Ingestion	Toxic to female reproduction	Rat	NOAEL 130 mg/kg/day	2 generation
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H- benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-	Ingestion	Not classified for female reproduction	Rat	NOAEL 100 mg/kg/day	premating into lactation
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H- benzotriazol-2-	Ingestion	Not classified for male reproduction	Rat	NOAEL 100 mg/kg/day	115 days

yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-					
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H- benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-	Ingestion	Not classified for development	Rat	NOAEL 2 mg/kg/day	premating into lactation
Polymeric benzotriazole	Ingestion	Not classified for female reproduction	Rat	NOAEL 100 mg/kg/day	premating into lactation
Polymeric benzotriazole	Ingestion	Not classified for male reproduction	Rat	NOAEL 100 mg/kg/day	115 days
Polymeric benzotriazole	Ingestion	Not classified for development	Rat	NOAEL 2 mg/kg/day	premating into lactation
Zinc 2-ethylhexanoate	Ingestion	Not classified for female reproduction	similar compounds	NOAEL 800 mg/kg/day	2 generation
Zinc 2-ethylhexanoate	Ingestion	Not classified for male reproduction	similar compounds	NOAEL 800 mg/kg/day	2 generation
Zinc 2-ethylhexanoate	Ingestion	Toxic to development	similar compounds	NOAEL 100 mg/kg/day	during gestation
Calcium 2-ethylhexanoate	Ingestion	Not classified for female reproduction	similar compounds	NOAEL 800 mg/kg/day	2 generation
Calcium 2-ethylhexanoate	Ingestion	Not classified for male reproduction	similar compounds	NOAEL 800 mg/kg/day	2 generation
Calcium 2-ethylhexanoate	Ingestion	Toxic to development	similar compounds	NOAEL 100 mg/kg/day	during gestation

Lactation

Name	Route	Species	Value
Xylene	Ingestion	Mouse	Not classified for 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
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	
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-	Ingestion	central nervous	Some positive	Rat	NOAEL not	

propyl acetate		system depression	data exist, but the data are not sufficient for classification		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	Not classified	Rat	NOAEL 3.5 mg/l	not available
Xylene	Inhalation	liver	Not classified	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	Not classified	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	
Bis (2, 2, 6, 6-tetramethyl-4-piperidinyl) sebacate	Dermal	photoirritation	Not classified	Mouse	NOAEL not available	
Bis (2, 2, 6, 6-tetramethyl-4-piperidinyl) sebacate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL not available	
Zinc 2-ethylhexanoate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL not available	
Calcium 2-ethylhexanoate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Dipropylene glycol methyl ether acetate	Ingestion	liver | heart | endocrine system | hematopoietic system | kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	4 weeks

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
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
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	Not classified	Multiple animal species	NOAEL Not available	
Xylene	Inhalation	heart | endocrine system | gastrointestinal tract | hematopoietic system | muscles | kidney and/or bladder | respiratory system	Not classified	Multiple animal species	NOAEL 3.5 mg/l	13 weeks
Xylene	Ingestion	auditory system	Not classified	Rat	NOAEL 900 mg/kg/day	2 weeks
Xylene	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 1,500 mg/kg/day	90 days
Xylene	Ingestion	liver	Not classified	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	Not classified	Mouse	NOAEL 1,000 mg/kg/day	103 weeks
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 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
Bis (2, 2, 6, 6-tetramethyl-4-piperidinyl) sebacate	Ingestion	heart | skin | endocrine system | gastrointestinal tract | bone, teeth, nails, and/or hair | hematopoietic system | liver | immune system | muscles | nervous system | eyes | kidney and/or bladder | respiratory system | vascular system	Not classified	Rat	NOAEL 261 mg/kg/day	90 days
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-	Ingestion	liver | endocrine system | hematopoietic system | eyes | kidney and/or bladder | respiratory system	Not classified	Rat	NOAEL 50 mg/kg/day	90 days
Polymeric benzotriazole	Ingestion	liver | endocrine system | hematopoietic system | eyes | kidney and/or bladder | respiratory system	Not classified	Rat	NOAEL 50 mg/kg/day	90 days

Aspiration Hazard

Name	Value

Xylene	Aspiration hazard
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:
GHS Acute 3: Harmful to aquatic life.

