SAFETY DATA SHEET

Issuing Date 24-Apr-2014  Revision Date 29-Aug-2017  Revision Number 1

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

1.1. Product identifier
Product Name N1.0
Contains Decane, 5-Methylnonane, 3-Methylnonane
Contains Decane, 5-Methylnonane, 3-Methylnonane

1.2. Relevant identified uses of the substance or mixture and uses advised against
Recommended Use Viscometer and/or density measurement equipment calibration and performance verification reference standard

Uses advised against No information available

1.3. Details of the supplier of the safety data sheet
Supplier Cannon Instrument Company
2139 High Tech Rd.
State College, PA 16803-1733
TEL: (814) 353-8000; (800) 676-6232
For further information, please contact
E-mail Address No information available.

1.4. Emergency telephone number
Emergency Telephone (800) 255-3924 Domestic CHEM-TEL Inc.
Number +1 (813) 248-0585 Overseas CHEM-TEL Inc. (Please Call Collect)

Europe 112

Section 2. Hazards identification

2.1. - Classification of the substance or mixture

REGULATION (EC) No 1272/2008

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspiration Toxicity</td>
<td>Category 1</td>
</tr>
<tr>
<td>Acute Inhalation Toxicity - Vapors</td>
<td>Category 4</td>
</tr>
<tr>
<td>Skin Corrosion/Irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Serious Eye Damage/Eye Irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Specific Target Organ Systemic Toxicity (Single Exposure)</td>
<td>Category 3</td>
</tr>
</tbody>
</table>

Physical Hazards

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammable liquids</td>
<td>Category 3</td>
</tr>
</tbody>
</table>

2.2. Label Elements
Signal Word  
Danger

Hazard Statements
H304 - May be fatal if swallowed and enters airways  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H322 - Harmful if inhaled  
H336 - May cause drowsiness or dizziness  
H226 - Flammable liquid and vapor

Precautionary Statements - EU (§28, 1272/2008)
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
P370 + P378 - In case of fire: Use CO2, dry chemical, or foam for extinction.  
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
P331 - Do NOT induce vomiting  
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

2.3. Other information
Prolonged skin contact may defat the skin and produce dermatitis. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Section 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>EC-No</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>EU - GHS Substance Classification</th>
<th>REACH No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decane</td>
<td>204-686-4</td>
<td>124-18-5</td>
<td>&gt;94.5</td>
<td>STOT SE 3 (H336) Asp. Tox. 1 (H304) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Acute Tox. 4 (H332) Flam Liq. 3 (H226)</td>
<td>No data available</td>
</tr>
<tr>
<td>3-Methylnonane</td>
<td>227-631-6</td>
<td>5911-04-6</td>
<td>&lt;5</td>
<td>STOT SE 3 (H336) Asp. Tox. 1 (H304) Skin Irrit. 2 (H315)</td>
<td>No data available</td>
</tr>
<tr>
<td>5-Methylnonane</td>
<td>-</td>
<td>15869-85-9</td>
<td>&lt;5</td>
<td>STOT SE 3 (H336) Asp. Tox. 1 (H304) Skin Irrit. 2 (H315)</td>
<td>No data available</td>
</tr>
</tbody>
</table>

For the full text of the H-Statements mentioned in this Section, see Section 16

Section 4. First aid measures
4.1. Description of first-aid measures

Eye Contact  Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Obtain medical attention if irritation persists.

Skin Contact  Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention if irritation develops and persists.

Ingestion  Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Drink plenty of water. Get medical attention.

Inhalation  IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately if symptoms occur. Artificial respiration and/or oxygen may be necessary. If breathing has stopped, contact emergency medical services immediately.

4.2. Most important symptoms and effects, both acute and delayed


4.3. Indication of immediate medical attention and special treatment needed

Notes to Physician  Aspiration hazard.

Section 5. Fire-fighting measures

5.1. Extinguishing media

Suitable Extinguishing Media  Water spray. Carbon dioxide (CO$_2$). Foam. Dry powder.

Extinguishing media which must not be used for safety reasons  No information available.

5.2. Special hazards arising from the substance or mixture

Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases  During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide, Carbon dioxide.

5.3. Advice for firefighters

Special protective equipment for fire-fighters  As in any fire, wear self-contained breathing apparatus and full protective gear.

Section 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures  Remove all sources of ignition. Avoid contact with skin, eyes and clothing. Use personal protective equipment.

6.2. Environmental precautions  Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

6.3. Methods and materials for containment and cleaning up  Dike to collect large liquid spills. Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

Clean contaminated surface thoroughly.

