



Safety Data Sheet

Copyright,2020, 3M Company All rights reserved. Copying and/or downloading of this information for the purpose of properly utilizing 3M products is allowed provided that: (1) the information is copied in full with no changes unless prior written agreement is obtained from 3M, and (2) neither the copy nor the original is resold or otherwise distributed with the intention of earning a profit thereon.

Document group:	11-8900-0	Version number:	11.00
Revision date:	12/11/2020	Supersedes date:	22/05/2019
Transportation version number:	4.00 (09/08/2015)		

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

3M Process Colour 990-12, Red

Product Identification Numbers

75-0300-8079-2

7000004847

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses

Ink

1.3. Details of the supplier of the safety data sheet

Address: 3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.
Telephone: +44 (0)1344 858 000
E Mail: tox.uk@mmm.com
Website: www.3M.com/uk

1.4. Emergency telephone number

+44 (0)1344 858 000

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

CLP REGULATION (EC) No 1272/2008

The health and environmental classifications of this material have been derived using the calculation method, except in cases where test data are available or the physical form impacts classification. Classification(s) based on test data or physical form are noted below, if applicable.

CLASSIFICATION:

Flammable Liquid, Category 3 - Flam. Liq. 3; H226
Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315

Serious Eye Damage/Eye Irritation, Category 1 - Eye Dam. 1; H318
Hazardous to the Aquatic Environment (Chronic), Category 2 - Aquatic Chronic 2; H411

For full text of H phrases, see Section 16.

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

SIGNAL WORD

DANGER.

Symbols

GHS02 (Flame) | GHS05 (Corrosion) | GHS09 (Environment) |

Pictograms



Ingredients:

Ingredient	CAS Nbr	EC No.	% by Wt
cyclohexanone	108-94-1	203-631-1	10 - 30

HAZARD STATEMENTS:

H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H411	Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273	Avoid release to the environment.
P280A	Wear eye/face protection.

Response:

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.

SUPPLEMENTAL INFORMATION:

Supplemental Hazard Statements:

EUH208	Contains 2,3-Epoxypropyl neodecanoate. Naphthenic acids, nickel salts. Reaction mass of Polymeric benzotriazole and Poly(oxy-1,2-ethanediyl), .alpha.-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-.omega.-hydroxy-. triphenyl phosphite. May produce an allergic reaction.
--------	---

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EC No.	REACH Registration No.	% by Wt	Classification
Vinyl polymer	Trade Secret			10 - 30	Substance not classified as hazardous
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	88917-22-0		01-0000015637-64	10 - 30	Substance not classified as hazardous
cyclohexanone	108-94-1	203-631-1	01-2119453616-35	10 - 30	Flam. Liq. 3, H226; Acute Tox. 4, H332 Acute Tox. 4, H312; Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Dam. 1, H318
2-methoxy-1-methylethyl acetate	108-65-6	203-603-9	01-2119475791-29	< 20	Flam. Liq. 3, H226 STOT SE 3, H336
Alkyd resin 3261	Trade Secret			3 - 7	Substance not classified as hazardous
xylene	1330-20-7	215-535-7		3 - 7	Flam. Liq. 3, H226; Acute Tox. 4, H332; Acute Tox. 4, H312; Skin Irrit. 2, H315 - Nota C Asp. Tox. 1, H304; Eye Irrit. 2, H319; STOT SE 3, H335; STOT RE 2, H373; Aquatic Chronic 3, H412
bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	52829-07-9	258-207-9		< 0.6	Aquatic Acute 1, H400,M=1; Aquatic Chronic 2, H411 Acute Tox. 3, H331; Eye Dam. 1, H318
Organic pigment (NJ TSR # 04499600-5232P)	Trade Secret			1 - 5	Substance not classified as hazardous
2,4-Dihydroxybenzophenone	131-56-6	205-029-4		1 - 5	Aquatic Chronic 2, H411 Eye Irrit. 2, H319
triphenyl phosphite	101-02-0	202-908-4		< 0.04	Skin Irrit. 2, H315; Eye Irrit. 2, H319; Aquatic Acute 1, H400,M=1; Aquatic Chronic 1, H410,M=1 Acute Tox. 4, H302; Skin Sens. 1A, H317; STOT RE 2, H373
2,3-Epoxypropyl neodecanoate	26761-45-5	247-979-2		< 0.3	Skin Sens. 1, H317; Muta. 2, H341; Aquatic Chronic 2, H411
ZINC 2-ETHYLHEXANOATE	136-53-8	205-251-1		< 0.2	Aquatic Chronic 3, H412 Eye Irrit. 2, H319; Repr. 2, H361df
Calcium bis(2-ethylhexanoate)	136-51-6	205-249-0		< 0.2	Eye Dam. 1, H318; Repr. 2,

