**Section 1. Chemical Product and Company Identification**

<table>
<thead>
<tr>
<th>Product name</th>
<th>ATOSOL 150</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplier</td>
<td>Total Petrochemicals &amp; Refining USA, Inc. P O Box 674411 Houston,TX 77267-4411</td>
</tr>
<tr>
<td>Chemical Family</td>
<td>Aromatic/Hydrocarbon Mixture</td>
</tr>
<tr>
<td>CAS Registry Number</td>
<td>64742-94-5</td>
</tr>
<tr>
<td>Synonym</td>
<td>solvent naphtha (petroleum), heavy arom. Formerly FAS-TX150</td>
</tr>
</tbody>
</table>

**In Case of Emergency**

Chemtrec: (800) 424-9300  Total Petrochemicals & Refining USA, Inc.: (800) 322-3462

**Technical Information**

For non-emergency product information: email product.stewardship@total.com

**Section 2. Hazards Identification**

**Emergency Overview**

COMBUSTIBLE LIQUID AND VAPOR. VAPOR MAY CAUSE FIRE.

MAY BE HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION.

MAY BE HARMFUL IF SWALLOWED. ASPIRATION HAZARD IF SWALLOWED. CAN ENTER LUNGS AND CAUSE DAMAGE.

MAY CAUSE DAMAGE TO THE FOLLOWING ORGANS: LUNGS, CENTRAL NERVOUS SYSTEM, DIGESTIVE SYSTEM, RESPIRATORY TRACT, SKIN, EYES, BLOOD, KIDNEYS, LIVER.

CONTAINS MATERIAL WHICH MAY CAUSE CANCER

**Routes of Entry**

Dermal contact. Eye contact. Inhalation. Ingestion.

**Potential Acute Health Effects**

**Eyes** May cause eye irritation.

**Skin** May cause skin irritation. Skin inflammation is characterized by itching, scaling, reddening or, occasionally, blistering. Absorbed through skin.

**Inhalation** High vapor/mist concentration exposure can cause respiratory tract irritation, nausea, headaches, dizziness, and other central nervous system effects.

**Ingestion** May cause irritation of gastrointestinal tract. If swallowed, aspiration into lungs may result in chemical pneumonitis an severe pulmonary injury.

**Potential Chronic Health Effects**

**CARCINOGENIC EFFECTS:**

Classified 2B (Possible for humans.) by IARC [naphthalene].

Classified 2 (Reasonably anticipated to be human carcinogens.) by NTP [naphthalene].

Classified A4 (Not classifiable for humans or animals.) by ACGIH [naphthalene].

**Medical Conditions Aggravated by Overexposure**

Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

**Overexposure /Signs/ Symptoms**

Prolonged or repeated exposure to this product can cause central nervous system effects and irritation to the eyes, skin, and respiratory tract. Frequent skin contact can remove skin oils, resulting in dermatitis.

See Toxicological Information (Section 11)
Section 3. Composition and Information on Ingredients

Occupational exposure limits, if available, are listed in Section 8.

