



Safety Data Sheet

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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 Piezo Inkjet Ink 8816-UV, Cyan

Product Identification Numbers

75-0301-5343-3 75-0301-8169-9

7000030856 7000055651

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:

Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315
 Serious Eye Damage/Eye Irritation, Category 1 - Eye Dam. 1; H318
 Skin Sensitization, Category 1 - Skin Sens. 1; H317
 Reproductive Toxicity, Category 1B - Repr. 1B; H360FD
 Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H335
 Hazardous to the Aquatic Environment (Acute), Category 1 - Aquatic Acute 1; H400
 Hazardous to the Aquatic Environment (Chronic), Category 1 - Aquatic Chronic 1; H410

For full text of H phrases, see Section 16.

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

SIGNAL WORD

DANGER.

Symbols

GHS05 (Corrosion) |GHS07 (Exclamation mark) |GHS08 (Health Hazard) |GHS09 (Environment) |

Pictograms



Ingredients:

Ingredient	CAS Nbr	EC No.	% by Wt
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	227-561-6	10 - 30
isooctyl acrylate	29590-42-9	249-707-8	10 - 30
Tetrahydrofurfuryl acrylate	2399-48-6	219-268-7	10 - 30
hexamethylene diacrylate	13048-33-4	235-921-9	< 10
2-Propenoic acid, 1,6-hexanediyl ester, polymer with 2-aminoethanol	67906-98-3		< 10
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8	278-355-8	3 - 7

HAZARD STATEMENTS:

H315	Causes skin irritation.
H318	Causes serious eye damage.
H317	May cause an allergic skin reaction.
H360FD	May damage fertility. May damage the unborn child.
H410	Very toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P201	Obtain special instructions before use.
P280F	Wear respiratory 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.

SUPPLEMENTAL INFORMATION:**Supplemental Hazard Statements:**

EUH071 Corrosive to the respiratory tract.

Supplemental Precautionary Statements:

Restricted to professional users.

21% of the mixture consists of components of unknown acute oral toxicity.

Contains 21% of components with unknown hazards to the aquatic environment.

Notes on labelling

All or part of the classification is based on toxicity test data.

2.3. Other hazards

None known.

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

SECTION 3: Composition/information on ingredients**3.1. Substances**

Not applicable

3.2. Mixtures

Ingredient	Identifier(s)	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Tetrahydrofurfuryl acrylate	(CAS-No.) 2399-48-6 (EC-No.) 219-268-7 (REACH-No.) 01-2120738396-46	10 - 30	Aquatic Chronic 2, H411 EUH071 Acute Tox. 4, H302 Skin Corr. 1C, H314 Skin Sens. 1B, H317 Repr. 1B, H360Df
isooctyl acrylate	(CAS-No.) 29590-42-9 (EC-No.) 249-707-8 (REACH-No.) 01-2119486988-09	10 - 30	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400,M=1 Aquatic Chronic 1, H410,M=1 Skin Sens. 1B, H317
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	(CAS-No.) 5888-33-5 (EC-No.) 227-561-6 (REACH-No.) 01-2119957862-25	10 - 30	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400,M=1 Aquatic Chronic 1, H410,M=1 Skin Sens. 1B, H317
2-Propenoic acid, 1,6-hexanediyl ester, polymer with 2-aminoethanol	(CAS-No.) 67906-98-3	< 10	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
2-Propenoic acid, 2-hydroxyethyl ester, polymer with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-	(CAS-No.) 72162-39-1	< 10	Skin Irrit. 2, H315 Eye Irrit. 2, H319

trimethylcyclohexane, 2-oxepanone and 2,2'-oxybis[ethanol]			
hexamethylene diacrylate	(CAS-No.) 13048-33-4 (EC-No.) 235-921-9 (REACH-No.) 01-2119484737-22	< 10	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Nota D Aquatic Acute 1, H400,M=1 Aquatic Chronic 2, H411
Benzophenone	(CAS-No.) 119-61-9 (EC-No.) 204-337-6	3 - 7	Acute Tox. 4, H302 STOT RE 2, H373 Aquatic Chronic 3, H412
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	(CAS-No.) 147-14-8 (EC-No.) 205-685-1	3 - 7	Substance not classified as hazardous
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	(CAS-No.) 75980-60-8 (EC-No.) 278-355-8 (REACH-No.) 01-2119972295-29	3 - 7	Skin Sens. 1B, H317 Repr. 1B, H360F Aquatic Chronic 2, H411
Polyalkylene imine	Trade Secret	1 - 5	Substance not classified as hazardous
Camphene	(CAS-No.) 79-92-5 (EC-No.) 201-234-8	< 0.2	Eye Irrit. 2, H319 Aquatic Acute 1, H400,M=1 Aquatic Chronic 1, H410,M=1

