1 Identification

· Product identifier
  · Trade name: Custom Standard
  · Part number: QCUS-13313
  · 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
  Flam. Liq. 2  H225  Highly flammable liquid and vapor.

  GHS06 Skull and crossbones
  Acute Tox. 3  H331  Toxic if inhaled.

  GHS08 Health hazard
  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  GHS06  GHS08

· Signal word Danger

· Hazard-determining components of labeling:
  methanol

· Hazard statements
  Highly flammable liquid and vapor.
  Toxic if inhaled.
45.0

Causes damage to organs.

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

· **Classification system:**
  - **NFPA ratings (scale 0 - 4)**
    - Health = 3
    - Fire = 3
    - Reactivity = 0
  - **HMIS-ratings (scale 0 - 4)**
    - HEALTH
      - Health = *3
    - FIRE
      - Fire = 3
    - REACTIVITY
      - 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.

<table>
<thead>
<tr>
<th>Dangerous components:</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-56-1</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.
Trade name: Custom Standard

· 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:
  Do not allow to enter sewers/ surface or ground water.
· 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:
    | Compound     | PAC-1 |
    |--------------|-------|
    | 67-56-1 methanol | 530 ppm |
    | 71-43-2 benzene    | 52 ppm  |
    | 108-88-3 toluene   | 67 ppm  |
    | 108-38-3 m-xylene  | 130 ppm |
    | 100-42-5 styrene   | 20 ppm  |
    | 100-41-4 ethylbenzene | 33 ppm |

  · PAC-2:
    | Compound     | PAC-2 |
    |--------------|-------|
    | 67-56-1 methanol | 2,100 ppm |
    | 71-43-2 benzene    | 800 ppm  |
    | 108-88-3 toluene   | 560 ppm  |
    | 108-38-3 m-xylene  | 920 ppm  |
    | 100-42-5 styrene   | 130 ppm  |
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:

67-56-1 methanol

<table>
<thead>
<tr>
<th>Component</th>
<th>Limit Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL</td>
<td>Long-term value: 260 mg/m³, 200 ppm</td>
</tr>
<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></td>
<td>Skin</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></td>
<td>Skin; BEI</td>
</tr>
</tbody>
</table>

· Ingredients with biological limit values:

67-56-1 methanol

<table>
<thead>
<tr>
<th>Component</th>
<th>Limit Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEI</td>
<td>15 mg/L</td>
</tr>
<tr>
<td></td>
<td>Medium: urine</td>
</tr>
<tr>
<td></td>
<td>Time: end of shift</td>
</tr>
<tr>
<td></td>
<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: Liquid
    - Color: Colorless
  - **Odor:** Alcohol-like
  - **Odor threshold:** Not determined.
  - **pH-value:** Not determined.

- **Change in condition**
  - Melting point/Melting range: -98 °C (-144 °F)
  - Boiling point/Boiling range: 64.7 °C (148 °F)

- **Flash point:** 9 °C (48 °F)

- **Flammability (solid, gaseous):** Not applicable.

- **Ignition temperature:** 455 °C (851 °F)

- **Decomposition temperature:** Not determined.
Trade name: Custom Standard

| · 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       | Not determined.             |
| · Vapor density          | Not determined.             |
| · Evaporation rate        | Not determined.             |
| · 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 %                     |
|                          | 800.0 g/l / 6.68 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 Estimate)**
      - Inhalative LC50/4 h $3 \text{ mg/L}$
  - **67-56-1 methanol**
    - Oral LD50 $56.28 \text{ mg/kg (rat)}$
    - Dermal LD50 $15800 \text{ mg/kg (rabbit)}$
· **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:
    Toxic

  · **Carcinogenic categories**
    - **IARC (International Agency for Research on Cancer)**
      | Chemical      | Carcinogenic Category |
      |----------------|-----------------------|
      | 71-43-2 benzene | 1                     |
      | 106-42-3 p-xylene | 3                     |
      | 108-88-3 toluene | 3                     |
      | 95-47-6 o-xylene | 3                     |
      | 108-38-3 m-xylene | 3                     |
      | 100-42-5 styrene  | 2B                    |
      | 100-41-4 ethylbenzene | 2B                  |
    - **NTP (National Toxicology Program)**
      | Chemical      | Classification |
      |----------------|----------------|
      | 71-43-2 benzene | K              |
      | 100-42-5 styrene | R              |
    - **OSHA-Ca (Occupational Safety & Health Administration)**
      | Chemical      |
      |----------------|
      | 71-43-2 benzene |

