

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[™] Screen Printing UV Ink 9801 Thinner

Product Identification Numbers 75-3470-6920-7

7000056124

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 000E Mail:tox.uk@mmm.comWebsite: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:

Serious Eye Damage/Eye Irritation, Category 1 - Eye Dam. 1; H318 Skin Sensitization, Category 1 - Skin Sens. 1; H317 Reproductive Toxicity, Category 2 - Repr. 2; H361fd Specific Target Organ Toxicity-Repeated Exposure, Category 1 - STOT RE 1; H372 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

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

Pictograms



| Ingredients: Ingredient | CAS Nbr | EC No. | % by Wt |
|----------------------------------|------------|-----------|---------|
| 2-Phenoxyethyl acrylate | 48145-04-6 | 256-360-6 | 60 - 70 |
| 1-Vinylhexahydro-2H-azepin-2-one | 2235-00-9 | 218-787-6 | 30 - 40 |
| 2-phenoxyethanol | 122-99-6 | 204-589-7 | 1 - 5 |

HAZARD STATEMENTS:

| H318 | Causes serious eye damage. |
|--------|---|
| H317 | May cause an allergic skin reaction. |
| H361fd | Suspected of damaging fertility. Suspected of damaging the unborn child. |
| H372 | Causes damage to organs through prolonged or repeated exposure: liver respiratory system. |
| H411 | Toxic to aquatic life with long lasting effects. |

PRECAUTIONARY STATEMENTS

| Prevention: P260A P273 P280B | Do not breathe vapours. Avoid release to the environment. Wear protective gloves and eye/face protection. |
|--|--|
| Response: P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if |
| P310 P333 + P313 | present and easy to do. Continue rinsing. Immediately call a POISON CENTRE or doctor/physician. If skin irritation or rash occurs: Get medical advice/attention. |

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] |
|----------------------------------|--|---------|---|
| 2-Phenoxyethyl acrylate | (CAS-No.) 48145-04-6 (EC-No.) 256-360-6 | 60 - 70 | Skin Sens. 1A, H317 Repr. 2, H361df Aquatic Chronic 2, H411 |
| 1-Vinylhexahydro-2H-azepin-2-one | (CAS-No.) 2235-00-9 (EC-No.) 218-787-6 | 30 - 40 | Acute Tox. 4, H312 Acute Tox. 4, H302 Eye Irrit. 2, H319 Skin Sens. 1B, H317 STOT RE 1, H372 |
| 2-phenoxyethanol | (CAS-No.) 122-99-6 (EC-No.) 204-589-7 | 1 - 5 | Acute Tox. 4, H302(LD50 = 1394 mg/kg **ATE values per Annex VI**) Eye Dam. 1, H318 STOT SE 3, H335 |

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

The most important symptoms and effects based on the CLP classification include:

Allergic skin reaction (redness, swelling, blistering, and itching). Serious damage to the eyes (corneal cloudiness, severe pain, tearing, ulcerations, and significantly impaired or loss of vision). Target organ effects. See Section 11 for additional details.

4.3. Indication of any immediate medical attention and special treatment required

Not applicable.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

In case of fire: Use a carbon dioxide or dry chemical extinguisher 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

| <u>Substance</u> | <u>Condition</u> |
|------------------|--------------------|
| formaldehyde | During combustion. |
| Carbon monoxide | During combustion. |
| Carbon dioxide. | 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 in a well-ventilated place. Keep container tightly closed. Keep cool. Protect from sunlight. Store away from

heat. 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 Additional comments CAS Nbr Agency Limit type 1-Vinylhexahydro-2H-azepin-2-TWA(8 hours):0.1 ppm(0.57 2235-00-9 Manufacturer determined one mg/m3) 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.