3M Process Colour 990-12, Red

					H361df
Naphthenic acids, nickel salts	61788-71-4	263-000-1		< 1	Acute Tox. 3, H301; Skin Sens. 1, H317; Carc. 2, H351; Aquatic Acute 1, H400,M=10; Aquatic Chronic 1, H410,M=10
Reaction mass of Polymeric benzotriazole and Poly(oxy-1,2-ethanediyl), .alpha.-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-.omega.-hydroxy-		400-830-7		< 1	Skin Sens. 1, H317; Aquatic Chronic 2, H411

Please see section 16 for the full text of any H statements referred to in this section

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

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. 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**

Hydrocarbons.
Carbon monoxide
Carbon dioxide.
Hydrogen Chloride

Condition

During combustion.
During combustion.
During combustion.
During combustion.

5.3. Advice 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.

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 vapours, 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. 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. Seal the container. Dispose of collected material as soon as possible.

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

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.

7.3. Specific end use(s)

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

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
2-methoxy-1-methylethyl acetate	108-65-6	UK HSC	TWA:274 mg/m ³ (50 ppm);STEL:548 mg/m ³ (100 ppm)	SKIN
cyclohexanone	108-94-1	UK HSC	TWA:41 mg/m ³ (10 ppm);STEL:82 mg/m ³ (20 ppm)	SKIN
xylene	1330-20-7	UK HSC	TWA:220 mg/m ³ (50 ppm);STEL:441 mg/m ³ (100 ppm)	SKIN
Nickel, water-soluble inorganic compounds, except nickel carbonyl	61788-71-4	UK HSC	TWA(as Ni):0.1 mg/m ³	SKIN; Resp Sensitizer

UK HSC : UK Health and Safety Commission

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

Biological limit values

Ingredient	CAS Nbr	Agency	Determinant	Biological Specimen	Sampling Time	Value	Additional comments
cyclohexanone	108-94-1	UK EH40 BMGVs	Cyclohexanol	Creatinine in urine	EOS	2 mmol/mol	
xylene	1330-20-7	UK EH40 BMGVs	Methyl hippuric acid	Creatinine in urine	EOS	650 mmol/mol	

UK EH40 BMGVs : UK. EH40 Biological Monitoring Guidance Values (BMGVs)

EOS: End of shift.

Derived no effect level (DNEL)

Ingredient	Degradation Product	Population	Human exposure pattern	DNEL
2-methoxy-1-methylethyl acetate		Worker	Dermal, Long-term exposure (8 hours), Systemic effects	796 mg/kg bw/d
2-methoxy-1-methylethyl acetate		Worker	Inhalation, Long-term exposure (8 hours), Systemic effects	275 mg/m ³
2-methoxy-1-methylethyl acetate		Worker	Inhalation, Short-term exposure, Local effects	550 mg/m ³

Predicted no effect concentrations (PNEC)

Ingredient	Degradation Product	Compartment	PNEC
2-methoxy-1-methylethyl acetate		Agricultural soil	0.29 mg/kg d.w.
2-methoxy-1-methylethyl acetate		Freshwater	0.635 mg/l
2-methoxy-1-methylethyl acetate		Freshwater sediments	3.29 mg/kg d.w.
2-methoxy-1-methylethyl acetate		Intermittent releases to water	6.35 mg/l

3M Process Colour 990-12, Red

2-methoxy-1-methylethyl acetate		Marine water	0.0635 mg/l
2-methoxy-1-methylethyl acetate		Marine water sediments	0.329 mg/kg d.w.
2-methoxy-1-methylethyl acetate		Sewage Treatment Plant	100 mg/l

Recommended monitoring procedures: Information on recommended monitoring procedures can be obtained from UK HSC

8.2. Exposure controls

In addition, refer to the annex for more information.

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.

Applicable Norms/Standards

Use eye/face protection conforming to EN 166

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:

Material	Thickness (mm)	Breakthrough Time
Polymer laminate	No data available	No data available

Applicable Norms/Standards

Use gloves tested to EN 374

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

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

Applicable Norms/Standards

Use a respirator conforming to EN 140 or EN 136: filter types A & P

8.2.3. Environmental exposure controls

Refer to Annex

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state

Liquid.

