1 Identification

· Product identifier
· Trade name: Custom Standard
· Part number: CUS-8124
· 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

GHS08 Health hazard
Carc. 1A H350 May cause cancer.

GHS07

Acute Tox. 4 H302 Harmful if swallowed.

· 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
chrysene-d12
acenaphthene-d10
· Hazard statements
Harmful if swallowed.
May cause cancer.
· Precautionary statements
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Trade name: Custom Standard

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 exposed or concerned: Get medical advice/attention.
Rinse mouth.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**
  - **NFPA ratings (scale 0 - 4)**
    - Health = 1
    - Fire = 0
    - Reactivity = 0
  - **HMIS-ratings (scale 0 - 4)**
    - Health = *1
    - 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>98.19%</td>
</tr>
<tr>
<td>1719-03-5 chrysene-d12</td>
<td>0.302%</td>
</tr>
<tr>
<td>3855-82-1 1,4-dichlorobenzene-d4</td>
<td>0.302%</td>
</tr>
<tr>
<td>15067-26-2 acenaphthene-d10</td>
<td>0.302%</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:** 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.
- **After swallowing:** Immediately call a doctor.
- **Information for doctor:**
  - **Most important symptoms and effects, both acute and delayed** 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
  - PAC-2: 75-09-2 dichloromethane 560 ppm
  - PAC-3: 75-09-2 dichloromethane 6,900 ppm

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 storeroms and receptacles: No special requirements.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: None.
- 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.
Safety Data Sheet
acc. to OSHA HCS

Printing date 09/15/2017
Version Number 1
Reviewed on 09/15/2017

Trade name: Custom Standard

- 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.
At this time, the other constituents have no known exposure limits.

<table>
<thead>
<tr>
<th>75-09-2 dichloromethane</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>REL</td>
</tr>
<tr>
<td>TLV</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

- Ingredients with biological limit values:
- 75-09-2 dichloromethane

<table>
<thead>
<tr>
<th>BEI</th>
<th>0.3 mg/L</th>
</tr>
</thead>
<tbody>
<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.
  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:
  Protective gloves

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:
  Safety glasses

(Contd. on page 5)
### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
  - **General Information**
    - **Appearance:**
      - Form: Liquid
      - Color: Colorless
    - **Odor:** Like chlorine
    - **Odor threshold:** Not determined.
  - **pH-value:** Not determined.

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

- **Flash point:** Not applicable.

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

- **Ignition temperature:** 605°C (°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 (mm Hg)

- **Density at 20°C (68 °F):** 1.3 g/cm³ (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.

- **Viscosity:**
  - Dynamic: Not determined.
  - Kinematic: Not determined.

- **Solvent content:**
  - Organic solvents: 98.2 %
  - VOC content: 0.00 %
    - 0.0 g/l / 0.00 lb/gl

- **Solids content:** 1.8 %
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)
      | Type       | LD50        | LC50/4 h     |
      |------------|-------------|--------------|
      | Oral       | 1,629 mg/kg (rat) | 89.6 mg/L (rat) |
      | Dermal     | >2,037 mg/kg (rat) |       |
      | Inhalative |             | 89.6 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)

- 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: Harmful

- 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.
Trade name: Custom Standard

- **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 UN1593
- **UN proper shipping name**
  - DOT Dichloromethane
  - IMDG, IATA DICHLOROMETHANE
- **Transport hazard class(es)**
  - **DOT**
    - **Class** 6.1 Toxic substances
    - **Label** 6.1
  - **IMDG, IATA**
    - **Class** 6.1 Toxic substances
    - **Label** 6.1
- **Packing group**
  - **DOT, IMDG, IATA** III
- **Environmental hazards:** Not applicable.
Trade name: Custom Standard

- 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
  - Hazardous substance: 1000 lbs, 454 kg
  - IMDG
  - Limited quantities (LQ): 5L
  - Excepted quantities (EQ): Code: E1
    Maximum net quantity per inner packaging: 30 ml
    Maximum net quantity per outer packaging: 1000 ml

- UN "Model Regulation": UN 1593 DICHLOROMETHANE, 6.1, III

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):
    75-09-2 dichloromethane
  - TSCA (Toxic Substances Control Act):
    75-09-2 dichloromethane

- Proposition 65
  - Chemicals known to cause cancer:
    75-09-2 dichloromethane
  - 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)
    75-09-2 dichloromethane
  - TLV (Threshold Limit Value established by ACGIH)
    75-09-2 dichloromethane
Trade name: Custom Standard

- 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
  chrysene-d12
 acenaphthene-d10

- Hazard statements
  Harmful if swallowed.
  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 exposed or concerned: Get medical advice/attention.
  Rinse mouth.
  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).

- 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 09/15/2017 / -

- 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)
Trade name: Custom Standard

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
Carc. 1A: Carcinogenicity – Category 1A