

SAFETY DATA SHEET

UVgel 356A ink Cyan



A CANON COMPANY

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

1.1 Product identifier

Product name : UVgel 356A ink Cyan
Article number : 1070092848
Product code (Canon) : 1965C021AA

1.2 Relevant identified uses of the substance or mixture and uses advised against
Inkjet printing ink for Océ Colorado 1640 Printer. Other uses are not recommended.

1.3 Details of the supplier of the safety data sheet

Supplier : Océ-Technologies B.V.
Address : St. Urbanusweg 43, 5914 CA Venlo, the Netherlands
Telephone number : +31 77 359 2222
e-mail address : sds-hq@oce.com

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : United Kingdom: 111

Emergency telephone number

Telephone number : + 44 (0) 1235 239 670
Hours of operation : 24h
Information limitations : For chemical emergencies only.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

Skin Irrit. 2, H315

Eye Irrit. 2, H319

Skin Sens. 1, H317

Repr. 1B, H360FD (Fertility and Unborn child)

Aquatic Chronic 2, H411

See Section 16 for the full text of the H statements declared above.

2.2 Label elements

Hazard pictograms :



Signal word :

Danger

SECTION 2: Hazards identification

| | |
|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hazard statements | : Causes serious eye irritation. Causes skin irritation. May cause an allergic skin reaction. May damage fertility. May damage the unborn child. Toxic to aquatic life with long lasting effects. |
| Precautionary statements | |
| General | : Not applicable |
| Prevention | : Wear protective gloves and eye protection. Avoid release to the environment. |
| Response | : IF exposed or concerned: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical attention. |
| Storage | : Not applicable. |
| Disposal | : Not applicable |
| Hazardous ingredients | : 3-[2,2-dimethyl-1-oxo-3-[(1-oxoallyl)oxy]propoxy]-2,2-dimethylpropyl acrylate Di-TMPTTA ethyl 4-dimethylaminobenzoate 2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone |
| Supplemental label elements | : Not applicable. |
| Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles | : Restricted to professional users. |

2.3 Other hazards

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

| Product/ingredient name | Identifiers | % | Classification | | Type |
|--------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-----------|-----------------------------|--------------------------------------------------------------------------------------------------------------------|------|
| | | | 67/548/EEC | Regulation (EC) No. 1272/2008 [CLP] | |
| 3-[2,2-dimethyl-1-oxo-3-[(1-oxoallyl)oxy]propoxy]-2,2-dimethylpropyl acrylate Di-TMPTTA | EC: 250-072-4 CAS: 30145-51-8 | ≥25 - ≤50 | Not classified. | Eye Irrit. 2, H319 Skin Sens. 1, H317 | [1] |
| 2,2-dimethyltrimethylene diacrylate | REACH #: 01-2119977121-41 EC: 302-434-9 CAS: 94108-97-1 EC: 218-741-5 CAS: 2223-82-7 Index: 607-112-00-4 | ≥25 - ≤50 | R43 | Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411 | [1] |
| 4-tert-Butylcyclohexyl acrylate | EC: 282-104-8 CAS: 84100-23-2 | ≤10 | T; R24 Xi; R36/38 R43 | Acute Tox. 3, H311 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 | [1] |
| | | ≤10 | Xi; R36/37/38 N; R51/53 | Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1A, H317 STOT SE 3, H335 Aquatic Acute 1, H400 (M=1) | [1] |

