

**Product Stewardship Summary****ATOSOL® 150 Aromatic Solvent****Product Overview**

ATOSOL 150 is a complex mixture of aromatic hydrocarbons. It is sold in bulk for use in downhole applications in oilfields, as an effective solvent in industrial applications for chemical processing, as a resin blendstock for foundries, and in specialty paints and pesticides. ATOSOL 150 is a low volatility hydrocarbon solvent, is generally low to moderate in toxicity, and can be safely handled under standard industrial hygiene, storage, and transportation practices.

Information described in this summary comes primarily from the evaluation of available test data and modeling conducted under the Screening Information Data Set (SIDS)¹ for the "C10-C12 Aromatics Hydrocarbon Solvents" Categories, which includes CAS# 64742-94-5.²

Chemical Identity:

Trade Name: ATOSOL 150

CAS#: 64742-94-5

This complex mixture of aromatic hydrocarbons is predominately made of C10–C12 aromatics in the form of alkylbenzenes and alkylnaphthalenes from distillation of petroleum. ATOSOL 150 is composed of the following chemicals:

Component	CAS#	Amount (%)
Solvent naphtha, petroleum, heavy aromatic	64742-94-5	100%

Which may include:

1,2-Dimethyl-4-ethylbenzene	934-80-5	10-20%
1,2,3,5-Tetramethylbenzene	527-53-7	10-20%
1,2,4,5-Tetramethylbenzene	95-93-2	5-15%
1,3-Dimethyl-4-ethylbenzene	874-41-9	2-10%
1,3-Dimethyl-5-ethylbenzene	934-74-7	2-10%
1,4-Dimethyl-2-ethylbenzene	1758-88-9	2-10%
1-Methyl-3-propylbenzene	1074-43-7	2-10%
Naphthalene	91-20-3	<10%
1,2,3-Trimethylbenzene	526-73-8	1-5%
1-methyl-4-n-propylbenzene	1074-55-1	1-5%
1,2,4-Trimethylbenzene	95-63-6	<2%
2-Methylnaphthalene	91-57-6	2%
1,3-diethylbenzene	141-93-5	<2%

¹ The Screening Information Data Set (SIDS) program is operated under the auspices of the Organization for Economic Cooperation and Development (OECD), and is a voluntary cooperative international testing program that began in 1989. <http://www.epa.gov/HPV/pubs/general/sidsappb.htm>.

² TSCA Inventory description: Solvent naphtha, petroleum, heavy arom. SN: (Polyethyl)benzenes DF: A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C9 through C16 and boiling in the range of approximately 165°C to 290°C (330°F to 554°F)

Uses

ATOSOL 150 is a solvent and is used in a variety of industrial applications, including:

- Solvent for chemical processing
- Resin Blendstock for Foundaries
- Downhole Applications in Oil Fields
- Specialty Paints
- Pesticides

Physical/chemical properties:

Specific Gravity: 0.89 – 0.905
Appearance: colorless liquid
Boiling Point: 182 – 210°C (360 – 410°F)
Flash Point: >65.6°C (150°F)
Vapor Pressure: <1mm Hg (@20°C)
Solubility in water: negligible

ATOSOL 150 is classified as a combustible liquid under United States occupational and transportation regulations.

Health Effects:

Aromatic hydrocarbon solvents, such as ATOSOL 150, have low to moderate toxicity by ingestion, skin contact and inhalation. Exposure to these substances shows no evidence of causing harm to reproduction or the developing fetus, and no evidence of causing adverse effects on genetic material. The most significant effect from repeated dose exposure to aromatic hydrocarbon solvents is that the material is locally irritating to the skin and lungs.

The most toxic component of ATOSOL 150 is Naphthalene, which is present at less than 10%. The acute effects of naphthalene exposure are related to ingesting or inhaling the material, or by skin contact.

Different governmental and non-governmental agencies rate the cancer causing potential (carcinogenicity) of different chemicals. Some results for Naphthalene include:

Agency	Carcinogenicity
International Agency for Research on Cancer (IARC)	Possible for Humans
National Toxicity Program (NTP)	Reasonably anticipated to be human carcinogens
American Conference for Governmental Industrial Hygienists (ACGIH)	Not classifiable for humans or animals.

Naphthalene can cause damage to the following organs:

- Lungs
- Central nervous system (CNS)
- Digestive system
- Uupper respiratory tract
- Skin
- Eyes (lens or cornea)
- Blood
- Kidneys
- Liver

Potential for Exposure

Environmental Exposure

ATOSOL 150 is relatively easy to handle and to contain, reducing the chance for release to the environment. However, in the event of a spill, data has shown that the components that make up ATOSOL 150 will degrade rapidly and not persist in the environment. Aromatic Hydrocarbon solvents such as ATOSOL 150 are moderately toxic to freshwater fish, invertebrate and algae.

Safe distribution of this product is a focus of TPI's product stewardship program. TPI takes care in the transfer of bulk product in its design of transfer facilities and in its training of workers loading and transporting the product.

Industrial Worker Exposure:

Ventilation must be provided for industrial workers in order for exposure levels to stay below established standards. Workers should wear splash goggles, safety glasses, fire retardant clothing covering the entire body, and chemical resistant gloves, as appropriate for the work being done. If inhalation above industry standards is possible, an appropriate respirator must be worn.

Consumer/General Public Exposure:

TPI does not directly sell ATOSOL 150 for use by consumers. It is possible that TPI's customers may formulate the solvent into consumer products. In such cases, TPI's customers are responsible for appropriately considering the information provided in the ATOSOL 150 MSDS.

EPA's Office of Pollution Prevention and Toxics reviewed ATOSOL 150 for use in food-use pesticides products and found no concerns.³

TPI has received no significant customer or end user environmental, health or safety complaints for ATOSOL 150.

³ April 15, 2004 letter from Kathryn Boyle, Inerts Team EPA. Pesticide products containing Atosol 150 are reviewed individually.

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References:

C10-C12 Aromatics Hydrocarbon Solvents Category Test Plan SIDS DOSSIER ON THE HPV CHEMICAL [draft]
Predominant Alkyl naphthalene (bicyclic) Hydrocarbon Solvents
Part of the C10-12 Aromatic Hydrocarbon Solvents November 1, 2003
SIDS DOSSIER ON THE HPV CHEMICAL [draft]
Predominant Alkylbenzene (monocyclic) Hydrocarbon Solvents
Part of the C10-12 Aromatic Hydrocarbon Solvents November 1, 2003
C10-C12 Aromatics Hydrocarbon Solvents Category Test Plan
International Hydrocarbon Solvents Consortium [draft] July 7, 2005
MSDS for ATOSOL 150

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