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

1.1 Product identifier

Product name : WLK660055

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

Material uses : Industrial applications: Ink for use in a continuous ink jet process.

1.3 Details of the supplier of the safety data sheet

Website: www.wolke.com
Email: info@wolke.com

Videojet Technologies Europe B.V., P.O. Box 1, Strijkviertel 39, 3454 DeMeern, The Netherlands
Tel: +31 30 6 693 000  Fax: +31 30 6 693 060

Wolke Inks & Printers GmbH, Ostbahnstrasse 116, 91217 Hersbruck, Germany
Tel: +49 9151 81610  Fax: +49 9151 816156

Videojet Technologies U.K., Ltd., 4 & 5 Ermine Centre Lancaster Way, Huntingdon, Cambs, PE29 6XX, United Kingdom
Tel: 0870 240 5542 Fax: 0870 242 2835

1.4 Emergency telephone number

Emergency telephone number : Giftnotrufzentrale (Poison Control Center) Nürnberg
Prof.-Ernst-Nathan-Str. 1
90419 Nürnberg
+49 (0) 911 398 24 51

 SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Directive 1999/45/EC (DPD)

Classification : Xn; R21/22
Xi; R36

Human health hazards : Harmful in contact with skin and if swallowed. Irritating to eyes.

See Section 16 for the full text of the R-phrases declared above.

2.2 Label elements

Hazard symbol or symbols : Xn

Indication of danger : Harmful
Risk phrases : R21/22- Harmful in contact with skin and if swallowed.
R36- Irritating to eyes.
2.3 Other hazards

Other hazards which do not result in classification: None.

SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Substance/mixture</th>
<th>Identifiers</th>
<th>%</th>
<th>67/548/EEC</th>
<th>Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,3-dimethylimidazolidin-2-one</td>
<td>EC: 201-304-8, CAS: 80-73-9</td>
<td>40 - &lt;50</td>
<td>Xn; R21/22</td>
<td>Acute Tox. 4, H302, Acute Tox. 4, H312, Eye Irrit. 2, H319</td>
</tr>
<tr>
<td>propan-2-ol</td>
<td>EC: 200-661-7, CAS: 67-63-0, Index: 603-117-00-0</td>
<td>2 - &lt;5</td>
<td>F; R11, Xi; R36, R67</td>
<td>Flam. Liq. 2, H225, Eye Irrit. 2, H319, STOT SE 3, H336</td>
</tr>
</tbody>
</table>

4.1 Description of first aid measures

**Eye contact**: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

**Inhalation**: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. 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.

**Skin contact**: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Ingestion**: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Over-exposure signs/symptoms**

**Potential acute health effects**

Eye contact: Irritating to eyes.

Inhalation: Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact: Harmful in contact with skin.

Ingestion: Harmful if swallowed.
Eye contact: Adverse symptoms may include the following:
- irritation
- watering
- redness

Inhalation: No specific data.

Skin contact: No specific data.

Ingestion: No specific data.

4.3 Indication of any immediate medical attention and special treatment needed
Treat symptomatically. 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.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media: None known.

5.2 Special hazards arising from the substance or mixture
Hazard from the substance or mixture: In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products: Decomposition products may include the following materials:
- carbon dioxide
- carbon monoxide
- nitrogen oxides

5.3 Advice for firefighters
Special protective actions for fire-fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

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 Section 8 for additional information on hygiene measures.

6.2 Environmental precautions
Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up
Small spill: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
6.4 Reference to other sections
See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures: Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. 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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

Advice on general occupational hygiene: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities
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.

7.3 Specific end use(s)
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).

SECTION 8: Exposure controls/personal protection

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).

8.1 Control parameters

Occupational exposure limits

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Exposure limit values</th>
</tr>
</thead>
<tbody>
<tr>
<td>propan-2-ol</td>
<td>EH40/2005 WELs (United Kingdom (UK), 1/2012).</td>
</tr>
<tr>
<td></td>
<td>STEL: 1250 mg/m³ 15 minute(s).</td>
</tr>
<tr>
<td></td>
<td>STEL: 500 ppm 15 minute(s).</td>
</tr>
<tr>
<td></td>
<td>TWA: 999 mg/m³ 8 hour(s).</td>
</tr>
<tr>
<td></td>
<td>TWA: 400 ppm 8 hour(s).</td>
</tr>
</tbody>
</table>

Recommended monitoring procedures: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

Derived effect levels

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Type</th>
<th>Exposure</th>
<th>Value</th>
<th>Population</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>propan-2-ol</td>
<td>DNEL</td>
<td>Long term Inhalation</td>
<td>500 mg/m³</td>
<td>Workers</td>
<td>Systemic</td>
</tr>
</tbody>
</table>

