SECTION 1  PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: Lead Oxide Red
PRODUCT NUMBER: 2277
CAS NUMBER: 1314-41-6
SYNONYMS: Lead (II,IV) oxide; lead tetraoxide; triplumbic tetroxide, minium

MANUFACTURER:
Prochem, Inc.
826 Roosevelt Road
Rockford, IL  61109
PHONE: 815-398-1788
FAX: 815-398-1810
TOLL FREE: 800-795-8788

IN CASE OF TRANSPORTATION EMERGENCY CONTACT CHEM-TREC: 1-800-424-9300

SECTION 2  HAZARDS IDENTIFICATION

CLASSIFICATION OF SUBSTANCE OR MIXTURE

Pictogram

Signal Word Danger

Hazard Statements

H350 May cause cancer.
H360 May damage fertility or the unborn child.
H362 May cause harm to breast-fed children.
H372 Causes damage to central nervous system, blood formation, and kidneys through prolonged or repeated exposure.

Precautionary Phrases

P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink, or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P281 Use personal protective equipment as required.
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P308+P313 IF exposed or concerned: Get medical advice/attention.
SECTION 2          HAZARDS IDENTIFICATION (Cont.)

HMIS CLASSIFICATION:
Health: 0 Fire: 0 Reactivity Hazard: 0

NFPA RATING:
Health: 0 Flammability: 0 Reactivity Hazard: 0

EYE CONTACT: May cause eye irritation.
SKIN CONTACT: Contact to skin may lead to irritation, redness, and pain.
INHALATION: Causes damage to central nervous system, blood formation, and kidneys.
INGESTION: Can lead to muscle weakness, metallic taste, loss of appetite, insomnia, dizziness, high lead levels in blood, and urine with shock.

SECTION 3          COMPOSITION / INFORMATION ON INGREDIENTS

Formula: Pb3O4
Molecular Weight: 685.60

<table>
<thead>
<tr>
<th>CHEMICAL NAME</th>
<th>CAS#</th>
<th>%</th>
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<tr>
<td>Lead Oxide</td>
<td>1314-41-6</td>
<td>100</td>
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</table>

SECTION 4          FIRST AID MEASURES

EYE EXPOSURE: Immediately flush the eyes with copious amounts of water for at least 15 minutes. Assure flushing under eyelids. A victim may need assistance in keeping their eyelids open. Get immediate competent medical attention.
SKIN EXPOSURE: Wash affected area with soap and plenty of water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.
INHALATION: Remove to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
INGESTION: Induce vomiting only if directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5          FIREFIGHTING MEASURES

FLASH POINT: Not combustible, but is mild oxidizing agent which can increase the flammability of combustible materials that come in contact with it.
AUTO IGNITION TEMPERATURE: Not available
EXPLOSION LIMITS: Not available
EXTINGUISHING MEDIUM: Use fire fighting measures that suit the surrounding fire.
SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS: Lead oxides fumes

SECTION 6          ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Wear all appropriate equipment when using this material. Ensure adequate ventilation. Avoid the formation of dust. Avoid breathing vapors, mist, gas, or dust.
ENVIRONMENTAL PRECAUTIONS: Prevent spillage from entering drains or allowing to be released into the environment.
METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: Sweep up and place in suitable container for proper disposal.

SECTION 7          HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Wear appropriate personal protective equipment. Avoid contact with skin and eyes. Use with adequate ventilation. Avoid formation of dusts and aerosols.
CONDITIONS FOR SAFE STORAGE: Store in cool, dry, and well-ventilated area. Store away from oxidizers and active metals.
**SECTION 8  EXPOSURE CONTROLS AND PERSONAL PROTECTION**

**EXPOSURE CONTROLS:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Exposure Limits</th>
<th>Basis</th>
<th>Entity</th>
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<tbody>
<tr>
<td>Lead tetraoxide</td>
<td>0.05 mg/m³</td>
<td>TLV</td>
<td>ACGIH</td>
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<tr>
<td></td>
<td>0.05 mg/m³</td>
<td>PEL</td>
<td>OSHA</td>
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<tr>
<td></td>
<td>0.1 mg/m³</td>
<td>REL</td>
<td>NIOSH</td>
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<td>100 mg/m³</td>
<td>IDLH</td>
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</tr>
<tr>
<td></td>
<td>30 µg/100mL</td>
<td>BEI</td>
<td>ACGIH</td>
</tr>
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</table>

TLV: Threshold Limit Value over 8 hours of work. IDLH: Immediately Dangerous to Life or Health. REL: Recommended Exposure Limit. PEL: Permissible Exposure Limit. BEI: Biological Exposure Indices.

