1 Identification

- Product identifier
  - Trade name: Custom Standard
  - Part number: DK-101920
  - 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: +1-800-424-9300
  Outside US: +1-703-527-3887

2 Hazard(s) identification

- Classification of the substance or mixture
  - GHS08 Health hazard
    Carc. 1B H350 May cause cancer.

- GHS07
  Acute Tox. 4 H302 Harmful if swallowed.
  Skin Irrit. 2 H315 Causes skin irritation.
  Eye Irrit. 2A H319 Causes serious eye irritation.

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

- Signal word Danger

- Hazard-determining components of labeling:
  dichloromethane

- Hazard statements
  Harmful if swallowed.
  Causes skin irritation.
  Causes serious eye irritation.
  May cause cancer.
4. Trade name: Custom Standard

1. Precautionary statements

- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Wash thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Wear protective gloves/protective clothing/eye protection/face protection.
- If swallowed: Call a poison center/doctor if you feel unwell.
- If on skin: Wash with plenty of water.
- 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.
- Specific treatment (see on this label).
- Rinse mouth.
- If skin irritation occurs: Get medical advice/attention.
- If eye irritation persists: Get medical advice/attention.
- Take off contaminated clothing and wash it before reuse.
- Store locked up.
- Dispose of contents/container in accordance with local/regional/national/international regulations.

2. Classification system:

- NFPA ratings (scale 0 - 4)
  - Health = 2
  - Fire = 0
  - Reactivity = 0

- HMIS-ratings (scale 0 - 4)
  - HEALTH 2
  - FIRE 0
  - 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>Substance</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-09-2 dichloromethane</td>
<td>99.0198%</td>
</tr>
<tr>
<td>683-18-1 dibutyltin dichloride</td>
<td>0.0754%</td>
</tr>
</tbody>
</table>

4. First-aid measures

- Description of first aid measures
- General information:
  - Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  - After inhalation: In case of unconsciousness place patient stably in side position for transportation.
  - After skin contact: Immediately wash with water and soap and rinse thoroughly.
Trade name: Custom Standard

- After eye contact:
  Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing: Immediately call a 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: Use fire fighting measures that suit the environment.
  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: Not required.
- 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:
  - 75-09-2 dichloromethane 200 ppm
  - 639-58-7 fentin chloride 0.65 mg/m³

  PAC-2:
  - 75-09-2 dichloromethane 560 ppm
  - 639-58-7 fentin chloride 20 mg/m³

  PAC-3:
  - 75-09-2 dichloromethane 6,900 ppm
  - 639-58-7 fentin chloride 38 mg/m³

7 Handling and storage

- Handling:
  - Precautions for safe handling: Ensure good ventilation/exhaustion at the workplace.
  - Information about protection against explosions and fires: No special measures required.
- Conditions for safe storage, including any incompatibilities
- Storage:
  - Requirements to be met by storerooms and receptacles: No special requirements.
  - Information about storage in one common storage facility: Not required.
Trade name: Custom Standard

- Further information about storage conditions: Keep receptacle tightly sealed.
- 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

<table>
<thead>
<tr>
<th>Component</th>
<th>PEL</th>
<th>REL</th>
<th>TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-09-2 dichloromethane</td>
<td>Short-term value: 125 ppm</td>
<td>See Pocket Guide App. A</td>
<td>Long-term value: 174 mg/m³, 50 ppm</td>
</tr>
<tr>
<td></td>
<td>Long-term value: 25 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>see 29 CFR 1910.1052</td>
<td></td>
<td></td>
</tr>
<tr>
<td>683-18-1 dibutyltin dichloride</td>
<td>Long-term value: 0.1 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>as Sn</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Short-term value: 0.2 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>as Sn, Skin</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Long-term value: 0.1 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>as Sn, Skin</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Ingredients with biological limit values:

<table>
<thead>
<tr>
<th>Component</th>
<th>BEI</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-09-2 dichloromethane</td>
<td>0.3 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: Dichloromethane (semi-quantitative)</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. Avoid contact with the eyes and skin.

- 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:
  Protective gloves
· 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 cannot 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:
   Safety glasses
   Tightly sealed goggles

---

9 Physical and chemical properties

· Information on basic physical and chemical properties

   · General Information
   · Appearance:
     · Form: Fluid
     · Color: Colorless
   · Odor: Like chlorine
   · Odor threshold: Not determined.