SECTION 3: Composition/information on ingredients

| | | | | | |
|----------------------------------------------------------------------------------------------------|----------------------------------------------------------|------|--------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| Propylidynetrimethanol, ethoxylated, esters with acrylic acid, reaction products with diethylamine | EC: 500-425-6 CAS: 159034-91-0 | ≤10 | Not classified. | Aquatic Chronic 2, H411 Eye Irrit. 2, H319 Skin Sens. 1A, H317 | [1] |
| Propoxylated neopentyl glycol diacrylate | REACH #: 01-2119970213-43 CAS: 84170-74-1 | ≤5 | R43 | Aquatic Chronic 3, H412 Skin Sens. 1B, H317 | [1] |
| ethyl 4-dimethylaminobenzoate | EC: 233-634-3 CAS: 10287-53-3 | ≤5 | Not classified. | Aquatic Chronic 2, H411 Repr. 1B, H360FD (Fertility and Unborn child, Can impair male fertility.) (oral) | [1] |
| 2-benzyl-2-dimethylamino-4-morpholinobutyrophenone | EC: 404-360-3 CAS: 119313-12-1 Index: 606-047-00-9 | ≤3 | N; R50/53 | Aquatic Chronic 2, H411 Repr. 1B, H360D (Unborn child) | [1] |
| Propylidynetrimethanol, ethoxylated, esters with acrylic acid | EC: 500-066-5 CAS: 28961-43-5 | ≤0,3 | Xi; R36 | Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1) Eye Irrit. 2, H319 Skin Sens. 1, H317 | [1] |
| n-butyl acrylate | EC: 205-480-7 CAS: 141-32-2 Index: 607-062-00-3 | ≤0,1 | R10 Xi; R36/37/38 R43 | Flam. Liq. 3, H226 Acute Tox. 4, H302 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335 | [1][2] |
| | | | See section 16 for the full text of the R-phrases declared above. | See Section 16 for the full text of the H statements declared above. | |

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern
- [6] Additional disclosure due to company policy

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General** : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.
- Eye contact** : Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. If irritation persists, get medical attention.
- Inhalation** : Remove to fresh air. Keep person warm and at rest.

SECTION 4: First aid measures

- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners. If skin irritation or rash occurs: Get medical attention.
- Ingestion** : If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

- Eye contact** : Causes serious eye irritation.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : May damage fertility or the unborn child if swallowed.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

See toxicological information (Section 11)

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Recommended: alcohol-resistant foam, CO₂, powders, water spray.
- Unsuitable extinguishing media** : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

5.3 Advice for firefighters

- Special protective actions for fire-fighters** : Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.
- Special protective equipment for fire-fighters** : Appropriate breathing apparatus may be required.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : Exclude sources of ignition and ventilate the area. Avoid breathing vapour or mist. Avoid contact with eyes, skin and clothing. Refer to protective measures listed in sections 7 and 8.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

SECTION 6: Accidental release measures

- 6.2 Environmental precautions** : Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.
- 6.3 Methods and material for containment and cleaning up** : Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Preferably clean with a detergent. Avoid using solvents.
- 6.4 Reference to other sections** : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

- 7.1 Precautions for safe handling** : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

7.2 Conditions for safe storage, including any incompatibilities

Do not store above the following temperature: 29°C (84,2°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations : Industrial

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

| Product/ingredient name | Exposure limit values |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| n-butyl acrylate | EH40/2005 WELs (United Kingdom (UK), 12/2011). STEL: 26 mg/m ³ 15 minutes. STEL: 5 ppm 15 minutes. TWA: 5 mg/m ³ 8 hours. TWA: 1 ppm 8 hours. |

DNELs/DMELs

SECTION 8: Exposure controls/personal protection

| Product/ingredient name | Type | Exposure | Value | Population | Effects |
|------------------------------------------|------|----------------------|--------------------------|------------|----------|
| Di-TMPPTA | DNEL | Long term Dermal | 1,67 mg/kg | Workers | Systemic |
| - | DNEL | Long term Inhalation | 5,88 mg/m ³ | Workers | Systemic |
| Propoxylated neopentyl glycol diacrylate | DNEL | Long term Inhalation | 11,75 mg/m ³ | Workers | Systemic |
| - | DNEL | Long term Inhalation | 2,9 mg/m ³ | Consumers | Systemic |
| - | DNEL | Long term Oral | 1,67 mg/kg | Consumers | Systemic |
| - | DNEL | Long term Dermal | 3,33 mg/kg | Workers | Systemic |
| - | DNEL | Long term Dermal | 0,117 mg/cm ² | Workers | Local |
| - | DNEL | Long term Dermal | 1,67 mg/kg | Consumers | Systemic |
| - | DNEL | Long term Dermal | 0,117 mg/cm ² | Consumers | Local |