**EYE PROTECTION:** Wear chemical safety glasses or goggles and face shield.

**SKIN PROTECTION:** Wear nitrile or rubber gloves, and a complete suit protecting against chemicals.

**VENTILATION:** Provide local exhaust, preferably mechanical.

**RESPIRATOR:** Use an approved respirator.

**ADDITIONAL PROTECTION:** Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

**SECTION 9  PHYSICAL AND CHEMICAL PROPERTIES**

**COLOR AND FORM:** Red-Orange powder

**ODOR:** None

**MOLECULAR WEIGHT:** 685.60

**BOILING POINT:** No data available

**MELTING POINT:** 500° C (dec.)

**SPECIFIC GRAVITY:** 9.1 gm/ml

**SOLUBILITY:** Soluble

**SECTION 10  STABILITY AND REACTIVITY**

**STABILITY:** Stable

**HAZARDOUS POLYMERIZATION:** Will not occur

**CONDITIONS TO AVOID:** Heat, sparks, and flame.

**INCOMPATIBILITY:** Avoid contact with oxidizers and chemically active metals. Aluminum powder, fluorine with the glycerol complex o the oxide, sodium, metal acetylene carbides, peroxyformic acid, dichloromethylsilane, hydrogen sulfides, and sulfur trioxide.

**DECOMPOSITION PRODUCTS:** Lead oxides fumes

**SECTION 11  TOXICOLOGICAL DATA**

**ACUTE TOXICITY:** LD50 Oral – Rat – >10000mg/kg

**CARCINOGENIC EFFECTS:** Lead compounds are probable human carcinogens.

**MUTAGENIC EFFECTS:** Not available

**TETRATOGENIC EFFECTS:** Is a teratogen.

**CHRONIC TOXICITY:** Lead is a cumulative poison, increasing amounts of lead can build up in the body and may reach appoint where symptoms and disabilities occur. Continuous exposure may result in decreased fertility. Lead is a teratogen. Overexposure of lead by either parent before pregnancy may increase the chances of miscarriage or birth defects. May cause cancer. May cause damage to fertility. Contains a known or suspect reproductive toxic. May cause harm to the unborn child. May cause adverse kidney effects.

**RTECS:** No data

Inorganic lead compounds are slowly absorbed by ingestion and inhalation and poorly absorbed through the skin. If absorbed, lead will accumulate in the body with low rates of excretion, lead to long-term build up.

To the best of our knowledge the toxicological effects of this compound have not been fully investigated.
SECTION 12 ECOLOGICAL DATA

AQUATIC VERTEBRATE: Gambusia affinis mg/L LC50 static 0.041-0.81: 96h. Pimephales promelas, Oncorhynchus mykiss mg/L LC50 (pH 5.5-6.5) 0.052-3.60: 96h Pimephales promelas, Oncorhynchus mykiss mg/L LC50 (pH >6.5-7.5) 0.114-3.25: 96h Pimephales promelas, Oncorhynchus mykiss mg/L LC50 (pH <7.5-8.5)

AQUATIC INVERTEBRATE: 0.074-0.656: 48h Daphnia magna, Ceriodaphnia dubia mg/L LC50 (pH 5.5-6.5) 0.029-1.18: 48h Daphnia magna, Ceriodaphnia dubia mg/L LC50 (pH >6.5-7.5) 0.026-3.12: 48h Daphnia magna, Ceriodaphnia dubia mg/L LC50 (pH >7.5-8.5)

TERRESTRIAL: 0.072-0.388: 72h Preudokirchneriella subcapitata, Chlorella kessleri mg/L ErC50 (pH 5.5-6.5) 0.027-0.080: 72h Preudokirchneriella subcapitata, Chlorella kessleri mg/L ErC50 (pH >6.5-7.5) 0.021-0.050: 72h Preudokirchneriella subcapitata, Chlorella kessleri mg/L ErC50 (pH <7.5-8.5)

Do not allow undiluted product or large quantities to reach ground water, watercourse, or sewage system. Avoid transfer to the environment.

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of in according to local, state, and federal regulations.

SECTION 14 TRANSPORTATION DATA

DOT: UN3077  IATA: UN3077
  Environmentally hazardous substances, solid, n.o.s.  Environmentally hazardous substance, solid, n.o.s.
    (Lead Oxide Red)  (Lead Oxide Red)
  CLASS 9  CLASS 9
  PG III  PG III

Marine Pollutant: No

SECTION 15 REGULATORY INFORMATION

TSCA: Listed in the TSCA inventory
SARA 302/304: Not Listed
SARA 311/312: Acute Health Hazard, Chronic Health Hazard
SARA (TITLE 313): Lead Tetroxide
CALIFORNIA PROP. 65: Contains chemicals known to the state of California to cause cancer and birth defects or other reproductive harm. Lead Tetroxide
MASSACHUSETTS RIGHT TO KNOW COMPONENTS: No components are subject to the Massachusetts Right to Know Act.
NEW JERSEY RIGHT TO KNOW COMPONENTS: Lead Tetroxide
PENNSYLVANIA RIGHT TO KNOW COMPONENTS: Lead Tetroxide

SECTION 16 OTHER INFORMATION

DISCLAIMER: The information herein is believed to be accurate and reliable as of the date compiled. However, Prochem, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information in this document or any use of the product based on the information.
DATE PREPARED: 06/15