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

8.2. Exposure controls

8.2.1. Engineering controls

No engineering controls required.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eve/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 Polymer laminate Thickness (mm) No data available

Breakthrough Time 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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| Physical state | Liquid. |
|--|--|
| Specific Physical Form: | Liquid. |
| Colour | Colourless |
| Odor | Acrylate |
| Odour threshold | No data available. |
| Melting point/freezing point | Not applicable. |
| Boiling point/boiling range | > 148.9 °C |
| Flammability (solid, gas) | Not applicable. |
| Flammable Limits(LEL) | No data available. |
| Flammable Limits(UEL) | No data available. |
| Flash point | > 93.3 °C [<i>Test Method</i> :Pensky-Martens Closed Cup] |
| Autoignition temperature | No data available. |
| Decomposition temperature | No data available. |
| рН | substance/mixture is non-soluble (in water) |
| Kinematic Viscosity | No data available. |
| Water solubility | Negligible |
| Solubility- non-water | No data available. |
| Partition coefficient: n-octanol/water | No data available. |
| Vapour pressure | < 160 Pa [@ 20 °C] |
| Density | approximately 1.3 g/ml |
| Relative density | approximately 1.3 [<i>Ref Std</i> :WATER=1] |
| Relative Vapour Density | No data available. |
| 9.2. Other information | |

9.2.2 Other safety characteristics EU Volatile Organic Compounds Evaporation rate Percent volatile

No data available. < 1 [Ref Std:BUOAC=1] 30 - 40 % 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 may occur. Upon loss of initiator or with exposure to heat.

10.4 Conditions to avoid Sparks and/or flames. Heat.

10.5 Incompatible materials

Strong oxidising agents.

10.6 Hazardous decomposition products

Substance None known. **Condition**

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

May be harmful in contact with skin. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

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

Additional Health Effects:

Prolonged or repeated exposure may cause target organ effects:

Respiratory effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate,

bluish coloured skin (cyanosis), sputum production, changes in lung function tests, and respiratory failure.

Reproductive/Developmental Toxicity:

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Toxicological Data

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

Acute Toxicity

| Name | Route | Species | Value |
|----------------------------------|-------------|---------|---|
| Overall product | Dermal | | No data available; calculated ATE >2,000 - =5,000 |
| | | | mg/kg |
| Overall product | Ingestion | | No data available; calculated ATE >2,000 - =5,000 |
| | | | mg/kg |
| 2-Phenoxyethyl acrylate | Dermal | Rat | LD50 > 2,000 mg/kg |
| 2-Phenoxyethyl acrylate | Ingestion | Rat | LD50 > 5,000 mg/kg |
| 1-Vinylhexahydro-2H-azepin-2-one | Dermal | Rabbit | LD50 1,700 mg/kg |
| 1-Vinylhexahydro-2H-azepin-2-one | Ingestion | Rat | LD50 1,049 mg/kg |
| 2-phenoxyethanol | Dermal | Rabbit | LD50 > 2,000 mg/kg |
| 2-phenoxyethanol | Inhalation- | Rat | LC50 > 1.5 mg/l |
| | Dust/Mist | | |
| 2-phenoxyethanol | Ingestion | Rat | LD50 1,394 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|----------------------------------|---------|---------------------------|
| | | |
| 2-Phenoxyethyl acrylate | Rabbit | No significant irritation |
| 1-Vinylhexahydro-2H-azepin-2-one | Rabbit | Minimal irritation |
| 2-phenoxyethanol | Rabbit | No significant irritation |

Serious Eye Damage/Irritation

| Name | Species | Value |
|----------------------------------|---------|---------------------------|
| | | |
| 2-Phenoxyethyl acrylate | Rabbit | No significant irritation |
| 1-Vinylhexahydro-2H-azepin-2-one | Rabbit | Severe irritant |
| 2-phenoxyethanol | Rabbit | Corrosive |

Skin Sensitisation

| Name | Species | Value |
|----------------------------------|---------|----------------|
| | | |
| 2-Phenoxyethyl acrylate | Guinea | Sensitising |
| | pig | |
| 1-Vinylhexahydro-2H-azepin-2-one | Mouse | Sensitising |
| 2-phenoxyethanol | Guinea | Not classified |
| | pig | |

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 |
|----------------------------------|----------|---------------|
| | | |
| 1-Vinylhexahydro-2H-azepin-2-one | In Vitro | Not mutagenic |
| 2-phenoxyethanol | In Vitro | Not mutagenic |
| 2-phenoxyethanol | In vivo | Not mutagenic |

