SECTION 1: IDENTIFICATION

Product name: PENSOLV K4HP
Recommended use: Degreaser
Physical Description: Clear liquid with sweet odor
Generic Ingredients: Aliphatic hydrocarbon, ketone
Manufacturer: Penetone Corporation
125 Kingsland Ave.
Clifton, NJ 07014
800-631-1652 or 201-567-3000

SECTION 2: HAZARDS IDENTIFICATION

GHS CLASSIFICATION:

<table>
<thead>
<tr>
<th>Health:</th>
<th>Physical:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin irritation: 2</td>
<td>Flammable liquid: 2</td>
</tr>
<tr>
<td>Eye irritation: 2B</td>
<td></td>
</tr>
<tr>
<td>Specific target organ toxicity - single exposure: 3</td>
<td></td>
</tr>
<tr>
<td>Specific target organ toxicity - repeat exposure: 2</td>
<td></td>
</tr>
<tr>
<td>Reproductive toxicity: 2</td>
<td></td>
</tr>
<tr>
<td>Aspiration hazard: 1</td>
<td></td>
</tr>
</tbody>
</table>

DANGER!
Highly Flammable Liquid and Vapor.
May Be Fatal If Swallowed and Enters Airways.
Causes Eye and Skin Irritation.
May Cause Drowsiness or Dizziness.
May Cause Damage to Central and Peripheral Nervous Systems
Through Prolonged or Repeated Exposure (Inhalation).
Suspected of Damaging Fertility or the Unborn Child.

Precautionary Statements:

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe fumes/mists/vapors/spray. Use only outdoors or in a well-ventilated area. Wear protective gloves, eye protection, and face protection. Wash hands and exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Keep container tightly closed. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Ground/Bond container and receiving equipment. Use explosion-proof electrical, ventilating, lighting, and mixing equipment. Use only non-sparking tools. Take precautionary measure against static discharge.

Response: In case of fire: Use dry chemical, carbon dioxide, water spray, water fog, or alcohol resistant foam. Do not use solid water stream as this may spread the fire.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. A mild soap may be used. If skin irritation or rash occurs: Get medical advice/attention.

If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center, doctor, emergency room or 911 if you feel unwell.

If swallowed: Immediately call a poison center, doctor, emergency room, or 911. Do NOT induce vomiting.

If exposed or concerned: Get medical advice/attention.


Disposal: Dispose of contents/container in accordance with local, regional, and national regulations (see Sections 13 and 15 of SDS for disposal and reporting requirements).
SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS#</th>
<th>Concentration Wt% (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent naphtha, light aliphatic</td>
<td>64742-89-8</td>
<td>30-50</td>
</tr>
<tr>
<td>contains heptane</td>
<td>142-82-5</td>
<td>7-15</td>
</tr>
<tr>
<td>Methyl propyl ketone</td>
<td>107-87-9</td>
<td>40-60</td>
</tr>
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</table>

(1) Exact percentages being withheld under trade secret provision of OHSA HCS 1910.1200(i)

SECTION 4: FIRST-AID MEASURES

General Description of Symptoms & First-Aid Measures
Most likely work-place exposure routes will be skin contact or inhalation.

For skin contact, typically no immediate effects will be observed. Slight reddening or minor irritation could develop some time after exposure if product is not quickly washed off.

Inhalation exposure may produce varied effects, particularly if exposure occurs above the recommended workplace exposure limits (see SECTION 8). Typical symptoms would include headaches, dizziness, drowsiness and impairment or loss of motor function. In extreme cases, unconsciousness and other central nervous effects may occur.

Eyes
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists or develops: Get medical advice or attention. Penetone recommends that after any eye exposure a physician be seen immediately.

Ingestion
If swallowed: Immediately call a poison center, doctor, physician or other competent medical authority. Rinse mouth. Product presents an aspiration hazard. DO NOT INDUCE VOMITING.

Inhalation
If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center, doctor, physician or other competent medical authority if you feel unwell.

Skin
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. A mild soap may be used to wash skin. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice or attention.

Special Treatment / Other
None

SECTION 5: FIRE FIGHTING MEASURES

Flammable Properties
Classification: 2
Flash Point: 40°F (5°C) TCC
Autoignition Temperature: not determined
Lower Flammable Limit: 1% Upper Flammable Limit: 8%

Specific Hazards
Highly flammable liquid and vapor. Can form flammable mixtures at or above the flash point.
**Extinguishing Media**

**Suitable:** SMALL FIRE: Use dry chemical, carbon dioxide (CO₂), water spray or alcohol resistant foam. LARGE FIRE: water spray, water fog, or alcohol resistant foam.

