Section 1: PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers
   Product Name: 2-Heptanone (Methyl Amyl Ketone), Natural
   Product Number: 0254400
   CAS-No.: 110-43-0

1.2 Product Recommended Use
   Flavorings

1.3 Preparation Information
   Company: Aurochemicals
   7 Nicoll Street
   Washingtonville, NY 10992- USA

   Telephone: 845-496-6065
   Fax: 845-496-6248

1.4 Emergency Telephone Number
   1-800-535-5053
   International - 1-352-323-3500 collect

Section 2: HAZARD(s) IDENTIFICATION

2.1 Classification of substance or mixture
   GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
   Flammable liquids (Category 3), H226
   Acute toxicity, Oral (Category 4), H302
   Acute toxicity, Inhalation (Category 4), H332

2.2 GHS Label Elements, Including precautionary statements
   Pictogram

   Signal Statement

   Hazard Statement(s)
   H226 Flammable liquid and vapor
   H302+H332 Harmful if swallowed or inhaled

   Precautionary Statement(s)
   P210 Keep away from heat/sparks/open flames/hot surfaces – No smoking
   P233 Keep container tightly closed
   P240 Ground/bond container and receiving equipment
   P241 Use explosion proof electrical/ventilating/lighting/equipment
   P242 Use only non-sparking tools
   P243 Take precautionary measures against static discharge
   P261 Avoid breathing dust/fume/gas/mist/vapors/spray
2.3 HNOC (Hazards not otherwise classified or not covered by GHS)

None

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heptan-2-one</td>
<td>Flammable liquids (3), H226</td>
<td>90-100%</td>
</tr>
<tr>
<td></td>
<td>Acute toxicity, Oral (4), H302</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acute toxicity, Inhalation (4), H332</td>
<td></td>
</tr>
</tbody>
</table>

Section 4: FIRST AID MEASURES

4.1 Description of first aid measures

General Advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Inhalation
Provide fresh air; keep at rest and at a comfortable position to breathe. Consult a physician

Contact with skin:
Remove contaminated clothing. Rinse skin with cool water then wash with mild soap and warm water. Consult a physician

Contact with eyes:
Rinse thoroughly with plenty of water for at least 15 minutes as a precaution. Consult a physician.

Ingestion
DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Clothing contamination:
Remove contaminated clothing and wash before reuse.
4.2 **Most important symptoms and effects**

Both acute and delayed

See section 2.2 and or section 11

4.3 **Indication of any immediate medical attention and special treatment needed.**

No data available

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**Section 5: FIREFIGHTING MEASURES**

5.1 **Extinguishing Media**

**Suitable Extinguishing Media**

Use water spray, alcohol resistant foam, dry chemical or carbon dioxide

5.2 **Special hazards arising from the substance or mixture**

Carbon oxides

5.3 **Advice for fire fighters**

Wear self contained breathing apparatus for firefighting if necessary. Emits toxic fumes under fire conditions.

5.4 **Further information**

Use water spray to cool unopened containers.

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**Section 6: ACCIDENTIAL RELEASE MEASURES**

6.1 **Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid breathing vapors. Mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

6.2 **Environment precautions**

Prevent further leakage or spillage if safe to do so. Do not allow to enter drains or sewage system. Discharge into the environment must be avoided.

6.3 **Methods and materials for containment and clean up**

Contain spillage. Wet Sweep up with broom and place in a suitable, closed container for disposal.

6.4 **Specific end use(s)**

Apart from the uses mentioned in section 1.2, no other specific uses are stipulated.

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**Section 7: HANDLING AND STORAGE**

7.1 **Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition-No smoking. Take measures to prevent the buildup of electrostatic charge.

7.2 **Conditions for Safe storage**

Keep container tightly closed in a dry, cool and well-ventilated place. Containers which have been opened must be carefully resealed and kept upright to prevent leakage.

7.3 **Specific End use(s)**

Flavorings

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**Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

8.1 **Control parameters**

Components with workplace control parameters
<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Value</th>
<th>Control Parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heptan-2-one</td>
<td>110-43-0</td>
<td>TWA</td>
<td>50 ppm</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
</tr>
</tbody>
</table>

Remarks: Skin and eye irritation

<table>
<thead>
<tr>
<th>TWA</th>
<th>100 ppm</th>
<th>465 mg/m³</th>
<th>USA. Occupational Exposure Limits (OSHA) – Table Z-1 Limits for Air Contaminates</th>
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</thead>
<tbody>
<tr>
<td>The value in mg/m³ is approximate</td>
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</tr>
<tr>
<td>TWA</td>
<td>100 ppm</td>
<td>465 mg/m³</td>
<td>USA. OSHA – Table Z-1 Limits for Air Contaminates – 1910.100</td>
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<tr>
<td>TWA</td>
<td>100 ppm</td>
<td>465 mg/m³</td>
<td>USA. NIOSH Recommended Exposure Limits</td>
</tr>
</tbody>
</table>

8.2 Exposure Controls

Appropriate Engineering Controls Handle in accordance with good industrial hygiene and safety practices. Wash hands before breaks and at the end of the workday.