Colour

Red

Specific Physical Form:

Liquid.

Odor

Solvent

Odour threshold

No data available.

pH

Not applicable.

Boiling point/boiling range

≥ 138.3 °C

Melting point

Not applicable.

Flammability (solid, gas)

Not applicable.

Explosive properties

Not classified

Oxidising properties

Not classified

Flash point

42.8 °C [*Test Method*: Tagliabue closed cup]

Autoignition temperature

No data available.

Flammable Limits(LEL)

1 %

Flammable Limits(UEL)

12.75 %

Vapour pressure

≤ 895.9 Pa [*@ 20 °C*]

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.

Evaporation rate

≤ 1 [*Ref Std*: BUOAC=1]

Vapour density

≥ 3.4 [*Ref Std*: AIR=1]

Decomposition temperature

No data available.

Viscosity

1,300 - 1,500 mPa-s

Density

0.97 g/ml [*@ 20 °C*]

9.2. Other information

EU Volatile Organic Compounds

No data available.

Molecular weight

No data available.

Percent volatile

65 - 80 % weight

SECTION 10: Stability and reactivity

10.1 Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Sparks and/or flames.

10.5 Incompatible materials

Strong oxidising 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 agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from internal hazard assessments.

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 localised 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.

Prolonged or repeated exposure by ingestion may cause:

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.

3M Process Colour 990-12, Red

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 ATE2,000 - 5,000 mg/kg
Overall product	Inhalation-Vapour(4 hr)		No data available; calculated ATE20 - 50 mg/l
Overall product	Ingestion		No data available; calculated ATE >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
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-methoxy-1-methylethyl acetate	Dermal	Rabbit	LD50 > 5,000 mg/kg
2-methoxy-1-methylethyl acetate	Inhalation-Vapour (4 hours)	Rat	LC50 > 28.8 mg/l
2-methoxy-1-methylethyl acetate	Ingestion	Rat	LD50 8,532 mg/kg
Vinyl polymer	Dermal	Rabbit	LD50 > 8,000 mg/kg
Vinyl polymer	Ingestion	Rat	LD50 > 8,000 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
Organic pigment (NJ TSR # 04499600-5232P)	Dermal		LD50 estimated to be > 5,000 mg/kg
Organic pigment (NJ TSR # 04499600-5232P)	Inhalation-Dust/Mist		LC50 estimated to be > 12.5 mg/l
Organic pigment (NJ TSR # 04499600-5232P)	Ingestion		LD50 estimated to be > 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
Naphthenic acids, nickel salts	Ingestion		LD50 estimated to be 50 - 300 mg/kg
Reaction mass of Polymeric benzotriazole and Poly(oxy-1,2-ethanediy), .alpha.-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-.omega.-hydroxy-	Dermal	Rat	LD50 > 2,000 mg/kg
Reaction mass of Polymeric benzotriazole and Poly(oxy-1,2-ethanediy), .alpha.-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-.omega.-hydroxy-	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.8 mg/l
Reaction mass of Polymeric benzotriazole and Poly(oxy-1,2-ethanediy), .alpha.-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-.omega.-hydroxy-	Ingestion	Rat	LD50 > 5,000 mg/kg
bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	Dermal	Rat	LD50 > 3,170 mg/kg

