SAFETY DATA SHEET of:
Ink jet fixativesprays

Revision date: Wednesday, May 13, 2015

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

1.1 Product identifier:

Ink jet fixativesprays

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

Concentration in use: /

1.3 Details of the supplier of the safety data sheet:

GHIANT AEROSOLS NV
Industrieweg 7
B2340 Beerse
Phone: 014615460 — Fax: 014617525
E-mail: philip.nolten@ghiant.be — Website: http://www.ghiant.com/

1.4 Emergency telephone number:

003270245245

2 SECTION 2: Hazards identification:

2.1 Classification of the substance or mixture:

Classification of the substance or mixture in accordance with regulation (EU) 1272/2008:

EUH066  H222 Flam. Aerosol 1  H229  H336 STOT SE 3  H411 Aquatic Chronic 2

Classification of the substance or mixture in accordance with regulation 67/548/EC:

R12: Extremely flammable  R51/53: Dangerous to the environment  R66  R67

2.2 Label elements:

Symbols:
Signal word:
Danger

Hazard statements:

EUH066: Repeated exposure may cause skin dryness or cracking.
H222 Flam. Aerosol 1: Extremely flammable aerosol.
H229: Pressurised container: May burst if heated.
H336 STOT SE 3: May cause drowsiness or dizziness.
H411 Aquatic Chronic 2: Toxic to aquatic life with long lasting effects.

Precautionary statements:
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P251: Do not pierce or burn, even after use.
P273: Avoid release to the environment.
P312: Call a POISON CENTER or doctor/physician if you feel unwell.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.
P410+P412: Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Contains:
Pentane

2.3 Other hazards:
none

3 SECTION 3: Composition/information on ingredients:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Concentration</th>
<th>CAS number</th>
<th>EINECS</th>
<th>REACH Registration number</th>
<th>CLP Classification</th>
<th>R-Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropanol</td>
<td>5% - 15%</td>
<td>67-63-0</td>
<td>200-661-7</td>
<td>01-2119457558-25</td>
<td>H225 Flam. Liq. 2  H319 Eye Irrit. 2  H336 STOT SE 3</td>
<td>R11  R36  R67</td>
</tr>
<tr>
<td>Hydrocarbons, C9-12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)</td>
<td>5% - 15%</td>
<td>919-446-0</td>
<td>01-2119458049-33</td>
<td>EUH066  H226 Flam. Liq. 3  H304 Asp. Tox. 1  H336 STOT SE 3  H411 Aquatic Chronic 2</td>
<td>R10  R51/53  R65  R66  R67</td>
<td></td>
</tr>
</tbody>
</table>
4 SECTION 4: First aid measures:

4.1 Description of first aid measures:
Always ask medical advice as soon as possible should serious or continuous disturbances occur.

**Skin contact:** remove contaminated clothing, rinse with plenty of water, if necessary seek medical attention.

**Eye contact:** first prolonged rinsing with water (contact lenses to be removed if this is easily done) then take to physician.

**Ingestion:** rinse mouth, do not induce vomiting, take to hospital immediately.

**Inhalation:** let sit upright, fresh air, rest and take to hospital.

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

**Skin contact:** is absorbed, dry skin, redness

**Eye contact:** redness, pain, bad looking

**Ingestion:** diarrhoea, headache, abdominal cramps, sleepiness, vomiting

**Inhalation:** sore throat, cough, shortness of breath, headache

4.3 Indication of any immediate medical attention and special treatment needed:

For the full text of the H & R phrases mentioned in this section, see section 16.
SECTION 5: Fire-fighting measures:

5.1 Extinguishing media:
CO2, foam, powder, sprayed water

5.2 Special hazards arising from the substance or mixture:
none

5.3 Advice for fire-fighters:
Extinguishing agents to be avoided: none

SECTION 6: Accidental release measures:

6.1 Personal precautions, protective equipment and emergency procedures:
Do not walk into or touch spilled substances and avoid inhalation of fumes, smoke, dusts and vapours by staying up wind. Remove any contaminated clothing and used contaminated protective equipment and dispose of it safely.

6.2 Environmental precautions:
do not allow to flow into sewers or open water.

6.3 Methods and material for containment and cleaning up:
remove by using absorbent material.

6.4 Reference to other sections:
for further information check sections 8 & 13.

SECTION 7: Handling and storage:

7.1 Precautions for safe handling:
handle with care to avoid spillage.

7.2 Conditions for safe storage, including any incompatibilities:
keep in a sealed container in a closed, frost-free, ventilated room.

7.3 Specific end use(s):
/

SECTION 8: Exposure controls/personal protection:

8.1 Control parameters:
Listing of the hazardous ingredients in section 3, of which the TLV value is known
n-Butane (<0.01% Butadiene -1,3) 1,928 mg/m³, Propane 1,800 mg/m³, Pentane 1,796 mg/m³, Isopropanol 997 mg/m³, Hydrocarbons, C7-C9, n-alkanes, iso-alkanes, cyclic 903 mg/m³, Hydrocarbons, C9-12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) 533 mg/m³