PNEC Summary: Not available.
8.2 Exposure controls

Appropriate engineering controls: No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Hand protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Respiratory protection: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

**Appearance**

- Physical state: Liquid.
- Colour: Black.
- Odour: Not available.
- pH: Not applicable.
- Melting point/freezing point: May start to solidify at the following temperature: 8 °C. Weighted average: 0 °C.
- Initial boiling point and boiling range: Lowest known value: 83 °C. Weighted average: 162 °C.
- Flash point: Not applicable.
- Evaporation rate (butyl acetate = 1): Highest known value: 1.7. Weighted average: 0.5.
- Flammability (solid, gas): Not applicable. (Liquid)
- Upper/lower flammability or explosive limits: Not applicable.
- Vapour pressure: Highest known value: 33 mm Hg at 20°C. Weighted average: 11 mm Hg at 20°C.
- Vapour density: Lowest known value: <0.6. Highest known value: >2.1. (Air = 1)
- Relative density (Water = 1): 1.06
- Solubility(ies): Not available.
- Partition coefficient: n-octanol/water: Not available.
- Auto-ignition temperature: Not applicable.
- Decomposition temperature: Thermally stable.
- Viscosity: Not available.
Explosive properties: Not applicable. Not classified.
Oxidising properties: Not applicable. Not classified.

9.2 Other information
Volatility (w/w): 94 %.
VOC Volatility (w/w): 51 %.

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
The product is stable.

10.3 Possibility of hazardous reactions
Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid
None.

10.5 Incompatible materials
None.

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

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,3-dimethylimidazolidin-2-one</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>930 uL/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>190 uL/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LC50 Inhalation Gas.</td>
<td>Rat</td>
<td>16000 ppm</td>
<td>8 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>12800 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>5000 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

Conclusion/Summary: Harmful in contact with skin. Harmful if swallowed.

Irritation/Corrosion

Conclusion/Summary

Skin: No known significant effects or critical hazards.
Eyes: Irritating to eyes.
Respiratory: No known significant effects or critical hazards.

Sensitisation

Conclusion/Summary

Skin: No known significant effects or critical hazards.

Respiratory

Mutagenicity

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

Carcinogenicity

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

Reproductive toxicity

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

Aspiration hazard

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

Potential chronic health effects, Other

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

SECTION 12: Ecological information

12.1 Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>propan-2-ol</td>
<td>Acute LC50 1400000 ug/L</td>
<td>Marine water</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 4200000 ug/L</td>
<td>Fresh water</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Crustaceans - Crangon crangon</td>
<td>Fish - Rasbora heteromorpha - 1 to 3 cm</td>
<td></td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability

Conclusion/Summary: Not available.

12.3 Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>propan-2-ol</td>
<td>0.05</td>
<td>-</td>
<td>low</td>
</tr>
</tbody>
</table>

12.4 Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>): 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

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).

13.1 Waste treatment methods

Product

Methods of disposal: The generation of waste should be avoided or minimised wherever possible. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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.

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

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.

Special precautions: None.
SECTION 14: Transport information

<table>
<thead>
<tr>
<th></th>
<th>ADR/RID</th>
<th>ADN/ADNR</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.2 UN proper shipping name</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>14.3 Transport hazard class(es)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>14.4 Packing group</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>14.5 Environmental hazards</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
</tr>
<tr>
<td>14.6 Special precautions for user</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Additional information</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not available.

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)
REACH Status: In compliance.

Annex XIV - List of substances subject to authorisation
Substances of very high concern
None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles
Not applicable.

15.2 Chemical Safety Assessment
This product contains substances for which Chemical Safety Assessments are still required.

15.3 Other information

Tariff Code - harmonized system: 8443.99 Printing machinery used for printing by means of plates, cylinders and other printing components of heading 8442; other printers, copying machines and facsimile machines, whether or not combined; parts and accessories thereof: Other:
EU...90.00 Other.
USA...20.10

Heavy Metals: Total concentration: Pb, Hg, Cd, Cr(VI) < 100 ppm

Chemical Weapons Convention List
Schedule I Chemicals: Not listed
Schedule II Chemicals: Not listed
Schedule III Chemicals: Not listed
SECTION 16: Other information

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II - United Kingdom (UK)

![Indicates information that has changed from previously issued version.]

**Full text of abbreviated R phrases**
- R11- Highly flammable.
- R21/22- Harmful in contact with skin and if swallowed.
- R36- Irritating to eyes.
- R67- Vapours may cause drowsiness and dizziness.

**Full text of classifications [DSD/DPD]**
- F- Highly flammable
- Xn - Harmful
- Xi - Irritant

**Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

**Exposure Scenarios**

http://www.videojet.com/usa/materialsafetydatasheets