PNECs

| Product/ingredient name | Compartment Detail | Value | Method Detail |
|------------------------------------------|------------------------|-------------------|---------------|
| Di-TMPPTA | Fresh water | 0,0012 mg/l | - |
| - | Soil | 0,098 mg/kg dwt | - |
| - | Marine water sediment | 0,0493 mg/kg dwt | - |
| - | Fresh water sediment | 0,493 mg/kg dwt | - |
| - | Sewage Treatment Plant | 100 mg/l | - |
| - | Marine water | 0,00012 mg/l | - |
| Propoxylated neopentyl glycol diacrylate | Fresh water | 0,0027 mg/l | - |
| - | Fresh water sediment | 0,1881 mg/kg dwt | - |
| - | Marine water | 0,00027 mg/l | - |
| - | Sewage Treatment Plant | 0,2 mg/l | - |
| - | Soil | 0,036 mg/kg dwt | - |
| - | Marine water sediment | 0,01881 mg/kg dwt | - |

8.2 Exposure controls

Appropriate engineering controls : Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn.

Individual protection measures

Hygiene measures : Wash hands after handling compounds and before eating, smoking and using the lavatory and at the end of the day. Wash contaminated clothing before reusing.

Eye/face protection : Use safety eyewear designed to protect against splash of liquids.

Skin protection

Hand protection

Gloves

: Protective gloves should be worn under normal conditions of use.

4 - 8 hours (breakthrough time): Nitrile gloves. Solvex 37-900 Thickness 0.425mm Length: 380mm.

> 8 hours (breakthrough time): Nitrile gloves. Microflex 93-260; Thickness 0.12 mm. Length: 300mm.

10 min (breakthrough time) Nitrile gloves. Touch N Tuff® 92-600 Thickness 0.12 mm. Length: 300mm.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

SECTION 8: Exposure controls/personal protection

- Body protection** : Avoid contact with skin.
Other skin protection : Avoid contact with skin.
Respiratory protection : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators.
Environmental exposure controls : Do not allow to enter drains or watercourses.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : Liquid.
Colour : Blue.
Odour : Odourless.
Odour threshold : Not available.
pH : Not applicable.
Melting point/freezing point : -69°C
Initial boiling point and boiling range : Not available.
Flash point : Closed cup: 145,1°C
Evaporation rate : Not available.
Flammability (solid, gas) : Not available.
Upper/lower flammability or explosive limits : Not available.
Vapour pressure : Not available.
Vapour density : Not available.
Relative density : Not available.
Solubility(ies) : Not available.
Partition coefficient: n-octanol/ water : Not available.
Auto-ignition temperature : 341°C
Decomposition temperature : Not available.
Viscosity : Not available.
Explosive properties : Not available.
Oxidising properties : Not available.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

- 10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability : Stable under recommended storage and handling conditions (see Section 7).
10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid : When exposed to high temperatures may produce hazardous decomposition products.

SECTION 10: Stability and reactivity

10.5 Incompatible materials : Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|----------------------------------------------------------------------------------------------------|---------------------------------|---------|--------------------|----------|
| Di-TMPTTA | LD50 Dermal | Rabbit | 5170 mg/kg | - |
| - | LD50 Oral | Rat | >5000 mg/kg | - |
| 4-tert-Butylcyclohexyl acrylate | LD50 Oral | Rat | >2000 mg/kg | - |
| Propylidynetrimethanol, ethoxylated, esters with acrylic acid, reaction products with diethylamine | LD50 Dermal | Rat | >2000 mg/kg | - |
| - | LD50 Oral | Rat | >2000 mg/kg | - |
| Propoxylated neopentyl glycol diacrylate | LC50 Inhalation Dusts and mists | Rat | >2 mg/l | 4 hours |
| - | LD50 Dermal | Rat | >2000 mg/kg | - |
| - | LD50 Oral | Rat | >5000 mg/kg | - |
| ethyl 4-dimethylaminobenzoate | LD50 Dermal | Rat | >2000 mg/kg | - |
| - | LD50 Oral | Rat | >2000 mg/kg | - |
| 2-benzyl-2-dimethylamino-4-morpholinobutyrophenone | LD50 Dermal | Rat | >2000 mg/kg | - |
| - | LD50 Oral | Rat | >5000 mg/kg | - |
| Propylidynetrimethanol, ethoxylated, esters with acrylic acid | LD50 Dermal | Rabbit | >13200 mg/kg | - |
| - | LD50 Oral | Rat | 2000 to 5000 mg/kg | - |
| n-butyl acrylate | LC50 Inhalation Gas. | Rat | 2730 ppm | 4 hours |
| - | LD50 Oral | Rat | 900 mg/kg | - |

Conclusion/Summary : Based on available data, the classification criteria are not met.

