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

· Product identifier
· Trade name: Custom Standard
· Part number: QCUS-23539
· Application of the substance / the mixture: Laboratory chemicals

· Details of the supplier of the safety data sheet
· Manufacturer/Supplier:
  ULTRA Scientific, inc.
  250 Smith Street
  North Kingstown, RI 02852
  USA

· Information department:
  Telephone: (401) 294-9400
  Fax: (401) 295-2300
  E-mail: regulatory@ultrasci.com
· Emergency telephone number:
  US: (800) 424-9300
  Outside US: (703) 527-3887

2 Hazard(s) identification

· Classification of the substance or mixture

  ![GHS02 Flame](image)
  Flam. Liq. 2 H225 Highly flammable liquid and vapor.

  ![GHS06 Skull and crossbones](image)
  Acute Tox. 3 H331 Toxic if inhaled.

  ![GHS08 Health hazard](image)
  STOT SE 1 H370 Causes damage to organs.

· Label elements
· GHS label elements: The product is classified and labeled according to the Globally Harmonized System (GHS).
· Hazard pictograms

  ![GHS02 Flame](image)
  ![GHS06 Skull and crossbones](image)
  ![GHS08 Health hazard](image)

· Signal word: Danger
· Hazard-determining components of labeling:
  methanol
· Hazard statements:
  Highly flammable liquid and vapor.
  Toxic if inhaled.
Trade name: Custom Standard

Causes damage to organs.

- **Precautionary statements**
  - Keep away from heat/sparks/open flames/hot surfaces. No smoking.
  - Use explosion-proof electrical/ventilating/lighting/equipment.
  - Do not breathe dust/fume/gas/mist/vapors/spray.
  - Wear protective gloves/protective clothing/eye protection/face protection.
  - Ground/bond container and receiving equipment.
  - Use only non-sparking tools.
  - Take precautionary measures against static discharge.
  - Wash thoroughly after handling.
  - Do not eat, drink or smoke when using this product.
  - Use only outdoors or in a well-ventilated area.
  - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - Specific treatment (see on this label).
  - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
  - In case of fire: Use for extinction: CO2, powder or water spray.
  - Store locked up.
  - Store in a well-ventilated place. Keep container tightly closed.
  - Store in a well-ventilated place. Keep cool.
  - Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**
  - **NFPA ratings (scale 0 - 4)**
  
  ![NFPA ratings](image)
  
  Health = 3
  Fire = 3
  Reactivity = 0

  - **HMIS-ratings (scale 0 - 4)**

  ![HMIS-ratings](image)
  
  Health = *3
  Fire = 3
  Reactivity = 0

- **Other hazards**
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization:** Mixtures
- **Description:** Mixture of the substances listed below with nonhazardous additions.

  - **Dangerous components:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Mass Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-56-1 methanol</td>
<td>99.995%</td>
</tr>
</tbody>
</table>

### 4 First-aid measures

- **Description of first aid measures**
- **General information:**
  - Immediately remove any clothing soiled by the product.
  - Remove breathing apparatus only after contaminated clothing have been completely removed.
  - In case of irregular breathing or respiratory arrest provide artificial respiration.
· **After inhalation:**
  Supply fresh air or oxygen; call for doctor.
  In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:** If symptoms persist consult doctor.

· **Information for doctor:**
  · Most important symptoms and effects, both acute and delayed No further relevant information available.
  · Indication of any immediate medical attention and special treatment needed No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
  CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet

- **Special hazards arising from the substance or mixture**
  No further relevant information available.

- **Advice for firefighters**
  - **Protective equipment:** Mouth respiratory protective device.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
  Wear protective equipment. Keep unprotected persons away.

- **Environmental precautions:** Prevent seepage into sewage system, workpits and cellars.

- **Methods and material for containment and cleaning up:**
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Dispose contaminated material as waste according to item 13.
  Ensure adequate ventilation.

- **Reference to other sections**
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

- **Protective Action Criteria for Chemicals**

  **PAC-1:**

<table>
<thead>
<tr>
<th>Compound</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-56-1 methanol</td>
<td>530 ppm</td>
</tr>
<tr>
<td>67-66-3 trichloromethane</td>
<td>2 ppm</td>
</tr>
<tr>
<td>75-25-2 bromoform</td>
<td>1.5 ppm</td>
</tr>
<tr>
<td>79-01-6 trichloroethylene</td>
<td>130 ppm</td>
</tr>
<tr>
<td>124-48-1 dibromochloromethane</td>
<td>1.1 mg/m³</td>
</tr>
<tr>
<td>75-27-4 bromodichloromethane</td>
<td>1.3 mg/m³</td>
</tr>
<tr>
<td>127-18-4 tetrachloroethylene</td>
<td>35 ppm</td>
</tr>
<tr>
<td>107-06-2 1,2-dichloroethylene</td>
<td>50 ppm</td>
</tr>
</tbody>
</table>

  **PAC-2:**

<table>
<thead>
<tr>
<th>Compound</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-56-1 methanol</td>
<td>2,100 ppm</td>
</tr>
<tr>
<td>67-66-3 trichloromethane</td>
<td>64 ppm</td>
</tr>
<tr>
<td>75-25-2 bromoform</td>
<td>6.8 ppm</td>
</tr>
</tbody>
</table>
Trade name: Custom Standard

<table>
<thead>
<tr>
<th>Substance</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>79-01-6 trichloroethylene</td>
<td>450 ppm</td>
</tr>
<tr>
<td>124-48-1 dibromochloromethane</td>
<td>12 mg/m3</td>
</tr>
<tr>
<td>75-27-4 bromodichloromethane</td>
<td>14 mg/m3</td>
</tr>
<tr>
<td>127-18-4 tetrachloroethylene</td>
<td>230 ppm</td>
</tr>
<tr>
<td>107-06-2 1,2-dichloroethylene</td>
<td>200 ppm</td>
</tr>
<tr>
<td>PAC-3:</td>
<td></td>
</tr>
<tr>
<td>67-56-1 methanol</td>
<td>7200* ppm</td>
</tr>
<tr>
<td>67-66-3 trichloromethane</td>
<td>3,200 ppm</td>
</tr>
<tr>
<td>75-25-2 bromoform</td>
<td>41 ppm</td>
</tr>
<tr>
<td>79-01-6 trichloroethylene</td>
<td>3,800 ppm</td>
</tr>
<tr>
<td>124-48-1 dibromochloromethane</td>
<td>73 mg/m3</td>
</tr>
<tr>
<td>75-27-4 bromodichloromethane</td>
<td>85 mg/m3</td>
</tr>
<tr>
<td>127-18-4 tetrachloroethylene</td>
<td>1,200 ppm</td>
</tr>
<tr>
<td>107-06-2 1,2-dichloroethylene</td>
<td>300 ppm</td>
</tr>
</tbody>
</table>

7 Handling and storage

- Handling:
  - Precautions for safe handling
    Ensure good ventilation/exhaustion at the workplace.
    Open and handle receptacle with care.
  - Information about protection against explosions and fires:
    Keep ignition sources away - Do not smoke.
    Protect against electrostatic charges.
    Keep respiratory protective device available.
- Conditions for safe storage, including any incompatibilities
- Storage:
  - Requirements to be met by storerooms and receptacles: Store in a cool location.
  - Information about storage in one common storage facility: Not required.
  - Further information about storage conditions:
    Keep receptacle tightly sealed.
    Store in cool, dry conditions in well sealed receptacles.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.
- Control parameters
- Components with limit values that require monitoring at the workplace:
  The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
  The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
  At this time, the remaining constituent has no known exposure limits.
  At this time, the other constituents have no known exposure limits.
Trade name: Custom Standard

### 67-56-1 methanol

<table>
<thead>
<tr>
<th>PEL</th>
<th>Long-term value: 260 mg/m³, 200 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>REL</td>
<td>Short-term value: 325 mg/m³, 250 ppm</td>
</tr>
<tr>
<td></td>
<td>Long-term value: 260 mg/m³, 200 ppm</td>
</tr>
<tr>
<td>Skin</td>
<td></td>
</tr>
<tr>
<td>TLV</td>
<td>Short-term value: 328 mg/m³, 250 ppm</td>
</tr>
<tr>
<td></td>
<td>Long-term value: 262 mg/m³, 200 ppm</td>
</tr>
<tr>
<td>Skin; BEI</td>
<td></td>
</tr>
</tbody>
</table>

#### Ingredients with biological limit values:

<table>
<thead>
<tr>
<th>67-56-1 methanol</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEI</td>
</tr>
<tr>
<td>15 mg/L</td>
</tr>
<tr>
<td>Medium: urine</td>
</tr>
<tr>
<td>Time: end of shift</td>
</tr>
<tr>
<td>Parameter: Methanol (background, nonspecific)</td>
</tr>
</tbody>
</table>

#### Additional information:
The lists that were valid during the creation were used as basis.

- **Exposure controls**
  - **Personal protective equipment:**
  - **General protective and hygienic measures:**
    - Keep away from foodstuffs, beverages and feed.
    - Immediately remove all soiled and contaminated clothing.
    - Wash hands before breaks and at the end of work.
    - Store protective clothing separately.
  - **Breathing equipment:**
    - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
  - **Protection of hands:**
    - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
    - Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
    - Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
  - **Material of gloves:**
    - The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
    - **Penetration time of glove material**
      - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
  - **Eye protection:**
    - Tightly sealed goggles

### 9 Physical and chemical properties

#### Information on basic physical and chemical properties

- **General Information**
- **Appearance:**
  - Form: Fluid
### 44.2.6 Physical and Chemical Properties

**Color:** According to product specification
- **Odor:** Characteristic
- **Odor threshold:** Not determined.
- **pH-value:** Not determined.
- **Change in condition**
  - Melting point/Melting range: -98 °C (-144 °F)
  - Boiling point/Boiling range: Undetermined.
- **Flash point:** 9 °C (48 °F)
- **Flammability (solid, gaseous):** Not applicable.
- **Ignition temperature:** 455 °C (851 °F)
- **Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
- **Explosion limits:**
  - Lower: 5.5 Vol %
  - Upper: 44 Vol %
- **Vapor pressure at 20 °C (68 °F):** 100 hPa (75 mm Hg)
- **Density at 20 °C (68 °F):** 0.8 g/cm³ (6.676 lbs/gal)
- **Relative density**
- **Vapor density**
- **Evaporation rate**
- **Solubility in / Miscibility with**
  - Water: Not miscible or difficult to mix.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - Dynamic: Not determined.
  - Kinematic: Not determined.
- **Solvent content:**
  - Organic solvents: 100.0 %
  - VOC content: 100.0 %
  - 1000 g/l / 8.35 lb/gl
- **Other information**
  - No further relevant information available.

### 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
  - **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
  - **Possibility of hazardous reactions** No dangerous reactions known.
  - **Conditions to avoid** No further relevant information available.
  - **Incompatible materials:** No further relevant information available.
Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

Information on toxicological effects

Acute toxicity:

LD/LC50 values that are relevant for classification:

ATE (Acute Toxicity Estimates)

<table>
<thead>
<tr>
<th>Inhalative</th>
<th>LC50/4 h</th>
<th>3 mg/L</th>
</tr>
</thead>
</table>

67-56-1 methanol

<table>
<thead>
<tr>
<th>Oral</th>
<th>LD50</th>
<th>5628 mg/kg (rat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dermal</td>
<td>LD50</td>
<td>15800 mg/kg (rabbit)</td>
</tr>
</tbody>
</table>

Primary irritant effect:

- on the skin: No irritant effect.
- on the eye: No irritating effect.

Sensitization: No sensitizing effects known.

Additional toxicological information:
The product shows the following dangers according to internally approved calculation methods for preparations:

Carcinogenic categories

- IARC (International Agency for Research on Cancer)

| 67-66-3 trichloromethane | 2B |
| 75-25-2 bromoform | 3 |
| 79-01-6 trichloroethylene | 1 |
| 124-48-1 dibromochloromethane | 3 |
| 75-27-4 bromodichloromethane | 2B |
| 127-18-4 tetrachloroethylene | 2A |
| 107-06-2 1,2-dichloroethane | 2B |

- NTP (National Toxicology Program)

| 67-66-3 trichloromethane | R |
| 79-01-6 trichloroethylene | K |
| 75-27-4 bromodichloromethane | R |
| 127-18-4 tetrachloroethylene | R |
| 107-06-2 1,2-dichloroethane | R |

- OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

Toxicity

Aquatic toxicity: No further relevant information available.

Persistence and degradability: No further relevant information available.

Behavior in environmental systems:

Bioaccumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available.
13 Disposal considerations

- **Waste treatment methods**
  - **Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- **Uncleaned packagings:**
  - **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
  - DOT, IMDG, IATA: UN1992

- **UN proper shipping name**
  - DOT: Flammable liquids, toxic, n.o.s. (Methanol)
  - IMDG, IATA: FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)

- **Transport hazard class(es)**
  - **DOT**
    - **Class:** 3 Flammable liquids
    - **Label:** 3, 6.1

  - **IMDG**
    - **Class:** 3 Flammable liquids
    - **Label:** 3/6.1

  - **IATA**
    - **Class:** 3 Flammable liquids
    - **Label:** 3 (6.1)
### Trade name: Custom Standard

<table>
<thead>
<tr>
<th>Packing group</th>
<th>DOT, IMDG, IATA</th>
<th>II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental hazards:</td>
<td>Not applicable.</td>
<td></td>
</tr>
</tbody>
</table>

- **Special precautions for user**: Warning: Flammable liquids
- **Danger code (Kemler)**: 336
- **EMS Number**: F-E,S-D
- **Stowage Category**: B
- **Stowage Code**: SW2 Clear of living quarters.

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**: Not applicable.

- **Transport/Additional information:**
  - **DOT**
  - **Quantity limitations**
    - On passenger aircraft/rail: 1 L
    - On cargo aircraft only: 60 L

- **IMDG**
  - **Limited quantities (LQ)**: 1L
  - **Excepted quantities (EQ)**
    - Code: E2
    - Maximum net quantity per inner packaging: 30 ml
    - Maximum net quantity per outer packaging: 500 ml

- **UN "Model Regulation":**
  - UN 1992 FLAMMABLE LIQUIDS, TOXIC, N.O.S. (METHANOL), 3 (6.1), II

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - **Sara**
  - **Section 355 (extremely hazardous substances):**
    - 67-66-3 trichloromethane
  - **Section 313 (Specific toxic chemical listings):**
    - 67-56-1 methanol
    - 67-66-3 trichloromethane
    - 75-25-2 bromoform
    - 79-01-6 trichloroethylene
    - 75-27-4 bromodichloromethane
    - 127-18-4 tetrachloroethylene
    - 107-06-2 1,2-dichloroethane
  - **TSCA (Toxic Substances Control Act):**
    - All ingredients are listed.
  - **Proposition 65**
  - **Chemicals known to cause cancer:**
    - 67-66-3 trichloromethane
    - 75-25-2 bromoform
    - 79-01-6 trichloroethylene
### Chemicals known to cause reproductive toxicity for males:
- 79-01-6 trichloroethylene

### Chemicals known to cause developmental toxicity:
- 67-56-1 methanol
- 67-66-3 trichloromethane
- 79-01-6 trichloroethylene

### Carcinogenic categories

#### EPA (Environmental Protection Agency)
- 67-66-3 trichloromethane B2, L, NL
- 75-25-2 bromoform B2
- 79-01-6 trichloroethylene CaH
- 124-48-1 dibromochloromethane C
- 75-27-4 bromodichloromethane B2
- 127-18-4 tetrachloroethylene L
- 107-06-2 1,2-dichloroethane B2

#### TLV (Threshold Limit Value established by ACGIH)
- 67-66-3 trichloromethane A3
- 75-25-2 bromoform A3
- 79-01-6 trichloroethylene A2
- 127-18-4 tetrachloroethylene A3
- 107-06-2 1,2-dichloroethane A4

#### NIOSH-Ca (National Institute for Occupational Safety and Health)
- 67-66-3 trichloromethane
- 79-01-6 trichloroethylene
- 127-18-4 tetrachloroethylene
- 107-06-2 1,2-dichloroethane

### GHS label elements
The product is classified and labeled according to the Globally Harmonized System (GHS).

### Hazard pictograms

- GHS02
- GHS06
- GHS08

### Hazard-determining components of labeling:
- methanol

### Hazard statements
- Highly flammable liquid and vapor.
- Toxic if inhaled.
44.2.6 Causes damage to organs.

- **Precautionary statements**

  Keep away from heat/sparks/open flames/hot surfaces. No smoking.
  Use explosion-proof electrical/ventilating/lighting/equipment.
  Do not breathe dust/fume/gas/mist/vapors/spray.
  Wear protective gloves/protective clothing/eye protection/face protection.
  Ground/bond container and receiving equipment.
  Use only non-sparking tools.
  Take precautionary measures against static discharge.
  Wash thoroughly after handling.
  Do not eat, drink or smoke when using this product.
  Use only outdoors or in a well-ventilated area.
  If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  Specific treatment (see on this label).
  IF INHALED: Remove person to fresh air and keep comfortable for breathing.
  In case of fire: Use for extinction: CO2, powder or water spray.
  Store locked up.
  Store in a well-ventilated place. Keep container tightly closed.
  Store in a well-ventilated place. Keep cool.
  Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

---

### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Document Control / Regulatory
- **Contact:** regulatory@ultrasci.com
- **Date of preparation / last revision** 04/12/2017 / -
- **Abbreviations and acronyms:**
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - DOT: US Department of Transportation
  - IATA: International Air Transport Association
  - ACGIH: American Conference of Governmental Industrial Hygienists
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - NFPA: National Fire Protection Association (USA)
  - HMIS: Hazardous Materials Identification System (USA)
  - VOC: Volatile Organic Compounds (USA, EU)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - NIOSH: National Institute for Occupational Safety
  - OSHA: Occupational Safety & Health
  - TLV: Threshold Limit Value
  - PEL: Permissible Exposure Limit
  - REL: Recommended Exposure Limit
  - BEI: Biological Exposure Limit
  - Flam. Liq. 2: Flammable liquids – Category 2
  - Acute Tox. 3: Acute toxicity – Category 3
  - STOT SE 1: Specific target organ toxicity (single exposure) – Category 1