1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier
Product Name Myralene™ 110 Functional Fluid

Other means of identification
Product Code NA
Revision Number
Synonyms Amyris Solvent Based Degreaser

Recommended use of the chemical and restrictions on use
Recommended Use Intended for use as an industrial cleaner for removing bitumen soils, greases, tars, waxes, and ink stains
Uses advised against Not for human or animal consumption.

Details of the supplier of the safety data sheet
Manufacturer Address U.S. Lubricants A Division of U.S. Venture, Inc. 425 Better Way Appleton, WI 5415

Emergency telephone number
Company Phone Number 800-490-4900
24 Hour Emergency Phone Number
2. HAZARDS IDENTIFICATION

Classification of the substance or mixture [GHS]

Regulation (EC) 1272/2008; OSHA HCS 2012

Aspiration hazard - Category 1. Skin Sensitization – Category 1B. Mixture not fully tested.

Label elements

CLP/GHS hazard pictogram

CLP/GHS signal word

Danger

CLP/GHS precautionary statements

P102: Keep out of reach of children. P261-avoid breathing fumes, mist, vapors or sprays. P272- Contaminated work clothes should not be allowed out of the workplace. P280-Wear protective gloves. P302+P352- If on skin, wash with plenty of soap and water. P321- For specific treatment, refer to first aid instructions on the label. P301+P310 - If swallowed: Immediately contact a poison control center or physician. P331- Do NOT induce vomiting. P332+P313: If skin irritation occurs: get medical advice. P363- Wash contaminated clothing before reuse. P405 - Store locked up. P501 - Dispose of contents/container to location in accordance with local/regional/national/international regulations.

NFPA Classification:

Health Hazard: 1; Fire Hazard: 1; Reactivity Hazard: 0

Other hazards

May cause skin and eye irritation. See section 11.

Note

The pharmacologic and toxicologic properties of this mixture have not been fully characterized. Keep out of reach of children. See Section 4 for first aid measures.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS #</th>
<th>EINECS/ELINCS#</th>
<th>Amount</th>
<th>GHS Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Myralene\textsuperscript{TM} 10</td>
<td>1581740-29-5</td>
<td>N/A</td>
<td>&lt;10%</td>
<td>AH1: H304; SS1B:H317 SI3:H316 FL3: H226; SI 2:H315; SS1: H317; AH1: H304; AA1:H410 EI2:H319</td>
</tr>
<tr>
<td>d-Limonene</td>
<td>5989-27-5</td>
<td>227-813-5</td>
<td>&lt;1.0%</td>
<td></td>
</tr>
<tr>
<td>Surfactants (proprietary)</td>
<td>N/A</td>
<td>N/A</td>
<td>&lt;1.0%</td>
<td>Not classified</td>
</tr>
<tr>
<td>Dibasic ester solvent (proprietary)</td>
<td>N/A</td>
<td>N/A</td>
<td>&lt;10%</td>
<td></td>
</tr>
<tr>
<td>Isopar M solvent</td>
<td>64742-47-8</td>
<td>N/A</td>
<td>80-85%</td>
<td>AH1: H304</td>
</tr>
</tbody>
</table>

Note

See Section 16 for full text of GHS classifications. The GHS classification is based on Regulation (EC) 1272/2008 (EU CLP), 29 OSHA 1910.1200 and applicable GHS regulations (United Nations ST/SG/AC 10/30 rev 3).
4. FIRST AID MEASURES

Description of first aid measures

Eye Contact
If easy to do, remove contact lenses, if worn. Immediately flush eyes with copious quantities of water for at least 15 minutes. If irritation occurs or persists, notify medical personnel.

Skin Contact
If irritation occurs wash exposed area with soap and water and remove contaminated clothing/shoes. If irritation persists or rash develops, notify medical personnel.

Inhalation
Immediately move exposed subject to fresh air. If breathing is labored, administer oxygen. Immediately notify medical personnel and supervisor.

Ingestion
If swallowed, call a physician immediately. Do not induce vomiting unless directed by medical personnel. Do not give anything to drink unless directed by medical personnel. Never give anything by mouth to an unconscious person. Notify medical personnel and supervisor.

Protection of first aid responders
See Section 8 for Exposure Controls/Personal Protection recommendations.

Most important symptoms and effects, both acute and delayed
See Sections 2 and 11

Indication of immediate medical attention and special treatment needed, if necessary
Treat symptomatically and supportively.

5. FIRE-FIGHTING MEASURES

Extinguishing media
Use water spray (fog), foam, dry powder, or carbon dioxide, as appropriate for surrounding fire and materials.

Specific hazards arising from the substance or mixture
No information identified. May emit toxic fumes of carbon monoxide and carbon dioxide. Risk of static accumulation. Remove ignition sources.

Flammability/Explosivity
No explosivity or flammability data identified. High airborne concentrations of finely divided organic particles can potentially explode if ignited.

