1 PRODUCT AND COMPANY IDENTIFICATION

Manufacturer
Titan Laboratories
2935 Irving Blvd.
#209
Dallas, TX 75247

Contact: Titan Laboratories
Phone: 800-475-3300 // 214-638-1200
Email: info@titanlabs.net
Web: www.titanlabs.net

2 HAZARDS IDENTIFICATION

NFPA: Health = 2, Fire = 2, Reactivity = 0
HMIS III: H^2/F^2/P^0

PERSONAL PROTECTION INDEX

C | Safety Glasses, Gloves, Apron

Consult your supervisor or S.O.P. for "SPECIAL" handling directions.
GHS Signal Word:
WARNING

GHS Hazard Pictograms:

GHS Classifications:
- Physical, Flammable Liquids, 3
- Health, Acute toxicity, 4 Oral
- Health, Aspiration hazard, 2
- Health, Acute toxicity, 5 Dermal
- Health, Skin corrosion/irritation, 3
- Health, Serious Eye Damage/Eye Irritation, 2 B
- Health, Acute toxicity, 5 Inhalation
- Health, Specific target organ toxicity - Single exposure, 3

GHS Phrases:
- H226 - Flammable liquid and vapor
- H302 - Harmful if swallowed
- H305 - May be harmful if swallowed and enters airways
- H313 - May be harmful in contact with skin
- H316 - Causes mild skin irritation
- H320 - Causes eye irritation
- H333 - May be harmful if inhaled
- H335 - May cause respiratory irritation
- H336 - May cause drowsiness or dizziness

GHS Precautionary Statements:
- P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking
- P233 - Keep container tightly closed.
- P241 - Use explosion-proof electrical/ventilating/light/equipment.
- P242 - Use only non-sparking tools.
- P243 - Take precautionary measures against static discharge.
- P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
- P262 - Do not get in eyes, on skin, or on clothing.
- 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.
- P273 - Avoid release to the environment.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P301+310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P301+330+311 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303+361+353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305+351+338 - IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
- P332+313 - If skin irritation occurs: Get medical advice/attention.
- P337+313 - If eye irritation persists: Get medical advice/attention.
P362 - Take off contaminated clothing and wash before reuse.
P370+378 - In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide for extinction.
P403+235 - Store in a well ventilated place. Keep cool.
P405 - Store locked up.
P501 - Dispose of contents/container to an approved waste disposal plant.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

<table>
<thead>
<tr>
<th>Cas #</th>
<th>Percentage</th>
<th>Chemical Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>8052-41-3</td>
<td>&lt;=100%</td>
<td>Aliphatic Petroleum Distillate</td>
</tr>
</tbody>
</table>

4 FIRST AID MEASURES

Inhalation: If inhaled, move person into fresh air. Monitor respiratory function. If breathing is difficult, provide oxygen. If not breathing, give artificial respiration. If symptoms persist, obtain medical attention.

Skin Contact: Promptly flush skin with water for at least 15 minutes to ensure all chemical is removed. Remove contaminated clothing and wash before reuse. Consult a physician if irritation persists.

Eye Contact: Flush with large amounts of water for at least 15 minutes, lifting upper and lower lids occasionally. Remove contact lenses if present and easy to do so. Get immediate medical attention.

Ingestion: Rinse mouth with water. Do NOT induce vomiting unless instructed to do so. Material can enter lungs (aspiration hazard) during swallowing or vomiting resulting in lung inflammation or other lung injury. Never give anything by mouth to an unconscious person. Get immediate medical attention.

Most important symptoms and effects, both acute and delayed:
The most important known symptoms and effects are described in the labelling (see Section 2) and/or Section 11. Inhalation of high concentrations of this material, as could occur in enclosed spaces or improper use, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material. This material has as aspiration hazard. Any potential danger from aspiration must be weighed against possible oral toxicity when determining whether to induce vomiting. Consider activated charcoal and/or gastric lavage.

Indication of any immediate medical attention and special treatment needed:
No data available.