· pH-value:
   Not determined.

· Change in condition
   · Melting point/Melting range: -95.1 °C (-139.2 °F)
   · Boiling point/Boiling range: 40 °C (104 °F)

· Flash point: Not applicable.

· Flammability (solid, gaseous): Not applicable.

· Ignition temperature: 605 °C (1,121 °F)

· Decomposition temperature: Not determined.

· Auto igniting: Product is not selfigniting.

· Danger of explosion: Product does not present an explosion hazard.

· Explosion limits:
   · Lower: 13 Vol %
   · Upper: 22 Vol %

· Vapor pressure at 20 °C (68 °F): 360 hPa (270 mm Hg)

· Density at 20 °C (68 °F): 1.3 g/cm³ (10.8485 lbs/gal)

· Relative density Not determined.

· Vapor density Not determined.

· Evaporation rate Not determined.

· Solubility in / Miscibility with
  · Water at 20 °C (68 °F): 20 g/l

· Partition coefficient (n-octanol/water): Not determined.
Trade name: Custom Standard

- **Viscosity:**
  - Dynamic at 20 °C (68 °F): 0.43 mPas
  - Kinematic: Not determined.

- **Solvent content:**
  - Organic solvents: 99.0 %
  - VOC content:
    - 0.00 %
    - 0.0 g/l / 0.00 lb/gl
  - Solids content: 0.5 %

- **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 1,616 mg/kg (rat)
    - Dermal LD50 >2,020 mg/kg (rat)
    - Inhalative LC50/4 h 88.9 mg/L (rat)

    **75-09-2 dichloromethane**
    - Oral LD50 1,600 mg/kg (rat)
    - Dermal LD50 >2,000 mg/kg (rat)
    - Inhalative LC50/4 h 88 mg/L (rat)

    **683-18-1 dibutyltin dichloride**
    - Oral LD50 50 mg/kg (rat)

    **753-73-1 dimethyltin dichloride**
    - Oral LD50 73.9 mg/kg (rat)

    **1461-22-9 tributyltin chloride**
    - Oral LD50 129 mg/kg (rat)
    - Inhalative LC50/4 h <0.078 mg/L (rat)

    **639-58-7 fentin chloride**
    - Oral LD50 238 mg/kg (rat)
    - Dermal LD50 >1,000 mg/kg (rabbit)
Trade name: Custom Standard

· Primary irritant effect:
  · on the skin: Irritant to skin and mucous membranes.
  · 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:
  Harmful
  Irritant

· Carcinogenic categories
  · IARC (International Agency for Research on Cancer)
    75-09-2 dichloromethane 2A
  · NTP (National Toxicology Program)
    75-09-2 dichloromethane R
  · OSHA-Ca (Occupational Safety & Health Administration)
    75-09-2 dichloromethane

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 3 (Self-assessment): extremely hazardous for water
    Do not allow product to reach ground water, water course or sewage system, even in small quantities.
    Danger to drinking water if even extremely 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: UN1593
Safety Data Sheet  
acc. to OSHA HCS

Trade name: Custom Standard

- UN proper shipping name
- DOT  
- IMDG  
- IATA  
  Dichloromethane  
  DICHLOROMETHANE solution, MARINE POLLUTANT  
  DICHLOROMETHANE solution

- Transport hazard class(es)
  - DOT
    - Class 6.1 Toxic substances
    - Label 6.1
  - IMDG
    - Class 6.1 Toxic substances
    - Label 6.1
  - IATA
    - Class 6.1 Toxic substances
    - Label 6.1
  - Packing group
    - DOT, IMDG, IATA
      III

- Environmental hazards:
  Product contains environmentally hazardous substances: n-octyltin-trichloride, fentin chloride

- Marine pollutant:
  Symbol (fish and tree)

- Special precautions for user
  Warning: Toxic substances
- Danger code (Kemler): 60
- EMS Number: F-A,S-A
- Segregation groups
  Liquid halogenated hydrocarbons
- Stowage Category
  A

- 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: 60 L
      On cargo aircraft only: 220 L

