

# SAFETY DATA SHEET

## Subcartridge(Light magenta)

## IP7-216

## **OKI DATA CORPORATION**

Issuing Date: 1 April, 2018



## Safety Data Sheet

#### 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING 1.1 Product identifier Product Name : Subcartridge(Light magenta) Product Code : IP7-216 1.2 Relevant identified uses of the substance or mixture and uses advised against Inkjet Ink 1.3 Details of the supplier of the safety data sheet Manufacturer's Name : **OKI Data Corporation** 4-11-22 Shibaura, Minato-ku, Tokyo, Japan Tel: +81-(0)3-5445-6111 Distributor: OKI Data (Australia) Pty Ltd. Level 1 67 Epping Road, Macquarie Park NSW 2113, Australia Tel: +61-2-8071-0000 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

| <regulation (ec)="" 1272="" 20<="" no.="" th=""><th>08&gt;</th></regulation> | 08>                              |
|--|----------------------------------|
| Classification   |                                  |
| Skin irritation, Category 2  | H315: Causes skin irritation.    |
| Serious eye damage, Category 1   | H318: Causes serious eye damage. |
| 2.2 Label elements   |                                  |

<Regulation (EC) No. 1272/2008>

Hazard pictograms



| Signal word:                   | Danger   |
|--------------------------------|--|
| Hazard statements              | Causes skin irritation.  |
|                                | Causes serious eye damage.   |
| Precautionary statements       |  |
| Prevention:                    | Wear eye protection/ face protection.  |
|                                | Wear protective gloves/ protective clothing.   |
| Response:                      | IF IN EYES: Rinse cautiously with water for several minutes.<br>Remove contact lenses, if present and easy to do. Continue<br>rinsing. Immediately call a POISON CENTER or doctor/<br>physician. |
|                                | IF ON SKIN: Wash with plenty of water. Call a POISON<br>CENTER or doctor/ physician if you feel unwell.  |
|                                | Take off contaminated clothing and wash it before reuse.   |
| Hazardous components which n   | nust be listed on the label:   |
|                                | γ-butyrolactone  |
| 3 Other hazards                |  |
| Vapours may form explosive mix | xture with air.  |

#### 3. COMPOSITION / INFORMATION ON INGREDIENTS

2.3



| Main Ingredients                | Content(%) | CAS-No.    | EC-No.    | Registration<br>number | Classification<br>(REGULATION<br>(EC) No<br>1272/2008)             |
|---------------------------------|------------|------------|-----------|------------------------|--|
| bis(2-ethoxyethyl)ether         | 70-80      | 112-36-7   | 203-963-7 | -                      | Skin Irrit. 2;<br>H315   |
| γ-butyrolactone                 | 1-10       | 96-48-0    | 202-509-5 | -                      | Acute Tox. 4;<br>H302<br>Eye Dam. 1;<br>H318<br>STOT SE 3;<br>H336 |
| (2-methoxymethylethoxy)propanol | 1-10       | 34590-94-8 | 252-104-2 | -                      | None   |

Other components (listed on EINECS, NLP or ELINCS) are not hazardous according to the directives mentioned above.

#### 4. FIRST-AID MEASURES

4.1 Description of first aid measures General advice: In the case of accident or if you feel unwell, seek medical advice immediately. When symptoms persist or in all cases of doubt seek medical advice. Protection of first-aiders: First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists. If inhaled, remove to fresh air. If inhaled: Get medical attention if symptoms occur. In case of skin contact: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Thoroughly clean shoes before reuse. In case of contact, immediately flush eyes with plenty of water In case of eye contact: for at least 15 minutes. If easy to do, remove contact lens, if worn. Get medical attention immediately If swallowed: If swallowed, DO NOT induce vomiting unless directed to do so by medical personnel. Get medical attention. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. 4.2 Most important symptoms and effects, both acute and delayed Risks: Causes skin irritation. Causes serious eye damage. 4.3 Indication of any immediate medical attention and special treatment needed Treatment: Treat symptomatically and supportively 5. FIRE-FIGHTING MEASURES

