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

1.1. Product identifier

- **Product form**: Mixtures
- **Product name**: NS312 Tyvek & Styrene Reducer
- **Product code**: N665 S312

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

1.2.1. Relevant identified uses

- **Main use category**: Professional use
- **Use of the substance/mixture**: Screen Reducer

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

GL Specialized Inks (Pty) Ltd
8 Hawthorne Place
Mahogany Ridge
Westmead
Durban
Telephone: +27 (0)31 700 6455
Fax: +27 (0)31 700 6187

After hours:
082 451 6588 (Jay)
082 780 8837 (Julie)

www.gl-inks.com
jay@gl-inks.com

1.4. Emergency telephone number

No additional information available

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

- Flammable liquids, Category 3: H226
- Serious eye damage/eye irritation, Category 2: H319

Full text of H statements: see section 16

**Adverse physicochemical, human health and environmental effects**

Flammable liquid and vapour. Causes serious eye irritation.

2.2. Label elements

**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

- **Hazard pictograms (CLP)**: GHS02, GHS07

- **Signal word (CLP)**: Warning

- **Hazard statements (CLP)**: H226 - Flammable liquid and vapour
- H319 - Causes serious eye irritation

- **Precautionary statements (CLP)**: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
- P280 - Wear eye protection, protective clothing, protective gloves
- P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337+P313 - If eye irritation persists: Get medical advice/attention
P403+P235 - Store in a well-ventilated place. Keep cool
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards
No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-HYDROXY-4-METHYLPENTAN-2-ONE</td>
<td>(CAS-No.) 123-42-2</td>
<td>&gt;= 80</td>
<td>Eye Irrit. 2, H319</td>
</tr>
<tr>
<td></td>
<td>(EC-No.) 204-626-7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(EC Index-No.) 603-016-00-1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Specific concentration limits:

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>Specific concentration limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-HYDROXY-4-METHYLPENTAN-2-ONE</td>
<td>(CAS-No.) 123-42-2</td>
<td>(C &gt;= 10) Eye Irrit. 2, H319</td>
</tr>
<tr>
<td></td>
<td>(EC-No.) 204-626-7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(EC Index-No.) 603-016-00-1</td>
<td></td>
</tr>
</tbody>
</table>

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after eye contact : Eye irritation.

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

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media


5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable liquid and vapour.

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up: Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections
For further information refer to section 13.

SECTION 7: Handling and storage
7.1. Precautions for safe handling
Precautions for safe handling: Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Avoid contact with skin and eyes.
Hygiene measures: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities
Technical measures: Ground/bond container and receiving equipment.
Storage conditions: Store in a well-ventilated place. Keep cool. Keep container tightly closed.

7.3. Specific end use(s)
No additional information available

SECTION 8: Exposure controls/personal protection
8.1. Control parameters

<table>
<thead>
<tr>
<th>Local name</th>
<th>Control parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-HYDROXY-4-METHYL-PENTAN-2-ONE (123-42-2)</td>
<td>United Kingdom WEL TWA (mg/m³) 241 mg/m³ United Kingdom WEL TWA (ppm) 50 ppm United Kingdom WEL STEL (mg/m³) 362 mg/m³ United Kingdom WEL STEL (ppm) 75 ppm</td>
</tr>
</tbody>
</table>

8.2. Exposure controls
Appropriate engineering controls:
Ensure good ventilation of the work station.

Personal protective equipment:

Hand protection:
Protective gloves

Eye protection:
Safety glasses

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment
Environmental exposure controls:
Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Colourless, light yellow.</td>
</tr>
<tr>
<td>Odour</td>
<td>pleasant, slight.</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>0.12 4-Hydroxy-4-methylpentan-2-one</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>≥ 164.45 °C 4-Hydroxy-4-methylpentan-2-one</td>
</tr>
<tr>
<td>Flash point</td>
<td>57.85 - 61.11 °C 4-Hydroxy-4-methylpentan-2-one</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>≥ 602.85 °C</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Combustible liquid</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>0.1 kPa 4-Hydroxy-4-methylpentan-2-one</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>≤ 4 4-Hydroxy-4-methylpentan-2-one</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>0.931 g/cm³ 4-Hydroxy-4-methylpentan-2-one</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower explosive limit (LEL)</td>
<td>1.8 vol % 4-Hydroxy-4-methylpentan-2-one</td>
</tr>
<tr>
<td>Upper explosive limit (UEL)</td>
<td>6.9 vol % 4-Hydroxy-4-methylpentan-2-one</td>
</tr>
</tbody>
</table>