8.2 Exposure controls:

<table>
<thead>
<tr>
<th>Protection</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation protection</td>
<td>if necessary, use an air-purifying face mask in case of respiratory hazards.</td>
</tr>
<tr>
<td>Skin protection</td>
<td>handling with nitril-gloves (EN 374). Breakthrough time: &gt;480’. Material thickness: 0.35 mm. Take of the gloves properly without touching the outside with your bare hands. The manufacturer of the protective gloves has to be consulted about the suitability for a specific work station. Wash and dry your hands.</td>
</tr>
<tr>
<td>Eye protection</td>
<td>keep an eye-rinse bottle within reach. Tight-fitting safety goggles. Wear a face shield and protective suit in case of exceptional processing problems.</td>
</tr>
<tr>
<td>Other protection</td>
<td>impermeable clothing. The type of protective equipment depends on the concentration and amount of hazardous substances at the work station in question.</td>
</tr>
</tbody>
</table>

9 SECTION 9: Physical and chemical properties:

9.1 Information on basic physical and chemical properties:

- Melting point/melting range: /
- Boiling point/Boiling range: -140 °C — 192 °C
- pH: /
- pH 1% diluted in water: /
- Vapour pressure/20°C, #: 853 000 Pa
- Vapour density: not applicable
- Relative density, 20°C: 0.670 kg/l
- Appearance/20°C: liquid
- Flash point: -40 °C
- Flammability (solid, gas): not applicable
- Auto-ignition temperature: 200 °C
- Upper flammability or explosive limit, (Vol %): 11.000 %
- Lower flammability or explosive limit, (Vol %): 0.700 %
- Explosive properties: not applicable
- Oxidising properties: not applicable
- Decomposition temperature: /
- Solubility in water: not soluble
- Partition coefficient: n-octanol/water: not applicable
- Odour: characteristic
- Odour threshold: not applicable
- Dynamic viscosity, 20°C: 1 mPa.s
- Kinematic viscosity, 20°C: 1 mm²/s
- Evaporation rate (n-BuAc = 1): 6.000

9.2 Other information:
Volatile organic component (VOC): 95.29 %
Volatile organic component (VOC): 587.976 g/l

10 SECTION 10: Stability and reactivity:

10.1 Reactivity:
stable under normal conditions.

10.2 Chemical stability:
extremely high or low temperatures.

10.3 Possibility of hazardous reactions:
none

10.4 Conditions to avoid:
protect from sunlight and do not expose to temperatures exceeding + 50°C.

10.5 Incompatible materials:
keep away from sources of ignition

10.6 Hazardous decomposition products:
doesn’t decompose with normal use

11 SECTION 11: Toxicological information:

11.1 Information on toxicological effects:
About the preparation itself: No data available
General information: See ingredients under section 3
Calculated acute toxicity, LD50 oral rat: /
Calculated acute toxicity, LD50 dermal rat: /

12 SECTION 12: Ecological information:

12.1 Toxicity:
No data available

12.2 Persistence and degradability:
No data available

12.3 Bioaccumulative potential:
No data available

12.4 Mobility in soil:
Water hazard class, WGK: 2
Solubility in water: not soluble

12.5 Results of PBT and vPvB assessment:
No data available

12.6 Other adverse effects:
No data available

13 SECTION 13: Disposal considerations:

13.1 Waste treatment methods:
Draining into the sewers is not permitted. Removal should be carried out by licensed services. Possible restrictive regulations by local authority should always be adhered to.

14 SECTION 14: Transport information:

14.1 UN number:
1950

14.2 UN proper shipping name:
UN 1950 Aerosols, flammable, 5F, (D)

14.3 Transport hazard class(es):
Class(es): 5F
Identification number of the hazard: not applicable

14.4 Packing group:
not applicable

14.5 Environmental hazards:
environmentally hazardous

14.6 Special precautions for user:
Hazard characteristics: Risk of fire. Risk of explosion. Containments may explode when heated.
Additional guidance: Take cover. Keep out of low areas.

15 SECTION 15: Regulatory information:
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

Water hazard class, WGK: 2
Volatile organic component (VOC): 95.291 %
Volatile organic component (VOC): 587.976 g/l
Composition by regulation (EC) 648/2004: Aliphatic hydrocarbons > 30%, Aromatic hydrocarbons 5% - 15%

15.2 Chemical Safety Assessment:

No data available

16 SECTION 16: Other information:

Legend to abbreviations used in the safety data sheet:

Nr.: number
CAS: Chemical Abstracts Service
EINECS: European INventory of Existing Commercial chemical Substances
WGK: Water hazard class
WGK 1: slightly hazardous for water
WGK 2: hazardous for water
WGK3: extremely hazardous for water
ADR: Accord européen relatif au transport international des marchandises Dangereuses par Route
TLV: Threshold Limit Value
PTB: persistent, toxic, bioaccumulative
vPvB: very persistent and very bioaccumulative substances
CLP: Classification, Labelling and Packaging of chemicals
DPD: Dangerous Preparations Directive

Legend to the R & H Phrases used in the safety data sheet:


Reason of revision, changes of following items:

Sections: 2.1, 2.2, 3, 4.1, 4.2, 16

MSDS reference number:

ECM-100657,01

This safety information sheet has been compiled in accordance with annex II/A of the regulation (EU) No 453/2010. Classification has been calculated in accordance with the European directive 67/548/EWG, 1999/45/EC and regulation.
1272/2008 with their respective amendments. It has been compiled with the utmost care. We cannot, however, accept responsibility for damage, of any kind, that may be caused by using these data or the product concerned. To use this preparation for an experiment or a new application, the user must carry out a material suitability and safety study himself.