**Unsuitable:** Do not use solid water stream as this may spread fire.

**Protection & Precautions for Firefighters**

**Protective Equipment & Clothing:** Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters protective clothing will only provide limited protection.

**Fire Fighting Guidance:** Mist/spray can burn at temperatures below flash point. Cool containers with flooding quantities of water until well after fire is out. Move containers from fire area if you can do it safely. Dike fire control water for later disposal; do not scatter material. Containers can expand and explode under fire conditions due to vapor buildup. Always stay away from containers engulfed in fire.

**Hazardous Combustion Products:** Smoke, fumes, and oxides of carbon.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

**Land Spill**
Eliminate sources of ignition. Do not touch or walk through spilled material. Stop leak if you can do it safely. For large spills, dike and pump into properly labeled containers for reclamation or disposal. For small spill, soak up with absorbent material and place in properly labeled containers for disposal.

**Water Spill**
Product consists of hydrocarbons, is lighter than water. Product will float. Remove product from water surface by skimming or with suitable absorbents. Put into properly labeled containers for reclamation or disposal. If allowed by local environmental regulatory agencies, you may use a suitable dispersant. Check with local environmental regulatory agencies for reporting requirements.

*See SECTION 8 for EXPOSURE CONTROLS and PERSONAL PROTECTION.*

### SECTION 7: HANDLING & STORAGE

**Handling**
Do not handle near heat, sparks, or flame. Avoid contact with oxidizing agents. Use only with adequate ventilation/personal protection (SEE section 8). Avoid contact with eyes, skin and clothing. After handling, always wash hands thoroughly with soap and water. Avoid personal contact with any residue. Dispose of empty containers with care. Empty containers can contain flammable residue and explosive vapors. *Do not cut, weld, or reuse empty container.*

Methyl propyl ketone can form peroxides. Minimize exposure to air. After opening, purge with nitrogen before closing. Periodically test for peroxide formation on long term storage. Do not allow to evaporate to near dryness. Do not distill to dryness. Addition of water or appropriate reducing material will lessen peroxide formation.

**Storage**
Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up. Do not store near heat, sparks, open flame, or other ignition sources. Do not store near strong oxidizing agents. Do not store in direct sunlight. Avoid storing above 120°F (49°C).

Ensure container and all receiving vessels and transfer lines are properly grounded.
SECTION 8: EXPOSURE CONTROLS and PERSONAL PROTECTION

Engineering Controls
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

Personal Protection

**Inhalation**  A respiratory protection program that meets OSHA’s 29 CFR 1910.134 or ANSI Z88.2 requirements must be followed whenever workplace conditions warrant respirator use. Use of an organic vapor mask or respirator is recommended.

**Skin**  Wear chemical resistant gloves such as: rubber, nitrile, neoprene, or latex when skin contact is possible. Protective clothing including gloves, apron, sleeves, boots, head and face protection should be worn depending on how the product is used. PPE should be cleaned thoroughly after each use.

**Eyes**  Penetone recommends always wearing safety glasses as a minimum in any workplace. Conditions may warrant the use of chemical goggles and possibly a face shield. Consult your standard operating procedure or safety professional for advice. Use protective eye and face devices that comply with ANSI Z87.1-1987.

Additional Remarks
Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the hazards and/or potential hazards that may be encountered during use.