5 FIRE FIGHTING MEASURES

Flammability: NFPA Class-II Combustible Liquid
Flash Point: 106 °F (41 °C)
Flash Point Method: (TCC)
Burning Rate: No data available
Autoignition Temp: 446 - 600 °F (230 - 316 °C)
LEL: 1.0% (v/v)
UEL: 6.0% (v/v)

Extinguishing Media:
Water Spray
Water Fog
Carbon Dioxide
Alcohol-Resistant Foam
Dry Chemical

Special Hazards Arising From the Substance or Mixture:
Carbon Oxides
Hydrocarbon particulate

Advice for Firefighters:
Firefighters should wear full-face, positive-pressure respirators.

Further Information:
If incinerated, may release toxic fumes.
Use water spray to cool unopened containers.
Do NOT use high volume water jet to extinguish fire, as the force of the water jet may cause fire to spread.
Beware of vapors accumulating to form explosive concentrations.
Vapors can accumulate in low areas.
See Section 7 for more information on safe handling.
See Section 8 for more information on personal protection equipment.
See Section 13 for disposal information.

ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:
Use personal protective equipment.
Keep from contacting skin or eyes.
Avoid breathing vapors, mist or gas.
Ensure adequate ventilation.
Evacuate personnel to safe areas.
Remove all sources of ignition.
If any equipment is necessary, ensure that it is non-sparking and electrically-protected.

Environmental Precautions:
Prevent further release (leakage/spillage) if safe to do so.
Do not allow product to enter drains.
Do not allow to drain to environment.

Methods and Materials for Containments and Cleaning Up:
Ensure adequate ventilation.
Contain spillage and absorb with liquid-binding material (sand, diatomite, universal binders, vermiculite) and placed in container for disposal.
Spill may also be diluted with equal volume of water and absorbed (as above) or collect with an electrically-protected vacuum cleaner or by wet-brushing. Collected waste should then be placed in container for disposal.
Dispose of contaminated material according to Section 13.

Reference to Other Sections:
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for information on proper disposal.
7 HANDLING AND STORAGE

Handling Precautions:
- Avoid breathing vapors or mist.
- Avoid contact with eyes, skin, or clothing.
- Keep containers closed when not in use.
- Do not expose containers to open flame, excessive heat, or direct sunlight.
- Keep away from sources of ignition.
- Do not smoke while using material.
- Take measures to prevent the buildup of electrostatic charge.
- Do not puncture or drop containers.
- Handle with care and avoid spillage on the floor (slippage).
- Keep material out of reach of children.
- Keep material away from incompatible materials.
- Wash thoroughly after handling.

Storage Requirements:
- Keep container tightly closed.
- Avoid inhalation of vapors or mist upon opening container.
- Store in a well-ventilated place.
- Do not store at elevated temperatures.
- Do not store in direct sunlight.
- Store away from strong acids, strong bases, strong oxidizing agents, Oxygen, liquid Chlorine and other Halogens.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:
- All ventilation should be designed in accordance with OSHA standard (29 CFR 1910.94). Use local exhaust at filling zones and where leakage and dust formation is probable. Use mechanical (general) ventilation for storage areas. Use appropriate ventilation as required to keep Exposure Limits in Air below TLV & PEL limits.

Personal Protective Equip:
- Eye/face protection:
  - When using material use safety goggles, gloves and apron according to HMIS PP, C. A vapor respirator according to HMIS PP, U is also strongly recommended if working with material in poorly ventilated spaces. All safety equipment should be tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

  - Skin protection:
    - Handle with gloves made from PVC, neoprene, nitrile, butyl-rubber or fluorinated-rubber. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact. Dispose of contaminated gloves according to applicable laws and laboratory practices.

  - Body Protection:
    - Chemically resistant gloves, apron and safety goggles are recommended. Type of protective equipment should be selected based on concentration amount and conditions of use of this material.

  - Respiratory protection:
    - Full-face vapor respirator may be required as backup to engineering controls when proper engineering controls are not in place to keep TLV and PEL limits below defined thresholds.

  - Control of environmental exposure:
    - Prevent leakage or spillage if safe to do so. Do not let material enter drains.

Components with workplace control parameters:
Component(s): Aliphatic petroleum distillate
CAS No(s): 8052-41-3
USA NIOSH (TWA/REL): 350 mg/m$^3$
USA NIOSH (CEIL): 1800 mg/m$^3$ (15 minutes)
USA NIOSH Immediately Dangerous to Life or Health: 20,000 mg/m$^3$
USA ACGIH (TWA/TLV): 100 ppm (8 hours)
USA OSHA (TWA/PEL): 500 ppm (8 hours)
USA OSHA Construction Industry (TWA/PEL): 200 ppm
USA OSHA Shipyard Employment (TWA/PEL): 200 ppm
CAL/OSHA (TWA/PEL): 100 ppm

Biological occupational exposure limits:
Contains no substances with biological occupational exposure limits values.