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

Specific Concentration Limits

Ingredient	Identifier(s)	Specific Concentration Limits
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	(CAS-No.) 5888-33-5 (EC-No.) 227-561-6 (REACH-No.) 01-2119957862-25	(C >= 10%) STOT SE 3, H335
isooctyl acrylate	(CAS-No.) 29590-42-9 (EC-No.) 249-707-8 (REACH-No.) 01-2119486988-09	(C >= 10%) STOT SE 3, H335

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. Do not induce vomiting. Get immediate medical attention.

4.2. Most important symptoms and effects, both acute and delayed

No critical symptoms or effects. 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 ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products

Substance

Carbon monoxide
Carbon dioxide.

Condition

During combustion.
During combustion.

5.3. 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. 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. 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. Place in a closed 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.

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. 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.) Use personal protective equipment (eg. gloves, respirators...) as required.

7.2. Conditions for safe storage including any incompatibilities

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
Tetrahydrofurfuryl acrylate	2399-48-6	Manufacturer determined	TWA:0.1 ppm(0.64 mg/m ³);STEL:0.3 ppm(1.91 mg/m ³)	Dermal Sensitizer

UK HSC : UK Health and Safety Commission
 TWA: Time-Weighted-Average
 STEL: Short Term Exposure Limit
 CEIL: Ceiling

Biological limit values

No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

Derived no effect level (DNEL)

Ingredient	Degradation Product	Population	Human exposure pattern	DNEL
isooctyl acrylate		Consumer	Dermal, Long-term exposure (24 hours), Systemic effects	0.1 mg/kg bw/d
isooctyl acrylate		Consumer	Inhalation, Long-term exposure (24 hours), Systemic effects	5 mg/m ³
isooctyl acrylate		Consumer	Oral, Long-term exposure (24 hours), Systemic effects	3 mg/kg bw/d
isooctyl acrylate		Worker	Dermal, Long-term exposure (8 hours), Local effects	0.0625 mg/cm ²
isooctyl acrylate		Worker	Dermal, Long-term exposure (8 hours), Systemic effects	0.2 mg/kg bw/d
isooctyl acrylate		Worker	Inhalation, Long-term exposure (8 hours), Systemic effects	21 mg/m ³

Predicted no effect concentrations (PNEC)

Ingredient	Degradation	Compartment	PNEC

	Product		
isooctyl acrylate		Agricultural soil	0.0117 mg/kg d.w.
isooctyl acrylate		Air average	3 mg/m ³
isooctyl acrylate		Freshwater	0.00065 mg/l
isooctyl acrylate		Freshwater sediments	0.101 mg/kg d.w.
isooctyl acrylate		Grassland average	0.0117 mg/kg d.w.
isooctyl acrylate		Intermittent releases to water	0.006 mg/l
isooctyl acrylate		Marine water	.00007 mg/l
isooctyl acrylate		Marine water sediments	0.002 mg/kg d.w.
isooctyl acrylate		Sewage Treatment Plant	10 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.

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 vapors and particulates, including oily mists

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

Applicable Norms/Standards

Use a respirator conforming to EN 140: 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

Physical state	Liquid.
Specific Physical Form:	Liquid.
Colour	Cyan
Odor	Acrylate
Odour threshold	<i>No data available.</i>
Melting point/freezing point	<i>Not applicable.</i>
Boiling point/boiling range	> 93.3 °C
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	<i>No data available.</i>
Flammable Limits(UEL)	<i>No data available.</i>
Flash point	> 93.3 °C [Test Method:Closed Cup]
Autoignition temperature	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
pH	<i>substance/mixture is non-soluble (in water)</i>
Kinematic Viscosity	12.5 mm ² /sec
Water solubility	Negligible
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Vapour pressure	< 1,333.2 Pa [@ 20 °C]
Density	1.04 g/ml
Relative density	1.04 [Ref Std:WATER=1]
Relative Vapor Density	> 1 [Ref Std:AIR=1]

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds	<i>No data available.</i>
Evaporation rate	<i>No data available.</i>
Percent volatile	<i>No data available.</i>

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 may occur. (Upon depletion of inhibitor or exposure to heat)

10.4 Conditions to avoid

Light.