#### 5.1 Extinguishing media Suitable extinguishing Water spray media: Alcohol-resistant foam Dry chemical Carbon dioxide (CO2)



| Unsuitable Extinguishing Me            | dia   |
|--|---|
|  | High volume water jet   |
| 5.2 Special hazards arising from the   | he substance or mixture   |
| Specific hazards during fire-fighting: | Do not use a solid water stream as it may scatter and spread<br>fire.<br>Flash back possible over considerable distance.<br>Vapours may form explosive mixtures with air.<br>Exposure to combustion products may be a hazard to health.   |
| Hazardous combustion<br>products:      | Carbon oxides   |
| 5.3 Advice for firefighters            |   |
| Ũ                                      | t In the event of fire, wear self-contained breathing apparatus.<br>Use personal protective equipment.<br>Use extinguishing measures that are appropriate to local<br>circumstances and the surrounding environment.  |
|  | Cool containers/tanks with water spray.<br>Remove undamaged containers from fire area if it is safe to<br>do so.<br>Evacuate area.  |
| 6. ACCIDENTAL RELEASE ME               | ASURES  |
| 6.1 Personal precautions, protection   | ve equipment and emergency procedures   |
| Personal precautions:                  | Remove all sources of ignition.<br>Use personal protective equipment.<br>Follow safe handling advice and personal protective<br>equipment recommendations.  |
| 6.2 Environmental precautions          |   |
| Environmental precautions:             | Discharge into the environment must be avoided.<br>Prevent further leakage or spillage if safe to do so.<br>Prevent spreading over a wide area (e.g. by containment or<br>oil barriers).<br>Retain and dispose of contaminated wash water.<br>Local authorities should be advised if significant spillages<br>cannot be contained.  |
| 6.3 Methods and material for cont      | ainment and cleaning up   |
| Methods for cleaning up:               | Non-sparking tools should be used.<br>Soak up with inert absorbent material (e.g. sand, silica gel,<br>acid binder, universal binder, sawdust).<br>Suppress (knock down) gases/vapours/mists with a water<br>spray jet.<br>For large spills, provide dyking or other appropriate<br>containment to keep material from spreading. If dyked<br>material can be pumped, store recovered material in  |
|  | <ul> <li>appropriate container.</li> <li>Clean up remaining materials from spill with suitable absorbent.</li> <li>Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.</li> <li>Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.</li> </ul> |

#### 6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.



#### 7. HANDLING AND STORAGE

| 7.1 Precautions for safe handling              |   |
|--|---|
| Technical measures:                            | See Engineering measures under EXPOSURE<br>CONTROLS/PERSONAL PROTECTION section.  |
| Local/Total ventilation:                       | Use with local exhaust ventilation.<br>Use only in an area equipped with explosion proof exhaust<br>ventilation.  |
| Advice on safe handling:                       | Do not get on skin or clothing.<br>Avoid inhalation of vapour or mist.<br>Do not swallow.<br>Do not get in eyes.<br>Handle in accordance with good industrial hygiene and<br>safety practice.<br>Keep container tightly closed.<br>Keep away from heat and sources of ignition.<br>Take precautionary measures against static discharges.<br>Take care to prevent spills, waste and minimize release to<br>the environment. |
| Hygiene measures:                              | Ensure that eye flushing systems and safety showers are<br>located close to the working place. When using do not eat,<br>drink or smoke. Wash contaminated clothing before reuse.   |
| 7.2 Conditions for safe storage, in            | cluding any incompatibilities   |
| Requirements for storage areas and containers: | Keep in properly labelled containers. Keep tightly closed.<br>Keep in a cool, well-ventilated place. Store in accordance<br>with the particular national regulations. Keep away from heat<br>and sources of ignition.   |
| Advice on common storage:                      | Do not store with the following product types:<br>Strong oxidizing agents<br>Explosives<br>Gases  |
| 7.3 Specific end use(s)                        |   |
| Specific use(s):                               | No data available   |

