SECTION 1  PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: Dimethyl selenide
PRODUCT NO: 0025
CAS NO: 593-79-3
SYNONYMS: Methyl selenide

Intended Use: For R&D use only.

MANUFACTURER:
NOVA-KEM
N115 W19392 EDISON DRIVE
GERMANTOWN, WI 53022

PHONE: +1-262-293-0251
FAX: +1-262-253-1258

IN CASE OF TRANSPORTATION EMERGENCY CONTACT CHEM-TREC 1-800-424-9300
CHEM-TREC INTERNATIONAL: +1-703-741-5500
FOR TECHNICAL INFORMATION CONTACT: +1-262-293-0251

SECTION 2  HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

GHS CLASSIFICATION:
Acute toxicity, Oral (Category 3)
Acute toxicity, Inhalation (Category 3)
Specific target organ toxicity- repeated exposure (Category 2)
Acute aquatic toxicity (Category 1)
Chronic aquatic toxicity (Category 1)

Pictogram

Signal Word

Danger
**SECTION 2  HAZARDS IDENTIFICATION (Cont.)**

Hazard Statements

<table>
<thead>
<tr>
<th>Hazard Statement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H301 + H331</td>
<td>Toxic if swallowed or inhaled</td>
</tr>
<tr>
<td>H373</td>
<td>May cause damage to organs through prolonged or repeated exposure</td>
</tr>
<tr>
<td>H410</td>
<td>Very toxic to aquatic life with long lasting effects</td>
</tr>
</tbody>
</table>

Precautionary Phrases

<table>
<thead>
<tr>
<th>Precautionary Phrase</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>P260</td>
<td>Do not breathe fume/gas/mist/vapors/spray.</td>
</tr>
<tr>
<td>P264</td>
<td>Wash skin thoroughly after handling</td>
</tr>
<tr>
<td>P270</td>
<td>Do not eat, drink or smoke when using this product</td>
</tr>
<tr>
<td>P271</td>
<td>Use only outdoors or in a well-ventilated area</td>
</tr>
<tr>
<td>P273</td>
<td>Avoid release to the environment</td>
</tr>
<tr>
<td>P301 + P312</td>
<td>IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.</td>
</tr>
<tr>
<td>P304 + P340</td>
<td>IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing</td>
</tr>
<tr>
<td>P314</td>
<td>Get medical advice/attention if you feel unwell</td>
</tr>
<tr>
<td>P321</td>
<td>Specific treatment (see supplemental first aid instructions on this label)</td>
</tr>
<tr>
<td>P330</td>
<td>Rinse mouth.</td>
</tr>
<tr>
<td>P391</td>
<td>Collect spillage.</td>
</tr>
<tr>
<td>P403 + P233</td>
<td>Store in a well-ventilated place. Keep container tightly closed.</td>
</tr>
<tr>
<td>P405</td>
<td>Store locked up.</td>
</tr>
<tr>
<td>P501</td>
<td>Dispose of contents/container to an approved waste disposal plant.</td>
</tr>
</tbody>
</table>

**OTHER HAZARDS**

None.

**SECTION 3  COMPOSITION / INFORMATION ON INGREDIENTS**

<table>
<thead>
<tr>
<th>CHEMICAL NAME</th>
<th>CAS#</th>
<th>Assay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl selenide</td>
<td>593-79-3</td>
<td>100 %</td>
</tr>
</tbody>
</table>

**SECTION 4  FIRST AID MEASURES**

**INHALATION:** Remove victim to fresh air. If not breathing administer CPR. Consult a physician.  
**SKIN EXPOSURE:** Wash affected area with soap and plenty of water. Remove contaminated clothes and shoes if necessary. Take victim immediately to hospital. Consult a physician.  
**EYE EXPOSURE:** Flush eyes with water as a precaution.  
**INGESTION:** Do not induce vomiting. Rinse out mouth with water provided person is conscious. Consult a physician.
SECTION 5  FIREFIGHTING MEASURES

EXTINGUISHING MEDIA:
In case of fire: Use water spray, CO2, alcohol-resistant foam or dry chemical

HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS:
Carbon oxides, selenium oxides

ADVICE FOR FIRE FIGHTERS
Wear self-contained breathing apparatus.

SECTION 6  ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS
Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

ENVIRONMENTAL PRECAUTIONS
Contain the spillage. Do not let product enter drains. Discharge to the environment must be avoided.

METHODS AND MATERIALS
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

SECTION 7  HANDLING AND STORAGE

PERSONAL PRECAUTIONS
Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

CONDITIONS FOR SAFE STORAGE
Keep container tightly closed. Store in dry, well-ventilated area. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Recommended storage temperature 2 – 8 °C.
Air and moisture sensitive. Store under inert gas.

INCOMPATIBILITY: Water, moisture, strong oxidizing agents

SECTION 8  EXPOSURE CONTROLS AND PERSONAL PROTECTION

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>Dimethyl selenide</td>
<td>593-79-3</td>
<td>TWA</td>
<td>0.200000 mg/m³</td>
<td>USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>0.2 mg/m³</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>0.200000 mg/m³</td>
<td>USA. NIOSH Recommended Exposure Limits</td>
</tr>
<tr>
<td>Remarks</td>
<td></td>
<td>Upper Respiratory Tract irritation, Eye irritation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SECTION 8  EXPOSURE CONTROLS AND PERSONAL PROTECTION (Cont.)

