1 Identification

- Product identifier
- Trade name: Custom Standard
- Part number: DK-101761
- 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.
  - GHS08 Health hazard
    Carc. 2 H351 Suspected of causing cancer.
  - GHS07
    Eye Irrit. 2A H319 Causes serious eye irritation.
    STOT SE 3 H336 May cause drowsiness or dizziness.

- Label elements
  - GHS label elements: The product is classified and labeled according to the Globally Harmonized System (GHS).
  - Hazard pictograms
    - GHS02
    - GHS07
    - GHS08

- Signal word: Danger
- Hazard-determining components of labeling:
  - acetone
- Hazard statements:
  - Highly flammable liquid and vapor.
Trade name: Custom Standard

Causes serious eye irritation.
May cause drowsiness or dizziness.

- **Precautionary statements**
  - Obtain special instructions before use.
  - Do not handle until all safety precautions have been read and understood.
  - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  - Ground/bond container and receiving equipment.
  - Use explosion-proof electrical/ventilating/lighting/equipment.
  - Take precautionary measures against static discharge.
  - Avoid breathing dust/fume/gas/mist/vapors/spray
  - Wash thoroughly after handling.
  - 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.
  - IF in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - IF exposed or concerned: Get medical advice/attention.
  - Call a poison center/doctor if you feel unwell.
  - IF eye irritation persists: Get medical advice/attention.
  - 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.
  - Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**
  - **NFPA ratings (scale 0 - 4)**
    - Health = 2
    - Fire = 3
    - Reactivity = 0
  - **HMIS-ratings (scale 0 - 4)**
    - Health = 2
    - 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:**
  - 67-64-1 acetone 98.23%
4 First-aid measures

· Description of first aid measures
  · After inhalation: Supply fresh air; consult doctor in case of complaints.
  · After skin contact: Generally the product does not irritate the skin.
  · After eye contact:
    Rinse opened eye for several minutes under running water. If symptoms persist, 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: No special measures required.

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:
    67-64-1 acetone 200 ppm
    76-06-2 trichloronitromethane 0.050 ppm
  · PAC-2:
    67-64-1 acetone 3200* ppm
    76-06-2 trichloronitromethane 0.15 ppm
  · PAC-3:
    67-64-1 acetone 5700* ppm

(Contd. on page 4)
7 Handling and storage

- **Handling:**
  - **Precautions for safe handling** No special precautions are necessary if used correctly.
  - **Information about protection against explosions and fires:**
    Keep ignition sources away - Do not smoke.
    Protect against electrostatic charges.

- **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>Substance</th>
<th>PEL Long-term</th>
<th>REL Long-term</th>
<th>TLV Short-term</th>
<th>BEI</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-64-1 acetone</td>
<td>2400 mg/m³, 1000 ppm</td>
<td>590 mg/m³, 250 ppm</td>
<td>1187 mg/m³, 500 ppm</td>
<td>594 mg/m³, 250 ppm</td>
</tr>
<tr>
<td>3252-43-5 dibromoacetonitrile</td>
<td>5 mg/m³ as CN</td>
<td>Skin</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Ingredients with biological limit values:**

<table>
<thead>
<tr>
<th>Substance</th>
<th>BEI 50 mg/L</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-64-1 acetone</td>
<td>Medium: urine</td>
</tr>
<tr>
<td></td>
<td>Time: end of shift</td>
</tr>
<tr>
<td></td>
<td>Parameter: Acetone (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.
    Avoid contact with the eyes.
    Avoid contact with the eyes and skin.
**Trade name: Custom Standard**

- **Breathing equipment:** Not required.
- **Protection of hands:** Not required.
- **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:** Characteristic
  - **Odor threshold:** Not determined.
  - **pH-value:** Not determined.

- **Change in condition**
  - **Melting point/Melting range:** -94.7 °C (-138.5 °F)
  - **Boiling point/Boiling range:** 55.8-56.6 °C (132.4-133.9 °F)

- **Flash point:** -17 °C (1.4 °F)

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

- **Ignition temperature:** 465 °C (869 °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:** 2.6 Vol %
  - **Upper:** 13 Vol %