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Control parameters

#### Occupational Exposure Limits

bis(2-ethoxyethyl)ether

| Components                       | CAS-No.    | Value type (Form of exposure) | Control<br>parameters | Basis      |
|----------------------------------|------------|-------------------------------|-----------------------|------------|
| (2-Methoxymethyle-thoxy)propanol | 34590-94-8 |                               | 50 ppm<br>308 mg/m3   | 2000/39/EC |
|                                  |            |                               | 50 ppm<br>308 mg/m3   | GB EH40    |

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 50.5 mg/m3 End Use: Workers Exposure routes: Skin contact Potential health effects: Long-term systemic effects Value: 3.43 mg/kg bw/day End Use: Consumers Exposure routes: Inhalation



|                                  | Potential health effects: Long-term systemic effects<br>Value: 5.96 mg/m3<br>End Use: Consumers<br>Exposure routes: Skin contact<br>Potential health effects: Long-term systemic effects<br>Value: 1.71 mg/kg bw/day<br>End Use: Consumers<br>Exposure routes: Ingestion<br>Potential health effects: Long-term systemic effects<br>Value: 300 mg/kg bw/day  |
|----------------------------------|--|
| γ-butyrolactone:                 | End Use: Workers<br>Exposure routes: Inhalation<br>Potential health effects: Long-term systemic effects<br>Value: 130 mg/m3<br>End Use: Workers<br>Exposure routes: Inhalation<br>Potential health effects: Acute systemic effects<br>Value: 958 mg/m3<br>End Use: Workers<br>Exposure routes: Skin contact<br>Potential health effects: Long-term systemic effects<br>Value: 19 mg/kg<br>End Use: Consumers   |
|                                  | Exposure routes: Inhalation<br>Potential health effects: Long-term systemic effects<br>Value: 28 mg/m3<br>End Use: Consumers<br>Exposure routes: Inhalation<br>Potential health effects: Acute systemic effects<br>Value: 340 mg/m3<br>End Use: Consumers<br>Exposure routes: Skin contact<br>Potential health effects: Long-term systemic effects<br>Value: 8 mg/kg<br>End Use: Consumers<br>Exposure routes: Ingestion<br>Potential health effects: Long-term systemic effects<br>Value: 8 mg/kg   |
| (2-Methoxymethyle-thoxy)propanol | End Use: Workers<br>Exposure routes: Inhalation<br>Potential health effects: Long-term systemic effects<br>Value: 310 mg/m3<br>End Use: Workers<br>Exposure routes: Skin contact<br>Potential health effects: Long-term systemic effects<br>Value: 65 mg/kg<br>End Use: Consumers<br>Exposure routes: Inhalation<br>Potential health effects: Long-term systemic effects<br>Value: 37.2 mg/m3<br>End Use: Consumers<br>Exposure routes: Skin contact<br>Potential health effects: Long-term systemic effects<br>Value: 15 mg/kg<br>End Use: Consumers<br>Exposure routes: Ingestion<br>Potential health effects: Long-term systemic effects<br>Value: 1.67 mg/kg |

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

y-butyrolactone: Fresh water Value: 0.056 mg/l Marine water Value: 0.0056 mg/l Intermittent use/release Value: 0.56 mg/l Sewage treatment plant Value: 452 mg/l Fresh water sediment Value: 0.24 mg/kg Marine sediment Value: 0.02 mg/kg Soil Value: 0.0147 mg/kg Fresh water (2-Methoxymethyle-thoxy)propanol Value: 19 mg/l Marine sediment Value: 1.9 mg/l Intermittent use/release Value: 190 mg/l Sewage treatment plant Value: 4168 mg/l Fresh water sediment Value: 70.2 mg/kg Marine sediment Value: 7.02 mg/kg Soil Value: 2.74 mg/kg 8.2 Exposure controls Ensure adequate ventilation, especially in confined areas. Engineering measures: Minimize workplace exposure concentrations. Use only in an area equipped with explosion proof exhaust ventilation. Personal protective equipment Wear the following personal protective equipment: Eye protection: Chemical resistant goggles must be worn. If splashes are likely to occur, wear: Face-shield Hand protection Material: Nitrile rubber butyl-rubber Remarks: Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday. Skin and body protection: Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential. Wear the following personal protective equipment: Flame retardant antistatic protective clothing. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc). Use respiratory protection unless adequate local exhaust Respiratory protection

ventilation is provided or exposure assessment demonstrates

```
Issuing Date: 1 April, 2018
```