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 hazard classes as defined in Regulation (EC) No 1272/2008

Signs and Symptoms of Exposure

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

Inhalation

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

Skin contact

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

May be harmful if swallowed.

Gastrointestinal corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain, nausea, vomiting, and diarrhea; blood in the faeces and/or vomitus may also be seen. May cause additional health effects (see below).

Additional Health Effects:

Prolonged or repeated exposure may cause target organ effects:

Kidney/Bladder effects: Signs/symptoms may include changes in urine production, abdominal or lower back pain, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination. Dermal effects: Signs/symptoms may include redness, itching, acne, or bumps on the skin.

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 >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >2,000 - =5,000 mg/kg
isooctyl acrylate	Dermal	Rabbit	LD50 > 2,000 mg/kg
isooctyl acrylate	Ingestion	Rat	LD50 > 5,000 mg/kg
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	Dermal	Rabbit	LD50 > 5,000 mg/kg
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	Ingestion	Rat	LD50 4,350 mg/kg
Tetrahydrofurfuryl acrylate	Ingestion	Rat	LD50 882 mg/kg
hexamethylene diacrylate	Dermal	Rabbit	LD50 3,636 mg/kg
hexamethylene diacrylate	Ingestion	Rat	LD50 > 5,000 mg/kg
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	Dermal		LD50 estimated to be > 5,000 mg/kg
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	Ingestion	Rat	LD50 10,000 mg/kg
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	Ingestion	Rat	LD50 > 5,000 mg/kg
Benzophenone	Dermal	Rabbit	LD50 3,535 mg/kg
Benzophenone	Ingestion	Rat	LD50 1,900 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Overall product	Professional judgement	Irritant
isooctyl acrylate	In vitro data	No significant irritation
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	Rabbit	Minimal irritation
Tetrahydrofurfuryl acrylate	Rabbit	Corrosive
2-Propenoic acid, 1,6-hexanediyl ester, polymer with 2-aminoethanol	similar compounds	Irritant
2-Propenoic acid, 2-hydroxyethyl ester, polymer with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 2-oxepanone and 2,2'-oxybis[ethanol]	similar compounds	Irritant
hexamethylene diacrylate	Rabbit	Irritant
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	Rabbit	No significant irritation
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	Rabbit	No significant irritation
Benzophenone	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
isooctyl acrylate	similar health hazards	Mild irritant
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	Rabbit	Mild irritant

Tetrahydrofurfuryl acrylate	Rabbit	Corrosive
2-Propenoic acid, 1,6-hexanediyl ester, polymer with 2-aminoethanol	similar compounds	Severe irritant
2-Propenoic acid, 2-hydroxyethyl ester, polymer with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 2-oxepanone and 2,2'-oxybis[ethanol]	similar compounds	Severe irritant
hexamethylene diacrylate	Rabbit	Moderate irritant
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	Rabbit	No significant irritation
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	Rabbit	No significant irritation
Benzophenone	Rabbit	Mild irritant
Camphene	Rabbit	Moderate irritant

Skin Sensitisation

Name	Species	Value
isooctyl acrylate	Mouse	Sensitising
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	Mouse	Sensitising
Tetrahydrofurfuryl acrylate	Professional judgement	Sensitising
2-Propenoic acid, 1,6-hexanediyl ester, polymer with 2-aminoethanol	similar compounds	Sensitising
hexamethylene diacrylate	Guinea pig	Sensitising
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	Human	Not classified
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	Mouse	Sensitising
Benzophenone	Guinea pig	Not classified

