SAFETY DATA SHEET
according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Date of issue: 02/24/2015
Version 1.0

SECTION 1. Identification

Product identifier

Product number    LX0260
Product name      Ligoine Practical
CAS-No.            8032-32-4

Relevant identified uses of the substance or mixture and uses advised against

Identified uses    Reagent for analysis

Details of the supplier of the safety data sheet

Company                EMD Millipore Corporation | 290 Concord Road, Billerica, MA 01821, United States of America | General Inquiries: +1-978-715-4321 | Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5)

Emergency telephone  800-424-9300 CHEMTREC (USA)
                       +1-703-527-3887 CHEMTREC (International)
                       24 Hours/day; 7 Days/week

SECTION 2. Hazards identification

GHS Classification
- Flammable liquid, Category 2, H225
- Aspiration hazard, Category 1, H304
For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS-Labeling

Hazard pictograms

Signal Word
Danger

Hazard Statements
H225 Highly flammable liquid and vapor.
H304 May be fatal if swallowed and enters airways.

Precautionary Statements
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.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing.
Rinse skin with water/shower.
P331 Do NOT induce vomiting.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P501 Dispose of contents/container to an approved waste disposal plant.

Other hazards
None known.

SECTION 3. Composition/information on ingredients
Chemical nature Mixture of diverse liquid hydrocarbons.
Benzene content < 0.1%

Hazardous ingredients
Chemical Name (Concentration)
CAS-No.
Ligroine (>= 90 % - <= 100 %)
8032-32-4

Exact percentages are being withheld as a trade secret.

SECTION 4. First aid measures
Description of first-aid measures
Inhalation
After inhalation: fresh air.

Skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower.

Eye contact
After eye contact: rinse out with plenty of water.

Ingestion

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed
irritant effects, respiratory paralysis, Dermatitis, Dizziness, Unconsciousness, agitation, spasms, cardiovascular disorders, Headache, Drying-out effect resulting in rough and chapped skin.
SECTION 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media
- Foam, Carbon dioxide (CO2), Dry powder

Unsuitable extinguishing media
- For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture
- Combustible.
- Vapors are heavier than air and may spread along floors.
- Forms explosive mixtures with air at ambient temperatures.
- Pay attention to flashback.
- Development of hazardous combustion gases or vapors possible in the event of fire.

Advice for firefighters

- Special protective equipment for fire-fighters
  - In the event of fire, wear self-contained breathing apparatus.

Further information
- Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact.
- Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

- Protective equipment see section 8.

Environmental precautions
- Do not let product enter drains. Risk of explosion.

Methods and materials for containment and cleaning up

- Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemisorb®). Dispose of properly. Clean up affected area.

SECTION 7. Handling and storage

Precautions for safe handling

- Observe label precautions.

Advice on protection against fire and explosion
- Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.
Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.
Store at room temperature.

SECTION 8. Exposure controls/personal protection

Exposure limit(s)

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Basis</th>
<th>Value</th>
<th>Threshold limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ligroine 8032-32-4</td>
<td>NIOSH/GUIDE</td>
<td>Recommended exposure limit (REL):</td>
<td>350 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Ceiling Limit Value and Time Period (if specified):</td>
<td>1,800 mg/m³</td>
<td>Ceiling Limit Value 15-min</td>
</tr>
<tr>
<td>Z1A</td>
<td>Short Term Exposure Limit (STEL):</td>
<td>400 ppm</td>
<td>1,800 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Time Weighted Average (TWA):</td>
<td>300 ppm</td>
<td>1,350 mg/m³</td>
</tr>
</tbody>
</table>

Engineering measures
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

Individual protection measures
Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

Hygiene measures
Change contaminated clothing. Wash hands after working with substance.

Eye/face protection
Safety glasses

Other protective equipment:
Flame retardant antistatic protective clothing.

Respiratory protection
required when vapors/aerosols are generated.
Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

SECTION 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state</th>
<th>liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>colorless</td>
</tr>
</tbody>
</table>
Odor: No strong odor known.

Odor Threshold: No information available.

pH: No information available.

Melting point: No information available.

