TOTAL PETROCHEMICALS

TOTAL PETROCHEMICALS USA, INC.

Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

Trade name	**ATOSOL 150** Sea Hawk 2035
Supplier	TOTAL PETROCHEMICALS USA, INC. P O Box 674411 Houston,Tx. 77267-4411
Synonym	solvent naphtha (petroleum), heavy arom. Formerly FAS-TX150
MSDS Name	ATOSOL 150
Chemical Family	Aromatic/Hydrocarbon Mixture
CAS Registry Number	64742-94-5
Threshold Limit Value	No Threshold Limit Value (TLV) or Permissible Exposure Limit (PEL) has been published for this material. Some specific components may have established exposure limits (see Section 2). The best practice is to maintain concentrations of all atmospheric contaminants as low as practical using engineering controls and work rules. Appropriate personal protective equipment may be used for additional protection of the worker from exposure. For application of TLVs or PELs consult an industrial hygienist.
Manufacturer	TOTAL PETROCHEMICALS USA, INC. P.O. Box 849 Port Arthur, TX 77641-0849

Code	ATOSOL150
MSDS#	SP018
Validation Date	**1/1/2008**
Print Date	1/1/2008
Responsible for Preparation	**Paul Bradley**

In Case of Emergency	**Chemtrec:** (800) 424-9300 **TOTAL PETROCHEMICALS USA, INC:** (800) 322-3462
Technical Information	TOTAL PETROCHEMICALS USA, INC. La Porte Research and Technology PO Box 1200 Deer Park,Tx. 77536 281-884-7500

Section 2. Composition and Information on Ingredients

Name	CAS #	% by Weight	Exposure Limits
Solvent naphtha, petroleum, heavy arom.	64742-94-5	100	Not established.
1,2-Dimethyl-4-ethylbenzene	934-80-5	10-20	Not established.
1,2,3,5-Tetramethylbenzene	527-53-7	10-20	Not established.
1,2,4,5-Tetramethylbenzene	95-93-2	5-15	Not established.
1,3-Dimethyl-4-ethylbenzene	874-41-9	2-10	Not established.
1,3-Dimethyl-5-ethylbenzene	934-74-7	2-10	Not established.
1,4-Dimethyl-2-ethylbenzene	1758-88-9	2-10	Not established.
1-Methyl-3-propylbenzene	1074-43-7	2-10	Not established
Naphthalene	91-20-3	< 10	**ACGIH TLV (United States, 1/2006).** TWA: 52 mg/m^3 8 hour(s) STEL: 79 mg/m^3 TWA: 10 ppm 8 hour(s) STEL: 15 ppm **OSHA PEL 1989 (United States, 3/1989).** TWA: 50 mg/m^3 8 hour(s) TWA: 10 ppm 8 hour(s)
1,4-diethylbenzene	105-05-5	1-5	Not established.
1,2,3-Trimethylbenzene	526-73-8	1-5	**ACGIH TLV (United States, 1/2006).** TWA: 123 mg/m^3 8 hour(s). TWA: 25 ppm 8 hour(s). **OSHA PEL 1989 (United States, 3/1989).** TWA: 125 mg/m^3 8 hour(s). TWA: 25 ppm 8 hour(s).
1-methyl-4-n-propylbenzene	1074-55-1	1-5	Not established.
1,2,4-Trimethylbenzene	95-63-6	<2	10 Hr TWA: 25 ppm (125 mg/cu m). NIOSH Mixed Isomers of trimethylbenzene: 8 hr TWA: 25 ppm ACGIH
2-Methylnaphthalene	91-57-6	<2	Not established.
1,3-diethylbenzene	141-93-5	<2	Not established.

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Section 3. Hazards Identification

Physical State and Appearance	Liquid.
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	Absorbed through skin. 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.
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]. **MUTAGENIC EFFECTS**: Not available. **TERATOGENIC EFFECTS**: Not available.
Medical Conditions Aggravated by Overexposure	Repeated exposure to an highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.
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 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.
Notes to Physician	Not available.

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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).
Special Remarks on Fire Hazards	No additional remark.
Special Remarks on Explosion Hazards	No additional remark.

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	Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. DO NOT ingest. Do not breathe gas, fumes, vapor or spray. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents.
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 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

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comprehensive response plan should be developed and implemented.

Section 8. Exposure Controls/Personal Protection

Engineering Controls Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection

Eyes Safety glasses with side shields.

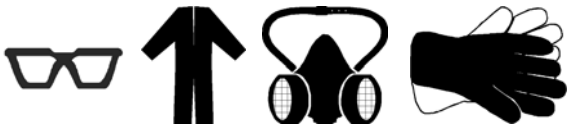
Body Flame retardant clothing covering the entire body.

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

Hands Chemical resistant gloves if contact is possible.