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
isooctyl acrylate	In Vitro	Some positive data exist, but the data are not sufficient for classification
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	In Vitro	Not mutagenic
Tetrahydrofurfuryl acrylate	In Vitro	Not mutagenic
hexamethylene diacrylate	In Vitro	Some positive data exist, but the data are not sufficient for classification
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	In Vitro	Not mutagenic
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	In Vitro	Not mutagenic
Benzophenone	In Vitro	Not mutagenic
Benzophenone	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
isooctyl acrylate	Dermal	Mouse	Not carcinogenic
hexamethylene diacrylate	Dermal	Mouse	Not carcinogenic
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	Ingestion	Mouse	Not carcinogenic
Benzophenone	Dermal	Multiple animal species	Not carcinogenic
Benzophenone	Ingestion	Multiple animal species	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
isooctyl acrylate	Dermal	Not classified for female reproduction	Rat	NOAEL 57 mg/kg/day	premating & during gestation
isooctyl acrylate	Dermal	Not classified for male reproduction	Rat	NOAEL 57 mg/kg/day	premating & during gestation
isooctyl acrylate	Dermal	Not classified for development	Rat	NOAEL 57 mg/kg/day	premating & during gestation
isooctyl acrylate	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	during organogenesis
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	Ingestion	Not classified for male reproduction	Rat	NOAEL 500 mg/kg/day	31 days
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	Ingestion	Not classified for female reproduction	Rat	NOAEL 100 mg/kg/day	premating into lactation
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	Ingestion	Not classified for development	Rat	NOAEL 100 mg/kg/day	premating into lactation
Tetrahydrofurfuryl acrylate	Ingestion	Toxic to female reproduction	Rat	NOAEL 50 mg/kg/day	premating into lactation
Tetrahydrofurfuryl acrylate	Dermal	Toxic to male reproduction	Rat	NOAEL 100 mg/kg/day	90 days
Tetrahydrofurfuryl acrylate	Ingestion	Toxic to male reproduction	Rat	NOAEL 35 mg/kg/day	90 days
Tetrahydrofurfuryl acrylate	Inhalation	Toxic to male reproduction	Rat	NOAEL 0.6 mg/l	90 days
Tetrahydrofurfuryl acrylate	Ingestion	Toxic to development	Rat	NOAEL 50 mg/kg/day	premating into lactation
hexamethylene diacrylate	Not specified	Not classified for development	Rat	NOAEL 750 mg/kg/day	during organogenesis
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	42 days
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	Ingestion	Not classified for development	Rat	NOAEL 150 mg/kg/day	during gestation
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	Ingestion	Toxic to female reproduction	Rat	NOAEL 200 mg/kg/day	premating into lactation
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	Ingestion	Toxic to male reproduction	Rat	NOAEL 60 mg/kg/day	85 days
Benzophenone	Ingestion	Not classified for female reproduction	Rat	NOAEL 100 mg/kg/day	2 generation
Benzophenone	Ingestion	Not classified for male reproduction	Rat	NOAEL 80 mg/kg/day	2 generation
Benzophenone	Ingestion	Not classified for development	Rabbit	NOAEL 25 mg/kg/day	during gestation

Target Organ(s)**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
isooctyl acrylate	Inhalation	respiratory irritation	Not classified	Human	NOAEL Not available	occupational exposure
isooctyl acrylate	Ingestion	central nervous system depression	Not classified	Rat	NOAEL 5,000 mg/kg	
Tetrahydrofurfuryl acrylate	Inhalation	respiratory irritation	May cause respiratory irritation	Human and	NOAEL Not available	

				animal		
2-Propenoic acid, 1,6-hexanediy l ester, polymer with 2-aminoethanol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
2-Propenoic acid, 2-hydroxyethyl ester, polymer with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 2-oxepanone and 2,2'-oxybis[ethanol]	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
hexamethylene diacrylate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
isooctyl acrylate	Dermal	heart endocrine system hematopoietic system liver immune system nervous system kidney and/or bladder respiratory system	Not classified	Rat	NOAEL 57 mg/kg/day	premat ing & during gestation
isooctyl acrylate	Ingestion	endocrine system liver kidney and/or bladder heart bone, teeth, nails, and/or hair hematopoietic system immune system muscles nervous system eyes respiratory system vascular system	Not classified	Rat	NOAEL 600 mg/kg/day	90 days
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	Ingestion	gastrointestinal tract immune system kidney and/or bladder heart endocrine system hematopoietic system liver nervous system respiratory system	Not classified	Rat	NOAEL 500 mg/kg/day	31 days
hexamethylene diacrylate	Dermal	skin	May cause damage to organs though prolonged or repeated exposure	Mouse	LOAEL 70 mg/kg/day	80 weeks
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	Ingestion	endocrine system hematopoietic system respiratory system	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	Ingestion	kidney and/or bladder	Not classified	Multiple animal species	NOAEL Not available	not available
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	Ingestion	skin blood liver kidney and/or bladder nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	90 days
Benzophenone	Ingestion	kidney and/or bladder	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 75 mg/kg/day	14 weeks
Benzophenone	Ingestion	heart hematopoietic	Not classified	Rat	NOAEL 850 mg/kg/day	14 weeks

