SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

1.1. Product Identifier
Product Form: Substance
Product Name: MATRILOX IP001M
CAS No: 112-05-0
Synonyms: Pelargonic acid, Nonanoic acid

1.2. Intended Use of the Product
Use of the substance/mixture: Lubricants, chemical intermediate, cosmetics and personal care products

1.3. Name, Address, and Telephone of the Responsible Party
Company
Acme-Hardesty Co
450 Sentry Parkway
Blue Bell, PA 19422
T 866-226-3834 T 215-591-3610
www.acme-hardesty.com

1.4. Emergency Telephone Number
Emergency Number : 800-424-9300
For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, call CHEMTREC – Day or Night

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture
GHS-US classification
Skin Corr. 1B H314
Eye Dam. 1 H318
Full text of hazard classes and H-statements : see section 16

2.2. Label Elements
GHS-US Labeling
Hazard Pictograms (GHS-US) :

Signal Word (GHS-US) : Danger
Hazard Statements (GHS-US) : H314 - Causes severe skin burns and eye damage
Precautionary Statements (GHS-US) : P260 - Do not breathe vapors, mist, spray.
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P280 - Wear protective gloves, protective clothing, and eye protection.
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting.
P303+P361+P333 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 - If inhaled: Remove person to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a poison center or doctor.
P321 - Specific treatment (see section 4 on this SDS).
P363 - Wash contaminated clothing before reuse.
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.
2.3. Other Hazards

Other Hazards Not Contributing to the Classification: Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS-US)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Name: MATRILOX IP001M
CAS No: 112-05-0

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonanoic acid</td>
<td>(CAS No) 112-05-0</td>
<td>100</td>
<td>Skin Corr. 1B, H314, Eye Dam. 1, H318</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid Measures After Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

First-aid Measures After Skin Contact: Remove contaminated clothing. Immediately flush skin with plenty of water for at least 60 minutes. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or doctor.

First-aid Measures After Eye Contact: Rinse cautiously with water for at least 60 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects, Both Acute and Delayed

Symptoms/Injuries: Causes severe skin burns and eye damage. Causes serious eye damage.

Symptoms/Injuries After Inhalation: May be corrosive to the respiratory tract.

Symptoms/Injuries After Skin Contact: Causes severe irritation which will progress to chemical burns.

Symptoms/Injuries After Eye Contact: Causes permanent damage to the cornea, iris, or conjunctiva.

Symptoms/Injuries After Ingestion: May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

Chronic Symptoms: None expected under normal conditions of use.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Water spray, dry chemical, foam, carbon dioxide.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not considered flammable but may burn at high temperatures.

Explosion Hazard: Product is not explosive.

Reactivity: May react exothermically with water releasing heat. Adding an acid to a base or base to an acid may cause a violent reaction.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not get in eyes, on skin, or on clothing. Do not breathe vapor, mist or spray.

6.1.1. For Non-emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

6.1.2. For Emergency Responders

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Ventilate area.

6.2. Environmental Precautions

Prevent entry to sewers and public waters.

6.3. Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill. Cautiously neutralize spilled liquid.

6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: May release corrosive vapors.

Precautions for Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Handle empty containers with care because they may still present a hazard. Do not get in eyes, on skin, or on clothing. Do not breathe vapors, spray, mist.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store in original container or corrosive resistant and/or lined container.

Incompatible Products: Strong acids, strong bases, strong oxidizers. Amines.

Incompatible Materials: Sources of ignition.

7.3. Specific End Use(s)

Lubricants, chemical intermediate, cosmetics and personal care products

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

8.2. Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.


Materials for Protective Clothing: Chemically resistant materials and fabrics. Corrosion-proof clothing.

Hand Protection: Wear protective gloves.