Advice for firefighters
Wear full protective clothing and a self-contained breathing apparatus with a full facepiece operated in the pressure demand or other positive pressure mode. Decontaminate all equipment after use.
### 6. ACCIDENTAL RELEASE MEASURES

| Personal precautions, protective equipment and emergency procedures | If product is released or spilled, take proper precautions to contain the spill and minimize exposure (see Section 8). Area should be adequately ventilated. Remove ignition sources. |
| Environmental precautions | Do not empty into drains. Avoid release to the environment. Contact National Response Center in case of accidental discharge to waterways that produce a sheen. |
| Methods and material for containment and cleaning up | For small spills (such as in a laboratory), soak up material with absorbent pads and wash spill area thoroughly with soap and water. For large spills in manufacturing, absorb liquid with an appropriate adsorbent. Do not raise dust. Eliminate ignition sources. Use equipment rated for use with combustible materials. Use care in the choice of adsorbents as some may react and generate excess heat and create a risk of fire. Review safety data sheets of absorbents prior to use. Place spill materials into a leak-proof container suitable for disposal. Dispose of material in a manner that is compliant with federal, state and local laws |
| Reference to other sections | See Sections 8 and 13 for more information. |

### 7. HANDLING AND STORAGE

| Precautions for safe handling | Wash thoroughly after handling. Use personal protective equipment for large scale use as needed. Avoid breathing vapors and contact with eyes. Do not eat, drink or smoke while handling this product. Avoid prolonged or repeated exposure. Use normal preventative fire protection measures. Electrostatic accumulation hazard; use proper bonding and grounding procedures. Do not cut or weld empty containers as they may contain residue. |
| Conditions for safe storage including any incompatibilities | Keep container tightly closed. Keep in a cool and well-ventilated area away from any ignition source. Keep away from heat or direct sunlight. |
| Specific end use(s) | Industrial solvent degreaser |
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters/Occupational Exposure Limit Values

For the majority of components, no limits have been established. Recommended limits for limonene and Isopar are provided below:

<table>
<thead>
<tr>
<th>Compound</th>
<th>Issuer</th>
<th>Type</th>
<th>OEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>d-Limonene</td>
<td>ACGIH</td>
<td>TLV(8h)</td>
<td>20 ppm</td>
</tr>
<tr>
<td>Isopar</td>
<td>Industry</td>
<td>PEL (8h)</td>
<td>300 ppm</td>
</tr>
</tbody>
</table>

DNEL/PNEC Limits

A DNEL/PNEC has not been established for this mixture.

Risk Management Measures

Do not ingest. Keep away from children. If swallowed then seek immediate medical assistance.

Engineering controls

Provide ventilation. Use local exhaust and/or enclosure at mist/aerosol/spray-generating points. High energy operations such as spraying should be done within an approved emission control or containment system. Remove ignition sources.

Personal protection

Wear safety glasses with side shields, nitrile gloves and lab coat when handling in laboratory or manufacturing environments. If adequate ventilation is not available, wear a NIOSH approved N95 or P95 dust mask or air-purifying respirator with an organic vapor cartridge based on assessment of risk and exposure level. An emergency eye wash station should be available.

Environmental Exposure Controls

Avoid release to the environment. In case of spill, do not release to drains. Implement appropriate and effective emergency response procedures to prevent release or spread of contamination and to prevent inadvertent contact by personnel.

Other protective measures

Wash hands before eating, drinking or smoking. Leave protective equipment in the work area. Decontaminate all protective equipment following use and before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Oil

Color

Colorless to pale yellow

Odor

Nearly odorless

Odor threshold

No information identified.

pH

No information identified

Melting point/freezing point

No information available

Initial boiling point and boiling range

225 °C @ 1 atm (Isopar M)

Flash point

95.6 °C (204 °F) (ASTM D- 93A)
<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaporation rate</td>
<td>&gt;0.01 (n-Bu Acetate =1)</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No information identified.</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>No information identified.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No information identified.</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No information identified.</td>
</tr>
<tr>
<td>Relative density</td>
<td>No information identified.</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Not soluble.</td>
</tr>
<tr>
<td>Solvent solubility</td>
<td>Soluble in alcohols.</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>No information identified.</td>
</tr>
<tr>
<td>Adorption Coefficient</td>
<td>No information identified.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No information identified.</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information identified.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No information identified.</td>
</tr>
<tr>
<td>Surface Tension</td>
<td>No information identified.</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No information identified.</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No information identified.</td>
</tr>
<tr>
<td>Other information</td>
<td></td>
</tr>
<tr>
<td>Molecular weight</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Molecular formula</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

### 10. STABILITY AND REACTIVITY

**Reactivity**
Not expected to be reactive

**Chemical stability**
Stable under normal conditions of use. Moderate risk of developing peroxides.

**Possibility of hazardous reactions**
Not expected to occur.

**Conditions to avoid**
Keep away from heat, sparks and open flames.

**Incompatible materials**
Avoid strong oxidizers, strong acids and strong bases.

**Hazardous decomposition products**
No information identified.

### 11. TOXICOLOGICAL INFORMATION

**Information on toxicological effects**

**Route of entry**
Inhalation, skin or eye contact and ingestion.

**Acute toxicity**
The components of this mixture are not expected to be acutely toxic by comparison with similar compounds. No studies identified for Isopar.