<table>
<thead>
<tr>
<th>Substance Name</th>
<th>CAS #</th>
<th>% by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent naphtha (petroleum), heavy arom.</td>
<td>64742-94-5</td>
<td>100</td>
</tr>
<tr>
<td>1,2-Dimethyl-4-ethylbenzene</td>
<td>934-80-5</td>
<td>10 - 20</td>
</tr>
<tr>
<td>1,2,3,5-tetramethylbenzene</td>
<td>527-53-7</td>
<td>10 - 20</td>
</tr>
<tr>
<td>1,2,4,5-tetramethylbenzene</td>
<td>95-93-2</td>
<td>5 - 15</td>
</tr>
<tr>
<td>1,3-Dimethyl-4-ethylbenzene</td>
<td>874-41-9</td>
<td>2 - 10</td>
</tr>
<tr>
<td>1,3-Dimethyl-5-ethylbenzene</td>
<td>934-74-7</td>
<td>2 - 10</td>
</tr>
<tr>
<td>1,4-Dimethyl-2-ethylbenzene</td>
<td>1758-88-9</td>
<td>2 - 10</td>
</tr>
<tr>
<td>1-methyl-3-n-propylbenzene</td>
<td>1074-43-7</td>
<td>2 - 10</td>
</tr>
<tr>
<td>naphthalene</td>
<td>91-20-3</td>
<td>&lt;10</td>
</tr>
<tr>
<td>1,4-diethylbenzene</td>
<td>105-05-5</td>
<td>1 - 5</td>
</tr>
<tr>
<td>1,2,3-trimethylbenzene</td>
<td>526-73-8</td>
<td>1 - 5</td>
</tr>
<tr>
<td>1-Methyl-4-propylbenzene</td>
<td>1074-55-1</td>
<td>1 - 5</td>
</tr>
<tr>
<td>1,2,4-trimethylbenzene</td>
<td>95-63-6</td>
<td>&lt;2</td>
</tr>
<tr>
<td>2-methylnaphthalene</td>
<td>91-57-6</td>
<td>&lt;2</td>
</tr>
<tr>
<td>1,3-diethylbenzene</td>
<td>141-93-5</td>
<td>&lt;2</td>
</tr>
</tbody>
</table>

Section 4. First Aid Measures

Eye Contact: Flush with large amounts of water. If redness persists, get medical attention.

Skin Contact: If the chemical got onto the clothed portion of the body, remove the contaminated clothes as quickly as possible. Wash contaminated skin with soap and water.

Inhalation: Allow the victim to rest in a well-ventilated area. Seek immediate medical attention.

Ingestion: DO NOT induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Section 5. Fire Fighting Measures

Flammability of the Product: Combustible.

Auto-ignition Temperature: Not available.

Flash Points: CLOSED CUP: >65.6°C (150°F). (Tagliabue).

Flammable Limits: Not available.

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances: Combustible in presence of open flames and sparks, of heat.

Explosion Hazards in Presence of Various Substances: Risks of explosion of the product in presence of static discharge: Possible.

Fire Fighting Media and Instructions: SMALL FIRE: Use DRY chemical powder, halon, and CO2. LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet.

Protective Clothing (Fire): Wear MSHA/NIOSH approved self-contained breathing apparatus or equivalent and full protective gear (Bunker gear).
Section 6. Accidental Release Measures

Small Spill and Leak  
Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill and Leak  
Contain spill and safely stop the flow.  
 Warn personnel to move away.  
 Eliminate all sources of ignition.  
 Ventilate.  
 Absorb with an inert material (sand) and put the spilled material in an appropriate waste disposal.  
 Do not allow any potentially contaminated water including rain water, runoff from fire fighting or spills to enter any waterway, sewer or drain.  
 Prevent entry into sewers, basements or confined areas; dike if needed.  
 Keep out of waterways.

Section 7. Handling and Storage

Handling  
Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage  
Combustible materials should be stored in a separate safety storage cabinet or room.  
 Keep away from heat.  
 Keep away from sources of ignition.  
 Keep container tightly closed.  
 Keep in a cool and well-ventilated area.  
 Ground all equipment containing material.  
 Keep container dry.  
 Keep in a cool place.

All efforts should be made to prevent any leaks or spills. Storage tanks containing should be engineered to prevent contact with water resources, as this material could contaminate the water resources. Surface spills can reach groundwater through porous soil or cracked surfaces. The storage tanks should be monitored regularly for leaks. Where spills or leaks are possible, a comprehensive response plan should be developed and implemented.

Section 8. Exposure Controls/Personal Protection

Engineering Controls  
Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment. Ensure that eyewash station and safety shower is proximal to the work-station location.

Personal Protection

Eyes  Safety glasses with side shields.

Body  Flame retardant clothing covering the entire body.