Eye Protection: Chemical safety goggles and face shield.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Other Information: When using, do not eat, drink or smoke.
SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Clear, colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>4.4 (0.1 g/L at 25 °C)</td>
</tr>
<tr>
<td>Relative Evaporation Rate (butylacetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting Point</td>
<td>13 °C (55.4 °F)</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>253 °C at 1013 hPa (487.4 °F)</td>
</tr>
<tr>
<td>Flash Point</td>
<td>137 °C at 1013 hPa (Closed cup ISO 2719A) (278.6 °F)</td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative Vapor Density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.905 kg/m³ at 20 °C (DIN 51757)</td>
</tr>
<tr>
<td>Solubility</td>
<td>Water: 0.3 g/l at 20 °C (OECD 105)</td>
</tr>
<tr>
<td>Partition Coefficient: N-Octanol/Water</td>
<td>Not available</td>
</tr>
<tr>
<td>Log Pow</td>
<td>3.42</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity, Dynamic</td>
<td>8.12 mPa.s at 20 °C</td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive Limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2. Other Information  
No additional information available

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity: May react exothermically with water releasing heat. Adding an acid to a base or base to an acid may cause a violent reaction.

10.2 Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

10.3 Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

10.4 Conditions to Avoid: Direct sunlight, extremely high or low temperatures, and incompatible materials.

10.5 Incompatible Materials: Strong acids, strong bases, strong oxidizers. Amines.


SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information On Toxicological Effects

Acute Toxicity: Not classified

<table>
<thead>
<tr>
<th>Material</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 Oral Rat (112-05-0)</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td>LD50 Dermal Rat</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td>LC50 Inhalation Rat (mg/l)</td>
<td>&gt; 0.46 mg/l</td>
</tr>
<tr>
<td>Nonanoic acid (112-05-0)</td>
<td></td>
</tr>
<tr>
<td>LD50 Oral Rat</td>
<td>&gt; 5 g/kg</td>
</tr>
</tbody>
</table>

Skin Corrosion/Irritation: Causes severe skin burns and eye damage.

pH: 4.4 0.1 g/L at 25 °C

Serious Eye Damage/Irritation: Causes serious eye damage.

pH: 4.4 0.1 g/L at 25 °C
Respiratory or Skin Sensitization: Not classified
Germ Cell Mutagenicity: Not classified
Carcinogenicity: Not classified
Reproductive Toxicity: Not classified
Specific Target Organ Toxicity (Single Exposure): Not classified
Specific Target Organ Toxicity (Repeated Exposure): Not classified
Aspiration Hazard: Not classified

Potential Adverse Human Health Effects and Symptoms: Based on available data, the classification criteria are not met.

 Symptoms/Injuries After Inhalation: May be corrosive to the respiratory tract.
 Symptoms/Injuries After Skin Contact: Causes severe irritation which will progress to chemical burns.
 Symptoms/Injuries After Eye Contact: Causes permanent damage to the cornea, iris, or conjunctiva.
 Symptoms/Injuries After Ingestion: May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.
 Chronic Symptoms: None expected under normal conditions of use.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity
Ecology - General: Not classified.

<table>
<thead>
<tr>
<th>MATRILOX IP001M (112-05-0)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 Fish 1</td>
<td>104 ml/l</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>96 mg/l</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nonanoic acid (112-05-0)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 Fish 1</td>
<td>93.4 - 115 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])</td>
</tr>
<tr>
<td>LC50 Fish 2</td>
<td>68 - 121 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])</td>
</tr>
</tbody>
</table>

12.2. Persistence and Degradability
Persistence and Degradability: Readily biodegradable.

12.3. Bioaccumulative Potential

<table>
<thead>
<tr>
<th>MATRILOX IP001M (112-05-0)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioconcentration factor (BCF REACH)</td>
<td>3.162</td>
</tr>
<tr>
<td>Log Pow</td>
<td>3.42</td>
</tr>
<tr>
<td>Bioaccumulative Potential</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Based on the n-octanol/water partition coefficient accumulation in organisms is not expected.</td>
</tr>
</tbody>
</table>

12.4. Mobility in Soil

<table>
<thead>
<tr>
<th>MATRILOX IP001M (112-05-0)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecology - Soil</td>
<td></td>
</tr>
<tr>
<td>Adsorption to solid soil phase is not expected.</td>
<td></td>
</tr>
</tbody>
</table>

12.5. Other Adverse Effects
Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods
Waste Disposal Recommendations: Dispose of contents/container in accordance with Dispose of waste material in accordance with all local, regional, national, and international regulations.