3M Process Colour 990-12, Red

bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.5 mg/l
bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	Ingestion	Rat	LD50 3,700 mg/kg
2,3-Epoxypropyl neodecanoate	Dermal	Rat	LD50 > 2,000 mg/kg
2,3-Epoxypropyl neodecanoate	Ingestion	Rat	LD50 > 2,000 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 bis(2-ethylhexanoate)	Dermal	Rabbit	LD50 > 5,000 mg/kg
Calcium bis(2-ethylhexanoate)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 1.2 mg/l
Calcium bis(2-ethylhexanoate)	Ingestion	Rat	LD50 > 5,000 mg/kg
triphenyl phosphite	Dermal	Rabbit	LD50 > 2,000 mg/kg
triphenyl phosphite	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 1.7 mg/l
triphenyl phosphite	Ingestion	Rat	LD50 1,590 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
cyclohexanone	Rabbit	Irritant
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	Rabbit	No significant irritation
2-methoxy-1-methylethyl acetate	Rabbit	No significant irritation
Vinyl polymer	Professional judgement	No significant irritation
xylene	Rabbit	Mild irritant
Organic pigment (NJ TSR # 04499600-5232P)	Professional judgement	No significant irritation
2,4-Dihydroxybenzophenone	Rabbit	No significant irritation
Naphthenic acids, nickel salts	Professional judgement	Minimal irritation
Reaction mass of Polymeric benzotriazole and Poly(oxy-1,2-ethanediyl), .alpha.-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-.omega.-hydroxy-	Rabbit	No significant irritation
bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	Rabbit	No significant irritation
2,3-Epoxypropyl neodecanoate	Rabbit	No significant irritation
ZINC 2-ETHYLHEXANOATE	Rabbit	Mild irritant
Calcium bis(2-ethylhexanoate)	Rabbit	No significant irritation
triphenyl phosphite	Rabbit	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
cyclohexanone	In vitro data	Corrosive
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	Rabbit	No significant irritation
2-methoxy-1-methylethyl acetate	Rabbit	Mild irritant
Vinyl polymer	Professional judgement	No significant irritation
xylene	Rabbit	Mild irritant
Organic pigment (NJ TSR # 04499600-5232P)	Professional judgement	No significant irritation

3M Process Colour 990-12, Red

	t	
2,4-Dihydroxybenzophenone	Rabbit	Severe irritant
Naphthenic acids, nickel salts	Professional judgement	Mild irritant
Reaction mass of Polymeric benzotriazole and Poly(oxy-1,2-ethanediyl), .alpha.-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-.omega.-hydroxy-	Rabbit	No significant irritation
bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	Rabbit	Corrosive
2,3-Epoxypropyl neodecanoate	Rabbit	No significant irritation
ZINC 2-ETHYLHEXANOATE	Rabbit	Severe irritant
Calcium bis(2-ethylhexanoate)	Rabbit	Corrosive
triphenyl phosphite	Rabbit	Moderate irritant

Skin Sensitisation

Name	Species	Value
cyclohexanone	Guinea pig	Not classified
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	Guinea pig	Not classified
2-methoxy-1-methylethyl acetate	Guinea pig	Not classified
Naphthenic acids, nickel salts	similar compounds	Sensitising
Reaction mass of Polymeric benzotriazole and Poly(oxy-1,2-ethanediyl), .alpha.-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-.omega.-hydroxy-	Guinea pig	Sensitising
bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	Human	Not classified
2,3-Epoxypropyl neodecanoate	Guinea pig	Sensitising
triphenyl phosphite	Mouse	Sensitising

Respiratory Sensitisation

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

Germ Cell Mutagenicity

Name	Route	Value
cyclohexanone	In vivo	Not mutagenic
cyclohexanone	In Vitro	Some positive data exist, but the data are not sufficient for classification
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	In Vitro	Not mutagenic
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	In vivo	Not mutagenic
2-methoxy-1-methylethyl acetate	In Vitro	Not mutagenic
xylene	In Vitro	Not mutagenic
xylene	In vivo	Not mutagenic
2,3-Epoxypropyl neodecanoate	In Vitro	Some positive data exist, but the data are not sufficient for classification
2,3-Epoxypropyl neodecanoate	In vivo	Mutagenic
Calcium bis(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

3M Process Colour 990-12, Red

xylene	Inhalation	Human	Some positive data exist, but the data are not sufficient for classification
Naphthenic acids, nickel salts	Not specified.	similar compounds	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
2-methoxy-1-methylethyl acetate	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation
2-methoxy-1-methylethyl acetate	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation
2-methoxy-1-methylethyl acetate	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation
2-methoxy-1-methylethyl 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
ZINC 2-ETHYLHEXANOATE	Ingestion	Toxic to female reproduction	Rat	NOAEL 300 mg/kg/day	1 generation
ZINC 2-ETHYLHEXANOATE	Ingestion	Toxic to male reproduction	Rat	NOAEL 300 mg/kg/day	1 generation
ZINC 2-ETHYLHEXANOATE	Ingestion	Toxic to development	Rat	NOAEL 100 mg/kg/day	1 generation
Calcium bis(2-ethylhexanoate)	Ingestion	Toxic to female reproduction	Rat	NOAEL 300 mg/kg/day	1 generation
Calcium bis(2-ethylhexanoate)	Ingestion	Toxic to male reproduction	Rat	NOAEL 300 mg/kg/day	1 generation
Calcium bis(2-ethylhexanoate)	Ingestion	Toxic to development	Rat	NOAEL 100 mg/kg/day	1 generation