Chronic aquatic hazard:
GHS Chronic 3: Harmful to aquatic life with long lasting effects.

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
Dipropylene glycol methyl ether acetate	88917-22-0	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
Dipropylene glycol methyl ether acetate	88917-22-0	Green algae	Experimental	72 hours	ErC50	>1,000 mg/l
Dipropylene glycol methyl ether acetate	88917-22-0	Rainbow trout	Experimental	96 hours	LC50	111 mg/l
Dipropylene glycol methyl ether acetate	88917-22-0	Water flea	Experimental	48 hours	LC50	1,090 mg/l
Dipropylene glycol methyl ether acetate	88917-22-0	Green algae	Experimental	72 hours	NOEC	1,000 mg/l
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	ErC50	>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	ErC50	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	Experimental	72 hours	ErC10	3.56 mg/l

		aquatic plants				
Vinyl acetate-vinyl alcohol-vinyl chloride polymer	Trade Secret	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Xylene	1330-20-7	Activated sludge	Estimated	3 hours	NOEC	157 mg/l
Xylene	1330-20-7	Green algae	Estimated	72 hours	EC50	4.36 mg/l
Xylene	1330-20-7	Rainbow trout	Estimated	96 hours	LC50	2.6 mg/l
Xylene	1330-20-7	Water flea	Estimated	48 hours	EC50	3.82 mg/l
Xylene	1330-20-7	Green algae	Estimated	72 hours	NOEC	0.44 mg/l
Xylene	1330-20-7	Rainbow trout	Estimated	56 days	NOEC	>1.3 mg/l
Xylene	1330-20-7	Water flea	Estimated	7 days	NOEC	0.96 mg/l
2,4-Dihydroxybenzophenone	131-56-6	Copepod	Experimental	48 hours	LC50	2.6 mg/l
2,4-Dihydroxybenzophenone	131-56-6	Medaka	Experimental	96 hours	LC50	3.7 mg/l
2,4-Dihydroxybenzophenone	131-56-6	Water flea	Experimental	48 hours	LC50	7.86 mg/l
2,4-Dihydroxybenzophenone	131-56-6	Goldfish	Experimental	28 days	NOEC	0.48 mg/l
2,4-Dihydroxybenzophenone	131-56-6	Ciliated protozoa	Experimental	48 hours	IC50	9.14 mg/l
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	68511-62-6	Green algae	Analogous Compound	72 hours	No tox obs at lmt of water sol	>100 mg/l
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	68511-62-6	Water flea	Analogous Compound	48 hours	No tox obs at lmt of water sol	>100 mg/l
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	68511-62-6	Zebra Fish	Endpoint not reached	96 hours	LC50	>100 mg/l
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	68511-62-6	Green algae	Analogous Compound	72 hours	No tox obs at lmt of water sol	>100 mg/l
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	68511-62-6	Water flea	Analogous Compound	21 days	No tox obs at lmt of water sol	>100 mg/l
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	68511-62-6	Activated sludge	Analogous Compound	3 hours	EC50	5,180 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
Bis (2, 2, 6, 6-tetramethyl-4-piperidinyl) sebacate	52829-07-9	Bluegill	Experimental	96 hours	LC50	4.4 mg/l
Bis (2, 2, 6, 6-tetramethyl-4-piperidinyl) sebacate	52829-07-9	Green algae	Experimental	72 hours	EC50	0.705 mg/l
Bis (2, 2, 6, 6-tetramethyl-4-	52829-07-9	Water flea	Experimental	48 hours	EC50	8.58 mg/l

