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

- **Product identifier**
  - **Trade name:** Check Sample, BTEXN
  - **Part number:** 820-00644
  - **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.
4.2.6 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.

Classification system:

- NFPA ratings (scale 0 - 4)
  \[
  \begin{array}{ll}
  \text{Health} & 3 \\
  \text{Fire} & 3 \\
  \text{Reactivity} & 0 \\
  \end{array}
  \]

- HMIS-ratings (scale 0 - 4)
  \[
  \begin{array}{ll}
  \text{Health} & *3 \\
  \text{Fire} & 3 \\
  \text{Reactivity} & 0 \\
  \end{array}
  \]

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:
  - 67-56-1 methanol 99.886%

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:** 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**

<table>
<thead>
<tr>
<th>PAC-1</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>67-56-1</td>
<td>methanol</td>
</tr>
<tr>
<td>1634-04-4</td>
<td>tert-butyl methyl ether</td>
</tr>
<tr>
<td>71-43-2</td>
<td>benzene</td>
</tr>
<tr>
<td>100-41-4</td>
<td>ethylbenzene</td>
</tr>
<tr>
<td>91-20-3</td>
<td>naphthalene</td>
</tr>
<tr>
<td>108-88-3</td>
<td>toluene</td>
</tr>
<tr>
<td>108-38-3</td>
<td>m-xylene</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAC-2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>67-56-1</td>
<td>methanol</td>
</tr>
<tr>
<td>1634-04-4</td>
<td>tert-butyl methyl ether</td>
</tr>
<tr>
<td>71-43-2</td>
<td>benzene</td>
</tr>
<tr>
<td>100-41-4</td>
<td>ethylbenzene</td>
</tr>
</tbody>
</table>

(Contd. on page 4)
## Trade name: Check Sample, BTEXN

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>91-20-3 naphthalene</td>
<td>83 ppm</td>
</tr>
<tr>
<td>108-88-3 toluene</td>
<td>560 ppm</td>
</tr>
<tr>
<td>108-38-3 m-xylene</td>
<td>920 ppm</td>
</tr>
</tbody>
</table>

### PAC-3:

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-56-1 methanol</td>
<td>7200* ppm</td>
</tr>
<tr>
<td>1634-04-4 tert-butyl methyl ether</td>
<td>5300* ppm</td>
</tr>
<tr>
<td>71-43-2 benzene</td>
<td>4000* ppm</td>
</tr>
<tr>
<td>100-41-4 ethylbenzene</td>
<td>1800* ppm</td>
</tr>
<tr>
<td>91-20-3 naphthalene</td>
<td>500 ppm</td>
</tr>
<tr>
<td>108-88-3 toluene</td>
<td>3700* ppm</td>
</tr>
<tr>
<td>108-38-3 m-xylene</td>
<td>2500* 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:

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Limit Values</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>67-56-1 methanol</strong></td>
<td></td>
</tr>
<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>Skin</td>
<td>Long-term value: 262 mg/m³, 200 ppm</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>
Trade name: Check Sample, BTEXN

**Ingredients with biological limit values:**

<table>
<thead>
<tr>
<th>Compound</th>
<th>BEI</th>
<th>Medium</th>
<th>Time</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>methanol</td>
<td>15 mg/L</td>
<td>urine</td>
<td>end of shift</td>
<td>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
- 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)
Trade name: Check Sample, BTEXN

- 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 self-igniting.
- 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): 0.80008 g/cm³ (6.677 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 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 Estimates)
    | Inhalative | LC50/4 h | 3 mg/L |
    |------------|---------|--------|
44.2.6 methanol

<table>
<thead>
<tr>
<th>Oral</th>
<th>LD50</th>
<th>(Contd. of page 6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dermal</td>
<td>LD50</td>
<td>5628 mg/kg (rat)</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:
  - Toxic

- Carcinogenic categories
  - IARC (International Agency for Research on Cancer)
    - 1634-04-4 tert-butyl methyl ether 3
    - 71-43-2 benzene 1
    - 100-41-4 ethylbenzene 2B
    - 91-20-3 naphthalene 2B
    - 108-88-3 toluene 3
    - 95-47-6 o-xylene 3
    - 108-38-3 m-xylene 3
    - 106-42-3 p-xylene 3
  - NTP (National Toxicology Program)
    - 71-43-2 benzene K
    - 91-20-3 naphthalene R
  - OSHA-Ca (Occupational Safety & Health Administration)
    - 71-43-2 benzene

- 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.

- **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)

- **Packing group**
  - DOT, IMDG, IATA: II

- **Environmental hazards:** Not applicable.

- **Special precautions for user**
  - Warning: Flammable liquids
  - Danger code (Kemler): 336
  - EMS Number: F-E,S-D
  - Stowage Category: B
44.2.6  

- **Stowage Code**  
  SW2 Clear of living quarters.

- **Transport in bulk according to Annex II of MARPOL 73/78 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):**
      - 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
    - 100-41-4 ethylbenzene
    - 91-20-3 naphthalene
  - **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)**
    - 71-43-2 benzene: A, K/L
    - 100-41-4 ethylbenzene: D
    - 91-20-3 naphthalene: C, CBD

(Contd. on page 10)
Trade name: Check Sample, BTEXN

| 108-88-3 | toluene | II |
| 95-47-6  | o-xylene | I |
| 108-38-3 | m-xylene | I |
| 106-42-3 | p-xylene | I |

- **TLV (Threshold Limit Value established by ACGIH)**
  - 108-88-3 toluene
  - 95-47-6 o-xylene
  - 108-38-3 m-xylene
  - 106-42-3 p-xylene

- **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.
  - 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.
Safety Data Sheet
acc. to OSHA HCS

Print date 03/17/2017
Version Number 1
Reviewed on 03/17/2017

Trade name: Check Sample, BTEXN

- **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:** 03/17/2017 / -

**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