6.4. Reference to other sections  See Section 12 for additional information.
7.1. **Precautions for Safe Handling**

**Handling**
Keep away from open flames, hot surfaces and sources of ignition. Avoid contact with skin, eyes and clothing. Wear personal protective equipment.

**Hygiene Measures**
Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

7.2. **Conditions for safe storage, including any incompatibilities**
Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition.

7.3. **Specific end use(s)**

**Exposure Scenario**
No information available.

**Other Guidelines**
No information available.

---

### Section 8. Exposure controls/personal protection

#### 8.1. Control parameters

**Exposure Limits**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>EU</th>
<th>Austria</th>
<th>Belgium</th>
<th>Cyprus</th>
<th>Denmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decane 124-18-5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Finland</th>
<th>France</th>
<th>Germany</th>
<th>Gibraltar</th>
<th>Greece</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decane 124-18-5</td>
<td>TWA: 1000 mg/m³ STEL: 1500 mg/m³</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-Methylnonane 5911-04-6</td>
<td>TWA: 1000 mg/m³ STEL: 1500 mg/m³</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-Methylnonane 15869-85-9</td>
<td>TWA: 1000 mg/m³ STEL: 1500 mg/m³</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>The Netherlands</th>
<th>Norway</th>
<th>Poland</th>
<th>Portugal</th>
<th>Spain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decane 124-18-5</td>
<td>TWA: 40 ppm TWA: 275 mg/m³ STEL: 40 ppm STEL: 275 mg/m³</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-Methylnonane 5911-04-6</td>
<td>TWA: 40 ppm TWA: 275 mg/m³ STEL: 40 ppm STEL: 275 mg/m³</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-Methylnonane 15869-85-9</td>
<td>TWA: 40 ppm TWA: 275 mg/m³ STEL: 40 ppm STEL: 275 mg/m³</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Biological occupational exposure limits**
This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

**Derived No Effect Level**
No information available.

**Predicted No Effect Concentration (PNEC)**
No information available.

#### 8.2. Exposure controls
Engineering Measures
Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye Protection
Personal protection equipment should be chosen according to the CEN standards

Safety glasses with side-shields. If splashes are likely to occur, wear: Goggles.

Skin and Body Protection
Impervious gloves. Please observe the instructions regarding permeability and
breakthrough time which are provided by the supplier of the gloves. Also take into
consideration the specific local conditions under which the product is used, such as the
danger of cuts, abrasion.

Hand Protection
When workers are facing concentrations above the exposure limit they must use
appropriate certified respirators.

Respiratory Protection

Environmental Exposure Controls
No information available.

### Section 9. Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks/ - Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Hydrocarbon-like</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Boiling Point/Boiling Range</td>
<td>171 °C</td>
<td>None known</td>
</tr>
<tr>
<td>Flash Point</td>
<td>44 °C</td>
<td>Closed cup</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Flammability Limits in Air</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Relative Density</td>
<td>No data available</td>
<td>0.73 None known</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Insoluble in water.</td>
<td>None known</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>Soluble in solvents.</td>
<td>None known</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Viscosity</td>
<td>1 cSt @ 40°C</td>
<td>None known</td>
</tr>
</tbody>
</table>

Explosive Properties
No information available

Oxidizing Properties
No information available

#### 9.2. Other information

- VOC Content (%)
  No information available

### Section 10. Stability and reactivity

#### 10.1. Reactivity
Not reactive under normal conditions.

#### 10.2. Chemical stability
Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

#### 10.4. Conditions to avoid
Ignitions sources - heat, sparks and open flames.

#### 10.5. Incompatible materials
Strong acids. Strong oxidizing agents.

#### 10.6. Hazardous decomposition products
Carbon oxides.
Section 11. Toxicological information

11.1. Information on toxicological effects

Acute Toxicity

Product Information

Inhalation
Harmful by inhalation. May cause irritation of respiratory tract. May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination.

Eye Contact
Expected to be an irritant based on components.

Skin Contact
Expected to be an irritant based on components. Prolonged skin contact may defat the skin and produce dermatitis.

Ingestion
Potential for aspiration if swallowed. Aspiration may cause pulmonary edema and pneumonitis. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause central nervous system depression. May be fatal if swallowed and enters airways.

Acute Toxicity
5.5% of the mixture consists of ingredient(s) of unknown toxicity.

The following values are calculated based on chapter 3.1 of the GHS document:

<table>
<thead>
<tr>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>99,999.00 mg/kg</td>
<td>99,999.00 mg/kg</td>
<td>99,999.00 mg/L</td>
</tr>
</tbody>
</table>

Gas

99,999.00 mg/L

Dust/Mist
1.60 mg/L

Vapor
12.00 mg/L

Chemical Name | LD50 Oral | LD50 Dermal | LC50 Inhalation
--- | --- | --- | ---
Decane | > 5000 mg/kg (Rat) | > 2000 mg/kg (Rat) | > 1369 ppm (Rat) 8 h

Sensitization
No information available.