<table>
<thead>
<tr>
<th>Physical and Chemical Properties</th>
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<tbody>
<tr>
<td><strong>Appearance:</strong> Clear, colorless liquid</td>
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<tr>
<td><strong>Physical State:</strong> Liquid</td>
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<tr>
<td><strong>Odor Threshold:</strong> Not determined</td>
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<tr>
<td><strong>Particle Size:</strong> Not determined</td>
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<tr>
<td><strong>Spec Grav./Density:</strong> (@ 15.6 °C): 0.770 g/ml (6.43 lbs/gal)</td>
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<tr>
<td><strong>Viscosity:</strong> Not determined</td>
</tr>
<tr>
<td><strong>Sat. Vap. Conc.:</strong> Not determined</td>
</tr>
<tr>
<td><strong>Boiling Point:</strong> 157 °C (315 °F)</td>
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<tr>
<td><strong>Flammability:</strong> Solid, gas: Flammable</td>
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<tr>
<td><strong>Partition Coefficient:</strong> Not determined</td>
</tr>
<tr>
<td><strong>Vapor Pressure:</strong> (mm Hg @ 25 °C): 3.0</td>
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<tr>
<td><strong>pH:</strong> @ 1%: DNA</td>
</tr>
<tr>
<td><strong>Evap. Rate:</strong> (N-Butyl Acetate = 1): 0.11</td>
</tr>
<tr>
<td><strong>Molecular weight:</strong> MIXTURE</td>
</tr>
<tr>
<td><strong>Decomp Temp:</strong> Not determined</td>
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<tr>
<td><strong>Odor:</strong> Slight, Kerosene-like</td>
</tr>
<tr>
<td><strong>Molecular Formula:</strong> MIXTURE</td>
</tr>
<tr>
<td><strong>Solubility:</strong> 1%</td>
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<tr>
<td><strong>Softening Point:</strong> Not determined</td>
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<tr>
<td><strong>Percent Volatile:</strong> 100%</td>
</tr>
<tr>
<td><strong>Heat Value:</strong> Not determined</td>
</tr>
<tr>
<td><strong>Freezing/Melting Pt.:</strong> DNA</td>
</tr>
<tr>
<td><strong>Flash Point:</strong> 41 °C (106 °F)</td>
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<tr>
<td><strong>Octanol:</strong> Not determined</td>
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<tr>
<td><strong>Vapor Density:</strong> (air = 1): &gt; 4.9</td>
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<tr>
<td><strong>VOC:</strong> DNA</td>
</tr>
<tr>
<td><strong>Bulk Density:</strong> Not determined</td>
</tr>
<tr>
<td><strong>Auto-Ignition Temp:</strong> 446 - 600 °F (230 - 316 °C)</td>
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<tr>
<td><strong>UFL/LFL:</strong> (% v/v): 6.0/1.0</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Stability and Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stability:</strong> Product is stable under normal conditions.</td>
</tr>
<tr>
<td><strong>Conditions to Avoid:</strong> Incompatibilities, flames, ignition sources.</td>
</tr>
<tr>
<td><strong>Materials to Avoid:</strong> Strong acids, strong bases, strong oxidizing agents, Oxygen, liquid Chlorine and other Halogens.</td>
</tr>
<tr>
<td><strong>Hazardous Decomposition:</strong> Carbon Oxides and Hydrocarbon particulate.</td>
</tr>
<tr>
<td><strong>Hazardous Polymerization:</strong> Will not occur.</td>
</tr>
</tbody>
</table>
11 TOXICOLOGICAL INFORMATION

Component(s): Aliphatic petroleum distillate
CAS No(s): 8052-41-3

Acute Toxicity:

LD50 Oral - Rat: > 7,000 mg/kg
LD50 Dermal - Rabbit: > 2,000 mg/kg
LC50 Inhalation - Rat: > 5.5 mg/l (8 h)
LC50 Inhalation - Rat: 21 mg/l (1 h)

Skin Corrosion/Irritation: May cause skin irritation.