(Contd. of page 7)
Trade name: Custom Standard

<table>
<thead>
<tr>
<th>IMDG</th>
<th>5L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited quantities (LQ)</td>
<td>Code: E1</td>
</tr>
<tr>
<td>Excepted quantities (EQ)</td>
<td>Maximum net quantity per inner packaging: 30 ml</td>
</tr>
<tr>
<td></td>
<td>Maximum net quantity per outer packaging: 1000 ml</td>
</tr>
</tbody>
</table>

- UN "Model Regulation": UN 1593 DICHLOROMETHANE SOLUTION, 6.1, III, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

<table>
<thead>
<tr>
<th>Section 355 (extremely hazardous substances):</th>
</tr>
</thead>
<tbody>
<tr>
<td>639-58-7 fentin chloride</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section 313 (Specific toxic chemical listings):</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-09-2 dichloromethane</td>
</tr>
<tr>
<td>639-58-7 fentin chloride</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TSCA (Toxic Substances Control Act):</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-09-2 dichloromethane</td>
</tr>
<tr>
<td>1118-46-3 Monobutyltin trichloride</td>
</tr>
<tr>
<td>3091-25-6 n-ocytlin-trichloride</td>
</tr>
<tr>
<td>683-18-1 dibutyltin dichloride</td>
</tr>
<tr>
<td>3542-36-7 dichlorooctylstannane</td>
</tr>
<tr>
<td>753-73-1 dimethyltin dichloride</td>
</tr>
<tr>
<td>1461-22-9 tributyltin chloride</td>
</tr>
<tr>
<td>639-58-7 fentin chloride</td>
</tr>
<tr>
<td>3091-32-5 Chlorotricyclohexylstannane</td>
</tr>
<tr>
<td>2587-76-0 chlorotrioctylstannane</td>
</tr>
<tr>
<td>993-16-8 Methyltin trichloride</td>
</tr>
<tr>
<td>1461-25-2 tetrabutyltin</td>
</tr>
</tbody>
</table>

- TSCA new (21st Century Act) (Substances not listed)
- Proposition 65

<table>
<thead>
<tr>
<th>Chemicals known to cause cancer:</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-09-2 dichloromethane</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemicals known to cause reproductive toxicity for females:</th>
</tr>
</thead>
<tbody>
<tr>
<td>None of the ingredients is listed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemicals known to cause reproductive toxicity for males:</th>
</tr>
</thead>
<tbody>
<tr>
<td>None of the ingredients is listed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemicals known to cause developmental toxicity:</th>
</tr>
</thead>
<tbody>
<tr>
<td>None of the ingredients is listed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Carcinogenic categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPA (Environmental Protection Agency)</td>
</tr>
<tr>
<td>75-09-2 dichloromethane</td>
</tr>
</tbody>
</table>
Trade name: Custom Standard

### TLV (Threshold Limit Value established by ACGIH)
- 1461-22-9 tributyltin chloride
- 75-09-2 dichloromethane
- 683-18-1 dibutyltin dichloride
- 3542-36-7 dichlorodiocctylstannane
- 1135-99-5 Diphenyltin dichloride
- 753-73-1 dimethyltin dichloride
- 639-58-7 fentin chloride
- 993-16-8 Methyltin trichloride
- 1461-25-2 tetrabutyltin

### NIOSH-Ca (National Institute for Occupational Safety and Health)
- 75-09-2 dichloromethane

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

### Hazard pictograms
- GHS07
- GHS08

### Signal word
Danger

### Hazard-determining components of labeling:
dichloromethane

### Hazard statements
Harmful if swallowed.
Causes skin irritation.
Causes serious eye irritation.
May cause cancer.

### Precautionary statements
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Call a poison center/doctor if you feel unwell.
If on skin: Wash with plenty of water.
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.
Specific treatment (see on this label).
Rinse mouth.
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

### National regulations:
- Additional classification according to Decree on Hazardous Materials:
Carcinogenic hazardous material group III (dangerous).
Trade name: Custom Standard

- **Information about limitation of use:**
  Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

- **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** 01/29/2018 / -

- **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
  - PEL: Permissible Exposure Limit
  - REL: Recommended Exposure Limit
  - BEI: Biological Exposure Limit
  - Acute Tox. 4: Acute toxicity – Category 4
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
  - Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
  - Carc. 1B: Carcinogenicity – Category 1B