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

1.1. Product identifier

Product form: Mixture
Physical state: Liquid
Product name: Gelest® UtenSil™ Primer P1
Product code: PP1-USP1
Formula: C6H14O3Si
Synonyms: ALLYLTRIMETHOXYSILANE in heptane; UtenSil™ Primer P1
Chemical family: ORGANOMETHOXYSILANE/HYDROCARBON BLEND

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

1.2.1. Relevant identified uses
Use of the substance/mixture: Chemical intermediate

1.2.2. Uses advised against
No additional information available

1.3. Details of the supplier of the safety data sheet

GELEST, INC.
11 East Steel Road
Morrisville, PA 19067
USA
T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST
info@gelest.com - www.gelest.com

GELEST INC.
Fritz-Klatte-Strasse 8
65933 Frankfurt
Germany
T +49 (0) 69 3535106-500 - F +49 (0) 69 3535106-501 - (M-F): 8:00 AM - 4:00 PM
info@gelestdc.com - www.gelestdc.com

1.4. Emergency telephone number
Emergency number: CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Flammable liquids, Category 2
Skin corrosion/irritation, Category 2
Specific target organ toxicity — Single exposure, Category 3, Narcosis
Aspiration hazard, Category 1
Hazardous to the aquatic environment — Acute Hazard, Category 1
Hazardous to the aquatic environment — Chronic Hazard, Category 1

Full text of H statements: see section 16

Adverse physicochemical, human health and environmental effects
No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]
Hazard pictograms (CLP):

![GHS02](fire)
![GHS07](exclamation)
![GHS08](person)
![GHS09](target)
Signal word (CLP) : Danger
Hazardous ingredients : n-Heptane
Hazard statements (CLP) : H225 - Highly flammable liquid and vapour.
H304 - May be fatal if swallowed and enters airways.
H315 - Causes skin irritation.
H336 - May cause drowsiness or dizziness.
H410 - Very toxic to aquatic life with long lasting effects.
Precautionary statements (CLP) : P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P240 - Ground/bond container and receiving equipment.
P261 - Avoid breathing vapours.
P264 - Wash hands thoroughly after handling.
P312 - Call a POISON CENTER if you feel unwell.

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>n-Heptane</td>
<td>(CAS-No.) 142-82-5 (EC-No.) 205-563-8 (EC Index-No.) 601-008-00-2</td>
<td>&gt; 90</td>
<td>Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410</td>
</tr>
<tr>
<td>Allyltrimethoxysilane</td>
<td>(CAS-No.) 2551-83-9 (EC-No.) 219-855-8</td>
<td>&lt; 10</td>
<td>Flam. Liq. 3, H226 Eye Irrit. 2, H319</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 general : Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.
First-aid measures after skin contact : Wash with plenty of water/…. Get medical advice/attention.
First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Immediately call a POISON CENTER/doctor.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/effects after inhalation : May cause drowsiness or dizziness. May cause irritation to the respiratory tract. Heptane can cause vertigo, incoordination and stupor at 5000ppm. Vapor inhalation of heptane may lead to impairment of coordination mental alertness, and reaction times, leading to accident proneness.
Symptoms/effects after skin contact : Causes skin irritation.
Symptoms/effects after eye contact : May cause eye irritation.
Symptoms/effects after ingestion : May be fatal if swallowed and enters airways.
Chronic symptoms : On contact with water this compound liberates methanol which is known to have a chronic effect on the central nervous system. Methanol may effect the central nervous system resulting in persistent or recurring headaches or impaired vision.

4.3. Indication of any immediate medical attention and special treatment needed
NOTE TO PHYSICIAN: This product reacts with water in the acid contents of the stomach to form methanol. The combination of visual disturbances, metabolic acidosis and fomic acid in urine is evidence of methanol poisoning. The therapeutic intravenous administration of ethanol (10 mls/hour) allows methanol to be preferentially oxidized and reduces production of methanol metabolites. Acidosis must be treated with
intravenous administration of sodium bicarbonate and methanol elimination may be increased by hemodialysis, as indicated. Treatment should be based on blood methanol levels and acid-base balance.