Carcinogenicity

| Name | Route | Species | Value |
|------------------|-----------|----------|------------------|
| 2-phenoxyethanol | Ingestion | Multiple | Not carcinogenic |
| | | animal | |
| | | species | |

Reproductive Toxicity

Reproductive and/or Developmental Effects

| Name | Route | Value | Species | Test result | Exposure Duration |
|-------------------------|-----------|--|---------|-----------------------------|-----------------------------|
| 2-Phenoxyethyl acrylate | Ingestion | Not classified for male reproduction | Rat | NOAEL 800 mg/kg/day | 43 days |
| 2-Phenoxyethyl acrylate | Ingestion | Toxic to female reproduction | Rat | NOAEL 300 mg/kg/day | premating into lactation |
| 2-Phenoxyethyl acrylate | Ingestion | Toxic to development | Rat | NOAEL 300 mg/kg/day | premating into lactation |
| 2-phenoxyethanol | Ingestion | Not classified for female reproduction | Mouse | NOAEL 3,700 mg/kg/day | 2 generation |
| 2-phenoxyethanol | Ingestion | Not classified for male reproduction | Mouse | NOAEL 3,700 mg/kg/day | 2 generation |
| 2-phenoxyethanol | Dermal | Not classified for development | Rabbit | NOAEL 600 mg/kg/day | during organogenesis |
| 2-phenoxyethanol | Ingestion | Not classified for development | Rat | NOAEL 1,000 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 |
|--------------------------------------|------------|------------------------|--|--------------------------------|------------------------|----------------------|
| 1-Vinylhexahydro-2H- azepin-2-one | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL Not available | |
| 2-phenoxyethanol | Inhalation | respiratory irritation | May cause respiratory irritation | official classifica tion | NOAEL Not available | |

Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test result | Exposure Duration |
|--------------------------------------|------------|---|--|---------|-----------------------------|----------------------|
| 1-Vinylhexahydro-2H- azepin-2-one | Inhalation | respiratory system | Causes damage to organs through prolonged or repeated exposure | Rat | NOAEL 0.001 mg/l | 28 days |
| 1-Vinylhexahydro-2H- azepin-2-one | Inhalation | blood liver kidney and/or bladder eyes | Not classified | Rat | NOAEL 0.18 mg/l | 90 days |
| 1-Vinylhexahydro-2H- azepin-2-one | Ingestion | liver | Not classified | Rat | NOAEL 260 mg/kg/day | 3 months |
| 2-phenoxyethanol | Dermal | skin hematopoietic system liver eyes | Not classified | Rabbit | NOAEL 500 mg/kg/day | 13 weeks |
| 2-phenoxyethanol | Ingestion | heart endocrine system hematopoietic system liver immune system nervous system kidney and/or bladder respiratory system | Not classified | Rat | NOAEL 1,514 mg/kg/day | 13 weeks |