Filter type:

that exposures are within recommended exposure guidelines. Organic vapour type (A)

#### 9

| 9. PHYSICAL AND CHEMICAL                    | PROPERTIES   |
|---|--|
| 9.1 Information on basic physical           | and chemical properties                                  |
| Appearance:                                 | liquid   |
| Color:                                      | yellow   |
| Odor  | solvent-like   |
| Odor Threshold:                             | No data available  |
| pH:   | No data available  |
| Melting point/freezing point:               | No data available  |
| Initial boiling point and<br>boiling range: | No data available  |
| Flash point:                                | 71 °C  |
|   | Method: Cleveland open cup                               |
| Evaporation rate:                           | No data available  |
| Flammability (solid, gas)                   | Not applicable   |
| Upper explosion limit:                      | No data available  |
| Lower explosion limit:                      | No data available  |
| Vapour pressure:                            | No data available  |
| Relative vapour density:                    | No data available  |
| Density:                                    | 0.9-1.1g/cm3 (25°C )                                     |
| Water solubility:                           | soluble  |
| Solubility in other solvents                | soluble<br>Solvent: organic solvents                     |
| Partition coefficient:<br>n-octanol/water:  | Not applicable   |
| Auto-ignition temperature:                  | No data available  |
| Thermal decomposition:                      | No data available  |
| Viscosity, dynamic:                         | 5 - 15 mPa.s (25 °C)                                     |
| Explosive properties:                       | Not explosive  |
| Oxidizing properties:                       | The substance or mixture is not classified as oxidizing. |
| 9.2 Other information                       |  |
|   | No data available  |

#### **10. STABILITY AND REACTIVITY**

#### 10.1 Reactivity

Not classified as a reactivity hazard.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

| Hazardous reactions:     | Combustible liquid.<br>Vapours may form explosive mixture with air.<br>Can react with strong oxidizing agents. |
|--------------------------|--|
| 10.4 Conditions to avoid |  |

Conditions to avoid: Heat, flames and sparks.



| 10.5 Incompatible materials |  |
|-----------------------------|--|
|-----------------------------|--|

Materials to avoid: Oxidizing agents

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

### 11. TOXICOLOGICAL INFORMATION

| 11.1 Information on toxicological                  | effects  |
|--|--|
| Information on likely routes of exposure:          | Inhalation, Skin contact, Ingestion,   |
| Acute toxicity:                                    | Not classified based on available information.   |
| <bis(2-ethoxyethyl) ether=""></bis(2-ethoxyethyl)> |  |
| Acute oral toxicity:                               | LD50 (Rat): 4,970 mg/kg  |
| <q-butyrolactone></q-butyrolactone>                |  |
| Acute oral toxicity:                               | LD50 (Rat): 1,582 mg/kg  |
| Acute dermal toxicity:                             | LC50 (Rat): > 5.1 mg/l<br>Exposure time: 4 h<br>Test atmosphere: dust/mist   |
| <(2-Methoxymethylethoxy)pro                        | panol>   |
| Acute oral toxicity                                | LD50 (Rat): > 5,000 mg/kg<br>Method: OECD Test Guideline 401   |
| Acute inhalation toxicity                          | LC50 (Rat): > 5.296 mg/l<br>Exposure time: 4 h<br>Test atmosphere: dust/mist<br>Assessment: he substance or mixture has no acute inhalation toxicity |
| Acute dermal toxicity                              | LD50 (Rabbit): > 5,000 mg/kg   |
| Skin corrosion/irritation:                         | Causes skin irritation.  |
| <bis(2-ethoxyethyl) ether=""></bis(2-ethoxyethyl)> |  |
| Result:  | Skin irritation  |
| Remarks:   | Based on data from similar materials   |
| <γ-butyrolactone>                                  |  |
| Species:   | Rabbit   |
| Result:  | No skin irritation   |
| <(2-Methoxymethylethoxy)p                          | ropanol>   |
| Species:   | Rabbit   |
| Result:  | No skin irritation   |
| Serious eye damage/eye irritation                  | : Causes serious eye damage.   |
| <bis(2-ethoxyethyl) ether=""></bis(2-ethoxyethyl)> |  |
| Species:   | Rabbit   |
| Method:  | OECD Test Guideline 405  |
| Result:  | No eye irritation  |
| <γ-butyrolactone>                                  |  |
| Species:   | Rabbit   |
| Method:  | OECD Test Guideline 405  |
| Result:  | Irreversible effects on the eye  |
| <(2-Methoxymethylethoxy)p                          | ropanol>   |
| Result:  | No eye irritation  |



| Respiratory or skin sensitisation                  |  |
|--|--|
| Skin sensitization:                                | Not classified based on available information.                     |
| Respiratory sensitisation:                         | Not classified based on available information.                     |
| <bis(2-ethoxyethyl) ether=""></bis(2-ethoxyethyl)> |  |
| Test Type:   | Local lymph node assay (LLNA)                                      |
| Exposure routes:                                   | Skin contact   |
| Species:   | Mouse  |
| Method:  | OECD Test Guideline 429  |
| Result:  | negative   |
| Remarks:   | Based on data from similar materials                               |
| <γ-butyrolactone>                                  |  |
| Test Type:   | Local lymph node assay (LLNA)                                      |
| Exposure routes:                                   | Skin contact   |
| Species:   | Mouse  |
| Method:  | OECD Test Guideline 429  |
| Result:  | negative   |
| <(2-Methoxymethylethoxy)p                          | ropanol>   |
| Exposure routes:                                   | Skin contact   |
| Species:   | Humans   |
| Result:  | negative   |
| Germ cell mutagenicity                             | Not classified based on available information.                     |
| <bis(2-ethoxyethyl) ether=""></bis(2-ethoxyethyl)> |  |
| Genotoxicity in vitro                              | Test Type: Bacterial reverse mutation assay (AMES)                 |
|  | Result: negative<br>Remarks: Based on data from similar materials  |
| <y-butyrolactone></y-butyrolactone>                | Remains. Dased on data nom similar materials                       |
| Genotoxicity in vitro                              | Test Type: Bacterial reverse mutation assay (AMES)                 |
|  | Result: negative   |
| <(2-Methoxymethylethoxy)p                          | ropanol>   |
| Genotoxicity in vitro                              | Test Type: Chromosome aberration test in vitro                     |
| Caroine conicity                                   | Result: negative<br>Not classified based on available information. |
| Carcinogenicity                                    | Not classified based on available information.                     |
| <γ-butyrolactone>                                  | Det  |
| Species:   | Rat  |
| Application Route:                                 | Ingestion  |
| Exposure time:                                     | 103 weeks  |
| Result:  | negative   |
| <(2-Methoxymethylethoxy)p                          | -  |
| Species:   | Rat  |
| Application Route:                                 | inhalation (vapour)  |
| Exposure time:                                     | 2 Years  |
| Method:  | OECD Test Guideline 453  |
| Result:  | negative   |
| Reproductive toxicity                              | Not classified based on available information.                     |
| <bis(2-ethoxyethyl) ether=""></bis(2-ethoxyethyl)> |  |