Respiratory  Use a MSHA/NIOSH approved respirator or equivalent at high concentrations.

Hands  Chemical resistant gloves if contact is possible.

Feet  Shoes.

Protective Clothing (Pictograms)

Total Petrochemicals & Refining USA, Inc.
**Personal Protection in Case of a Large Spill**

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent naphtha (petroleum), heavy arom.</td>
<td>-</td>
</tr>
<tr>
<td>1,2-Dimethyl-4-ethylbenzene</td>
<td>-</td>
</tr>
<tr>
<td>1,2,3,5-tetramethylbenzene</td>
<td>-</td>
</tr>
<tr>
<td>1,2,4,5-tetramethylbenzene</td>
<td>-</td>
</tr>
<tr>
<td>1,3-Dimethyl-4-ethylbenzene</td>
<td>-</td>
</tr>
<tr>
<td>1,3-Dimethyl-5-ethylbenzene</td>
<td>-</td>
</tr>
<tr>
<td>1,4-Dimethyl-2-ethylbenzene</td>
<td>-</td>
</tr>
<tr>
<td>1-methyl-3-n-propylbenzene naphthalene</td>
<td>-</td>
</tr>
</tbody>
</table>

ACGIH TLV (United States, 3/2012). Absorbed through skin.

TWA: 10 ppm 8 hours.
STEL: 15 ppm 15 minutes.
TWA: 52 mg/m³ 8 hours.
STEL: 79 mg/m³ 15 minutes.

OSHA PEL (United States, 6/2010).

TWA: 10 ppm 8 hours.

TWA: 50 mg/m³ 8 hours.

NIOSH REL (United States, 6/2009).

TWA: 10 ppm 10 hours.
TWA: 50 mg/m³ 10 hours.
STEL: 15 ppm 15 minutes.
STEL: 75 mg/m³ 15 minutes.

1,4-diethylbenzene

ACGIH TLV (United States, 3/2012).

TWA: 25 ppm 8 hours.

TWA: 123 mg/m³ 8 hours.

NIOSH REL (United States, 6/2009).

TWA: 25 ppm 10 hours.

TWA: 125 mg/m³ 10 hours.

1,2,3-trimethylbenzene

ACGIH TLV (United States, 3/2012).

TWA: 25 ppm 8 hours.

TWA: 123 mg/m³ 8 hours.

NIOSH REL (United States, 6/2009).

TWA: 25 ppm 10 hours.

TWA: 125 mg/m³ 10 hours.

1-Methyl-4-propylbenzene

ACGIH TLV (United States, 3/2012).

TWA: 25 ppm 8 hours.

TWA: 123 mg/m³ 8 hours.

NIOSH REL (United States, 6/2009).

TWA: 25 ppm 10 hours.

TWA: 125 mg/m³ 10 hours.

2-methylnaphthalene

ACGIH TLV (United States, 2011). Absorbed through skin.

TWA: 0.5 ppm 8 hours.

1,3-diethylbenzene

Consult local authorities for acceptable exposure limits.

---

**Section 9. Physical and Chemical Properties**

**Physical State and Appearance**

Liquid.

**Color**

Colorless.

**Odor**

Aromatic.

**Molecular Weight**

Not applicable.

**Molecular Formula**

Not applicable.

**Boiling/Condensation Point**

182.2 to 210°C (360 to 410°F)

**Specific Gravity**

0.9 (Water = 1)

**Vapor Pressure**

<1 mm of Hg (@ 20°C)
Reid Vapor Pressure

**Vapor Density**

4.5 (Air = 1)

**Vaportyliity**

100% (v/v).

**Evaporation Rate**

0.061

**VOC**

100 (%)

**Solubility in Water**

Negligible.

*Total Petrochemicals & Refining USA, Inc.*
Section 10. Stability and Reactivity

Stability and Reactivity

The product is stable.

Conditions of Instability

No additional remark.