SECTION 5: Firefighting measures

5.1. Extinguishing media


Unsuitable extinguishing media: Do not use straight streams.

5.2. Special hazards arising from the substance or mixture

Fire hazard: Highly flammable liquid and vapour. Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

Explosion hazard: May form flammable/explosive vapour-air mixture.

5.3. Advice for firefighters

Firefighting instructions: Exercise caution when fighting any chemical fire. Use water spray to cool exposed surfaces.

Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection. Avoid all eye and skin contact and do not breathe vapour and mist.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Eliminate every possible source of ignition. Use special care to avoid static electric charges.

6.1.1. For non-emergency personnel

Protective equipment: Wear protective equipment as described in Section 8.

Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment: Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up: Clean up any spills as soon as possible, using an absorbent material to collect it. Sweep or shovel spills into appropriate container for disposal. Collect spillage. Use only non-sparking tools.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed: Handle empty containers with care because residual vapours are flammable. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Precautions for safe handling: Avoid all eye and skin contact and do not breathe vapour and mist. Ground/bond container and receiving equipment. Take precautionary measures against static discharge. Use only outdoors or in a well-ventilated area. Use only non-sparking tools.

Hygiene measures: Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures: Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof electrical equipment.

Storage conditions: Keep container tightly closed.

Incompatible materials: Moisture, Water.

Storage area: Store in a well-ventilated place. Store away from heat.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>n-Heptane (142-82-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU</td>
</tr>
<tr>
<td>IOELV TWA (mg/m³)</td>
</tr>
<tr>
<td>EU</td>
</tr>
<tr>
<td>IOELV TWA (ppm)</td>
</tr>
<tr>
<td>Country</td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td>Austria</td>
</tr>
<tr>
<td>Belgium</td>
</tr>
<tr>
<td>Bulgaria</td>
</tr>
<tr>
<td>Cyprus</td>
</tr>
<tr>
<td>France</td>
</tr>
<tr>
<td>Greece</td>
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<tr>
<td>Italy</td>
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<tr>
<td>Latvia</td>
</tr>
<tr>
<td>United Kingdom</td>
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<tr>
<td>Czech Republic</td>
</tr>
<tr>
<td>Denmark</td>
</tr>
<tr>
<td>Finland</td>
</tr>
<tr>
<td>Finland</td>
</tr>
<tr>
<td>USA</td>
</tr>
<tr>
<td>USA</td>
</tr>
</tbody>
</table>

**n-Heptane (142-82-5)**
8.2. Exposure controls

Appropriate engineering controls:
Provide local exhaust or general room ventilation.

Personal protective equipment:
Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Hand protection:
Neoprene or nitrile rubber gloves

Eye protection:
Chemical goggles. Contact lenses should not be worn
**Skin and body protection:**
Wear suitable protective clothing

**Respiratory protection:**
Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified organic vapor (black cartridge) respirator.

### SECTION 9: 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>Appearance</td>
<td>Clear liquid</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>(mixture)</td>
</tr>
<tr>
<td>Colour</td>
<td>Colourless</td>
</tr>
<tr>
<td>Odour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Refractive index</td>
<td>No additional information available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>&lt; 0 °C</td>
</tr>
<tr>
<td>Boiling point</td>
<td>98 °C - initial (heptane)</td>
</tr>
<tr>
<td>Flash point</td>
<td>-4 °C</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>204 °C (heptane)</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Highly flammable liquid and vapour.</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>40 mm Hg @ 22°C (heptane)</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>3.45 (heptane)</td>
</tr>
<tr>
<td>Relative density</td>
<td>0.7</td>
</tr>
<tr>
<td>% Volatiles</td>
<td>&gt; 95 %</td>
</tr>
<tr>
<td>Solubility</td>
<td>Insoluble in water</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Kow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>1 - 2 cSt</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>Explosive limits</td>
<td>1 - 6.7 vol % (lower; upper: heptane)</td>
</tr>
</tbody>
</table>