|  | K |  |
|--|---|--|
|  |   |  |

| Effects on fertility                               | Test Type: One-generation reproduction toxicity study<br>Species: Rat<br>Application Route: Ingestion<br>Result: negative<br>Remarks: Based on data from similar materials  |  |
|--|---|--|
| Effects on foetal development                      | Test Type: Embryo-foetal development<br>Species: Rabbit<br>Application Route: Ingestion<br>Result: negative   |  |
| <q-butyrolactone></q-butyrolactone>                |   |  |
| Effects on fertility                               | Test Type: Combined repeated dose toxicity study with<br>the reproduction/developmental toxicity screening test<br>Species: Rat<br>Application Route: Ingestion<br>Method: OECD Test Guideline 422<br>Result: negative<br>Remarks: Based on data from similar materials |  |
| Effects on foetal development                      | Test Type: Embryo-foetal development<br>Species: Rat<br>Application Route: Ingestion<br>Result: negative  |  |
| <(2-Methoxymethylethoxy)                           | propanol>   |  |
| Effects on fertility                               | Test Type: Two-generation reproduction toxicity study<br>Species: Rat<br>Application Route: inhalation (vapour)<br>Method: OECD Test Guideline 416<br>Result: negative  |  |
| Effects on foetal development                      | Test Type: Embryo-foetal development<br>Species: Rat<br>Application Route: inhalation (vapour)<br>Result: negative  |  |
| STOT - single exposure:                            | Not classified based on available information.  |  |
| <γ-butyrolactone>                                  |   |  |
| Assessment:  | May cause drowsiness or dizziness.  |  |
| STOT - repeated exposure:                          | Not classified based on available information.  |  |
| Repeated dose toxicity                             |   |  |
| <bis(2-ethoxyethyl) ether=""></bis(2-ethoxyethyl)> |   |  |
| Species:   | Rat   |  |
| NOAEL:   | 2.49 mg/l   |  |
| Application Route:                                 | inhalation (dust/mist/fume)   |  |
| Exposure time:                                     | 4 w   |  |
| Method:  | OECD Test Guideline 412   |  |
| <γ-butyrolactone>                                  |   |  |
| Species:   | Rat   |  |
| NOAEL:   | 225 mg/kg   |  |
| Application Route:                                 | Ingestion   |  |
| Exposure time:                                     | 13 w  |  |
| <(2-Methoxymethylethoxy)propanol>                  |   |  |
| Species:   | Rat   |  |
| NOAEL:   | 1.21 mg/l   |  |



| Application Route:   | inhalation (vapour)                            |
|----------------------|--|
| Exposure time:       | 13 w   |
| Method:              | OECD Test Guideline 413                        |
| Aspiration toxicity: | Not classified based on available information. |

| 12. ECOLOGICAL INFORMATION<br>12.1 Toxicity                             |  |
|---|--|
| <bis(2-ethoxyethyl) ether=""></bis(2-ethoxyethyl)>                      |  |
| Toxicity to fish:   | LC50 : > 10,000 mg/l<br>Exposure time: 96 h  |
| Toxicity to daphnia and other aquatic<br>invertebrates:                 | LC50 : 6,600 mg/l<br>Exposure time: 96 h   |
| Toxicity to bacteria:   | NOEC : > 1,000 mg/l<br>Exposure time: 3 h<br>Method: OECD Test Guideline 209   |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): | EC10: 7.38 mg/l<br>Exposure time: 7 d<br>Species: Ceriodaphnia dubia (water flea)<br>Remarks: Based on data from similar materials                                 |
| <γ-butyrolactone>   |  |
| Toxicity to fish:   | LC50 (Lepomis macrochirus (Bluegill sunfish)): 56 mg/l<br>Exposure time: 96 h  |
| Toxicity to daphnia and other aquatic<br>invertebrates:                 | EC50 (Daphnia magna (Water flea)): > 500 mg/l<br>Exposure time: 48 h   |
| Toxicity to algae:  | EC50 (Desmodesmus subspicatus (green algae)): > 500 mg/l<br>Exposure time: 72 h<br>NOEC (Desmodesmus subspicatus (green algae)): 31.25 mg/l<br>Exposure time: 72 h |
| Toxicity to bacteria:   | IC50 : 4,518 mg/l<br>Exposure time: 40 h   |
| <(2-Methoxymethylethoxy)propanol>                                       |  |
| Toxicity to fish:   | LC50 (Poecilia reticulata (guppy)): > 1,000 mg/l<br>Exposure time: 96 h<br>Method: OECD Test Guideline 203   |
| Toxicity to daphnia and other aquatic invertebrates:                    | EC50 (Daphnia magna (Water flea)): 1,919 mg/l<br>Exposure time: 48 h<br>Method: OECD Test Guideline 202  |
| Toxicity to algae:  | EC50 (Selenastrum capricornutum (green algae)): > 969 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201   |
| Toxicity to bacteria:   | EC50 (Pseudomonas putida): 4,168 mg/l<br>Exposure time: 18 h   |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): | NOEC: >= 0.5 mg/l<br>Exposure time: 22 d<br>Species: Daphnia magna (Water flea)<br>Method: OECD Test Guideline 211   |
| 12.2 Persistence and degradability                                      |  |
| <bis(2-ethoxyethyl) ether=""></bis(2-ethoxyethyl)>                      |  |
| Biodegradability:   | Result: Not readily biodegradable.   |
|   | Biodegradation: 0 %  |
|   | Exposure time: 28 d<br>Method: OECD Test Guideline 301F  |
|   | Method: OECD Test Guideline 301F   |