		system liver immune system endocrine system bone, teeth, nails, and/or hair nervous system eyes respiratory system				
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Aspiration Hazard

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

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.

11.2. Information on other hazards

This material does not contain any substances that are assessed to be an endocrine disruptor for human health.

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
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	Green algae	Experimental	72 hours	EC50	1.98 mg/l
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	Zebra Fish	Experimental	96 hours	LC50	0.704 mg/l
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	Green algae	Experimental	72 hours	NOEC	0.405 mg/l
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	Water flea	Experimental	21 days	NOEC	0.092 mg/l
isooctyl acrylate	29590-42-9	Green algae	Estimated	72 hours	EC50	0.535 mg/l
isooctyl acrylate	29590-42-9	Fathead minnow	Experimental	96 hours	LC50	0.67 mg/l
isooctyl acrylate	29590-42-9	Water flea	Experimental	48 hours	EC50	0.4 mg/l
isooctyl acrylate	29590-42-9	Water flea	Experimental	21 days	NOEC	0.065 mg/l
isooctyl acrylate	29590-42-9	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
Tetrahydrofurfuryl acrylate	2399-48-6	Activated sludge	Experimental	3 hours	EC50	263.7 mg/l
Tetrahydrofurfuryl acrylate	2399-48-6	Green algae	Experimental	72 hours	EC50	3.92 mg/l
Tetrahydrofurfuryl acrylate	2399-48-6	Water flea	Experimental	48 hours	EC50	37.7 mg/l
Tetrahydrofurfuryl acrylate	2399-48-6	Zebra Fish	Experimental	96 hours	LC50	7.32 mg/l
Tetrahydrofurfuryl acrylate	2399-48-6	Green algae	Experimental	72 hours	EC10	2.48 mg/l

3M Piezo Inkjet Ink 8816-UV, Cyan

hexamethylene diacrylate	13048-33-4	Green algae	Experimental	72 hours	EC50	2.33 mg/l
hexamethylene diacrylate	13048-33-4	Medaka	Experimental	96 hours	LC50	0.38 mg/l
hexamethylene diacrylate	13048-33-4	Water flea	Experimental	48 hours	EC50	2.7 mg/l
hexamethylene diacrylate	13048-33-4	Green algae	Experimental	72 hours	NOEC	0.9 mg/l
hexamethylene diacrylate	13048-33-4	Medaka	Experimental	39 days	NOEC	0.072 mg/l
hexamethylene diacrylate	13048-33-4	Water flea	Experimental	21 days	NOEC	0.14 mg/l
hexamethylene diacrylate	13048-33-4	Activated sludge	Experimental	30 minutes	EC50	270 mg/l
2-Propenoic acid, 1,6-hexanediyl ester, polymer with 2-aminoethanol	67906-98-3		Data not available or insufficient for classification			N/A
2-Propenoic acid, 2-hydroxyethyl ester, polymer with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 2-oxepanone and 2,2'-oxybis[ethanol]	72162-39-1		Data not available or insufficient for classification			N/A
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8	Activated sludge	Experimental	3 hours	EC20	>1,000 mg/l
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8	Common Carp	Experimental	96 hours	LC50	1.4 mg/l
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8	Green algae	Experimental	72 hours	EC50	>2.01 mg/l
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8	Water flea	Experimental	48 hours	EC50	3.53 mg/l
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8	Green algae	Experimental	72 hours	EC10	1.56 mg/l
Benzophenone	119-61-9	Fathead minnow	Experimental	96 hours	LC50	10.89 mg/l
Benzophenone	119-61-9	Green algae	Experimental	72 hours	EC50	3.5 mg/l
Benzophenone	119-61-9	Water flea	Experimental	48 hours	EC50	6.8 mg/l
Benzophenone	119-61-9	Fathead minnow	Experimental	7 days	NOEC	2.1 mg/l
Benzophenone	119-61-9	Green algae	Experimental	72 hours	NOEC	1 mg/l
Benzophenone	119-61-9	Water flea	Experimental	21 days	NOEC	0.2 mg/l
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	147-14-8	Green algae	Estimated	72 hours	EC50	>100 mg/l
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	147-14-8	Water flea	Estimated	48 hours	EC50	>500 mg/l
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	147-14-8	Activated sludge	Experimental	30 minutes	EC20	750 mg/l
29H,31H-phthalocyaninato(2-)-	147-14-8	Bacteria	Experimental	30 minutes	EC10	>10,000 mg/l