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
Flammable liquid and vapour.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid
Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials
No additional information available

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

<table>
<thead>
<tr>
<th>Effect</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>Not classified</td>
</tr>
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</table>

4-HYDROXY-4-METHYLPENTAN-2-ONE (123-42-2)

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral</td>
<td>4000 mg/kg bodyweight</td>
</tr>
<tr>
<td>LD50 dermal</td>
<td>13630 mg/kg bodyweight</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Causes serious eye irritation.</td>
</tr>
</tbody>
</table>
NS312 Tyvek & Styrene Reducer
Safety Data Sheet
In accordance with SANS 10234:2008

Respiratory or skin sensitisation: Not classified
Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified
Reproductive toxicity: Not classified
STOT-single exposure: Not classified
STOT-repeated exposure: Not classified
Aspiration hazard: Not classified

SECTION 12: Ecological information

12.1. Toxicity
Ecology - general: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

4-HYDROXY-4-METHYLPENTAN-2-ONE (123-42-2)

<table>
<thead>
<tr>
<th>LC50 fish 1</th>
<th>EC50 other aquatic organisms 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>420 mg/l</td>
<td>9000 mg/l EC50 waterflea (48 h)</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability
No additional information available

12.3. Bioaccumulative potential
No additional information available

12.4. Mobility in soil
No additional information available

12.5. Results of PBT and vPvB assessment
No additional information available

12.6. Other adverse effects
No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Waste treatment methods: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Additional information: Flammable vapours may accumulate in the container.
Ecology - waste materials: Avoid release to the environment.

SECTION 14: Transport information
In accordance with ADR / RID / IMDG / IATA / ADN

<table>
<thead>
<tr>
<th>ADR</th>
<th>IMDG</th>
<th>IATA</th>
<th>ADN</th>
<th>RID</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1. UN number</td>
<td>1210</td>
<td>1210</td>
<td>1210</td>
<td>1210</td>
</tr>
<tr>
<td>14.2. UN proper shipping name</td>
<td>PRINTING INK / PRINTING INK RELATED MATERIAL (4-HYDROXY-4-METHYLPENTAN-2-ONE)</td>
<td>PRINTING INK RELATED MATERIAL (4-HYDROXY-4-METHYLPENTAN-2-ONE)</td>
<td>Printing ink related material (4-HYDROXY-4-METHYLPENTAN-2-ONE)</td>
<td>PRINTING INK RELATED MATERIAL (4-HYDROXY-4-METHYLPENTAN-2-ONE)</td>
</tr>
<tr>
<td>Transport document description</td>
<td>UN 1210 PRINTING INK / PRINTING INK RELATED MATERIAL (4-HYDROXY-4-METHYLPENTAN-2-ONE), 3, III, (D/E)</td>
<td>UN 1210 PRINTING INK RELATED MATERIAL (4-HYDROXY-4-METHYLPENTAN-2-ONE), 3, III</td>
<td>UN 1210 Printing ink related material (4-HYDROXY-4-METHYLPENTAN-2-ONE), 3, III</td>
<td>UN 1210 PRINTING INK RELATED MATERIAL (4-HYDROXY-4-METHYLPENTAN-2-ONE), 3, III</td>
</tr>
<tr>
<td>14.3. Transport hazard class(es)</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
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</tbody>
</table>
NS312 Tyvek & Styrene Reducer
Safety Data Sheet

In accordance with SANS 10234:2008

**14.4. Packing group**

<table>
<thead>
<tr>
<th>ADR</th>
<th>IMDG</th>
<th>IATA</th>
<th>ADN</th>
<th>RID</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td>III</td>
<td>III</td>
<td>III</td>
<td>III</td>
</tr>
</tbody>
</table>

**14.5. Environmental hazards**

<table>
<thead>
<tr>
<th></th>
<th>Dangerous for the environment : No</th>
<th>Dangerous for the environment : No</th>
<th>Dangerous for the environment : No</th>
<th>Dangerous for the environment : No</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMDG</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IATA</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>ADN</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RID</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