### Occupational Exposure Limits

<table>
<thead>
<tr>
<th>Component Name</th>
<th>Source</th>
<th>Value</th>
<th>Type</th>
<th>Notation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent naphtha, light aliphatic</td>
<td>ACGIH</td>
<td>1200 mg/m³</td>
<td>TWA</td>
<td>Appendix H</td>
</tr>
<tr>
<td></td>
<td>NIOSH</td>
<td>350 mg/m³</td>
<td>TWA</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>1800 mg/m³</td>
<td>C</td>
<td>15 minutes</td>
</tr>
<tr>
<td></td>
<td>OSHA Z1</td>
<td>500 ppm</td>
<td>PEL</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2,000 mg/m³</td>
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<tr>
<td>Heptane</td>
<td>ACGIH</td>
<td>400 ppm</td>
<td>TWA</td>
<td>CNS impair; URT irr</td>
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<tr>
<td></td>
<td>ACGIH</td>
<td>500 ppm</td>
<td>STEL</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NIOSH</td>
<td>85 ppm</td>
<td>TWA</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>440 ppm</td>
<td>STEL</td>
<td>15 min</td>
</tr>
<tr>
<td></td>
<td>OSHA Z1</td>
<td>500 ppm</td>
<td>PEL</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2,000 mg/m³</td>
<td></td>
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<tr>
<td>Methyl propyl ketone</td>
<td>ACGIH</td>
<td>150 ppm</td>
<td>STEL</td>
<td>pulm func; eye irrit</td>
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<td></td>
<td>NIOSH</td>
<td>150 ppm</td>
<td>TWA</td>
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<tr>
<td></td>
<td>OSHA Z1</td>
<td>200 ppm</td>
<td>PEL</td>
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<tr>
<td></td>
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<td>700 mg/m³</td>
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</table>

SECTION 9: PHYSICAL & CHEMICAL PROPERTIES

**Appearance:** clear water-white liquid

**Odor:** sweet

**Odor Threshold:** not determined

**pH:** not applicable

**Melting Point / Freezing:** less than 0°F (-18°C)

**Boiling Point / Boiling Point Range:** about 215°F (108°C)

**Flash Point:** 40°F (5°C) TCC

**Evaporation Rate:** 3.2 (n-butyl acetate = 1)
SECTION 10: STABILITY & REACTIVITY

Reactivity
Product is stable and only reactive under extreme conditions (very high heat/pressure) or in the presence of specific incompatible materials (see below).

Chemical Stability
Product is stable.

Hazardous Reactions
Hazardous polymerization will not occur. Methyl propyl ketone may form peroxides of unknown stability. Product should be stored under an inert atmosphere such as nitrogen.

Conditions to Avoid
Highly flammable liquid. Do not store near sources of heat, sparks, open flame, or other ignition sources. Ground all storage and receiving container and transfer lines.

Incompatible Materials
Strong oxidizing agents.

Hazardous Decomposition Products
Carbon monoxide and dioxide.

SECTION 11: TOXICOLOGICAL INFORMATION

Product Summary
Product as a whole has not been tested. Based on supplier information, the product as a whole would be considered of low toxicity for all routes of entry. Product is expected to be only slightly irritating to skin and possibly mildly irritating to eyes. Product will defat the skin, and prolonged/repeated contact could lead to dermatitis. If ingested, the product does present an aspiration hazard. Vapors/mists may irritate the upper respiratory tract and lungs and depress the central nervous system, causing drowsiness or dizziness. Repeated exposure may affect the peripheral nervous system causing loss of coordination.

Acute Toxicity:
- **Dermal**: LD50 > 2,000 mg/kg rabbit (estimated using additivity formula)
- **Inhalation**: LC50 > 20 mg/l rat (estimated using additivity formula)
- **Oral**: LD50 > 2,000 mg/kg rat (estimated using additivity formula)

Skin Corrosion/Irritation
Based upon component data, product is expected to show only mild skin irritation. Product may defat and dry the
Skin leading to discomfort and dermatitis.

**Serious Eye Damage/Irritation**
Based upon component data, product is expected to show only mild eye irritation.

**Sensitization - Respiratory or Skin**
Based upon component data, product is not expected to cause skin or respiratory sensitization.

**Germ Cell Mutagenicity**
Based upon component data, product is not expected to cause germ cell mutagenicity.

**Carcinogenicity**
Product does not contain components considered carcinogenic.

**Reproductive Toxicity**
No data available for product as a whole.

The aliphatic light solvent naphtha used in this product is suspected of damaging fertility or the unborn child. It causes foetotoxicity in animals at doses which are maternally toxic and affects the reproductive system in animals at doses which produce other toxic effects.

**Specific Target Organ Effects - Single Exposure**
Based upon component data, product may produce central nervous system depression and cause effects such as drowsiness and dizziness.

**Specific Target Organ Effects - Repeated or Prolonged Exposure**
No data available for product as a whole.

The aliphatic light solvent naphtha used in this product may affect the peripheral nervous system causing peripheral neuropathy which can be potentiated by ketones. This component has caused kidney effects in male rats which are not considered relevant to humans.

**Aspiration Hazard**
Based upon available data and comparison to similar materials, if swallowed, may pose a lung aspiration hazard during vomiting. Lung aspiration may result in chemical pneumonitis, pulmonary edema, and damage to lung tissue or death.

