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

- **Product identifier**
  - **Trade name:** trans-Chlordane Neat
  - **Part number:** N-2769-250MG
  - **CAS Number:** 5103-74-2
  - **EC number:** 225-826-0
- **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.
  - **GHS07**
    Acute Tox. 4  H302  Harmful if swallowed.
- **Label elements**
  - **GHS label elements**
    The substance is classified and labeled according to the Globally Harmonized System (GHS).
  - **Hazard pictograms**
  - **GHS07**
  - **GHS08**
- **Signal word** Warning
- **Hazard-determining components of labeling:**
  - trans-chlordane
- **Hazard statements**
  - Harmful if swallowed.
  - Suspected of causing cancer.
Trade name: trans-Chlordane Neat

- **Precautionary statements**
  - Wear protective gloves/protective clothing/eye protection/face protection.
  - Wash thoroughly after handling.
  - Do not eat, drink or smoke when using this product.
  - Obtain special instructions before use.
  - Do not handle until all safety precautions have been read and understood.
  - 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 = 2
    - Fire = 0
    - Reactivity = 0
  - **HMIS-ratings (scale 0 - 4)**
    - **HEALTH**
      - Health = *2
    - **FIRE**
      - Fire = 0
    - **REACTIVITY**
      - Reactivity = 0

- **Other hazards**
  - **Results of PBT and vPvB assessment**
    - **PBT:** Not applicable.
    - **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization:** Substances
- **CAS No. Description**
  - 5103-74-2 trans-chlordane
- **Identification number(s)**
- **EC number:** 225-826-0

### 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.
    - **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:
  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
  - PAC-1: Substance is not listed.
  - PAC-2: Substance is not listed.
  - PAC-3: Substance is not listed.

7 Handling and storage

- Handling:
- Precautions for safe handling: Open and handle receptacle with care.
- Information about protection against explosions and fires: Keep respiratory protective device available.
- 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: 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
  - 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.
    The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
    At this time, the remaining constituent has no known exposure limits.
Trade name: trans-Chlordane Neat

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

- **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:** Not required.
  - **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.
  - **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:** Not required.

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**9 Physical and chemical properties**

- **Information on basic physical and chemical properties**
  - **General Information**
    - **Appearance:**
      - **Form:** Solid
      - **Color:** Not determined.
    - **Odor:** Characteristic
    - **Odor threshold:** Not determined.
  - **pH-value:** Not applicable.
  - **Change in condition**
    - **Melting point/Melting range:** Undetermined.
    - **Boiling point/Boiling range:** Undetermined.
  - **Flash point:** Not applicable.
  - **Flammability (solid, gaseous):** Product is not flammable.
  - **Ignition temperature:**
    - **Decomposition temperature:** Not determined.
    - **Auto igniting:** Not determined.
  - **Danger of explosion:** Product does not present an explosion hazard.
Trade name: trans-Chlordane Neat

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

- **Vapor pressure:**
  - Not applicable.

- **Density at 20 °C (68 °F):**
  - 1.59 g/cm³ (13.269 lbs/gal)
  - Relative density: Not determined.
  - Vapor density: Not applicable.
  - Evaporation rate: Not applicable.

- **Solubility in / Miscibility with Water:**
  - Insoluble.

- **Partition coefficient (n-octanol/water):**
  - Not determined.

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

- **Solvent content:**
  - Organic solvents: 0.0 %
  - VOC content: g/l / 0 lb/gl

- **Other information**
  - No further relevant information available.

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### 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.