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	Human	NOAEL Not available	

3M Process Colour 990-12, Red

			classification			
cyclohexanone	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
2-methoxy-1-methylethyl acetate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
xylene	Inhalation	auditory system	Causes damage to organs	Rat	LOAEL 6.3 mg/l	8 hours
xylene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
xylene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
xylene	Inhalation	eyes	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
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 bis(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
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
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
2-methoxy-1-methylethyl acetate	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 16.2 mg/l	9 days
2-methoxy-1-methylethyl acetate	Inhalation	olfactory system	Not classified	Mouse	LOAEL 1.62 mg/l	9 days
2-methoxy-1-methylethyl acetate	Inhalation	blood	Not classified	Multiple animal species	NOAEL 16.2 mg/l	9 days
2-methoxy-1-methylethyl 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	Not classified	Multiple animal species	NOAEL 3.5 mg/l	13 weeks

3M Process Colour 990-12, Red

		system muscles kidney and/or bladder respiratory system				
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
2,3-Epoxypropyl neodecanoate	Ingestion	hematopoietic system liver	Not classified	Rat	NOAEL 400 mg/kg/day	5 weeks
2,3-Epoxypropyl neodecanoate	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 40 mg/kg/day	5 weeks
triphenyl phosphite	Ingestion	nervous system	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 15 mg/kg/day	28 days

Aspiration Hazard

Name	Value
xylene	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

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

12.1. Toxicity

No product test data available.

Material	CAS #	Organism	Type	Exposure	Test endpoint	Test result
cyclohexanone	108-94-1	Algae	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	Experimental	72 hours	Effect Concentration 10%	3.56 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

3M Process Colour 990-12, Red

Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	88917-22-0	Water flea	Experimental	48 hours	LC50	1,090 mg/l
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	88917-22-0	Green algae	Experimental	72 hours	NOEC	1,000 mg/l
Vinyl polymer	Trade Secret		Data not available or insufficient for classification			
2-methoxy-1-methylethyl acetate	108-65-6	Green algae	Experimental	72 hours	EC50	>1,000 mg/l
2-methoxy-1-methylethyl acetate	108-65-6	Rainbow trout	Experimental	96 hours	LC50	134 mg/l
2-methoxy-1-methylethyl acetate	108-65-6	Water flea	Experimental	48 hours	EC50	370 mg/l
2-methoxy-1-methylethyl acetate	108-65-6	Green algae	Experimental	72 hours	NOEC	1,000 mg/l
2-methoxy-1-methylethyl acetate	108-65-6	Water flea	Experimental	21 days	NOEC	100 mg/l
Alkyd resin 3261	Trade Secret		Data not available or insufficient for classification			
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	24 hours	IC50	1 mg/l
xylene	1330-20-7	Green Algae	Estimated	72 hours	NOEC	0.44 mg/l
xylene	1330-20-7	Water flea	Estimated	7 days	NOEC	0.96 mg/l
xylene	1330-20-7	Rainbow trout	Experimental	56 days	NOEC	>1.3 mg/l
bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	52829-07-9	Bluegill	Experimental	96 hours	LC50	4.4 mg/l
bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	52829-07-9	Green Algae	Experimental	72 hours	EC50	0.705 mg/l
bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	52829-07-9	Water flea	Experimental	48 hours	EC50	8.6 mg/l
bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	52829-07-9	Green Algae	Experimental	72 hours	Effect Concentration 10%	0.188 mg/l
bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	52829-07-9	Water flea	Experimental	21 days	NOEC	0.23 mg/l
2,4-Dihydroxybenzophenone	131-56-6	Copepods	Experimental	48 hours	LC50	2.6 mg/l
2,4-Dihydroxybenzophenone	131-56-6	Goldfish	Experimental	28 days	NOEC	0.48 mg/l
Organic pigment (NJ TSR # 04499600-5232P)	Trade Secret	Green algae	Estimated	72 hours	EC50	>100 mg/l
Organic pigment (NJ TSR # 04499600-5232P)	Trade Secret	Water flea	Estimated	48 hours	EC50	>100 mg/l
Organic pigment (NJ TSR # 04499600-5232P)	Trade Secret	Zebra Fish	Experimental	96 hours	LC50	>5,000 mg/l
Organic pigment (NJ TSR # 04499600-5232P)	Trade Secret	Green algae	Estimated	72 hours	NOEC	>100 mg/l
triphenyl phosphite	101-02-0	Green Algae	Experimental	72 hours	EC50	>16 mg/l
triphenyl phosphite	101-02-0	Ricefish	Experimental	96 hours	LC50	>4.3 mg/l