Personal protective equipment These recommendations are advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situations of anticipated use by our customers. They should not be construed as offering an approval or any specific use scenario.

Eye/face protection Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN (166 (EU)).

Skin protection Wear chemically resistant Butyl rubber gloves, 0.3mm. Use proper glove removal techniques (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use. Wash and dry hands.

Body protection Complete suit protecting against chemicals should be selected specifically for the work place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Respiratory protection Where risk assessment shows air-purifying respirators are appropriate, use a full face respirator with multi-purpose combination (U) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full faced supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (U) or CEN (EU).

Control of environmental exposure Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a Appearance Liquid, Colorless

b Odor No data available

c Odor Threshold No data available
### Section 10: STABILITY AND REACTIVITY

10.1 Reactivity
- No data available

10.2 Chemical Stability
- Stable under recommended storage conditions

10.3 Possibility of Hazardous reactions
- No data available

10.4 Conditions to avoid
- Heat, Flames and Sparks

10.5 Incompatible materials
- Strong oxidizing agents, Strong reducing agents, Strong bases

10.6 Hazardous decomposition products
- No data available

10.7 Further information
- No data available

### Section 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

**Acute Toxicity**
- **LD50-Oral- Rat**: 1,600 mg/kg
- **LC50-Inhalation- Rat (m/f)**: >16.7 mg/l 4 hr  
  (OECD Test Guideline 403)
- **LD50-Dermal-Rat (m/f)**: >5,000 mg/kg  
  (OECD Test Guideline 402)

**Skin corrosion/irritation**
- Rabbit – Mild skin irritation - 4hr  
  (OECD Test Guideline 404)

**Serious eye damage/eye irritation**
- Rabbit: Mild eye irritation  
  (OECD Test Guideline 405)

**Respiratory or skin sensitization**
- Mouse: Did not cause sensitisation on laboratory animals  
  (OECD Test Guideline 429)
Germ Cell mutagenicity

In Vitro Assay; Lymphocyte:
Result: Negative
Rat-Female – Result: Negative

Carcinogenicity

IARC No component of this product, present levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH No component of this product, present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP No component of this product, present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA No component of this product, present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity No data available

Teratogenicity No data available

Specific target organ toxicity-single exposure (GHS) No data available

Specific target organ toxicity-repeated exposures (GHS) No data available

Aspiration Hazards No data available

Signs and Symptoms of Exposure Stomach Irregularities – Based on Human Evidence
Central Nervous system depression
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated

Synergistic effects No data available

RTECS: MJ5075000

Section 12: ECOLOGICAL INFORMATION

12.1 Toxicity
To Fish:
LC50- Pimephales promelas (fathead minnow) 126-137 mg/l - 96 hr

To daphnia and other aquatic invertebrates
EC50- Static test: Pseudokirchneriella subcapitata (Selenastrum capricornutum) 98.2 mg/l 72 hr
(OECD Test Guideline 201)

12.2 Persistence and degradability
Biodegradability: Aerobic: Exposure time 28 d
Result: 69% - Readily biodegradable
(OECD Test Guideline 310)
Ration BOD/ThBOD: 1.77%

12.3 Bioaccumulative potential No data available
12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required / not conducted

12.6 Other adverse effects

No data available

Section 13: DISPOSAL CONSIDERATIONS

13.1 Disposal methods

Product: According to local regulations
Packaging: According to local regulations

Section 14: TRANSPORT INFORMATION

DOT (US)
Proper Shipping Name: n-Amyl methyl ketone
Reportable Quantity (RQ): No
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
Proper Shipping Name: n-AMYL METHYL KETONE
Marine Pollutant: No

IATA
Proper Shipping Name: n-Amyl methyl ketone

Section 15: REGULATORY INFORMATION

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302

SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Fire Hazard, Acute Health Hazard

Massachusetts Right to Know components
Heptan-2-one
CAS#: 110-43-0
Rev. Date: 4/1/1994

Pennsylvania Right to Know components
Heptan-2-one
CAS#: 110-43-0
Rev. Date: 4/1/1994

New Jersey Right to Know components
Heptan-2-one
CAS#: 110-43-0
Rev. Date: 4/1/1994

California Prop. 65 components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.
Section 16: OTHER INFORMATION

HMIS Rating
Health hazard 1
Chronic Health Hazard* 0
Flammability 2
Reactive Hazard 0

Further Information

Aurochemicals provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. Aurochemicals makes no representations or warranties, either expressed or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly, Aurochemicals will not be responsible, nor held liable, for damages resulting from use of or reliance upon this information.

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<tr>
<th>Issued by:</th>
<th>Contact Person:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aurochemicals</td>
<td>Deo N. Persaud</td>
</tr>
<tr>
<td>7 Nicoll Street</td>
<td>Revised Date: 9/16/2014</td>
</tr>
<tr>
<td>Washingtonville, NY 10992 USA</td>
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