## 1 Identification

- **Product identifier**
- **Trade name:** Custom Standard
- **Part number:** ICUS-6044
- **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. 2 H351 Suspected of causing cancer.
- **Label elements**
  - **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**
  - GHS08 Warning

- **Signal word** Warning
- **Hazard-determining components of labeling:** molybdenum trioxide
- **Hazard statements**
  - Suspected of causing cancer.
- **Precautionary statements**
  - Obtain special instructions before use.
  - Do not handle until all safety precautions have been read and understood.
  - Wear protective gloves/protective clothing/eye protection/face protection.
  - IF exposed or concerned: Get medical advice/attention.
  - Store locked up.
  - Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. on page 2)
Trade name: Custom Standard

- Classification system:
- NFPA ratings (scale 0 - 4)
  - Health = 0
  - Fire = 0
  - Reactivity = 0

- HMIS-ratings (scale 0 - 4)
  - Health = *0
  - 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:
  - 1313-27-5 molybdenum trioxide 1.0%

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.
  - 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: 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.
Trade name: Custom Standard

- 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.
- 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</th>
<th>Molybdenum Trioxide (1313-27-5)</th>
<th>Ammonia (1336-21-6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.3 mg/m³</td>
<td>61 ppm</td>
</tr>
<tr>
<td>2</td>
<td>43 mg/m³</td>
<td>330 ppm</td>
</tr>
<tr>
<td>3</td>
<td>260 mg/m³</td>
<td>2,300 ppm</td>
</tr>
</tbody>
</table>

7 Handling and storage

- Handling:
  - Precautions for safe handling: No special precautions are necessary if used correctly.
  - 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.
    - 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.
- Control parameters
  - Components with limit values that require monitoring at the workplace:
    | Molybdenum Trioxide (1313-27-5) |
    |-------------------------------|
    | PEL: Long-term value: 5 mg/m³ as Mo |
    | TLV: Long-term value: 0.5 mg/m³ as Mo; respirable fraction |
- 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.
- Breathing equipment: Not required.
Trade name: Custom Standard

- **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:** Goggles recommended during refilling.

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**9 Physical and chemical properties**

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

- **Change in condition**
  - Melting point/Melting range: Undetermined.
  - Boiling point/Boiling range: 100 °C (212 °F)

- **Flash point:** Not applicable.

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

- **Ignition temperature:**
  - Decomposition temperature: Not determined.

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Explosion limits:**
  - Lower: Not determined.
  - Upper: Not determined.

- **Vapor pressure at 20 °C (68 °F):** 23 hPa (17 mm Hg)

- **Density at 20 °C (68 °F):** 1.03666 g/cm³ (8.651 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.
Trade name: Custom Standard

- **Viscosity:**
  - Dynamic at 20 °C (68 °F): 0.952 mPas
  - Kinematic: Not determined.

- **Solvent content:**
  - Organic solvents: 0.0 %
  - Water: 98.8 %
  - VOC content: 0.0 g/l / 0.00 lb/gl
  - Solids content: 1.0 %
  - 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 12500 mg/kg (rat)
    - **1313-27-5 molybdenum trioxide**
      - Oral: LD50 2689 mg/kg (rat)
      - Dermal: LD50 >2000 mg/kg (rat)
      - Inhalative: LC50/4 h >5.05 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:
  - **Carcinogenic categories**
    - **IARC (International Agency for Research on Cancer)**
      - None of the ingredients is listed.
    - **NTP (National Toxicology Program)**
      - None of the ingredients is listed.
12 Ecological information

- **Toxicity:** No further relevant information available.
- **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**
- not regulated
- **UN proper shipping name**
- **DOT, IMDG, IATA**
- not regulated
- **Transport hazard class(es)**
- **DOT, IMDG, IATA**
- **Class**
- not regulated
- **Packing group**
- **DOT, IMDG, IATA**
- not regulated
- **Environmental hazards:**
- Not applicable.
- **Special precautions for user**
- Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**
- Not applicable.
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):
    1313-27-5 molybdenum trioxide
    1336-21-6 ammonia
- TSCA (Toxic Substances Control Act):
  All ingredients are listed.
- Proposition 65
  - Chemicals known to cause cancer:
    None of the ingredients is listed.
  - 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)
    None of the ingredients is listed.
  - TLV (Threshold Limit Value established by ACGIH)
    None of the ingredients is listed.
  - 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

  GHS08

- Signal word Warning
- Hazard-determining components of labeling:
  molybdenum trioxide
- Hazard statements
  Suspected of causing cancer.
- Precautionary statements
  Obtain special instructions before use.
  Do not handle until all safety precautions have been read and understood.
Trade name: Custom Standard

Wear protective gloves/protective clothing/eye protection/face protection.
IF exposed or concerned: Get medical advice/attention.
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: 05/24/2017 /

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
Carc. 2: Carcinogenicity – Category 2