Mutagenic Effects
No information available.

Carcinogenic Effects
No information available.

Reproductive Toxicity
No information available.

Developmental Toxicity
No information available.

STOT - single exposure
May cause drowsiness or dizziness

STOT - repeated exposure
See listed target organs below.

Target Organ Effects

Neurological Effects
Repeated or prolonged overexposure to solvents may cause permanent damage to the nervous system. Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal.

Aspiration Hazard
May be fatal if swallowed and enters airways.

Section 12. Ecological information

12.1. Toxicity

Ecotoxicity Effects
Harmful to aquatic organisms.

Chemical Name | Toxicity to Algae | Toxicity to Fish | Toxicity to Microorganisms | Daphnia Magna (Water Flea)
--- | --- | --- | --- | ---
Decane | EC50 24 h: = 0.043 mg/L (Chlorella vulgaris) | | | EC50 48 h: = 18 mg/L (Daphnia magna)

12.2. Persistence and degradability

Expected to be biodegradable

12.3. Bioaccumulative potential
12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

This product does not contain any known or suspected endocrine disruptors.

Section 13. Disposal considerations

13.1. Waste treatment methods

Waste from Residues / Unused Products
Dispose of in accordance with local regulations.

Contaminated Packaging
Empty containers should be taken to an approved waste handling site for recycling or disposal.

Section 14. Transport information

Note:
The information provided below may not apply to all shipping situations. Consult appropriate Dangerous Goods Regulations for additional requirements and mode-specific, material-specific, or quantity-specific shipping requirements.

IMDG/IMO
14.1. UN-Number
UN2247
14.2. Proper Shipping Name
n-Decane
14.3. Hazard Class
3
14.4. Packing Group
III
Description
UN2247, n-Decane, 3, III, (44°C c.c.)
14.5. Marine Pollutant
None
None
EmS No.
F-E, S-E
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
No information available.

RID
14.1. UN-Number
UN2247
14.2. Proper Shipping Name
n-Decane
14.3. Hazard Class
3
14.4. Packing Group
III
Description
UN2247, n-Decane, 3, III
14.5. Environmental hazard
None
None
Classification Code
F1

ADR
14.1. UN-Number
UN2247
14.2. Proper Shipping Name
n-Decane
14.3. Hazard Class
3
ADR/RID-Labels
3
14.4. Packing Group
III
Description
UN2247, n-Decane, 3, III, (D/E)
14.5. Environmental hazard
None
None
### Classification Code
- F1

### ICAO
14.1. UN-Number: UN2247
14.2. Proper shipping name: n-Decane
14.3. Hazard Class: 3
14.4. Packing Group: III
14.5. Environmental hazard: None
14.6. Special Provisions: None

### IATA
14.1. UN-Number: UN2247
14.2. Proper Shipping Name: n-Decane
14.3. Hazard Class: 3
14.4. Packing Group: III
14.5. Environmental hazard: None
14.6. Special Provisions: None

### ERG Code
- 3L

### Section 15. Regulatory information

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

<table>
<thead>
<tr>
<th>International Inventories</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td>Not determined</td>
</tr>
<tr>
<td>EINECS/ELINCS</td>
<td>Not determined</td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td>Complies</td>
</tr>
<tr>
<td>PICCS</td>
<td>Not determined</td>
</tr>
<tr>
<td>ENCS</td>
<td>Complies</td>
</tr>
<tr>
<td>IECSC</td>
<td>Not determined</td>
</tr>
<tr>
<td>AICS</td>
<td>Not determined</td>
</tr>
<tr>
<td>KECL</td>
<td>Complies</td>
</tr>
</tbody>
</table>

**Legend**
- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
- PICCS - Philippines Inventory of Chemicals and Chemical Substances
- ENCS - Japan Existing and New Chemical Substances
- IECSC - China Inventory of Existing Chemical Substances
- AICS - Australian Inventory of Chemical Substances
- KECL - Korean Existing and Evaluated Chemical Substances

#### 15.2. Chemical Safety Assessment
No information available

### Section 16. Other information

**Full text of H-Statements referred to under sections 2 and 3**
- H336 - May cause drowsiness or dizziness
- H304 - May be fatal if swallowed and enters airways
- H315 - Causes skin irritation
- H319 - Causes serious eye irritation
- H332 - Harmful if inhaled
- H226 - Flammable liquid and vapor

**Key literature references and sources for data**
- www.ChemADVISOR.com/

**Issuing Date**
- 24-Apr-2014

General Disclaimer
The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet