



# MATERIAL SAFETY DATA SHEET

## SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

|                                    |                                                                                                                      |                            |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------|----------------------------|
| <b>PRODUCT NAME</b>                | UNIAROM® TX 150 HF                                                                                                   |                            |
| <b>SYNONYM</b>                     | Heavy Aromatic Solvent Naphtha                                                                                       |                            |
| <b>CHEMICAL FAMILY</b>             | Hydrocarbon Mixture                                                                                                  |                            |
| <b>COMPANY IDENTIFICATION</b>      | UniSource Energy, Inc.<br>40 Shuman Blvd, Suite 290<br>Naperville, IL 60563<br>Phone: 630-470-6030 Fax: 630-470-6031 |                            |
| <b>EMERGENCY TELEPHONE NUMBERS</b> | UniSource Energy, Inc.<br>1-800-444-5510                                                                             | CHEMTREC<br>1-800-424-9300 |

## SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

| CAS Number | Material or Component                    | % By Weight |
|------------|------------------------------------------|-------------|
| 64742-94-5 | HEAVY AROMATIC PETROLEUM SOLVENT NAPHTHA | 100         |
| 98-06-6    | DIMETHYLBENZENE                          | 35 - 45     |
| 527-53-7   | 1,2,3,5-TETRAMETHYLBENZENE               | 8 - 18      |
| 105-05-5   | p-DIETHYLBENZENE                         | 5 - 15      |
| 95-93-2    | 1,2,4,5-TETRAMETHYLBENZENE               | 5 - 15      |
| 488-23-3   | 1,2,3,4-TETRAMETHYLBENZENE               | 2 - 12      |
| 91-20-3    | NAPHTHALENE                              | 3 - 8       |
| 526-73-8   | 1,2,3-TRIMETHYLBENZENE                   | 2 - 8       |
| 1074-43-7  | METHYL-n-PROPLYBENZENE                   | 2 - 8       |
| 496-11-7   | INDAN                                    | 0.5 - 5     |
| 141-93-5   | m-DIETHYLBENZENE                         | 0 - 3       |
| 95-63-6    | 1,2,4-TRIMETHYLBENZENE                   | 0 - 0.035   |
| 71-43-2    | BENZENE                                  | 0.005       |

## SECTION 3 HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

CAUTION!  
 COMBUSTIBLE LIQUID AND VAPOR  
 VAPOR MAY CAUSE FLASH FIRE  
 VAPORS MAY CAUSE EYE AND RESPIRATORY TRACT IRRITATION  
 MAY BE HARMFUL OR FATAL IF SWALLOWED  
 MAY CAUSE LUNG DAMAGE  
 OVEREXPOSURE MAY CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION

**ROUTES OF ENTRY:** Absorbed through dermal contact, eye contact, inhalation, ingestion.

### POTENTIAL ACUTE HEALTH EFFECTS

**Eyes:** May cause eye irritation with tearing, redness, stinging, blurred vision.  
**Skin:** May cause skin irritation with inflammation, reddening, itching, scaling or blistering.

**Inhalation:** Breathing high concentrations can cause respiratory tract irritation, nausea, headaches, excitation, euphoria, drowsiness, dizziness, light-headedness, blurred vision, fatigue, incoordination, tremors, convulsions, coma, respiratory arrest and other central nervous system effects.

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



## POTENTIAL CHRONIC HEALTH EFFECTS

### Carcinogenic Effects

#### BENZENE

Classified as a proven human carcinogen by OSHA

Classified 1 (Carcinogenic to humans) by IARC

#### NAPHTHALENE

Classified 2b (Possibly carcinogenic to humans) by IARC

## MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE

Repeated exposure to a highly toxic material may produce 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 thoroughly with water while holding eyelids open. Remove contact lenses, if worn, after initial flushing, and continue flushing for at least 15 minutes. If irritation occurs, get immediate medical attention.

**SKIN CONTACT:** Wash contact areas immediately with soap and water. Remove contaminated clothing and place in closed container for storage until laundered or discarded. Thoroughly clean contaminated clothing before reuse.

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

**INGESTION:** DO NOT induce vomiting; aspiration into lungs may cause chemical pneumonia and severe lung damage. If spontaneous vomiting occurs, keep head below hips to prevent aspiration and monitor for breathing difficulty. Seek immediate medical attention.