3M Process Colour 990-12, Red

triphenyl phosphite	101-02-0	Water flea	Experimental	48 hours	EC50	0.45 mg/l
triphenyl phosphite	101-02-0	Green Algae	Experimental	72 hours	NOEC	16 mg/l
2,3-Epoxypropyl neodecanoate	26761-45-5	Green Algae	Experimental	72 hours	EC50	2.9 mg/l
2,3-Epoxypropyl neodecanoate	26761-45-5	Rainbow trout	Experimental	96 hours	LC50	5 mg/l
2,3-Epoxypropyl neodecanoate	26761-45-5	Water flea	Experimental	48 hours	EC50	4.8 mg/l
2,3-Epoxypropyl neodecanoate	26761-45-5	Green algae	Experimental	96 hours	NOEC	1 mg/l
Calcium bis(2-ethylhexanoate)	136-51-6	Green algae	Estimated	72 hours	EC50	56 mg/l
Calcium bis(2-ethylhexanoate)	136-51-6	Ricefish	Estimated	96 hours	LC50	>113 mg/l
Calcium bis(2-ethylhexanoate)	136-51-6	Water flea	Estimated	48 hours	EC50	97 mg/l
Calcium bis(2-ethylhexanoate)	136-51-6	Green algae	Estimated	96 hours	Effect Concentration 10%	28 mg/l
Calcium bis(2-ethylhexanoate)	136-51-6	Water flea	Estimated	21 days	NOEC	28 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
Naphthenic acids, nickel salts	61788-71-4	Common Carp	Estimated	96 hours	LC50	6.9 mg/l
Naphthenic acids, nickel salts	61788-71-4	Green Algae	Estimated	96 hours	EC50	0.034 mg/l
Naphthenic acids, nickel salts	61788-71-4	Water flea	Estimated	48 hours	EC50	0.069 mg/l
Reaction mass of Polymeric benzotriazole and Poly(oxy-1,2-ethanediy), .alpha.-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-.omega.-hydroxy-	400-830-7	Green Algae	Experimental	72 hours	EC50	>100 mg/l
Reaction mass of Polymeric benzotriazole and Poly(oxy-1,2-ethanediy), .alpha.-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-.omega.-hydroxy-	400-830-7	Rainbow trout	Experimental	96 hours	LC50	2.8 mg/l
Reaction mass of Polymeric benzotriazole and Poly(oxy-1,2-ethanediy), .alpha.-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-.omega.-hydroxy-	400-830-7	Water flea	Experimental	48 hours	EC50	4 mg/l
Reaction mass of Polymeric benzotriazole and	400-830-7	Green Algae	Experimental	72 hours	Effect Conc. 10% - Growth Rate	10 mg/l