No supplementary information available

**14.6. Special precautions for user**

- **Overland transport**
  - Classification code (ADR) : F1
  - Special provisions (ADR) : 163, 640E, 367
  - Limited quantities (ADR) : 5L
  - Excepted quantities (ADR) : E1
  - Packing instructions (ADR) : P001, IBC03, LP01, R001
  - Special packing provisions (ADR) : PP1
  - Mixed packing provisions (ADR) : MP19
  - Portable tank and bulk container instructions (ADR) : T2
  - Portable tank and bulk container special provisions (ADR) : TP1
  - Tank code (ADR) : LGBF
  - Vehicle for tank carriage : FL
  - Transport category (ADR) : 3
  - Special provisions for carriage - Packages (ADR) : V12
  - Special provisions for carriage - Operation (ADR) : S2
  - Hazard identification number (Keimler No.) : 30
  - Orange plates :

  ![Orange plates](image)

  - Tunnel restriction code (ADR) : D/E

- **Transport by sea**
  - Special provisions (IMDG) : 163, 223, 955, 367
  - Limited quantities (IMDG) : 5L
  - Excepted quantities (IMDG) : E1
  - Packing instructions (IMDG) : P001, LP01
  - Special packing provisions (IMDG) : PP1
  - IBC packing instructions (IMDG) : IBC03
  - Tank instructions (IMDG) : T2
  - Tank special provisions (IMDG) : TP1
  - EmS-No. (Fire) : F-E
  - EmS-No. (Spillage) : S-D
  - Stowage category (IMDG) : A
  - Properties and observations (IMDG) : Fluid or viscous liquid containing colouring matter in solution or suspension. Miscibility with water depends upon the solvent.

- **Air transport**
  - PCA Excepted quantities (IATA) : E1
  - PCA Limited quantities (IATA) : Y344
  - PCA limited quantity max net quantity (IATA) : 10L
  - PCA packing instructions (IATA) : 355
  - PCA max net quantity (IATA) : 60L
  - CAO packing instructions (IATA) : 366
  - CAO max net quantity (IATA) : 220L
  - Special provisions (IATA) : A3, A72, A192
NS312 Tyvek & Styrene Reducer
Safety Data Sheet

In accordance with SANS 10234:2008

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

15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

<table>
<thead>
<tr>
<th>3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008</th>
<th>4-HYDROXY-4-METHYL-PENTAN-2-ONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3(a) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F</td>
<td>NS312 Tyvek &amp; Styrene Reducer</td>
</tr>
<tr>
<td>3(b) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10</td>
<td>NS312 Tyvek &amp; Styrene Reducer - 4-HYDROXY-4-METHYL-PENTAN-2-ONE</td>
</tr>
</tbody>
</table>

Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances

15.1.2. National regulations

Germany

VwVwS Annex reference : Water hazard class (WGK) 1, low hazard to waters (Classification according to VwVwS, Annex 4)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-list van kankerverwekkende stoffen : None of the components are listed

SZW-list van mutagene stoffen : None of the components are listed

2017/03/06
EN (English)
### NS312 Tyvek & Styrene Reducer

Safety Data Sheet

In accordance with SANS 10234:2008

<table>
<thead>
<tr>
<th>Safety Data Sheet</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>None of the components are listed</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Safety Data Sheet</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>None of the components are listed</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Safety Data Sheet</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>None of the components are listed</td>
<td></td>
</tr>
</tbody>
</table>

### Denmark

- **Class for fire hazard**: Class III-1
- **Store unit**: 50 liter
- **Classification remarks**: Flammable according to the Danish Ministry of Justice; Emergency management guidelines for the storage of flammable liquids must be followed

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

### SECTION 16: Other information

**Full text of H- and EUH-statements:**

<table>
<thead>
<tr>
<th>H- and EUH-statements</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Irrit. 2</td>
<td>Serious eye damage/eye irritation, Category 2</td>
</tr>
<tr>
<td>H226</td>
<td>Flammable liquid and vapour</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
</tbody>
</table>

**SDS EU (REACH Annex II)**

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.