**NOTES TO PHYSICIAN:** If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

## SECTION 5

## FIRE FIGHTING MEASURES

**FLAMMABILITY CLASS:** IIIA Combustible

**FLASH POINT:** Tag Closed Cup: 65.6°C (150°F) (ASTM D56)

**AUTO-IGNITION TEMPERATURE:** 450.0°C (842°F)

**FLAMMABLE LIMITS:** Not available

**PRODUCTS OF COMBUSTION:** May produce hazardous combustion products (COx, NOx, SOx).

### FIRE HAZARDS IN PRESENCE OF VARIOUS SUBSTANCES

Combustible in presence of open flames, sparks and heat. Vapors are flammable and may travel across the ground reaching remote ignition sources causing a flashback fire danger.

### EXPLOSION HAZARDS IN PRESENCE OF VARIOUS SUBSTANCES

Possible risk of explosion of the product in presence of static discharge or extreme heat.

### EXTINGUISHING MEDIA

Use water fog or spray, foam, dry chemical or carbon dioxide (CO<sub>2</sub>) to extinguish flames.

### FIRE FIGHTING INSTRUCTIONS

Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers or drinking water supply. Use water spray to cool fire exposed surfaces and to protect personnel.

**Small Fire:** Use DRY chemical powder, halon and CO<sub>2</sub>.

**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).

### NFPA HAZARD ID

Health: 1

Fire Hazard: 2

Reactivity: 0

Special Notice: None

### HMIS HAZARD ID

Health: 2

Flammability: 2

Physical Hazard : 0

Personal Protection: N/A

## SECTION 6

## ACCIDENTAL RELEASE MEASURES

### NOTIFICATION PROCEDURES

U.S. regulations may require reporting releases of this material to the environment which exceed the



reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. Report spills to local authorities and/or the National Response Center at (800) 424-8802 as appropriate or required.

### PROTECTIVE MEASURES

Avoid contact with spilled material. Warn or evacuate occupants in surrounding area. Eliminate all (potential) sources of ignition in the vicinity of the spill or released vapor. Handling equipment must be grounded to prevent sparking.

### SPILL MANAGEMENT

**Land Spill:** Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if it can be done without risk. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

**Water Spill:** Stop leak if it can be done without risk. Confine the spill immediately with booms. Warn other vessels. Remove from the surface by skimming or with suitable absorbents. Report spills as required to appropriate authorities. Seek the advice of a specialist before using dispersants.

### ENVIRONMENTAL PRECAUTIONS

**Large Spills:** Contain spill and safely stop the flow, warning personnel to stay away. Eliminate all sources of ignition and ventilate. Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas. Water spray may reduce vapor, but may not prevent ignition in closed spaces. Recover with appropriate pumping equipment or with suitable absorbent.

**Small Spills:** Absorb with an inert material such as clay or sand. Place in appropriate non-leaking container. Seal tightly for proper disposal.

**Note:** Local regulations may prescribe or limit action to be taken.

## SECTION 7

## HANDLING AND STORAGE

### HANDLING

Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Ground lines and equipment used during transfer to reduce the possibility of static spark-initiated fire or explosion. Use non-sparking tools. Keep away from incompatibles such as oxidizing agents. DO NOT ingest. Do not breathe gas, fumes, vapor or spray. Do not eat, drink or smoke in areas of use or storage. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately, showing them the container or the label. Avoid contact with skin and eyes.

### STORAGE

Combustible materials should be stored in a separate labeled safety storage cabinet or room. Keep away from heat and all possible sources of ignition. Keep container tightly closed and dry. Keep in a cool and well-ventilated area. Ground all equipment containing material. Empty containers may contain material residue; do not reuse without adequate precautions.

Use good personal hygiene practices. Wash thoroughly after handling this product. Do not eat, drink or smoke in areas of use or storage.

All efforts should be made to prevent any leaks or spills. Storage tanks containing this product 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

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

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.



### THRESHOLD LIMIT VALUE

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 TLV's or PEL's consult an industrial hygienist.

| Material or Component                    | Exposure Limits                                                                                                                          |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| HEAVY AROMATIC PETROLEUM SOLVENT NAPHTHA | Not established                                                                                                                          |
| DIMETHYLBENZENE                          | Not established                                                                                                                          |
| 1,2,3,5-TETRAMETHYLBENZENE               | Not established                                                                                                                          |
| p-DIETHYLBENZENE                         | Not established                                                                                                                          |
| 1,2,4,5-TETRAMETHYLBENZENE               | Not established                                                                                                                          |
| 1,2,3,4-TETRAMETHYLBENZENE               | Not established                                                                                                                          |
| NAPHTHALENE                              | <b>ACGIH / OSHA / MNOSHA</b><br>STEL: 15 ppm 15 minutes<br>TWA: 10 ppm 8 hours                                                           |
| 1,2,3-TRIMETHYLBENZENE                   | <b>ACGIH / NIOSH / MNOSHA</b><br>TWA: 25 ppm 8 hours                                                                                     |
| METHYL-n-PROPLYBENZENE                   | Not established                                                                                                                          |
| INDAN                                    | Not established                                                                                                                          |
| m-DIETHYLBENZENE                         | Not established                                                                                                                          |
| 1,2,4-TRIMETHYLBENZENE                   | <b>ACGIH / NIOSH</b><br>TWA: 25 ppm 8 hours                                                                                              |
| BENZENE                                  | <b>ACGIH</b><br>STEL: 2.5 ppm 15 minutes<br>TWA: 0.5 ppm 8 hours<br><b>OSHA / MNOSHA</b><br>STEL: 5 ppm 15 minutes<br>TWA: 1 ppm 8 hours |

Consult local authorities for acceptable exposure limits.

### SECTION 9

### PHYSICAL AND CHEMICAL PROPERTIES

**PHYSICAL STATE AND APPEARANCE:** Liquid  
**ODOR:** Aromatic hydrocarbon  
**COLOR:** Clear, colorless  
**BOILING/CONDENSATION PT:** >179.4°C (>355°F)  
**SPECIFIC GRAVITY:** 0.88 – 0.91@15.6°C/15.6°C (60°F/60°F)  
**VISCOSITY:** 1.33 cSt @ 25°C (77°C)  
**VAPOR PRESSURE:** < 10 mm Hg @ 20°C (68°F)  
**VAPOR DENSITY:** 4.7 (Air=1)  
**EVAPORATION RATE:** Very slow  
**MELTING POINT:** < -50°C (< -58°F)  
**POUR POINT:** < -23.3°C (< -10°F)  
**OCTANOL/WATER PARTN:** 3.30 – 4.50 @ 25°C  
**SOLUBILITY IN WATER:** Negligible

### SECTION 10

### STABILITY AND REACTIVITY

**STABILITY AND REACTIVITY:** The product is stable under normal conditions.  
**CONDITIONS TO AVOID:** Open flames and high energy ignition sources  
**INCOMPATIBILITY WITH VARIOUS SUBSTANCES:** Incompatible with oxidizing agents  
**HAZARDOUS DECOMPOSITION PRODUCTS:** May produce incomplete combustion products (COx, NOx, SOx).  
**HAZARDOUS POLYMERIZATION:** No

**SECTION 11****TOXICOLOGICAL INFORMATION**

**ROUTES OF EXPOSURE:** Inhalation, ingestion, skin, eye contact

**TOXICITY TO ANIMALS**

Acute oral toxicity (LD50): 6 - 7 g/kg [Rat]

Acute dermal toxicity (LD50): > 2 g/kg [Rat]

LC50: > 4688 mg/m<sup>3</sup> [Rat] – 4 hr – maximum achievable saturated vapor concentration

**CHRONIC EFFECTS ON HUMANS****Carcinogenic Effects****BENZENE**

Classified as a proven human carcinogen by OSHA

Classified 1 (Carcinogenic to humans) by IARC

**NAPHTHALENE**

Classified 2b (Possibly carcinogenic to humans) by IARC

**OTHER TOXIC EFFECTS ON HUMANS**

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

(See Section 3 – Hazards Identification)

**TOXICOLOGICAL DATA**

**BENZENE:** Exposure to high concentrations of benzene may cause cancer of the blood forming organs (acute myelogenous leukemia, aplastic anemia) and other severe blood disorders, male and female reproductive disorders, bone marrow suppression and cancer in multiple organ systems.

**NAPHTHALENE:** Exposure to high concentrations of naphthalene may cause destruction of red blood cells, anemia and cataracts.

Additional information is available upon request.

**SECTION 12****ECOLOGICAL INFORMATION**

**ECOTOXICITY:** Toxic to aquatic organisms

**MOBILITY:** Constituents are expected to partition between air, water and soil.

**SPECIAL REMARKS ON THE PRODUCTS OF BIODEGRADATION:** Constituents are expected to biodegrade.

**SECTION 13****DISPOSAL CONSIDERATIONS****WASTE DISPOSAL**

This material, as supplied, when discarded or disposed of, is a characteristic hazardous waste according to Federal regulations (Subpart C of 40 CFR 261) due to its benzene content. Under the Resource Conservation and Recovery Act (RCRA), it is the responsibility of the user of the material to determine, at the time of disposal, whether the material is a hazardous waste subject to RCRA.