3M Process Colour 990-12, Red

Poly(oxy-1,2-ethanediyl), .alpha.-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-.omega.-hydroxy-						
Reaction mass of Polymeric benzotriazole and Poly(oxy-1,2-ethanediyl), .alpha.-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-.omega.-hydroxy-	400-830-7	Water flea	Experimental	21 days	NOEC	0.78 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
cyclohexanone	108-94-1	Experimental Biodegradation	14 days	BOD	87 % BOD/ThBOD	OECD 301C - MITI test (I)
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
Vinyl polymer	Trade Secret	Data not availbl-insufficient			N/A	
2-methoxy-1-methylethyl acetate	108-65-6	Experimental Biodegradation	28 days	BOD	87.2 % BOD/ThBOD	OECD 301C - MITI test (I)
Alkyd resin 3261	Trade Secret	Data not availbl-insufficient			N/A	
xylene	1330-20-7	Experimental Photolysis		Photolytic half-life (in air)	1.4 days (t 1/2)	Other methods
xylene	1330-20-7	Experimental Biodegradation	28 days	BOD	90-98 % BOD/ThBOD	OECD 301F - Manometric respirometry
bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	52829-07-9	Experimental Biodegradation	28 days	CO2 evolution	24 % weight	OECD 301B - Modified sturm or CO2
2,4-Dihydroxybenzophenone	131-56-6	Experimental Biodegradation	28 days	BOD	0 % weight	OECD 301C - MITI test (I)
Organic pigment (NJ TSR # 04499600-5232P)	Trade Secret	Estimated Biodegradation	28 days	BOD	<10 % weight	OECD 301F - Manometric respirometry
triphenyl phosphite	101-02-0	Experimental Hydrolysis		Hydrolytic half-life	0.5 hours (t 1/2)	Other methods
triphenyl phosphite	101-02-0	Estimated Biodegradation	14 days	BOD	85 % BOD/ThBOD	OECD 301C - MITI test (I)
2,3-Epoxypropyl neodecanoate	26761-45-5	Experimental Hydrolysis		Half-life (t 1/2)	9.9 days (t 1/2)	Other methods
2,3-Epoxypropyl neodecanoate	26761-45-5	Experimental Biodegradation	28 days	BOD	11.6 % weight	OECD 301F - Manometric respirometry
Calcium bis(2-ethylhexanoate)	136-51-6	Estimated Biodegradation	28 days	Dissolv. Organic Carbon Deplet	99 % weight	OECD 301E - Modified OECD Scre
ZINC 2-ETHYLHEXANOATE	136-53-8	Data not availbl-insufficient			N/A	
Naphthenic acids, nickel salts	61788-71-4	Data not availbl-insufficient			N/A	
Reaction mass of Polymeric benzotriazole and Poly(oxy-1,2-ethanediyl), .alpha.-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-.omega.-hydroxy-	400-830-7	Experimental Biodegradation	28 days	CO2 evolution	12-24 %CO2 evolution/THC O2 evolution	OECD 301B - Modified sturm or CO2

3M Process Colour 990-12, Red**12.3 : Bioaccumulative potential**

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
cyclohexanone	108-94-1	Experimental Bioconcentration		Log Kow	0.86	Other methods
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	88917-22-0	Experimental Bioconcentration		Log Kow	0.61	Other methods
Vinyl polymer	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
2-methoxy-1-methylethyl acetate	108-65-6	Experimental Bioconcentration		Log Kow	0.36	Other methods
Alkyd resin 3261	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
xylene	1330-20-7	Experimental BCF - Rainbow Tr	56 days	Bioaccumulation factor	25.9	Other methods
bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	52829-07-9	Experimental Bioconcentration		Log Kow	0.35	Other methods
2,4-Dihydroxybenzophenone	131-56-6	Estimated Bioconcentration		Bioaccumulation factor	4.6	Estimated: Bioconcentration factor
Organic pigment (NJ TSR # 04499600-5232P)	Trade Secret	Estimated Bioconcentration		Log Kow	1.3	Other methods
triphenyl phosphite	101-02-0	Estimated Bioconcentration		Bioaccumulation factor	13800	Estimated: Bioconcentration factor
2,3-Epoxypropyl neodecanoate	26761-45-5	Estimated Bioconcentration		Bioaccumulation factor	28	Estimated: Bioconcentration factor
Calcium bis(2-ethylhexanoate)	136-51-6	Estimated Bioconcentration		Log Kow	2.64	Other methods
ZINC 2-ETHYLHEXANOATE	136-53-8	Estimated Bioconcentration		Log Kow	2.7	Other methods
Naphthenic acids, nickel salts	61788-71-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Reaction mass of Polymeric benzotriazole and Poly(oxy-1,2-ethanediy), alpha.-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-.omega.-hydroxy-	400-830-7	Experimental BCF - Rainbow Tr	21 days	Bioaccumulation factor	34	OECD 305E - Bioaccumulation flow-through fish test

12.4. Mobility in soil

Please contact manufacturer for more details

12.5. Results of the PBT and vPvB assessment

This material does not contain any substances that are assessed to be a PBT or vPvB

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations**13.1 Waste treatment 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

3M Process Colour 990-12, Red

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.

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of 3M, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC - 2000/532/EC and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor.

EU waste code (product as sold)

080312* Waste ink containing dangerous substances

SECTION 14: Transportation information

75-0300-8079-2

ADR/RID: UN1210, PRINTING INK, LIMITED QUANTITY, 3., III, (E), ADR Classification Code: F1.

IMDG-CODE: UN1210, PRINTING INK, 3, III, IMDG-Code segregation code: NONE, LIMITED QUANTITY, EMS: FE,SD.

ICAO/IATA: UN1210, PRINTING INK, 3., III.