Incompatibility with Various Substances

Extremely reactive or incompatible with strong oxidizing agents.

Hazardous Decomposition Products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. In a fire, hazardous decomposition products may be produced.

Hazardous Polymerization

Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological Information

Toxicity to Animals

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>solvent naphtha (petroleum), heavy arom.</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>&gt;2 mL/kg</td>
<td>-</td>
</tr>
<tr>
<td>1,2,3,5-tetramethylbenzene</td>
<td>LC50 Inhalation Vapor</td>
<td>Rat</td>
<td>&gt;590 mg/m³</td>
<td>4 hours</td>
</tr>
<tr>
<td>1,2,4,5-tetramethylbenzene</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>5157 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>1,2,4-trimethylbenzene</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>6700 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>naphthalene</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>&gt;20 gm/kg</td>
<td>-</td>
</tr>
<tr>
<td>naphthalene</td>
<td>LD50 Dermal</td>
<td>Rat</td>
<td>&gt;2500 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>naphthalene</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>490 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>1,2,4-trimethylbenzene</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>5 g/kg</td>
<td>-</td>
</tr>
<tr>
<td>2-methylnaphthalene</td>
<td>LC50 Inhalation Vapor</td>
<td>Rat</td>
<td>18000 mg/m³</td>
<td>4 hours</td>
</tr>
<tr>
<td>2-methylnaphthalene</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>1.63 gm/kg</td>
<td>-</td>
</tr>
<tr>
<td>2-methylnaphthalene</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>1630 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

Chronic Effects on Humans

CARCINOGENIC EFFECTS:

Classified 2B (Possible for humans.) by IARC [naphthalene]. Classified 2 (Reasonably anticipated to be human carcinogens.) by NTP [naphthalene].

May cause damage to the following organs: lungs, central nervous system (CNS), digestive system, upper respiratory tract, skin, eyes, blood, kidneys, liver.

Other Toxic Effects on Humans

May be irritating to eyes, skin and respiratory system. Aspiration hazard if swallowed. Can enter lungs and cause damage.

Special Remarks on Toxicity to Animals

NTP concluded based on inhalation studies that there is clear evidence of carcinogenic activity of naphthalene in rats based on increased incidences of respiratory epithelial adenoma (tissue tumors) and olfactory epithelial neuroblastoma (malignant tumors) of the nose.

Section 12. Ecological Information

Ecotoxicity

Not available.

Biodegradable/OECD

 Constituents of this type of aromatic solvent are expected to biodegrade.

Mobility

 Constituents of this type of aromatic solvent are expected to partition between air, water, and soil.

Section 13. Disposal Considerations

Waste Information

Recover free liquid. Transfer to a safe disposal area in accordance with federal, state, and local regulations. The classification of the product may meet the criteria for a hazardous waste.

Consult your local or regional authorities.
Section 14. Transport Information  
(for domestic bulk shipments, non-bulk shipments may differ)

DOT Classification for Bulk Shipments (non bulk shipments may differ)  
Combustible liquid

Proper Shipping Name/Description  
UN1268, Petroleum distillates, n.o.s., Combustible liquid, PGIII RQ (contains naphthalene)  
or  
NA1993, Combustible Liquid, n.o.s. (Heavy Aromatic Petroleum Solvent), PGIII RQ (contains naphthalene)

UN Number  
UN1268

Packing Group  
III

Marine Pollutant  
Not listed in Appendix B to 49CFR172.101

Hazardous Substances  
Naphthalene: 100 lbs

Reportable Quantity  
See codes as shown in 49 CFR 172.101 column 7.

Special Provisions for Transport  
Not available.

TDG Classification  
Not available.

IMO/IMDG Classification  
Not available.

ICAO/IATA Classification  
Not available.