**SECTION 10: Stability and reactivity**

10.1. Reactivity
No additional information available

10.2. Chemical stability
Stable in sealed containers.

10.3. Possibility of hazardous reactions
Reacts with water and moisture in air, liberating methanol.

10.4. Conditions to avoid
Heat. Sparks. Open flame.

10.5. Incompatible materials
Moisture. Water.

10.6. Hazardous decomposition products
Methanol. Organic acid vapors.

### SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity: Not classified
**n-Heptane (142-82-5)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral mouse</td>
<td>5000 mg/kg</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>3000 mg/kg</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>103 g/m³ (Exposure time: 4 h)</td>
</tr>
<tr>
<td>Toxicity information</td>
<td>1000 ppm Inhalation (heptane)-human, TCLo</td>
</tr>
</tbody>
</table>

**Skin corrosion/irritation:**
Causes skin irritation.

**Serious eye damage/irritation:**
Not classified

**Respiratory or skin sensitisation:**
Not classified

**Germ cell mutagenicity:**
Not classified

**Reproductive toxicity:**
Not classified

**Respiratory or skin sensitisation:**
Not classified

**Germ cell mutagenicity:**
Not classified

**Reproductive toxicity:**
Not classified

**STOT - single exposure:**
May cause drowsiness or dizziness.

**STOT - repeated exposure:**
Not classified

**Aspiration hazard:**
May be fatal if swallowed and enters airways.

**Symptoms/effects after inhalation:**
May cause drowsiness or dizziness. May cause irritation to the respiratory tract. Heptane can cause vertigo, incoordination and stupor at 5000ppm. Vapor inhalation of heptane may lead to impairment of coordination mental alertness, and reaction times, leading to accident proneness.

**Symptoms/effects after skin contact:**
Causes skin irritation.

**Symptoms/effects after eye contact:**
May cause eye irritation.

**Symptoms/effects after ingestion:**
May be fatal if swallowed and enters airways.

**Chronic symptoms:**
On contact with water this compound liberates methanol which is known to have a chronic effect on the central nervous system. Methanol may effect the central nervous system resulting in persistent or recurring headaches or impaired vision.

**Reason for classification:**
Expert judgment

### SECTION 12: Ecological information

**12.1. Toxicity**

Ecology - general: Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

Acute aquatic toxicity: Very toxic to aquatic life.

Chronic aquatic toxicity: Very toxic to aquatic life with long lasting effects.

**n-Heptane (142-82-5)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>375 mg/l (Exposure time: 96 h - Species: Cichlid fish)</td>
</tr>
</tbody>
</table>

**12.2. Persistence and degradability**

No additional information available

**12.3. Bioaccumulative potential**

**n-Heptane (142-82-5)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Pow</td>
<td>4.66</td>
</tr>
</tbody>
</table>

**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**

Sewage disposal recommendations: Do not dispose of waste into sewer.

Product/Packaging disposal recommendations: May be incinerated. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.

Additional information: Handle empty containers with care because residual vapours are flammable.

Ecology - waste materials: Avoid release to the environment.

### SECTION 14: Transport information

**14.1. UN number**

In accordance with ADR / RID / IMDG / IATA / ADN
14.1. UN number

UN-No. (ADR) : 1139
UN-No. (IMDG) : 1139
UN-No. (IATA) : 1139
UN-No. (ADN) : 1139
UN-No. (RID) : 1139

14.2. UN proper shipping name

Proper Shipping Name (ADR) : COATING SOLUTION
Proper Shipping Name (IMDG) : COATING SOLUTION
Proper Shipping Name (IATA) : Coating solution
Proper Shipping Name (ADN) : COATING SOLUTION
Proper Shipping Name (RID) : COATING SOLUTION