Acute toxicity estimates

Not available.

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|-------------------------------------|------------------------------------|---------|-------|-------------------------|-------------|
| Di-TMPTTA | Eyes - Redness of the conjunctivae | Rabbit | 2 | - | - |
| - | Eyes - Oedema of the conjunctivae | Rabbit | 1,5 | - | - |
| 2,2-dimethyltrimethylene diacrylate | Skin - Severe irritant | Rabbit | - | 500 milligrams | - |
| n-butyl acrylate | Eyes - Mild irritant | Rabbit | - | 24 hours 500 milligrams | - |
| - | Eyes - Mild irritant | Rabbit | - | 50 milligrams | - |
| - | Skin - Mild irritant | Rabbit | - | 24 hours 10 milligrams | - |
| - | Skin - Mild irritant | Rabbit | - | 500 milligrams | - |

Conclusion/Summary

SECTION 11: Toxicological information

- Skin** : Causes skin irritation. Based on toxicological literature on the ingredients of this product.
- Eyes** : Causes serious eye irritation. Based on toxicological literature on the ingredients of this product.
- Respiratory** : No known significant effects or critical hazards. Based on toxicological literature on the ingredients of this product.

Sensitisation

| Product/ingredient name | Route of exposure | Species | Result |
|----------------------------------------------------|-------------------|------------|-----------------|
| Propoxylated neopentyl glycol diacrylate | skin | Guinea pig | Sensitising |
| ethyl 4-dimethylaminobenzoate | skin | Guinea pig | Not sensitizing |
| 2-benzyl-2-dimethylamino-4-morpholinobutyrophenone | skin | Guinea pig | Not sensitizing |

Conclusion/Summary

- Skin** : May cause sensitisation by skin contact. Based on toxicological literature on the ingredients of this product.
- Respiratory** : No known significant effects or critical hazards. Based on toxicological literature on the ingredients of this product.

Mutagenicity

| Product/ingredient name | Test | Experiment | Result |
|---------------------------------|----------|--------------------------------------------------|----------|
| 4-tert-Butylcyclohexyl acrylate | - | Experiment: In vitro Subject: Bacteria | Negative |
| ethyl 4-dimethylaminobenzoate | OECD 471 | Experiment: In vitro Subject: Bacteria | Negative |
| - | OECD 474 | Experiment: In vivo Subject: Mammalian-Animal | Negative |

- Conclusion/Summary** : No mutagenic effect.

Carcinogenicity

- Conclusion/Summary** : No known significant effects or critical hazards.

Reproductive toxicity

| Product/ingredient name | Maternal toxicity | Fertility | Developmental toxin | Species | Dose | Exposure |
|----------------------------------------------------|-------------------|-----------|---------------------|---------|------|----------|
| ethyl 4-dimethylaminobenzoate | Negative | Positive | Positive | Rat | Oral | - |
| 2-benzyl-2-dimethylamino-4-morpholinobutyrophenone | Negative | Negative | Positive | Rat | Oral | - |

- Conclusion/Summary** : May damage fertility or the unborn child if swallowed.

Teratogenicity

- Conclusion/Summary** : No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

| Product/ingredient name | Category | Route of exposure | Target organs |
|---------------------------------|------------|-------------------|------------------------------|
| 4-tert-Butylcyclohexyl acrylate | Category 3 | Not applicable. | Respiratory tract irritation |

Specific target organ toxicity (repeated exposure)

Not available.

- Conclusion/Summary** : Not available.

Aspiration hazard

SECTION 11: Toxicological information

Not available.