Feet Safety slip proof shoes in areas where spills or leaks can occur.

Protective Clothing (Pictograms)



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.

Product Name	Exposure Limits
Solvent naphtha, petroleum, heavy arom.	Not established.
1,2-Dimethyl-4-ethylbenzene	Not established.
benzene, 1,2,3,5-tetramethyl-	Not established.
1,2,4,5-Tetramethylbenzene	Not established.
1,3-Dimethyl-4-ethylbenzene	Not established.
1-ethyl-3,5-dimethyl-benzene	Not established.
1,4-Dimethyl-2-ethylbenzene	Not established.
1-Methyl-3-propylbenzene	Not established
Naphthalene	**ACGIH TLV (United States, 1/2006).** TWA: 52 mg/m^3 8 hour(s) STEL: 79 mg/m^3 TWA: 10 ppm 8 hour(s) STEL: 15 ppm **OSHA PEL 1989 (United States, 3/1989).** TWA: 50 mg/m^3 8 hour(s) TWA: 10 ppm 8 hour(s)
p-diethyl benzene	Not established.
1,2,3-Trimethylbenzene	**ACGIH TLV (United States, 1/2006).** TWA: 123 mg/m^3 8 hour(s). TWA: 25 ppm 8 hour(s). **OSHA PEL 1989 (United States, 3/1989).** TWA: 125 mg/m^3 8 hour(s). TWA: 25 ppm 8 hour(s).
1-methyl-4-n-propylbenzene	Not established.
1,2,4-Trimethylbenzene	10 Hr TWA: 25 ppm (125 mg/cu m). NIOSH Mixed Isomers of trimethylbenzene: 8 hr TWA: 25 ppm ACGIH
2-Methylnaphthalene	Not established.
benzene, m-diethyl-	Not established.

Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical State and Appearance	Liquid.
Molecular Weight	Not applicable.
Molecular Formula	Not applicable.
pH (1% Soln/Water)	Not applicable.
Boiling/Condensation Point	182.2 to 210°C (360 to 410°F)
Melting/Freezing Point	Not available.

Odor	Aromatic.
Taste	Not available.
Color	Colorless.

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Critical Temperature	Not available.
Specific Gravity	0.9 (Water = 1)
Vapor Pressure	<1 mm of Hg (@ 20°C) Reid Vapor Pressure
Vapor Density	4.5 (Air = 1)
Volatility	100% (v/v).
Odor Threshold	Not available.
Evaporation Rate	0.061
VOC	100 (%)
Viscosity	Not available.
$LogK_{ow}$	Not available.
Ionicity (in Water)	Not available.
Dispersion Properties	Not available.
Solubility in Water	Negligible.
Physical Chemical Comments	Not available.

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	carbon monoxide & carbon dioxide
Hazardous Polymerization	No.

Section 11. Toxicological Information

Toxicity to Animals	Acute oral toxicity (LD50): 316 mg/kg [Mouse]. (naphthalene). Acute dermal toxicity (LD50): >2500 mg/kg [Rat]. (naphthalene).
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]. Classified A4 (Not classifiable for humans or animals.) by ACGIH [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.
Special Remarks on Chronic Effects on Humans	No additional remark.
Special Remarks on Other Toxic Effects on Humans	No additional remark.

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Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Biodegradable/OECD	Not available.
Mobility	Constituents of this type of aromatic solvent are expected to partition between air, water, and soil.
	No additional remark.
Toxicity of the Products of Biodegradation	No additional information.
Special Remarks on the Products of Biodegradation	Constituents of this type of aromatic solvent are expected to biodegrade.

Section 13. Disposal Considerations

Waste Information	Recover free liquid. Transfer to a safe disposal area in accordance with federal, state, and local regulations.
Waste Stream	Not available.

Consult your local or regional authorities.

Section 14. Transport Information (for bulk shipments, non-bulk shipments may differ)

DOT Classification for Bulk Shipments (non bulk shipments may differ)	Combustible liquid
DOT Proper Shipping Name	Petroleum distillates, n.o.s. (contains naphthalene), Combustible liquid, UN1268, PGIII RQ
UN Number	UN1268
Packing Group	III
USCG Proper Shipping Name	Naphtha: Aromatic
Marine Pollutant	Not listed in Appendix B to 49 CFR 172.101.
Hazardous Substances Reportable Quantity	Naphthalene: 100 lbs
Special Provisions for Transport	No additional remark.
TDG Classification	Not available.
ADR/RID Classification	Not available.
IMO/IMDG Classification	Not available.
ICAO/IATA Classification	Not available.