Transport document description (ADR) : UN 1139 COATING SOLUTION (ALLYLTRIMETHOXYSILANE in heptane), 3, II, (D/E), ENVIRONMENTALLY HAZARDOUS
Transport document description (IMDG) : UN 1139 COATING SOLUTION (ALLYLTRIMETHOXYSILANE in heptane), 3, II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
Transport document description (IATA) : UN 1139 Coating solution (ALLYLTRIMETHOXYSILANE in heptane), 3, II, ENVIRONMENTALLY HAZARDOUS
Transport document description (ADN) : UN 1139 COATING SOLUTION (ALLYLTRIMETHOXYSILANE in heptane), 3, II, ENVIRONMENTALLY HAZARDOUS
Transport document description (RID) : UN 1139 COATING SOLUTION (ALLYLTRIMETHOXYSILANE in heptane), 3, II, ENVIRONMENTALLY HAZARDOUS

14.3. Transport hazard class(es)

ADR
Transport hazard class(es) (ADR) : 3
Danger labels (ADR) :

IMDG
Transport hazard class(es) (IMDG) : 3
Danger labels (IMDG) :

IATA
Transport hazard class(es) (IATA) : 3
Hazard labels (IATA) :

ADN
Transport hazard class(es) (ADN) : 3
Danger labels (ADN) :
RID
Transport hazard class(es) (RID) : 3
Danger labels (RID) : 3

14.4. Packing group
Packing group (ADR) : II
Packing group (IMDG) : II
Packing group (IATA) : II
Packing group (ADN) : II
Packing group (RID) : II

14.5. Environmental hazards
Dangerous for the environment : Yes
Marine pollutant : Yes
Other information : No supplementary information available

14.6. Special precautions for user
- Overland transport
Classification code (ADR) : F1
Special provisions (ADR) : 640C
Limited quantities (ADR) : 5l
Excepted quantities (ADR) : E2
Packing instructions (ADR) : P001
Mixed packing provisions (ADR) : MP19
Portable tank and bulk container instructions (ADR) : T4
Portable tank and bulk container special provisions (ADR) : TP1, TP8
Tank code (ADR) : L1.5BN
Vehicle for tank carriage : FL
Transport category (ADR) : 2
Special provisions for carriage - Operation (ADR) : S2, S20
Hazard identification number (Kemler No.) : 33
Orange plates :

Tunnel restriction code (ADR) : D/E

- Transport by sea
Limited quantities (IMDG) : 5 L
Excepted quantities (IMDG) : E2
Packing instructions (IMDG) : P001
IBC packing instructions (IMDG) : IBC02
Tank instructions (IMDG) : T4
Tank special provisions (IMDG) : TP1, TP8
EmS-No. (Fire) : F-E
EmS-No. (Spillage) : S-E
Gelest® UtenSil™ Primer P1
Safety Data Sheet

Stowage category (IMDG) : B
Properties and observations (IMDG) : Miscibility with water depends upon the composition.

- Air transport
PCA Excepted quantities (IATA) : E2
PCA Limited quantities (IATA) : Y341
PCA limited quantity max net quantity (IATA) : 1L
PCA packing instructions (IATA) : 353
PCA max net quantity (IATA) : 5L
CAO packing instructions (IATA) : 364
CAO max net quantity (IATA) : 60L
Special provisions (IATA) : A3
ERG code (IATA) : 3L

- Inland waterway transport
Classification code (ADN) : F1
Special provisions (ADN) : 640C
Limited quantities (ADN) : 5 L
Excepted quantities (ADN) : E2
Equipment required (ADN) : PP, EX, A
Ventilation (ADN) : VE01
Number of blue cones/lights (ADN) : 1

- Rail transport
Classification code (RID) : F1
Special provisions (RID) : 640C
Limited quantities (RID) : 5L
Excepted quantities (RID) : E2
Packing instructions (RID) : P001
Mixed packing provisions (RID) : MP19
Portable tank and bulk container instructions (RID) : T4

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
Contains no REACH substances with Annex XVII restrictions
Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances
Contains no REACH Annex XIV substances

% Volatiles : > 95 %

15.1.2. National regulations

Germany
Reference to AwSV : Water hazard class (WGK) 3, Highly hazardous to water (Classification according to AwSV, Annex 1)
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV

Netherlands

SZW-lijst van kankerverwekkende stoffen: None of the components are listed
SZW-lijst van mutagene stoffen: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling: None of the components are listed

Denmark

Classification remarks: Emergency management guidelines for the storage of flammable liquids must be followed
Danish National Regulations: Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Abbreviations and acronyms:

<table>
<thead>
<tr>
<th>Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor</th>
</tr>
</thead>
</table>

Other information: Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:

Aquatic Acute 1: Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment — Chronic Hazard, Category 1
Asp. Tox. 1: Aspiration hazard, Category 1
Eye Irrit. 2: Serious eye damage/eye irritation, Category 2
Flam. Liq. 2: Flammable liquids, Category 2
Flam. Liq. 3: Flammable liquids, Category 3
Skin Irrit. 2: Skin corrosion/irritation, Category 2
STOT SE 3: Specific target organ toxicity — Single exposure, Category 3, Narcosis
H225: Highly flammable liquid and vapour.
H226: Flammable liquid and vapour.
H304: May be fatal if swallowed and enters airways.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H336: May cause drowsiness or dizziness.
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.

SDS EU (REACH Annex II) - Custom

The information contained in this document has been gathered from reference materials and/or Gelest, Inc. test data and is to the best knowledge and belief of Gelest, Inc. accurate and reliable. Such information is offered solely for your consideration, investigation and verification. It is not suggested or guaranteed that the hazard precautions or procedures described are the only ones which exist. Gelest, Inc. makes no warranties, express or implied, with respect to the use of such information and assumes no responsibility therefore. Information on this safety data sheet is not intended to constitute a basis for product specifications.

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### UtenSil® Primer P1
#### Adhesive/Primer for Reprographic Grade Silicones

**Description**
UtenSil® Primer P1 enhances the adhesion of reprographic silicones to a desired substrate.

<table>
<thead>
<tr>
<th><strong>Solution Properties</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>clear, colorless</td>
</tr>
<tr>
<td>Solids</td>
<td>5-10 wt%</td>
</tr>
<tr>
<td>Flashpoint</td>
<td>-4°C</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.70</td>
</tr>
<tr>
<td>Viscosity</td>
<td>1.0-2.0 cSt</td>
</tr>
</tbody>
</table>

**Shelf life**
12 months when stored below 25°C in sealed containers. Keep container sealed after dispensing product.

**Application Methods**
UtenSil® Primer P1 is applied as a coating by spraying, dipping or brushing. The solvent is removed by evaporation in an exhausted area. Moisture induced crosslinking occurs at room temperature over 1-2 hours at 35-85% relative humidity.

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### UtenSil® Bonding Agent B1
#### Bonding Agent for Reprographic Grade Silicones

**Description**
UtenSil® Bonding Agent B1 binds reprographic silicone surfaces together irreversibly.

<table>
<thead>
<tr>
<th><strong>Solution Properties</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>opaque, white*</td>
</tr>
<tr>
<td>Solids</td>
<td>5-10 wt%</td>
</tr>
<tr>
<td>Flashpoint</td>
<td>-1°C</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.78</td>
</tr>
<tr>
<td>Viscosity</td>
<td>2.0-3.0 cSt</td>
</tr>
</tbody>
</table>

*Turns clear after deactivation.

**Shelf life**
6 months when stored below 25°C in sealed containers. Keep container sealed after dispensing product.

**Application Methods**
UtenSil® Bonding Agent B1 is applied by spraying, dipping or brushing. The solvent is removed by evaporation in an exhausted area. Bonding of silicone surfaces occurs at 80°C over 4 hours. After bonding is complete the process is deactivated by heating to 140°C for 4 hours in a exhausted area. An amine odor is generated during the deactivation step.

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**Standard Packaging**
PP1-USP1 UtenSil® Primer P1
- 100 g
- 1 kg

PP1-USB1 UtenSil® Bonding Agent B1
- 100 g
- 1 kg