piperidinyl) sebacate						
Bis (2, 2, 6, 6-tetramethyl-4-piperidinyl) sebacate	52829-07-9	Green algae	Experimental	72 hours	EC10	0.188 mg/l
Bis (2, 2, 6, 6-tetramethyl-4-piperidinyl) sebacate	52829-07-9	Water flea	Experimental	21 days	NOEC	0.23 mg/l
Bis (2, 2, 6, 6-tetramethyl-4-piperidinyl) sebacate	52829-07-9	Activated sludge	Experimental	3 hours	IC50	>100
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-	104810-48-2	Green algae	Estimated	72 hours	EC50	>100 mg/l
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-	104810-48-2	Rainbow trout	Estimated	96 hours	LC50	2.8 mg/l
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-	104810-48-2	Water flea	Estimated	48 hours	EC50	4 mg/l
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-	104810-48-2	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-	104810-48-2	Green algae	Estimated	72 hours	EC10	10 mg/l
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-	104810-48-2	Water flea	Estimated	21 days	NOEC	0.78 mg/l
Polymeric	104810-47-1	Green algae	Estimated	72 hours	EC50	>100 mg/l

benzotriazole						
Polymeric benzotriazole	104810-47-1	Rainbow trout	Estimated	96 hours	LC50	2.8 mg/l
Polymeric benzotriazole	104810-47-1	Water flea	Estimated	48 hours	EC50	4 mg/l
Polymeric benzotriazole	104810-47-1	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
Polymeric benzotriazole	104810-47-1	Green algae	Estimated	72 hours	EC10	10 mg/l
Polymeric benzotriazole	104810-47-1	Water flea	Estimated	21 days	NOEC	0.78 mg/l
Calcium 2-ethylhexanoate	136-51-6	Activated sludge	Transformation Product	30 minutes	EC20	740 mg/l
Calcium 2-ethylhexanoate	136-51-6	Green algae	Transformation Product	72 hours	ErC50	56 mg/l
Calcium 2-ethylhexanoate	136-51-6	Medaka	Transformation Product	96 hours	LC50	>113 mg/l
Calcium 2-ethylhexanoate	136-51-6	Water flea	Transformation Product	48 hours	EC50	97 mg/l
Calcium 2-ethylhexanoate	136-51-6	Green algae	Transformation Product	96 hours	ErC10	28 mg/l
Calcium 2-ethylhexanoate	136-51-6	Water flea	Transformation Product	21 days	NOEC	28 mg/l
Phosphonic acid, diphenyl ester	4712-55-4	Green algae	Analogous Compound	72 hours	EC50	>16 mg/l
Phosphonic acid, diphenyl ester	4712-55-4	Medaka	Analogous Compound	96 hours	LC50	>4.3 mg/l
Phosphonic acid, diphenyl ester	4712-55-4	Water flea	Analogous Compound	48 hours	EC50	0.45 mg/l
Phosphonic acid, diphenyl ester	4712-55-4	Green algae	Analogous Compound	72 hours	NOEC	16 mg/l
Zinc 2-ethylhexanoate	136-53-8	Rainbow trout	Experimental	96 hours	LC50	0.44 mg/l
Zinc 2-ethylhexanoate	136-53-8	Water flea	Experimental	48 hours	EC50	1.6 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Dipropylene glycol methyl ether acetate	88917-22-0	Analogous Compound Biodegradation	28 days	Dissolv. Organic Carbon Deplet	90 %removal of DOC	OECD 301F - Manometric respirometry
1-Methoxy-2-propyl acetate	108-65-6	Experimental Biodegradation	28 days	BOD	87.2 %BOD/ThOD	OECD 301C - MITI test (I)
1-Methoxy-2-propyl acetate	108-65-6	Experimental Aquatic Inherent Biodegrad.		Dissolv. Organic Carbon Deplet	>100 %removal of DOC	similar to OECD 302B
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
Xylene	1330-20-7	Experimental Biodegradation	28 days	BOD	90-98 %BOD/ThOD	OECD 301F - Manometric respirometry
Xylene	1330-20-7	Experimental Photolysis		Photolytic half-life (in air)	1.4 days (t 1/2)	
2,4-Dihydroxybenzophenone	131-56-6	Experimental Biodegradation	28 days	BOD	0 %BOD/ThOD	OECD 301C - MITI test (I)
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	68511-62-6	Analogous Compound Biodegradation	28 days	BOD	0 %BOD/ThOD	OECD 301F - Manometric respirometry