<table>
<thead>
<tr>
<th>Compound</th>
<th>Type</th>
<th>Route</th>
<th>Species</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Myralene™ 110</td>
<td>LD$_{50}$</td>
<td>Oral</td>
<td>Rat</td>
<td>&gt;5000 mg/kg</td>
</tr>
<tr>
<td>d-Limonene</td>
<td>LD$_{50}$</td>
<td>Oral</td>
<td>Rat</td>
<td>&gt;4400 mg/kg</td>
</tr>
</tbody>
</table>
Irritation/Corrosion  The mixture has not been tested. Based on the review of the individual components, the mixture may cause irritation to skin and eyes.

Sensitization  The mixture has not been tested. Myralene TM 10 is classified as a week sensitizer. Frequent or prolonged contact may cause irritation or dermatitis.

STOT-single and repeated exposure  No studies identified.

Reproductive toxicity  No studies identified.

Developmental toxicity  No studies identified.

Genotoxicity  No indication of genotoxicity in any of the components.

Carcinogenicity  No studies identified. This mixture is not listed by NTP, IARC, ACGIH or OSHA as a carcinogen. D-limonene is listed as category 3 by IARC - not classified as to its carcinogenicity to humans.

Aspiration hazard  Expected to be an aspiration hazard.

Human health data  See "Section 2 - Other Hazards"

Additional information  Mixture not fully tested.

12. ECOLOGICAL INFORMATION

Toxicity  Several components of this mixture demonstrate moderate toxicity to aquatic species. The mixture has not been tested and releases to the environment are to be avoided.

Additional toxicity information  None identified

Persistence and Degradability  No information.

Mobility in soil  No information identified.

Results of PBT and vPvB assessment  No data available.

Other adverse effects  No data available.

Note  The environmental characteristics of this mixture have not been fully investigated. Releases to the environment should be avoided.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods  Used product should be disposed of according to local, state, and federal regulations. Do not send down the drain or flush down the toilet. All wastes containing the material should be properly labeled. Dispose of wastes in accordance to prescribed federal, state, and local guidelines, e.g., appropriately permitted chemical waste incinerator. Rinse waters resulting from spill cleanups should be discharged in an environmentally safe manner, e.g., appropriately permitted municipal or on-site wastewater treatment facility.
14. TRANSPORT INFORMATION

Transport
Based on the available data, this mixture is not regulated as a hazardous material/dangerous good under EU ADR/RID, US DOT, Canada TDG, IATA, or IMDG.

UN number
None assigned.

UN proper shipping name
None assigned.

Transport hazard classes and packing group
None assigned.

Environmental hazards
Based on the available data, this product/mixture is not regulated as an environmental hazard or a marine pollutant.

Special precautions for users
Mixture not fully tested - avoid exposure.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Not applicable.

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture
This SDS complies with the requirements under US, EU and GHS (EU CLP - Regulation EC No 1272/2008 and UN ST/SG/AC 10/30 rev 3) guidelines.

Chemical safety assessment
Not conducted.

OSHA Hazardous
Aspiration hazard. Do not ingest. May cause skin irritation and sensitization. Mixture not fully tested.

WHMIS classification
Not classified. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by those regulations.

US Regulatory
Components of this mixture are listed on the TSCA inventory.

EU REACH
This mixture is exempt from REACH registration due to low production/import volume (< 1 tonne per year).

SARA section 313
Not listed.

California proposition 65
None of the components are listed

California Air Board (CARB)
This mixture is compliant with CARB consumer product requirements for Volatile Organic Components (VOC) and contains < 1% VOC.
## 16. OTHER INFORMATION

**Full text of H phrases, P phrases and GHS classification**

- **AH1** - Aspiration Hazard - Category 1 H304 - May be fatal if swallowed and enters airways.
- **SS1B** - skin sensitization - Category 1B (weak sensitizer) H317 - May cause skin sensitization. Mixture not fully tested.

**Sources of data**

Information from published literature and internal company data.

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical and Chemical Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HMIS</td>
<td>Health hazards</td>
<td>Flammability</td>
<td>Physical hazards</td>
<td>Personal protection</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>X</td>
</tr>
</tbody>
</table>

**Issue Date**

17-March-2015

**Revision Date**

14-April-2015

**Disclaimer**

The information provided in this Material Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

End of Safety Data Sheet