Boiling point/boiling range: 140 - 194 °F (60 - 90 °C)

Flash point: 19 °F (-7 °C)
   Method: c.c.

Evaporation rate: No information available.

Flammability (solid, gas): No information available.

Lower explosion limit: No information available.

Upper explosion limit: No information available.

Vapor pressure: No information available.

Relative vapor density: No information available.

Density: 0.73 g/cm³
   at 68 °F (20 °C)

Relative density: No information available.

Water solubility: insoluble

Partition coefficient: n-octanol/water: No information available.

Autoignition temperature: No information available.

Decomposition temperature: No information available.

Viscosity, dynamic: No information available.

Explosive properties: Not classified as explosive.

Oxidizing properties: none

Viscosity, kinematic: 0.50 mm²/s
   at 68 °F (20 °C)

SECTION 10. Stability and reactivity

Reactivity
   Vapors may form explosive mixture with air.
Chemical stability
The product is chemically stable under standard ambient conditions (room temperature).

Possibility of hazardous reactions
Violent reactions possible with:
- strong oxidizing agents

Conditions to avoid
Warming.

Incompatible materials
rubber, various plastics

Hazardous decomposition products
no information available

SECTION 11. Toxicological information

Information on toxicological effects

Likely route of exposure
Eye contact, Skin contact

Skin irritation
Drying-out effect resulting in rough and chapped skin. Dermatitis

Eye irritation
slight irritation

Specific target organ systemic toxicity - single exposure
The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ systemic toxicity - repeated exposure
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard
Aspiration hazard, Aspiration may cause pulmonary edema and pneumonitis.

Carcinogenicity

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

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

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

ACGIH
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential
Further information

Systemic effects:
Headache, Dizziness, agitation, spasms, Unconsciousness
Cannot be excluded:
cardiovascular disorders, respiratory paralysis
Further data:
Handle in accordance with good industrial hygiene and safety practice.

SECTION 12. Ecological information

Ecotoxicity
No information available.

Persistence and degradability
No information available.

Bioaccumulative potential
No information available.

Mobility in soil
No information available.

SECTION 13. Disposal considerations
The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14. Transport information

Land transport (DOT)
UN number UN 1268
Proper shipping name PETROLEUM DISTILLATES, N.O.S.
Class 3
Packing group II
Environmentally hazardous --

Air transport (IATA)
UN number UN 1268
Proper shipping name PETROLEUM DISTILLATES, N.O.S.
Class 3
Packing group II
Environmentally hazardous --
Special precautions for user no

Sea transport (IMDG)
SAFETY DATA SHEET
according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number LX0260
Product name Ligoine Practical

UN number UN 1268
Proper shipping name PETROLEUM DISTILLATES, N.O.S.
Class 3
Packing group II
Environmentally hazardous --
Special precautions for user yes
EmS F-E S-E

SECTION 15. Regulatory information

United States of America

SARA 313
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 302
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Clean Water Act
This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.
This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

DEA List I
Not listed

DEA List II
Not listed

US State Regulations

Massachusetts Right To Know
Remarks
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know
Ingredients
Ligoine

New Jersey Right To Know
Ingredients
Ligoine

California Prop 65 Components
This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.
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Product number  LX0260  Version 1.0
Product name     Ligoine Practical

Notification status
TSCA: All components of the product are listed in the TSCA-inventory.
DSL: All components of this product are on the Canadian DSL.
KOREA: Not in compliance with the inventory

SECTION 16. Other information

Training advice
Provide adequate information, instruction and training for operators.

Labeling

Hazard pictograms


Signal Word
Danger

Hazard Statements
H225 Highly flammable liquid and vapor.
H304 May be fatal if swallowed and enters airways.

Precautionary Statements
Prevention
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P240 Ground/bond container and receiving equipment.
Response
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
Storage
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

Full text of H-Statements referred to under sections 2 and 3.
H225 Highly flammable liquid and vapor.
H304 May be fatal if swallowed and enters airways.

Key or legend to abbreviations and acronyms used in the safety data sheet
Used abbreviations and acronyms can be looked up at www.wikipedia.org.

Date of issue: 02/24/2015
The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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