N29,N30,N31,N32 copper						
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	147-14-8	Rainbow trout	Experimental	96 hours	LC50	355.6 mg/l
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	147-14-8	Green algae	Estimated	72 hours	EC10	100 mg/l
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	147-14-8	Water flea	Estimated	21 days	NOEC	>=1 mg/l
Camphene	79-92-5	Activated sludge	Experimental	3 hours	EC10	490.3 mg/l
Camphene	79-92-5	Green algae	Experimental	72 hours	EC50	1.75 mg/l
Camphene	79-92-5	Sheepshead Minnow	Experimental	96 hours	LC50	1.9 mg/l
Camphene	79-92-5	Water flea	Experimental	48 hours	EC50	0.72 mg/l
Camphene	79-92-5	Zebra Fish	Experimental	96 hours	LC50	0.72 mg/l
Camphene	79-92-5	Green algae	Experimental	72 hours	NOEC	0.07 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	Experimental Biodegradation	28 days	CO2 evolution	57 % weight	OECD 310 CO2 Headspace
isooctyl acrylate	29590-42-9	Experimental Biodegradation	28 days	BOD	93 %BOD/ThB OD	OECD 301D - Closed bottle test
Tetrahydrofurfuryl acrylate	2399-48-6	Experimental Bioconcentration		Log Kow	0.81	Non-standard method
Tetrahydrofurfuryl acrylate	2399-48-6	Experimental Biodegradation	28 days	BOD	77.7 %BOD/ThBOD	OECD 301F - Manometric respirometry
hexamethylene diacrylate	13048-33-4	Estimated Photolysis		Photolytic half-life (in air)	1 days (t 1/2)	Episuite™
hexamethylene diacrylate	13048-33-4	Experimental Biodegradation	28 days	CO2 evolution	60-70 %CO2 evolution/THC O2 evolution	ISO 14593 Inorg C Headspace
2-Propenoic acid, 1,6-hexanediyl ester, polymer with 2-aminoethanol	67906-98-3	Data not available - insufficient	N/A	N/A	N/A	N/A
2-Propenoic acid, 2-hydroxyethyl ester, polymer with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 2-oxepanone and 2,2'-oxybis[ethanol]	72162-39-1	Data not available - insufficient	N/A	N/A	N/A	N/A
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8	Experimental Biodegradation	28 days	BOD	≤10 %BOD/ThBOD	OECD 301F - Manometric respirometry
Benzophenone	119-61-9	Experimental Biodegradation	28 days	BOD	66-84 %BOD/ThBOD	OECD 301F - Manometric respirometry
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	147-14-8	Experimental Biodegradation	28 days	BOD	<1 % weight	OECD 301F - Manometric respirometry
Camphene	79-92-5	Experimental Photolysis		Photolytic half-life (in air)	7.2 hours (t 1/2)	Non-standard method
Camphene	79-92-5	Experimental Biodegradation	28 days	BOD	2 %BOD/ThBOD	OECD 301C - MITI test (I)

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	Estimated BCF - Other	56 hours	Bioaccumulation factor	37	OECD 305E - Bioaccumulation flow-through fish test
isooctyl acrylate	29590-42-9	Estimated Bioconcentration		Bioaccumulation factor	120-940	Catalogic™
isooctyl acrylate	29590-42-9	Experimental Bioconcentration		Log Kow	4.6	
hexamethylene diacrylate	13048-33-4	Experimental Bioconcentration		Log Kow	2.81	
2-Propenoic acid, 1,6-hexanediyl ester, polymer with 2-aminoethanol	67906-98-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
2-Propenoic acid, 2-hydroxyethyl ester, polymer with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 2-oxepanone and 2,2'-oxybis[ethanol]	72162-39-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8	Experimental BCF - Carp	56 days	Bioaccumulation factor	≤40	
Benzophenone	119-61-9	Experimental BCF - Fish	56 days	Bioaccumulation factor	<12	
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	147-14-8	Experimental BCF - Carp	42 days	Bioaccumulation factor	<3.6	OECD 305E - Bioaccumulation flow-through fish test
Camphene	79-92-5	Experimental BCF - Carp	56 days	Bioaccumulation factor	606-1290	OECD 305C-Bioaccum degree fish

12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
isooctyl acrylate	29590-42-9	Experimental Mobility in Soil	Koc	1,500 l/kg	
hexamethylene diacrylate	13048-33-4	Estimated Mobility in Soil	Koc	220 l/kg	Episuite™

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. Endocrine disrupting properties

This material does not contain any substances that are assessed to be an endocrine disruptor for environmental effects

12.7. 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.

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. 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

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
14.1 UN number or ID number	UN3082	UN3082	UN3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(ISOBORNYL ACRYLATE , ISOCTYL ACRYLATE)
14.3 Transport hazard class(es)	9	9	9
14.4 Packing group	III	III	III
14.5 Environmental hazards	Environmentally Hazardous	Not applicable	Marine Pollutant
14.6 Special precautions for user	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.
14.7 Marine Transport in bulk according to IMO instruments	No data available.	No data available.	No data available.
Control Temperature	No data available.	No data available.	No data available.
Emergency Temperature	No data available.	No data available.	No data available.
ADR Classification Code	M6	Not applicable.	Not applicable.

IMDG Segregation Code	Not applicable.	Not applicable.	NONE
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Please contact the address or phone number listed on the first page of the SDS for additional information on the transport/shipment of the material by rail (RID) or inland waterways (ADN).

SECTION 15: Regulatory information

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

Carcinogenicity

Ingredient

Benzophenone

CAS Nbr

119-61-9

Classification

Grp. 2B: Possible human
carc.

Regulation

International Agency
for Research on Cancer

Global inventory status

Contact 3M for more information. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

DIRECTIVE 2012/18/EU

Seveso hazard categories, Annex 1, Part 1

None

Seveso named dangerous substances, Annex 1, Part 2

Dangerous Substances	Identifier(s)	Qualifying quantity (tonnes) for the application of	
		Lower-tier requirements	Upper-tier requirements
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	200	500
isooctyl acrylate	29590-42-9	100	200

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

EUH071	Corrosive to the respiratory tract.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H360Df	May damage the unborn child. Suspected of damaging fertility.

H360F	May damage fertility.
H360FD	May damage fertility. May damage 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 Printing with UV Inks: Section 16: Annex information was deleted.
EU Section 09: pH information information was added.
Professional Large Format UV Printing: Section 16: Annex information was added.
CLP: Ingredient table information was modified.
Label: CLP Classification information was modified.
Label: CLP Percent Unknown information was modified.
Label: CLP Precautionary - Disposal information was deleted.
Label: CLP Precautionary - Prevention information was modified.
Label: CLP Precautionary - Response information was modified.
Label: CLP Supplemental Precautionary Statements information was deleted.
Section 02: SDS Elements: CLP Supplemental Precautionary Statements information was added.
Section 03: Composition table % Column heading information was added.
Section 3: Composition/ Information of ingredients table information was modified.
Section 03: SCL table information was added.
Section 03: Substance not applicable information was added.
Section 04: Information on toxicological effects information was modified.
Section 5: Hazardous combustion products table information was modified.
Section 8: DNEL table row information was modified.
Section 8: Occupational exposure limit table information was modified.
Section 8: PNEC table row information was modified.
Section 9: Evaporation Rate information information was deleted.
Section 9: Explosive properties information information was deleted.
Section 09: Kinematic Viscosity information information was added.
Section 9: Melting point information information was modified.
Section 9: Oxidising properties information information was deleted.
Section 9: pH information information was deleted.
Section 9: Property description for optional properties information was modified.
Section 9: Vapour density value information was added.
Section 9: Vapour density value information was deleted.
Section 9: Viscosity information information was deleted.
Section 11: Acute Toxicity table information was modified.
Section 11: Aspiration Hazard Table information was deleted.
Section 11: Aspiration Hazard text information was added.
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: No endocrine disruptor information available warning information was added.
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 added.
Section 11: Target Organs - Repeated Table information was deleted.
Section 11: Target Organs - Single Table information was modified.
Section 12: 12.6. Endocrine Disrupting Properties information was added.