Additional Information: Container may remain hazardous when empty. Continue to observe all precautions.


SECTION 14: TRANSPORT INFORMATION

In Accordance With ICAO/IATA/IMDG/DOT

14.1. UN Number

<table>
<thead>
<tr>
<th>UN-No.(DOT)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>: 3265</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DOT NA no.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>UN3265</td>
<td></td>
</tr>
</tbody>
</table>

14.2. UN Proper Shipping Name

<table>
<thead>
<tr>
<th>Proper Shipping Name (DOT)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrosive liquid, acidic, organic, n.o.s.</td>
<td></td>
</tr>
<tr>
<td>PELARGONIC ACID</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Class (DOT)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>8 - Class 8 - Corrosive material 49 CFR 173.136</td>
<td></td>
</tr>
</tbody>
</table>
Hazard Labels (DOT)  : 8 - Corrosive

DOT Symbols
Packing Group (DOT) : III - Minor Danger

DOT Special Provisions (49 CFR 172.102)
IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672)
TP7 - 4 178.274(d)(2) Normal............. 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / (1 + a (tr - tf)) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees Celsius of the liquid during filling
TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP

DOT Packaging Exceptions (49 CFR 173.xxx)
DOT Packaging Non Bulk (49 CFR 173.xxx)  : 154
DOT Packaging Bulk (49 CFR 173.xxx)  : 203

DOT Special Provisions (49 CFR 172.102)
DOT Special Provisions (49 CFR 172.102)

14.3. Additional Information
Emergency Response Guide (ERG) Number  : 153
Other Information  : No supplementary information available.

Transport by Sea
DOT Vessel Stowage Location  : A - The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel
DOT Vessel Stowage Other  : 40 - Stow “clear of living quarters”
EmS-No. (1)  : F-A
EmS-No. (2)  : S-B

Air Transport
DOT Quantity Limitations Passenger Aircraft/Rail (49 CFR 173.27)  : 5 L
DOT Quantity Limitations Cargo Aircraft Only (49 CFR 175.75)  : 60 L

SECTION 15: REGULATORY INFORMATION
15.1 US Federal Regulations
MATRILOX IP001M (112-05-0)
SARA Section 311/312 Hazard Classes  : Immediate (acute) health hazard
Nonanoic acid (112-05-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
EPA TSCA Regulatory Flag  : Y2 - Y2 - indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule

15.2 US State Regulations  Neither this product nor its chemical components appear on any US state lists.

SECTION 16: OTHER INFORMATION
Revision Date  : 06/28/2016
Other Information: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

| Eye Dam. 1 | Serious eye damage/eye irritation Category 1 |
| Skin Corr. 1B | Skin corrosion/irritation Category 1B |
| H314 | Causes severe skin burns and eye damage |
| H318 | Causes serious eye damage |

The data herein are based on our current knowledge and believed to be reliable. Acme-Hardesty Co., provides this information without any representation or warranty, expressed or implied, regarding its accuracy or correctness.

Users must make their own determination that handling, storage, use and disposal of the product in the anticipated manner is safe and appropriate. Because these actions of the user are out of our control, and may be beyond our knowledge, we do not assume responsibility and expressly disclaim liability for loss, damage, expense or any other claim arising out of or in any way connected with the handling, storage, use or disposal of the product or container.

Acme Hardesty US GHS SDS