SECTION 15: Regulatory information

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

Carcinogenicity

<u>Ingredient</u>	<u>CAS Nbr</u>	<u>Classification</u>	<u>Regulation</u>
cyclohexanone	108-94-1	Gr. 3: Not classifiable	International Agency for Research on Cancer
Naphthenic acids, nickel salts	61788-71-4	Carc. 2	3M classified according to Regulation (EC) No 1272/2008
xylene	1330-20-7	Gr. 3: Not classifiable	International Agency for Research on Cancer

15.2. Chemical Safety Assessment

A chemical safety assessment has not been carried out for this mixture. Chemical safety assessments for the contained substances may have been carried out by the registrants of the substances in accordance with Regulation (EC) No 1907/2006, as amended.

SECTION 16: Other information

List of relevant H statements

H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H361df	Suspected of damaging fertility. Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Revision information:

Commercial Screen Printing with UV Curable Coatings: Section 16: Annex information was deleted.

Professional Screen Printing with UV Curable Coatings: Section 16: Annex information was added.

Professional Use of Coatings: Section 16: Annex information was deleted.

CLP: Ingredient table information was added.

Label: CLP Classification information was modified.

Label: CLP Percent Unknown information was deleted.

Label: CLP Precautionary - Disposal information was deleted.

Label: CLP Precautionary - Prevention information was modified.

Label: CLP Precautionary - Response information was modified.

Label: Graphic information was modified.

Label: Signal Word information was modified.

List of sensitizers information was modified.

Section 3: Composition/ Information of ingredients table information was modified.

Section 5: Hazardous combustion products table information was modified.

Section 6: Accidental release clean-up information information was modified.

Section 8: BLV table information was modified.

Section 8: DNEL table row information was modified.

Section 8: Eye/face protection information information was modified.

Section 8: Occupational exposure limit table information was modified.

Section 8: PNEC table row information was modified.

Section 09: Color information was added.

Section 09: Odor information was added.

Sections 3 and 9: Odour, colour, grade information information was deleted.

Section 11: Acute Toxicity table information was modified.

Section 11: Aspiration Hazard Table information was modified.

Section 11: Carcinogenicity Table information was modified.

Section 11: Classification disclaimer information was modified.

Section 11: Germ Cell Mutagenicity Table information was modified.

Section 11: Health Effects - Eye information information was modified.

Section 11: Health Effects - Skin information information was modified.

Lactation Table information was modified.

Section 11: Reproductive Hazards information information was deleted.

Section 11: Reproductive Toxicity Table information was modified.

Section 11: Reproductive/developmental effects information information was added.

Section 11: Serious Eye Damage/Irritation Table information was modified.

Section 11: Skin Corrosion/Irritation Table information was modified.

Section 11: Skin Sensitization Table information was modified.

Section 11: Target Organs - Repeated Table information was modified.

Section 11: Target Organs - Single Table information was modified.

Section 12: Component ecotoxicity information information was modified.

Section 12: Persistence and Degradability information information was modified.

Section 12: Bioaccumulative potential information information was modified.

Section 15: Carcinogenicity information information was modified.

Section 15: Regulations - Inventories information was deleted.

Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material. information was modified.

Section 16: UK disclaimer information was deleted.

Annex

1. Title	
Substance identification	xylene; EC No. 215-535-7; CAS Nbr 1330-20-7;
Exposure Scenario Name	Professional Screen Printing with UV Curable Coatings
Lifecycle Stage	Widespread use by professional workers
Contributing activities	PROC 08a -Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC 10 -Roller application or brushing ERC 08a -Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
Processes, tasks and activities covered	Application of product with a roller or brush. Transfers without dedicated controls, including loading, filling, dumping, bagging.
2. Operational conditions and risk management measures	
Operating Conditions	Physical state: Liquid. General operating conditions: Assumes use at not more than 20°C above ambient temperature; Duration of use: 8 hours/day; Emission days per year: 365 days/year; Indoors with enhanced general ventilation; Task: Transferring Material; Duration of use: 4 hours/day;
Risk management measures	Under the operational conditions described above the following risk management measures apply: General risk management measures: Human health: Half-facepiece air-purifying respirator; Environmental: Municipal Sewage Treatment Plant;
Waste management measures	Do not apply industrial sludge to natural soils;
3. Prediction of exposure	
Prediction of exposure	Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted.

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 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. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into the European Union, you are responsible for all regulatory requirements, including, but not limited to, product registrations/notifications, substance

volume tracking, and potential substance registration.

3M United Kingdom MSDSs are available at www.3M.com/uk