Serious Eye Damage/Eye Irritation: Eye - Rabbit (Standard Draize Test): Moderate eye irritation (500 mg, 24 h); Vapors formed from heating may cause eye irritation.

Respiratory or Skin Sensitation: May cause respiratory irritation. Not expected to cause skin sensitation.

Germ Cell Mutagenicity: No data available.

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive Toxicity: No data available.

Specific Target Organ Toxicity - Single Exposure: No data available.

Specific Target Organ Toxicity - Repeated Exposure: No data available.

Aspiration Hazard: May be harmful if swallowed and enters airways.

Additional Information:
Component: Aliphatic petroleum distillate; RTECS: WJ8925000

12 ECOLOGICAL INFORMATION

Component(s): Aliphatic petroleum distillate
CAS No(s): 8052-41-3

Toxicity: No data available.

Persistence and Degradability:
Not readily biodegradable. Expected to biodegrade slowly, with aerobic and anaerobic biodegradation taking weeks to months.

**Bioaccumulative potential:**
Most of the hydrocarbon blocks comprising Aliphatic petroleum distillate(s) have a Log_{10}K_{ow} > 3.0 (est. ~4.76), indicating that these constituents have a potential to bioaccumulate.

**Mobility in Soil:**
Low mobility is expected, as sorption to soil and sediment is very strong.

**Results of PBT and vPvB assessment:**
Not required/conducted.

**Other Adverse Effects:**
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life. May cause long lasting harmful effects to aquatic life.

### DISPOSAL CONSIDERATIONS

Product: Hazardous wastes shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution, release into the environment or damage to people and animals. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated Packaging: Dispose of as unused product.

### TRANSPORT INFORMATION

**DOT Class:** Flammable Liquid (3) #3  
**UN #:** UN 1268, **Class:** 3, **Proper Shipping Name:** Petroleum distillates, n.o.s. (Aliphatic Petroleum Distillate)

**DOT (US) Bulk (over 119 gallons)**
**UN Number:** UN1268  
**Class:** 3  
**Packing Group:** III  
**ERG #:** 128  
**Proper Shipping Name:** Petroleum distillates, n.o.s. (Aliphatic Petroleum Distillate)  
**Marine Pollutant:** No  
**Poison Inhalation Hazard(s):** No

**DOT (US) Non-Bulk (under 119 gallons)**
Non-regulated material, liquid

**IMDG**
**UN Number:** UN1268  
**Class:** 3  
**Packing Group:** III  
**EMS-No:** F-E, S-E  
**Proper Shipping Name:** Petroleum distillates, n.o.s. (Aliphatic Petroleum Distillate)  
**Reportable Quantity (RQ):** 20 Liters  
**Marine Pollutant:** No

**IATA**
UN Number: UN1268  
Class: 3  
Packing Group: III  
ERG #: 128  
Proper Shipping Name: Petroleum distillates, n.o.s. (Aliphatic Petroleum Distillate)  
Reportable Quantity (RQ): 20 Liters

REGULATORY INFORMATION

COMPONENT / (CAS/PERC) / CODES

*Aliphatic Petroleum Distillate (8052413 100%) MASS, OSHAWAC, PA, SARA311/312, TSCA, TXAIR

REGULATORY KEY DESCRIPTIONS

MASS = MA Massachusetts Hazardous Substances List  
OSHAWAC = OSHA Workplace Air Contaminants  
PA = PA Right-To-Know List of Hazardous Substances  
SARA311/312 = SARA 311/312 Toxic Chemicals  
TSCA = Toxic Substances Control Act  
TXAIR = TX Air Contaminants with Health Effects Screening Level

OTHER INFORMATION

Disclaimer:

The data in this Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material in any process. The information set forth herein is furnished free of charge and is based on technical data that Titan Laboratories believes to be reliable. It is intended for use by persons having technical skill and at their own discretion and risk. Since conditions of use are outside of Titan Laboratories' control, Titan Laboratories makes no warranties, expressed or implied, and assumes no liability in connection with any use of this information. Nothing herein is to be taken as a license to operate under, or a recommendation to infringe upon, any patents.

Preparation Information:

GHS Conversion Services  
www.ghsconversionservices.com  
(669) 236-0304