### SECTION 12: ECOLOGICAL INFORMATION

**Product Summary**
Product is a blend of hydrocarbon solvent and a ketone. The product will float on water and cause a sheen. The ketone is soluble in water. The product is expected to be toxic to aquatic organisms. (Acute aquatic toxicity category 2 by European Union classification.) The product is volatile and will evaporate to air, where it is expected to rapidly oxidize by photochemical reactions. Product components may partition to sediments and waste water solids. The product is expected to be readily biodegradable.

**Ecotoxicity**
Acute toxicity for aquatic vertebrates and invertebrates estimated to be 5-20 mg/l (estimated using additivity formula).

**Persistence and Degradability**
Product components are or are expected to be readily biodegradable.

**Bioaccumulative Potential**
The aliphatic light solvent naphtha used in this product has the potential to bioaccumulate.
Mobility in soil
The aliphatic light solvent naphtha used in this product will adsorb to soil particles and will not be mobile.

Other Adverse Effects
None known

SECTION 13: DISPOSAL CONSIDERATIONS

Product is a D001 Ignitable Hazardous Waste under RCRA definitions. Dispose of contents/container in accordance with all applicable federal, state, and local regulations.

Note: Contaminated product, soil, water, container residues and spill cleanup materials may be hazardous wastes. Appropriate hazardous waste designation is the responsibility of the user.

SECTION 14: TRANSPORT INFORMATION

ID No.: UN1993
Proper Shipping Name: FLAMMABLE LIQUID, N.O.S., (contains petroleum distillate and methyl propyl ketone)
Hazard Class: 3
Packing Group: II
Label: FLAMMABLE
RQ: No
Special Precautions: None

SECTION 15: REGULATORY INFORMATION

TSCA
The ingredients in this product are listed on the TSCA inventory.

RCRA HAZARD CLASS
D001 - Ignitable hazardous waste

SARA 311/312 REPORTABLE HAZARD CATEGORIES: Immediate (Acute) Health     Fire

REPORTING REQUIREMENTS (all quantities in pounds)

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS / 313 Code</th>
<th>Section 302 (EHS) TPQ</th>
<th>Section 304 EHS RQ</th>
<th>CERCLA RQ</th>
<th>Section 313</th>
<th>CAA 112(r) TQ</th>
<th>CWA / OPA</th>
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</thead>
<tbody>
<tr>
<td>Product as a whole</td>
<td>(1)</td>
<td>(1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) This material is not subject to any special reporting under the requirements of CERCLA. Contact local authorities to determine if other reporting requirements apply. (2) This product subject to the reporting requirements under Section 311 of the CWA (40 CFR 110) and the OPA of 1990. Discharge or spills which produce a visible sheen on either surface water, or in waterways/sewers which lead to surface water, must be reported to the National Response Center at 800-424-8802.

NEW JERSEY RIGHT-TO-KNOW INFORMATION:
This product contains aliphatic petroleum naphtha (CAS# 64742-89-8) and methyl propyl ketone (CAS# 107-87-9).

CALIFORNIA PROPOSITION 65 INFORMATION
This product does not contain any chemicals recognized by the state of California to cause cancer and/or birth defects or reproductive harm.
SCAQMD INFORMATION
Is there a photochemically reactive material present? Yes
What is the % by volume of photochemically reactive material? About 50
What is the VOC content? 780 g/l
What is the vapor pressure of VOC’s? About 30 mm Hg @ 20°C

SECTION 16: OTHER INFORMATION

REVISION SUMMARY
Changes in Sections 1 and 2

SUPERSEDES ISSUE DATE
March 31, 2016

HAZARD RATING SYSTEMS:

<table>
<thead>
<tr>
<th>HMIS</th>
<th>NFPA</th>
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</thead>
<tbody>
<tr>
<td>HEALTH</td>
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</tr>
<tr>
<td>FLAMMABILITY</td>
<td>3</td>
</tr>
<tr>
<td>REACTIVITY</td>
<td>0</td>
</tr>
</tbody>
</table>

KEY
4 = Severe
3 = Serious
2 = Moderate
1 = Slight
0 = Minimal

FOR ADDITIONAL PRODUCT INFORMATION, CONTACT YOUR SALES ENGINEER
FOR ADDITIONAL HEALTH/SAFETY INFORMATION, CALL 201-567-3000

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