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### 11 Toxicological information

- **Information on toxicological effects**

  - **Acute toxicity:**

    | LD/LC50 values that are relevant for classification: |
    |-----------------------------------------------|
    | **ATE (Acute Toxicity Estimates)**             |
    | **Oral** | **LD50**     | 500 mg/kg          |
    |
    | **5103-74-2 trans-chlordane**                  |
    | **Oral** | **LD50**     | 275 mg/kg (mouse)  |

- **Primary irritant effect:**
  - **on the skin:**
    - No irritant effect.
  - **on the eye:**
    - No irritating effect.
  - **Sensitization:**
    - No sensitizing effects known.
Trade name: trans-Chlordane Neat

<table>
<thead>
<tr>
<th>Additional toxicological information:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carcinogenic categories</td>
</tr>
<tr>
<td>IARC (International Agency for Research on Cancer)</td>
</tr>
<tr>
<td>Substance is not listed.</td>
</tr>
<tr>
<td>NTP (National Toxicology Program)</td>
</tr>
<tr>
<td>Substance is not listed.</td>
</tr>
<tr>
<td>OSHA-Ca (Occupational Safety &amp; Health Administration)</td>
</tr>
<tr>
<td>Substance is not listed.</td>
</tr>
</tbody>
</table>

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: UN3077

- **UN proper shipping name**
  - DOT: Environmentally hazardous substances, solid, n.o.s. (trans-chlordane)
  - IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (trans-chlordane), MARINE POLLUTANT
  - IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (trans-chlordane)
### Transport hazard class(es)

- **DOT**
  - Class: 9
  - Label: Miscellaneous dangerous substances and articles

- **IMDG, IATA**
  - Class: 9
  - Label: Miscellaneous dangerous substances and articles

### Packing group
- **DOT, IMDG, IATA**
  - Packing group: III

### Environmental hazards:
- **Product contains environmentally hazardous substances:** trans-chlordane
- **Marine pollutant:**
  - Symbol (fish and tree)
- **Special marking (IATA):**
  - Symbol (fish and tree)

### Special precautions for user
- **Warning:** Miscellaneous dangerous substances and articles
- **Danger code (Kemler):**
  - Code: 90
- **EMS Number:**
  - F-A,S-F
- **Stowage Category:**
  - A
- **Stowage Code:**
  - SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.

### 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: No limit
    - On cargo aircraft only: No limit

- **IMDG**
  - Limited quantities (LQ): 5 kg
    - Code: E1
    - Maximum net quantity per inner packaging: 30 g
    - Maximum net quantity per outer packaging: 1000 g

- **UN "Model Regulation":**
  - UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S. (TRANS-CHLORDANE), 9, III
15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Sara
  - Section 355 (extremely hazardous substances):
    Substance is not listed.
  - Section 313 (Specific toxic chemical listings):
    Substance is not listed.
  - TSCA (Toxic Substances Control Act):
    Substance is not listed.
  - Proposition 65
    - Chemicals known to cause cancer:
      Substance is not listed.
    - Chemicals known to cause reproductive toxicity for females:
      Substance is not listed.
    - Chemicals known to cause reproductive toxicity for males:
      Substance is not listed.
    - Chemicals known to cause developmental toxicity:
      Substance is not listed.
  - Carcinogenic categories
    - EPA (Environmental Protection Agency)
      Substance is not listed.
    - TLV (Threshold Limit Value established by ACGIH)
      Substance is not listed.
    - NIOSH-Ca (National Institute for Occupational Safety and Health)
      Substance is not listed.
  - GHS label elements
    The substance is classified and labeled according to the Globally Harmonized System (GHS).
  - Hazard pictograms

  ![GHS pictograms]

  GHS07  GHS08

- Signal word Warning
- Hazard-determining components of labeling:
  - trans-chlordane
- Hazard statements
  Harmful if swallowed.
  Suspected of causing cancer.
- Precautionary statements
  Wear protective gloves/protective clothing/eye protection/face protection.
  Wash thoroughly after handling.
  Do not eat, drink or smoke when using this product.
  Obtain special instructions before use.
  Do not handle until all safety precautions have been read and understood.
Trade name: trans-Chlordane Neat

(Contd. of page 8)

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.
· **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** 04/21/2017 / -
· **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
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  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
  Acute Tox. 4: Acute toxicity – Category 4
  Carc. 2: Carcinogenicity – Category 2