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 | Туре | Exposure | Test endpoint | Test result |
|----------------------|------------|-------------------|--------------------|--------------------|---------------|--------------|
| 2-Phenoxyethyl | 48145-04-6 | Activated sludge | Experimental | 3 hours | EC50 | 177 mg/l |
| acrylate | | | | | | |
| 2-Phenoxyethyl | 48145-04-6 | Golden Orfe | Experimental | 96 hours | LC50 | 10 mg/l |
| acrylate | | | | | | |
| 2-Phenoxyethyl | 48145-04-6 | Green algae | Experimental | 72 hours | EC50 | 4.4 mg/l |
| acrylate | | | | | | |
| 2-Phenoxyethyl | 48145-04-6 | Water flea | Experimental | 48 hours | EC50 | 1.21 mg/l |
| acrylate | | | | | | |
| 2-Phenoxyethyl | 48145-04-6 | Green algae | Experimental | 72 hours | EC10 | 0.71 mg/l |
| acrylate | | _ | - | | | |
| 1-Vinylhexahydro-2H- | 2235-00-9 | Bacteria | Experimental | 17 hours | EC50 | 622 mg/l |
| azepin-2-one | | | 1 | | | |
| 1-Vinylhexahydro-2H- | 2235-00-9 | Green algae | Experimental | 72 hours | ErC50 | >100 mg/l |
| azepin-2-one | | | I | | | |
| 1-Vinylhexahydro-2H- | 2235-00-9 | Water flea | Experimental | 48 hours | EC50 | >100 mg/l |
| azepin-2-one | | | P | | | |
| 1-Vinylhexahydro-2H- | 2235-00-9 | Zebra Fish | Experimental | 96 hours | LC50 | 307 mg/l |
| azepin-2-one | | | Emperation | <i>y</i> 0 110 urb | 2000 | 50, 119,1 |
| 1-Vinylhexahydro-2H- | 2235-00-9 | Green algae | Experimental | 72 hours | NOEC | 25 mg/l |
| azepin-2-one | 2233 00 9 | Green ungue | Experimental | /2 nours | ROLE | 20 1119/1 |
| 2-phenoxyethanol | 122-99-6 | Activated sludge | Experimental | 30 minutes | EC50 | >1,000 mg/l |
| 2-phonoxyculation | 122-77-0 | Activated studge | Experimental | 50 minutes | 10.50 | > 1,000 mg/1 |
| 2-phenoxyethanol | 122-99-6 | Fathead minnow | Experimental | 96 hours | LC50 | 344 mg/l |
| 2 phenoxyethanor | 122 99 0 | I atticad minitow | Experimental | 50 110013 | LCJU | 544 1116/1 |
| 2-phenoxyethanol | 122-99-6 | Green algae | Experimental | 72 hours | EC50 | >100 mg/l |
| 2 phonoxyculation | 122-77-0 | | Experimental | /2 110013 | | - 100 mg/1 |
| 2-phenoxyethanol | 122-99-6 | Scud | Experimental | 96 hours | LC50 | 357 mg/l |
| 2-phonoxyculation | 122-33-0 | Beuu | Experimental | 70 110015 | | 557 mg/1 |
| 2-phenoxyethanol | 122-99-6 | Water flea | Experimental | 48 hours | EC50 | >500 mg/l |
| 2-phonoxyculation | 122-99-0 | water nea | Experimental | 40 110015 | 100 | - 500 mg/1 |
| 2-phenoxyethanol | 122-99-6 | Fathead minnow | Experimental | 34 days | NOEC | 24 mg/l |
| 2-phenoxyeunanoi | 122-99-0 | rameau minnow | Experimental | 54 days | NUEC | 24 mg/1 |
| 2-phenoxyethanol | 122-99-6 | Green algae | Experimental | 72 hours | NOEC | 46 mg/l |
| 2-phenoxyemanor | 122-99-0 | Green argae | Experimental | 12 HOUIS | NUEC | 40 mg/1 |
| 2 nhanawyathanal | 122-99-6 | Water flea | Even agring ant c1 | 21 dava | NOEC | 9.43 mg/l |
| 2-phenoxyethanol | 122-99-0 | water fiea | Experimental | 21 days | NOEC | 19.45 mg/1 |

12.2. Persistence and degradability

| Material | CAS Nbr | Test type | Duration | Study Type | Test result | Protocol |
|-------------------------|------------|----------------|----------|------------|--------------|---------------------------|
| 2-Phenoxyethyl acrylate | 48145-04-6 | Experimental | 28 days | BOD | 22.3 %BOD/Th | OECD 301D - Closed bottle |
| | | Biodegradation | - | | OD | test |

| 2-Phenoxyethyl acrylate | 48145-04-6 | Estimated Photolysis | | Photolytic half-life (in air) | 9.7 hours (t 1/2) | |
|--------------------------------------|------------|--------------------------------|---------|-----------------------------------|------------------------------|-------------------------------------|
| 1-Vinylhexahydro-2H- azepin-2-one | 2235-00-9 | Experimental Biodegradation | 28 days | | 30- 40 %removal of DOC | OECD 301A - DOC Die Away Test |
| 1-Vinylhexahydro-2H- azepin-2-one | 2235-00-9 | Experimental Biodegradation | | 0 | 98 %removal of DOC | OECD 302B Zahn- Wellens/EVPA |
| 1-Vinylhexahydro-2H- azepin-2-one | 2235-00-9 | Experimental Hydrolysis | | Hydrolytic half-life (pH 7) | | OECD 111 Hydrolysis func of pH |
| 1-Vinylhexahydro-2H- azepin-2-one | 2235-00-9 | Experimental Hydrolysis | | Hydrolytic half-life acidic pH | · · · · | OECD 111 Hydrolysis func of pH |
| 2-phenoxyethanol | 122-99-6 | Experimental Biodegradation | 28 days | BOD | 90 %BOD/ThO D | OECD 301F - Manometric respirometry |