<p-butyrolactone>

Biodegradability:

Result: Readily biodegradable. Biodegradation: 77 % Exposure time: 14 d Method: OECD Test Guideline 301C

<(2-Methoxymethylethoxy)propanol>

Biodegradability:

Result: Readily biodegradable. Biodegradation: 96 % Exposure time: 28 d Method: OECD Test Guideline 301F

#### 12.3 Bioaccumulative potential

<Bis(2-ethoxyethyl) ether>

Partition coefficient: n-octanol/water: log Pow: 0.39

<q-butyrolactone>

Partition coefficient: n-octanol/water: log Pow: -0.566

<(2-Methoxymethylethoxy)propanol>

Partition coefficient: n-octanol/water: log Pow: 0.004

#### 12.4 Mobility in soil

1

No data available

12.5 Results of PBT and vPvB assessment

Not relevant

12.6 Other adverse effects

No data available

#### 13. DISPOSAL CONSIDERATIONS

| 3.1 Waste treatment methods |   |
|-----------------------------|---|
| Product:                    | Dispose of in accordance with local regulations.<br>According to the European Waste Catalogue, Waste Codes<br>are not product specific, but application specific.<br>Waste codes should be assigned by the user, preferably in<br>discussion with the waste disposal authorities. |
| Contaminated packaging:     | Dispose of as unused product.<br>Empty containers should be taken to an approved waste<br>handling site for recycling or disposal.<br>Do not burn, or use a cutting torch on, the empty drum.   |

#### 14. TRANSPORT INFORMATION

14.1 UN number

Not regulated as a dangerous good

- 14.2 UN proper shipping name Not regulated as a dangerous good
- 14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

- 14.5 Environmental hazards Not regulated as a dangerous good
- 14.6 Special precautions for user

Not applicable



14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable for product as supplied.

| 15. REGULATORY INFORMATION  |                |  |
|---|----------------|--|
| 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture                         |                |  |
| Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous        |                |  |
| chemicals:  | Not applicable |  |
| REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).:                                  | Not applicable |  |
| Regulation (EC) No 1005/2009 on substances that deplete the<br>ozone layer:   | Not applicable |  |
| Regulation (EC) No 850/2004 on persistent organic pollutants:   | Not applicable |  |
| Seveso II - Directive 2003/105/EC amending Council Directive<br>96/82/EC on the control of major-accident hazards involving |                |  |
| dangerous substances:   | Not applicable |  |
| 15.2 Chemical Safety Assessment   |                |  |

A Chemical Safety Assessment has not been carried out.

#### **16. OTHER INFORMATION**

Full text of H-Statements

H302: Harmful if swallowed.

H315:Causes skin irritation.

H318: Causes serious eye damage.

H336:May cause drowsiness or dizziness.

Full text of other abbreviations

| Acute Tox.:       | Acute toxicity.  |
|-------------------|--|
| Eye Dam.:         | Serious eye damage.  |
| STOT SE:          | Specific target organ toxicity - single exposure.  |
| 2000/39/EC:       | Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values |
| GB EH40:          | UK. EH40 WEL - Workplace Exposure Limits.  |
| 2000/39/EC / TWA: | Limit Value - eight hours.   |
| GB EH40 / TWA:    | Long-term exposure limit (8-hour TWA reference period).  |

Further information

Sources of key data used to compile the Safety Data Sheet:

Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.