- **Vapor pressure at 20 °C (68 °F):** 175 hPa (131.3 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.
46.0.5 · Partition coefficient (n-octanol/water): Not determined.
· Viscosity:
  Dynamic at 20 °C (68 °F): 32 mPas
  Kinematic: Not determined.
· Solvent content:
  Organic solvents: 98.2 %
  VOC content: 0.00 %
  0.0 g/l / 0.00 lb/gl
· Solids content: 0.0 %
· 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)
      Oral LD50 48,947 mg/kg (rat)
      Dermal LD50 356,013 mg/kg (rabbit)
      Inhalative LC50/4 h 170 mg/L
      67-64-1 acetone
      Oral LD50 67,800 mg/kg (rat)
      Dermal LD50 20,000 mg/kg (rabbit)
      3252-43-5 dibromoacetonitrile
      Oral LD50 245 mg/kg (rat)
      76-06-2 trichloronitromethane
      Oral LD50 250 mg/kg (rat)
  · Primary irritant effect:
    · on the skin: No irritant effect.
    · on the eye: Irritating effect.
    · Sensitization: No sensitizing effects known.
    · Additional toxicological information:
      The product shows the following dangers according to internally approved calculation methods for preparations: Irritant
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 2 (Self-assessment): hazardous for water
  Do not allow product to reach ground water, water course or sewage system.
  Danger to drinking water if even small quantities leak into the ground.
- **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** UN1090
- **UN proper shipping name**
  - **DOT**
  - **IMDG, IATA** Acetone solution ACETONE solution
### Safety Data Sheet

**Trade name: Custom Standard**

<table>
<thead>
<tr>
<th><strong>Transport hazard class(es)</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DOT</strong></td>
<td></td>
</tr>
<tr>
<td><img src="dot.png" alt="DOT Symbol" /></td>
<td></td>
</tr>
</tbody>
</table>

| **Class**                      | 3 Flammable liquids |
| **Label**                      | 3 |

<table>
<thead>
<tr>
<th><strong>IMDG, IATA</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Class</strong></td>
<td>3 Flammable liquids</td>
</tr>
<tr>
<td><strong>Label</strong></td>
<td>3</td>
</tr>
</tbody>
</table>

| **Packing group**              |  |
| **DOT, IMDG, IATA**            | II |

| **Environmental hazards:**     | Not applicable |
| **Special precautions for user** | Warning: Flammable liquids |
| **Danger code (Kemler):**      | 33 |
| **EMS Number:**                | F-E,S-D |
| **Stowage Category**           | B |

| **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: 5 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 1090 ACETONE SOLUTION, 3, II |

### 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):** |  |
| 76-06-2 trichloronitromethane |  |
### TSCA (Toxic Substances Control Act):

<table>
<thead>
<tr>
<th>Substance ID</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-64-1</td>
<td>acetone</td>
</tr>
<tr>
<td>3252-43-5</td>
<td>dibromoacetonitrile</td>
</tr>
<tr>
<td>545-06-2</td>
<td>trichloroacetonitrile</td>
</tr>
<tr>
<td>76-06-2</td>
<td>trichloronitromethane</td>
</tr>
</tbody>
</table>

### TSCA new (21st Century Act) (Substances not listed)

- 3252-43-5 dibromoacetonitrile

### Proposition 65

- **Chemicals known to cause cancer:**
  - 3252-43-5 dibromoacetonitrile

- **Chemicals known to cause reproductive toxicity for females:**
  - None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**
  - None of the ingredients is listed.

- **Chemicals known to cause developmental toxicity:**
  - None of the ingredients is listed.

### Carcinogenic categories

- **EPA (Environmental Protection Agency)**
  - 67-64-1 acetone I

- **TLV (Threshold Limit Value established by ACGIH)**
  - 67-64-1 acetone A4
  - 76-06-2 trichloronitromethane A4

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**
  - None of the ingredients is listed.

### GHS label elements

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

#### Hazard pictograms

- GHS02
- GHS07
- GHS08

#### Signal word

Danger

#### Hazard-determining components of labeling:

- acetone

#### Hazard statements

- Highly flammable liquid and vapor.
- Causes serious eye irritation.
- Suspected of causing cancer.
- May cause drowsiness or dizziness.

#### Precautionary statements

- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- 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.
Avoid breathing dust/fume/gas/mist/vapors/spray
Wash thoroughly after handling.
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.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
IF exposed or concerned: Get medical advice/attention.
Call a poison center/doctor if you feel unwell.
If eye irritation persists: Get medical advice/attention.
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.

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### 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** 01/22/2018 / -
- **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
  - Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
  - Carc. 2: Carcinogenicity – Category 2
  - STOT SE 3: Specific target organ toxicity (single exposure) – Category 3