Section 12: 12.7. Other adverse effects information was modified.
 Section 12: Component ecotoxicity information information was modified.
 Section 12: Contact manufacturer for more detail. information was deleted.
 Section 12: Mobility in soil information information was added.
 Section 12: No endocrine disruptor information available warning information was added.
 Section 12: Persistence and Degradability information information was modified.
 Section 12: Bioaccumulative potential information information was modified.
 Section 14 Classification Code – Main Heading information was added.
 Section 14 Classification Code – Regulation Data information was added.
 Section 14 Control Temperature – Main Heading information was added.
 Section 14 Control Temperature – Regulation Data information was added.
 Section 14 Disclaimer Information information was added.
 Section 14 Emergency Temperature – Main Heading information was added.
 Section 14 Emergency Temperature – Regulation Data information was added.
 Section 14 Hazard Class + Sub Risk – Main Heading information was added.
 Section 14 Hazard Class + Sub Risk – Regulation Data information was added.
 Section 14 Hazardous/Not Hazardous for Transportation information was added.
 Section 14 Other Dangerous Goods – Main Heading information was added.
 Section 14 Other Dangerous Goods – Regulation Data information was added.
 Section 14 Packing Group – Main Heading information was added.
 Section 14 Packing Group – Regulation Data information was added.
 Section 14 Proper Shipping Name information was added.
 Section 14 Regulations – Main Headings information was added.
 Section 14 Segregation – Regulation Data information was added.
 Section 14 Segregation Code – Main Heading information was added.
 Section 14 Special Precautions – Main Heading information was added.
 Section 14 Special Precautions – Regulation Data information was added.
 Section 14 Transport in bulk – Regulation Data information was added.
 Section 14 Marine transport in bulk according to IMO instruments – Main Heading information was added.
 Section 14 UN Number Column data information was added.
 Section 14 UN Number information was added.
 Section 15: Carcinogenicity information information was modified.
 Section 15: Regulations - Inventories information was added.
 Section 15: Restrictions on manufacture ingredients information information was deleted.
 Section 15: Seveso Substance Text information was added.
 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.
 Section 2: No PBT/vPvB information available warning information was added.

Annex

1. Title	
Substance identification	isooctyl acrylate; EC No. 249-707-8; CAS Nbr 29590-42-9;
Exposure Scenario Name	Professional Large Format UV Printing
Lifecycle Stage	Widespread use by professional workers
Contributing activities	PROC 10 -Roller application or brushing ERC 08c -Widespread use leading to inclusion into/onto article (indoor)
Processes, tasks and activities covered	Cleaning surfaces by wiping, brushing. Printing operations.
2. Operational conditions and risk management measures	
Operating Conditions	Physical state: Suspension General operating conditions: Discharge volume of sewage treatment plant: 2,000,000 liters per day;

	<p>Duration of exposure per day at workplace [for one worker]: 8 hours/day; Emission days per year: 365 days/year; Flow rate of receiving surface water:: 18,000 cubic meters per day; Frequency of exposure at workplace [for one worker]: 220 days/year; Indoor use with Local Exhaust Ventilation; Local freshwater dilution factor: 10 ; Local marine water dilution factor: 100 ; Partially open and partially closed process;</p>
Risk management measures	<p>Under the operational conditions described above the following risk management measures apply: General risk management measures: Human health: Protective Gloves - Chemical resistant. Refer to Section 8 of the SDS for specific glove material.; Safety glasses with side shields.; Environmental: None needed; ; The following task-specific risk management measures apply in addition to those listed above: Task: Draining Material; Human Health; Protective Clothing - Apron; Task: Running the Process; Human Health; Ventilated Process Enclosures; Task: Waste Handling; Environmental; Wet scrubber - for gas removal; Industrial Sewage Treatment Plant;</p>
Waste management measures	<p>Do not release to waterways or sewers; Incinerate in a permitted hazardous waste incinerator;</p>
3. Prediction of exposure	
Prediction of exposure	<p>Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted.</p>

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