12.3 : Bioaccumulative potential

| Material | Cas No. | Test type | Duration | Study Type | Test result | Protocol |
|--------------------------------------|---------|----------------------------------|----------|------------|-------------|------------------------------|
| 2-Phenoxyethyl acrylate | | Experimental Bioconcentration | | Log Kow | 2.58 | |
| 1-Vinylhexahydro-2H- azepin-2-one | | Experimental Bioconcentration | | Log Kow | 1.2 | similar to OECD 107 |
| 2-phenoxyethanol | | Experimental Bioconcentration | | Log Kow | 1.2 | EC A.8 Partition Coefficient |

12.4. Mobility in soil

| Material | Cas No. | Test type | Study Type | Test result | Protocol |
|-------------------------|------------|------------------|------------|-------------|---------------------------|
| 2-Phenoxyethyl acrylate | 48145-04-6 | Estimated | Koc | 220 l/kg | Episuite™ |
| | | Mobility in Soil | | | |
| 1-Vinylhexahydro-2H- | 2235-00-9 | Modeled Mobility | Koc | 47 l/kg | Episuite TM |
| azepin-2-one | | in Soil | | _ | _ |
| 2-phenoxyethanol | 122-99-6 | Experimental | Koc | 41 l/kg | OECD 121 Estim. of Koc by |
| | | Mobility in Soil | | - | HPLC |

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.(PHENOXY ETHYL ACRYLATE) | LIQUID, N.O.S.(PHENOXY ETHYL ACRYLATE) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(PHENOXY ETHYL 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 |

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

Global inventory status

Contact 3M for more information. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. 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.

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Seveso hazard categories, Annex 1, Part 1

| Hazard Categories | Qualifying quantity (tonnes) for the application of | | |
|-----------------------------|---|-------------------------|--|
| | Lower-tier requirements | Upper-tier requirements | |
| E2 Hazardous to the Aquatic | 200 | 500 | |
| environment | | | |

Seveso named dangerous substances, Annex 1, Part 2 None

Regulation (EU) No 649/2012

No chemicals listed

15.2. Chemical Safety Assessment

A chemical safety assessment has not been carried out for this substance/mixture in accordance with Regulation (EC) No 1907/2006, as amended.

SECTION 16: Other information

List of relevant H statements

| H302 | Harmful if swallowed. |
|--------|---|
| H312 | Harmful in contact with skin. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |
| H361df | Suspected of damaging fertility. Suspected of damaging the unborn child. |
| H361fd | Suspected of damaging fertility. Suspected of damaging the unborn child. |
| H372 | Causes damage to organs through prolonged or repeated exposure. |
| H372 | Causes damage to organs through prolonged or repeated exposure: liver respiratory system. |
| H411 | Toxic to aquatic life with long lasting effects. |

Revision information:

EU Section 09: pH information information was added.

CLP: Ingredient table information was modified.

Label: CLP Classification 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 Target Organ Hazard Statement information was modified.

Label: Graphic information was modified.

Section 03: Composition table % Column heading information was added.

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

Section 03: Substance not applicable information was added. Section 04: First Aid - Symptoms and Effects (CLP) information was added. Section 04: Information on toxicological effects information was modified. Section 5: Hazardous combustion products table information was modified. Section 8: Appropriate Engineering controls information information was modified. Section 8: Occupational exposure limit table information was modified. Section 09: Color information was added. 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 09: Odor information was added. Sections 3 and 9: Odour, colour, grade information information was deleted. 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: Carcinogenicity Table information was added. Section 11: Carcinogenicity text information was deleted. 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:Bioccumulative 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: Seveso Hazard Category 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.

Sectio 16: UK disclaimer information was deleted.

Section 2: No PBT/vPvB information available warning information was added.

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