Section 15. Regulatory Information

HCS Classification	Class: Combustible liquid having a flash point between 37.8°C (100°F) and 93.3°C (200°F).
U.S. Federal Regulations	TSCA inventory: **All components are listed on TSCA inventory.** SARA 301/302/303 No chemicals in this product are listed as extremely hazards substances in 40 CFR 355, Emergency Planning And Notification (Appendix A to Part 355). SARA 304 The following chemicals in this product require reporting under the requirements of 40 CFR

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355, Emergency Planning And Notification (SARA extremely hazardous substances listed in Appendix A to Part 355 or CERCLA hazardous substances listed in Table 302.4 of 40 CFR Part 302).

Naphthalene

SARA 313

The following chemicals in this product are subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372 (Table 372.65). The Chemical Abstracts Service registry number and the percent by weight of each chemical are given in Section 2 of this MSDS.

naphthalene; 1,2,3-Trimethylbenzene; 1,2,4-Trimethylbenzene; benzene, m-diethyl-

SARA 311/312

The following chemicals in this product require reporting under the requirements of 40 CFR 370, Hazardous Chemical Reporting: Community Right-To-Know. The hazard category for each chemical is also listed.

naphthalene: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard; 1,2,3-Trimethylbenzene: Fire hazard; 1,2,4-Trimethylbenzene: Fire hazard, Delayed (chronic) health hazard; benzene, m-diethyl-: Fire hazard

Specific state and local regulations should be consulted to determine if there are any additional requirements. Because many states and localities have added requirements or incorporated the Federal contents in their own forms, Tier I & II should be obtained from the State Emergency Response Commission (SERC).

Clean Water Act (CWA) 307: naphthalene

Clean Water Act (CWA) 311: naphthalene

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

Clean Air Act (CAA) 112 regulated flammable substances: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

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-1B: Material causing immediate and serious toxic effects (Toxic).
Class D-2A: Material causing other toxic effects (Very toxic).

CEPA DSL: Heavy Aromatic Naphtha

EINECS

Not available.

DSCL (EEC)

R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

International Lists

Australia (NICNAS): 1,2,4-Trimethylbenzene; naphthalene

China: 1,2,4-Trimethylbenzene; naphthalene

Germany water class: 1,2,4-Trimethylbenzene; naphthalene

Japan (METI): 1,2,4-Trimethylbenzene; naphthalene

Korea (TCCL): 1,2,4-Trimethylbenzene; naphthalene

Philippines (RA6969): 1,2,4-Trimethylbenzene; naphthalene

State Regulations

Connecticut Carcinogen Reporting: None of the components are listed.
Connecticut Hazardous Material Survey: None of the components are listed.
Florida substances: The following components are listed: NAPHTHALENE; P-DIETHYL BENZENE; M-DIETHYL BENZENE; TRIMETHYLBENZENES
Illinois Chemical Safety Act: None of the components are listed.
Illinois Toxic Substances Disclosure to Employee Act: None of the components are listed.
Louisiana Reporting: None of the components are listed.
Louisiana Spill: None of the components are listed.
Massachusetts Spill: None of the components are listed.
Massachusetts Substances: The following components are listed: P-DIETHYL BENZENE;M-

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DIETHYL BENZENE; NAPHTHALENE; 1,2,3-TRIMETHYLBENZENE; 1,2,4-TRIMETHYLBENZENE;
Michigan Critical Material: None of the components are listed.
Minnesota Hazardous Substances: None of the components are listed.
New Jersey Hazardous Substances: The following components are listed: NAPHTHALENE; 1,2,3-TRIMETHYLBENZENE; 1,2,4-TRIMETHYLBENZENE;
New Jersey Spill: None of the components are listed.
New Jersey Toxic Catastrophe Prevention Act: None of the components are listed.
New York Acutely Hazardous Substances: The following components are listed: NAPHTHALENE;
New York Toxic Chemical Release Reporting: None of the components are listed.
Pennsylvania RTK Hazardous Substances: The following components are listed: BENZENE, 1,4-DIETHYL-;BENZENE, 1,3-DIETHYL-; NAPHTHALENE; 1,2,3-TRIMETHYLBENZENE; 1,2,4-TRIMETHYLBENZENE;
Rhode Island Hazardous Substances: None of the components are listed.

WARNING: This product contains a chemical or chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.: naphthalene
WARNING: This product contains a chemical or chemicals known to the state of California to cause reproductive harm (female).: No products were found.
California prop. 65 (no significant risk level): naphthalene
WARNING: This product contains a chemical or chemicals known to the state of California to cause cancer.: 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.)

Health	*	1
Fire Hazard		2
Reactivity		0
Personal Protection		

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

References

-HSDB - Hazardous Substances Data Bank
Chemtox Database

Other Special Considerations

No additional remark.

Validated by Paul Bradley on 1/1/2008.

Verified by Karen Scheel.

Printed 1/1/2008.

Chemtrec:
(800) 424-9300
TOTAL PETROCHEMICALS 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.