Ethylbenzene	100-41-4	Experimental Biodegradation	28 days	BOD	90-98 %BOD/ThOD	OECD 301F - Manometric respirometry
Bis (2, 2, 6, 6-tetramethyl-4-piperidinyl) sebacate	52829-07-9	Experimental Biodegradation	28 days	Percent degraded	24 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Bis (2, 2, 6, 6-tetramethyl-4-piperidinyl) sebacate	52829-07-9	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	56.6 days (t 1/2)	OECD 111 Hydrolysis func of pH
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-	104810-48-2	Estimated Biodegradation	28 days	CO2 evolution	24 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Polymeric benzotriazole	104810-47-1	Estimated Biodegradation	28 days	CO2 evolution	24 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Calcium 2-ethylhexanoate	136-51-6	Transformation product Biodegradation	28 days	Dissolv. Organic Carbon Deplet	99 %removal of DOC	OECD 301E - Modif. OECD Screen
Phosphonic acid, diphenyl ester	4712-55-4	Analogous Compound Biodegradation	28 days	BOD	84 %BOD/ThOD	OECD 301D - Closed bottle test
Zinc 2-ethylhexanoate	136-53-8	Transformation product Biodegradation	20 days	BOD	83 %BOD/ThOD	OECD 301D - Closed bottle test

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Dipropylene glycol methyl ether acetate	88917-22-0	Experimental Bioconcentration		Log Kow	0.61	EC A.8 Partition Coefficient
1-Methoxy-2-propyl acetate	108-65-6	Experimental Bioconcentration		Log Kow	0.36	OECD 107 log Kow shke flsk mtd
Cyclohexanone	108-94-1	Experimental Bioconcentration		Log Kow	0.86	OECD 107 log Kow shke flsk mtd
Vinyl acetate-vinyl alcohol-vinyl chloride polymer	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Xylene	1330-20-7	Experimental BCF - Fish	56 days	Bioaccumulation factor	25.9	
2,4-Dihydroxybenzophenone	131-56-6	Modeled Bioconcentration		Bioaccumulation factor	5.0	Catalogic™
2,4-Dihydroxybenzophenone	131-56-6	Modeled Bioconcentration		Log Kow	2.96	Episuite™
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	68511-62-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Ethylbenzene	100-41-4	Experimental BCF - Fish	56 days	Bioaccumulation factor	25.9	
Bis (2, 2, 6, 6-tetramethyl-4-piperidinyl) sebacate	52829-07-9	Experimental Bioconcentration		Log Kow	0.35	OECD 107 log Kow shke flsk mtd
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-	104810-48-2	Estimated BCF - Fish	21 days	Bioaccumulation factor	34	OECD305-Bioconcentration

5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-						
Polymeric benzotriazole	104810-47-1	Estimated BCF - Fish	21 days	Bioaccumulation factor	34	OECD305-Bioconcentration
Calcium 2-ethylhexanoate	136-51-6	Transformation product Bioconcentration		Log Kow	2.7	similar to OECD 107
Phosphonic acid, diphenyl ester	4712-55-4	Modeled Bioconcentration		Log Kow	2.4	Episuite™
Zinc 2-ethylhexanoate	136-53-8	Estimated Bioconcentration		Log Kow	2.7	

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:
The chemical components contained within this product are listed on the Australian Inventory of Chemical Substances and are in compliance with the requirements of the Industrial Chemicals (Notification and Assessment) Act 1989 as amended.

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