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

| Product/ingredient name | Result | Species | Exposure |
|----------------------------------------------------------------------------------------------------|----------------------|---------|----------|
| Di-TMPPTA | EC50 12 mg/l | Algae | 72 hours |
| - | Acute EC50 >10 mg/l | Daphnia | 48 hours |
| - | Acute LC50 1,2 mg/l | Fish | 96 hours |
| 4-tert-Butylcyclohexyl acrylate | LC50 1 to 10 mg/l | Fish | 96 hours |
| Propylidynetrimethanol, ethoxylated, esters with acrylic acid, reaction products with diethylamine | EC50 >100 mg/l | Daphnia | 48 hours |
| - | Acute LC50 >100 mg/l | Fish | 96 hours |
| Propoxylated neopentyl glycol diacrylate | Acute EC50 37 mg/l | Daphnia | 48 hours |
| - | Acute LC50 2,7 mg/l | Fish | 96 hours |
| 2-benzyl-2-dimethylamino-4-morpholinobutyrophenone | LC50 0,5 mg/l | Daphnia | 48 hours |
| - | LC50 0,46 mg/l | Fish | 96 hours |
| Propylidynetrimethanol, ethoxylated, esters with acrylic acid | LC50 70,7 mg/l | Daphnia | 48 hours |
| - | LC50 1,95 mg/l | Fish | 96 hours |

Conclusion/Summary : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

12.2 Persistence and degradability

Conclusion/Summary : May cause long-term adverse effects in the aquatic environment.

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|----------------------------------------------------------------------------------------------------|-------------------|---------------------|------------------|
| Di-TMPPTA | - | 4 to 14%; 28 day(s) | Not readily |
| 4-tert-Butylcyclohexyl acrylate | - | - | Readily |
| Propylidynetrimethanol, ethoxylated, esters with acrylic acid, reaction products with diethylamine | - | 6%; 28 day(s) | Not readily |
| Propoxylated neopentyl glycol diacrylate | - | - | Inherent |
| 2-benzyl-2-dimethylamino-4-morpholinobutyrophenone | - | - | Not readily |
| Propylidynetrimethanol, ethoxylated, esters with acrylic acid | - | - | Readily |

12.3 Bioaccumulative potential

SECTION 12: Ecological information

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|---------------------------------------------------------------|--------------------|-------|-----------|
| Di-TMPTTA | - | 388 | low |
| 4-tert-Butylcyclohexyl acrylate | 4,78 | - | high |
| 2-benzyl-2-dimethylamino-4-morpholinobutyrophenone | 2,91 | - | low |
| Propylidynetrimethanol, ethoxylated, esters with acrylic acid | 2,89 | - | low |
| n-butyl acrylate | 2,38 | 17,27 | low |

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Disposal considerations : Do not allow to enter drains or watercourses. Dispose of according to all federal, state and local applicable regulations. If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned. For further information, contact your local waste authority.

European waste catalogue (EWC)

| Waste code | Waste designation |
|------------|-------------------------------------------|
| 08 03 12* | waste ink containing hazardous substances |

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.





Disposal considerations : Using information provided in this safety data sheet, advice should be obtained from the relevant waste authority on the classification of empty containers. Empty containers must be scrapped or reconditioned. Dispose of containers contaminated by the product in accordance with local or national legal provisions.

| Type of packaging | European waste catalogue (EWC) |
|-------------------|-------------------------------------------------------------------------------------------------------------------------|
| Plastic bottle | 16 02 13* discarded equipment containing hazardous components (3) other than those mentioned in 16 02 09 to 16 02 12 |

SECTION 13: Disposal considerations

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spill material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

| | ADR/RID | ADN | IMDG | IATA |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 14.1 UN number | UN3082 | UN3082 | UN3082 | UN3082 |
| 14.2 UN proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Acrylate mixture) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Acrylate mixture) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Acrylate mixture) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Acrylate mixture) |
| 14.3 Transport hazard class(es) | 9  | 9  | 9  | 9  |
| 14.4 Packing group | III | III | III | III |
| 14.5 Environmental hazards | Yes. | Yes. | Yes. | Yes. |
| Additional information | This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8. | This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8. | This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8. | This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8. |

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code : Not applicable.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

SECTION 15: Regulatory information

Annex XVII - Restrictions : Restricted to professional users.
**on the manufacture,
 placing on the market
 and use of certain
 dangerous substances,
 mixtures and articles**