APPROPRIATE ENGINEERING CONTROLS
Handle in accordance with good industrial hygiene and safety practice. Install local exhaust ventilation devices and management to ensure proper control. Handle and use under inert atmosphere. Wash hands before breaks and immediately after handling. 

EYE PROTECTION: Approved safety glasses w/side shields, or safety goggles and face shield

SKIN PROTECTION: Wear appropriate chemical resistant gloves. Gloves must be inspected prior to use. Dispose of contaminated gloves in accordance with applicable laws and good laboratory practices. Wash and dry hands.

RESPIRATOR: If adequate ventilation if not available, a respirator should be worn. The use of respirators requires a Respirator Protection Program to be in compliance with 29CFR 1910.34 or NIOSH/MSHA or European Standard EN 149 approved respirator.

ADDITIONAL PROTECTION: Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9  PHYSICAL AND CHEMICAL PROPERTIES

COLOR AND FORM: Colorless liquid
FORMULA MASS: 225.34 g/mol
ODOR: Stench
ODOR THRESHOLD: No data available
pH: No data available
MELTING POINT/ FREEZING POINT: No data available
BOILING POINT: 52.8 deg C @ 760mm Hg (127.0 deg F)
FLASH POINT: No data available
EVAPORATION RATE: No data available
UPPER/LOWER EXPLOSION LIMIT: No data available
VAPOR PRESSURE: No data available
VAPOR DENSITY: No data available
RELATIVE DENSITY: 1.408 g/mL @ 20 °C (68 °F)
SOLUBILITY IN WATER: No data available
PARTITION COEFFICIENT: n-octanol/water: No data available
AUTO-IGNITION TEMPERATURE: No data available
DECOMPOSITION: No data available

SECTION 10  STABILITY AND REACTIVITY

STABILITY: Stable in sealed containers and stored under a dry inert atmosphere.
HAZARDOUS POLYMERIZATION: No data available
CONDITIONS TO AVOID: No data available
INCOMPATIBILITY: strong oxidizing agents, strong acids
DECOMPOSITION PRODUCTS: In the event of fire- see section 5.

SECTION 11  TOXICOLOGICAL DATA

ACUTE TOXICITY: LD50 Oral- Rat- 2,100 mg/kg. Remarks- Behavioral: Convulsions or effect on seizure threshold. Lungs, thorax, or respiration. Other changes: Blood- hemorrhage.
SKIN CORROSION/IRRITATION: No data available
SERIOUS EYE DAMAGE/IRRITATION: No data available
RESPIRATORY OR SKIN SENSITIZATION: No data available
GERM CELL MUTAGENICITY: No data available
CARCINOGENICITY: No component of this product present at levels greater than or equal to 0.1% is identified as a known or possible carcinogen by IARC, ACGIH, NTP or OSHA.
REPRODUCTIVE TOXICITY: No data available
SPECIFIC TARGET ORGAN TOXICITY-SINGLE EXPOSURE: No data available
SPECIFIC TARGET ORGAN TOXICITY-REPEATED EXPOSURE: May cause damage to organs through prolonged or repeated exposure.
ASPIRATION HAZARD: No data available
ADDITIONAL INFORMATION: To the best of our knowledge the chemical, physical, and toxicological properties of this substance are not fully known.
Nausea, headache, vomiting. Stomach irregularities- based on human evidence.
SECTION 12 ECOLOGICAL DATA

TOXICITY: Not known
PERSISTANCE AND DEGRADABILITY: Not known
BIOACCUMULATIVE POTENTIAL: Not known
MOBILITY AND SOIL: Not known
PBT AND vPvB ASSESSMENT: Not known
OTHER ADVERSE EFFECTS: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.

SECTION 13 DISPOSAL CONSIDERATIONS

DISPOSAL OF PRODUCT AND CONTAMINATED PACKAGING: Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

SECTION 14 TRANSPORTATION DATA

Proper shipping name: Toxic liquid, organic, n.o.s. (Dimethyl selenide)
UN2810 Class 6.1 PG II

DOT, IATA, and IMDG Regulated
Marine Pollutant: YES

SECTION 15 REGULATORY INFORMATION

TSCA
CAS # 593-79-3 is not listed on the TSCA inventory. It is for research and development use only.

SARA 302 COMPONENTS
None of the chemicals in this product are subject to the reporting requirements of Section 302 of SARA Title III

SARA 313 COMPONENTS
This material contains Dimethyl Selenide (CAS # 593-79-3) which is subject to the reporting requirements of Section 313 of SARA Title III

STATE
CAS # 593-79-3 can be found on the following state right to know lists: New Jersey, Pennsylvania

CALIFORNIA PROP 65
California No significant Risk Level: None of the chemicals in this product are listed.

SECTION 16 OTHER INFORMATION

OTHER INFORMATION:

CAS: Chemical Abstract Service
DOT: Department of Transportation
EPA: Environmental Protection Agency
IARC: International Agency for the Research on Cancer
IATA: International Air Transport Association
IMDG: International Maritime Code for Dangerous Goods
OSHA: Occupational Safety and Health Administration
SDS: Safety Data Sheet
TSCA: Toxic Substances Control Act
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DATE PREPARED:  08/2015 Rev. 0
SDS DEPT