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.
  · **Additional ecological information:**
  · **General notes:**
    Water hazard class 1 (Self-assessment): slightly hazardous for water
    Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
  · **Results of PBT and vPvB assessment**
    · **PBT:** Not applicable.
    · **vPvB:** Not applicable.
  · **Other adverse effects** 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.
### 45.0 Uncleaned packagings:

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

### 14 Transport information

<table>
<thead>
<tr>
<th><strong>UN-Number</strong></th>
<th>UN1992</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DOT, IMDG, IATA</strong></td>
<td></td>
</tr>
<tr>
<td><strong>UN proper shipping name</strong></td>
<td></td>
</tr>
<tr>
<td><strong>DOT</strong></td>
<td>Flammable liquids, toxic, n.o.s. (Methanol)</td>
</tr>
<tr>
<td><strong>IMDG, IATA</strong></td>
<td>FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)</td>
</tr>
<tr>
<td><strong>Transport hazard class(es)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>DOT</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Class</strong></td>
<td>3 Flammable liquids</td>
</tr>
<tr>
<td><strong>Label</strong></td>
<td>3, 6.1</td>
</tr>
<tr>
<td><strong>IMDG</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Class</strong></td>
<td>3 Flammable liquids</td>
</tr>
<tr>
<td><strong>Label</strong></td>
<td>3/6.1</td>
</tr>
<tr>
<td><strong>IATA</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Class</strong></td>
<td>3 Flammable liquids</td>
</tr>
<tr>
<td><strong>Label</strong></td>
<td>3 (6.1)</td>
</tr>
<tr>
<td><strong>Packing group</strong></td>
<td>II</td>
</tr>
<tr>
<td><strong>DOT, IMDG, IATA</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Environmental hazards:</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Special precautions for user</strong></td>
<td>Warning: Flammable liquids</td>
</tr>
<tr>
<td><strong>Danger code (Kemler):</strong></td>
<td>336</td>
</tr>
<tr>
<td><strong>EMS Number:</strong></td>
<td>F,E,S-D</td>
</tr>
<tr>
<td><strong>Stowage Category</strong></td>
<td>B</td>
</tr>
<tr>
<td><strong>Stowage Code</strong></td>
<td>SW2 Clear of living quarters.</td>
</tr>
<tr>
<td><strong>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</strong></td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>
Trade name: Custom Standard

· 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):
      None of the ingredients is listed.
    · Section 313 (Specific toxic chemical listings):
      All ingredients are listed.
  · TSCA (Toxic Substances Control Act):
    All ingredients are listed.
  · Proposition 65
    · Chemicals known to cause cancer:
      71-43-2 benzene
      100-42-5 styrene
      100-41-4 ethylbenzene
    · Chemicals known to cause reproductive toxicity for females:
      None of the ingredients is listed.
    · Chemicals known to cause reproductive toxicity for males:
      71-43-2 benzene
    · Chemicals known to cause developmental toxicity:
      67-56-1 methanol
      71-43-2 benzene
      108-88-3 toluene
  · Carcinogenic categories
    · EPA (Environmental Protection Agency)
      | CAS Number | Chemical Name | Category |
      |-------------|---------------|----------|
      | 71-43-2     | benzene       | A, K/L   |
      | 106-42-3    | p-xylene      | I        |
      | 108-88-3    | toluene       | II       |
      | 95-47-6     | o-xylene      | I        |
      | 108-38-3    | m-xylene      | I        |
Trade name: Custom Standard

- TLV (Threshold Limit Value established by ACGIH)
  - 100-41-4 ethylbenzene  D
  - 71-43-2 benzene  A1
  - 106-42-3 p-xylene  A4
  - 108-88-3 toluene  A4
  - 95-47-6 o-xylene  A4
  - 108-38-3 m-xylene  A4
  - 100-42-5 styrene  A4
  - 100-41-4 ethylbenzene  A3

- NIOSH-Ca (National Institute for Occupational Safety and Health)
  - 71-43-2 benzene

- GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
  - Hazard pictograms
    - GHS02
    - GHS06
    - GHS08

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

- **Date of preparation / last revision**: 06/19/2017 / -
- **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
  - 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