USCG Proper Shipping Name  
Naphtha: Aromatic

Section 15. Regulatory Information

HCS Classification  
Combustible liquid
Carcinogen
Target organ effects

U.S. Federal Regulations  
TSCA 4(a) final test rules: naphthalene
TSCA 8(a) PAIR: naphthalene
United States inventory (TSCA 8b): All components are listed or exempted.
TSCA 12(b) one-time export: naphthalene

SARA 302/304/311/312 extremely hazardous substances: To the best of our knowledge, there are no substances that would be at reportable levels for this regulation in this product.

SARA 302/304 emergency planning and notification: To the best of our knowledge, there are no substances that would be at reportable levels for this regulation in this product.

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: ATOSOL 150 [solvent naphtha (petroleum), heavy arom.]: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard

SARA 313 Supplier Notification  
This product contains the following EPCRA section 313 chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372 -Table 372.65).

<table>
<thead>
<tr>
<th>Product name</th>
<th>CAS number</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>naphthalene</td>
<td>91-20-3</td>
<td>&lt;10</td>
</tr>
<tr>
<td>1,2,4-trimethylbenzene</td>
<td>95-63-6</td>
<td>&lt;2</td>
</tr>
</tbody>
</table>

Clean Water Act (CWA) 307: naphthalene

Clean Water Act (CWA) 311: naphthalene

International Regulations  
WHMIS (Canada)  
Class B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F).  
Class D-2A: Material causing other toxic effects (Very toxic).

Total Petrochemicals & Refining USA, Inc.
CEPA Toxic substances: The following components are listed: Polycyclic aromatic hydrocarbons
Canadian ARET: None of the components are listed.
Canadian NPRI: The following components are listed: Heavy aromatic solvent naphtha
Alberta Designated Substances: None of the components are listed.
Ontario Designated Substances: None of the components are listed.
Quebec Designated Substances: None of the components are listed.

DSCL (EEC) R65- Harmful: may cause lung damage if swallowed.
CEPA DSL/NDSL All components are listed or exempted.

International Lists
Australia inventory (AICS): All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: Not determined.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): All components are listed or exempted.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): Not determined.

State Regulations
Massachusetts Substances: The following components are listed: NAPHTHALENE; P-DIETHYL BENZENE; TRIMETHYL BENZENE; PSEUDOCUMENE; M-DIETHYL BENZENE
New Jersey Hazardous Substances: The following components are listed: NAPHTHALENE; MOTH FLAKES; TRIMETHYL BENZENE; PSEUDOCUMENE
New York Acutely Hazardous Substances: The following components are listed: Naphthalene
Pennsylvania RTK Hazardous Substances: The following components are listed: NAPHTHALENE; BENZENE, 1,4-DIETHYL-; BENZENE, TRIMETHYL-; PSEUDOCUMENE; BENZENE, 1,3-DIETHYL-

CALIFORNIA PROP. 65 WARNING: This product contains a chemical or chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.: naphthalene

Section 16. Other Information

Label requirements
COMBUSTIBLE LIQUID AND VAPOR.
VAPOR MAY CAUSE FIRE.
MAY BE HARMFUL IF INHALED.
MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION.
MAY BE HARMFUL IF SWALLOWED.
ASPIRATION HAZARD IF SWALLOWED. CAN ENTER LUNGS AND CAUSE DAMAGE.

MAY CAUSE DAMAGE TO THE FOLLOWING ORGANS: LUNGS, CENTRAL NERVOUS SYSTEM, DIGESTIVE SYSTEM, RESPIRATORY TRACT, SKIN, EYES, BLOOD, KIDNEYS, LIVER.

CONTAINS MATERIAL WHICH MAY CAUSE CANCER

Hazardous Material Information System (U.S.A.)

National Fire Protection Association (U.S.A.)

References
-HSDB - Hazardous Substances Data Bank
Chemtox Database
Chemtrec:
(800) 424-9300

Total Petrochemicals & Refining USA, Inc.:
(800) 322-3462

Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

To obtain an electronic copy of this MSDS, please email: product.stewardship@total.com.