The transportation, storage, treatment and disposal of RCRA waste material must be conducted in compliance with 40 CFR 262, 263, 264, 268 and 270. Disposal can occur only in properly permitted facilities in accordance with federal, state and local regulations. Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authorities.

**Consult your local or regional authorities.**

**SECTION 14****TRANSPORT INFORMATION****U.S. DOT CLASSIFICATION FOR BULK SHIPMENTS**

**Proper Shipping Name:** Petroleum Distillates, n.o.s. (Petroleum Naphtha)

**Hazard Class & Division:** Combustible Liquid

**UN/NA Number:** 1268

**Packing Group:** III



**USCG PROPER SHIPPING NAME:** Naphtha: Aromatic  
**MARINE POLLUTANT:** Not available  
**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

### U.S. FEDERAL REGULATIONS

**TSCA:** TSCA 12(b) one-time export: NAPHTHALENE (CAS # 91-20-3)  
 All required ingredients are listed on TSCA inventory.

#### 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.

| Chemical Name | Immediate Hazard | Delayed Hazard | Fire Hazard | Pressure Hazard | Reactivity Hazard |
|---------------|------------------|----------------|-------------|-----------------|-------------------|
| NAPHTHALENE   | X                | X              | X           | -               | -                 |

#### 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):

| Chemical Name | CAS Number | Concentration (%) |
|---------------|------------|-------------------|
| NAPHTHALENE   | 91-20-3    | <8.0              |

A release of this material, as supplied, may be exempt from reporting under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA – 40 CFR 302) by the petroleum exclusion. This material contains toxic chemicals in excess of the applicable de minimis concentration that are subject to the annual toxic chemical release reporting requirements of 40 CFR 372.

#### CLEAN AIR ACT (CAA) 112

This material contains one or more substances listed as hazardous air pollutants.  
 This material contains up to 100% volatile organic compounds (VOC's) per 40 CFR Part 51.100.  
 This material contains up to 3 – 8% hazardous air pollutants (HAP's).

### INTERNATIONAL REGULATIONS

#### CANADA

**WHMIS** Class B-2: Flammable/Combustible  
 Class D-2B: Other toxic effects (Toxic)

All known major components of this material are listed on the Canadian Environmental Protection Act (CEPA) DSL or are exempt.

Additional information may be available upon request.

#### INTERNATIONAL INVENTORY LISTS

**Australia Inventory (AICS):** 64742-94-5  
**Canada Inventory (DSL):** 64742-94-5  
**China Inventory (IECSC):** 64742-94-5  
**Korea Inventory (KECI):** KE-31656  
**Philippines Inventory (PICCS):** 64742-94-5  
**EU Inventory (EINECS):** 265-198-5  
**US Inventory (TSCA):** 64742-94-5



## STATE REGULATIONS

**California Prop. 65** (no significant risk level): This product contains a chemical or chemicals known to the state of California to cause cancer, birth defects or other reproductive harm:  
NAPHTHALENE, BENZENE

**Please consult with local state agencies for regulatory compliance.**

**Additional information is available upon request.**

|                   |                          |
|-------------------|--------------------------|
| <b>SECTION 16</b> | <b>OTHER INFORMATION</b> |
|-------------------|--------------------------|

### REVISIONS

This Material Safety Data Sheet (MSDS) has been created to fully comply with the guidance contained in the ANSI MSDS standard (ANSI Z400.1-1998).

### LABEL REQUIREMENTS

CAUTION!  
COMBUSTIBLE LIQUID AND VAPOR  
VAPOR MAY CAUSE FLASH FIRE  
VAPORS MAY CAUSE EYE AND RESPIRATORY TRACT IRRITATION  
MAY BE HARMFUL OR FATAL IF SWALLOWED  
MAY CAUSE LUNG DAMAGE  
OVEREXPOSURE MAY CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION

|                                  |                           |
|----------------------------------|---------------------------|
| <b>DATE PREPARED: MARCH 2011</b> | <b>UNIAROM® TX 150 HF</b> |
|----------------------------------|---------------------------|

The information presented herein has been compiled from sources considered to be dependable and is accurate as of the date of preparation of this Material Safety Data Sheet. However, Seller does not assume 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. In addition, no responsibility can be assumed by the Seller for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the material. Seller assumes no responsibility for injury to Buyer or to third persons or any damage to any property. Buyer assumes all such risks.