Other EU regulations

**Europe inventory
 (EINECS)** : All components are listed or exempted.

**Regulation (EC) No. 648/2004,
 on Detergents , Annex VII** : Not applicable.

| Product/ingredient name | Carcinogenic effects | Mutagenic effects | Developmental effects | Fertility effects |
|----------------------------------------------------|----------------------|-------------------|---------------------------------------|----------------------------------------------------------------|
| ethyl 4-dimethylaminobenzoate | - | - | Repr. 1B, H360D (Unborn child) (oral) | Repr. 1B, H360F (Fertility, Can impair male fertility.) (oral) |
| 2-benzyl-2-dimethylamino-4-morpholinobutyrophenone | - | - | Repr. 1B, H360D (Unborn child) | - |

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Seveso Directive

This product may add to the calculation for determining whether a site is within the scope of the Seveso Directive on major accident hazards.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

15.2 Chemical safety assessment : This safety data sheet contains an ES in an integrated form. Contents of the exposure scenario have been included into sections 1.2, 8, 9, 12, 15 and 16 of this safety data sheet.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms

- : ATE = Acute Toxicity Estimate
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- DMEL = Derived Minimal Effect Level
- DNEL = Derived No Effect Level
- EUH statement = CLP-specific Hazard statement
- PBT = Persistent, Bioaccumulative and Toxic
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number
- vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

| Classification | Justification |
|-----------------------------------------------|--------------------|
| Skin Irrit. 2, H315 | Calculation method |
| Eye Irrit. 2, H319 | Calculation method |
| Skin Sens. 1, H317 | Calculation method |
| Repr. 1B, H360FD (Fertility and Unborn child) | Calculation method |
| Aquatic Chronic 2, H411 | Calculation method |

Full text of abbreviated H statements

| | |
|---------------|------------------------------------------------------------------------------|
| H226 | Flammable liquid and vapour. |
| H302 | Harmful if swallowed. |
| H311 | Toxic in contact with skin. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |
| H360D | May damage the unborn child. |
| H360FD (oral) | May damage fertility if swallowed. May damage the unborn child if swallowed. |
| H360FD | May damage fertility. May damage the unborn child. |
| 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. |

Full text of classifications [CLP/GHS]

| | |
|-------------------------|----------------------------------------------------------------------------------------------|
| Acute Tox. 3, H311 | ACUTE TOXICITY (dermal) - Category 3 |
| Acute Tox. 4, H302 | ACUTE TOXICITY (oral) - Category 4 |
| Acute Tox. 4, H332 | ACUTE TOXICITY (inhalation) - Category 4 |
| Aquatic Acute 1, H400 | SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1 |
| Aquatic Chronic 1, H410 | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1 |
| Aquatic Chronic 2, H411 | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2 |
| Aquatic Chronic 3, H412 | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3 |
| Eye Irrit. 2, H319 | SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 |
| Flam. Liq. 3, H226 | FLAMMABLE LIQUIDS - Category 3 |
| Repr. 1B, H360D | REPRODUCTIVE TOXICITY (Unborn child) - Category 1B |
| Repr. 1B, H360FD (oral) | REPRODUCTIVE TOXICITY (Fertility and Unborn child) (oral) - Category 1B |
| Repr. 1B, H360FD | REPRODUCTIVE TOXICITY (Fertility and Unborn child) - Category 1B |
| Skin Irrit. 2, H315 | SKIN CORROSION/IRRITATION - Category 2 |
| Skin Sens. 1, H317 | SKIN SENSITISATION - Category 1 |
| Skin Sens. 1A, H317 | SKIN SENSITISATION - Category 1A |
| Skin Sens. 1B, H317 | SKIN SENSITISATION - Category 1B |
| STOT SE 3, H335 | SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3 |

Full text of abbreviated R phrases

SECTION 16: Other information

R10- Flammable.

R24- Toxic in contact with skin.

R36- Irritating to eyes.

R36/38- Irritating to eyes and skin.

R36/37/38- Irritating to eyes, respiratory system and skin.

R43- May cause sensitisation by skin contact.

R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Full text of classifications [DSD/DPD]

T - Toxic

Xi - Irritant

N - Dangerous for the environment

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Notice to reader

The information in this Safety Data Sheet is based on the present state of knowledge and current legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications. The product should not be used for purposes other than those shown in Section 1 without first referring to the supplier and obtaining written handling instructions. As the specific conditions of use of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with. The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation.