



MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME	UNIAROM® SX 180 IF	
SYNONYM	Benzene, ethylenated, residues Polyethylbenzene Residue	
CAS REGISTRY NUMBER	68987-42-8	
CHEMICAL FAMILY	Aromatic Hydrocarbon	
COMPANY IDENTIFICATION	UniSource Energy, Inc. 245 W. Roosevelt Road, Building 14, Suite 145 West Chicago, IL 60185 Phone: 630-231-7990 Fax: 630-231-8036	
EMERGENCY TELEPHONE NUMBERS	UniSource Energy, Inc. 1-800-444-5510	CHEMTREC 1-800-424-9300

SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

CAS Number	Material or Component	% By Weight
101-81-5	DIPHENYLMETHANE	30 – 40
38888-98-1	1,1-DIPHENYLETHANE	10 – 20
103-29-7	1,2-DIPHENYLETHANE	10 – 20
	OTHER HEAVY AROMATICS	20 - 50

SECTION 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

COMBUSTIBLE LIQUID AND VAPOR.
VAPOR MAY CAUSE FIRE.

MAY CAUSE RESPIRATORY TRACT, EYES AND SKIN IRRITATION.
CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE.
ASPIRATION HAZARD IF SWALLOWED – CAN ENTER LUNGS AND CAUSE DAMAGE.

ROUTES OF ENTRY: Absorbed through 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 blistering.

Inhalation: May cause respiratory tract irritation, dizziness, agitation, headaches, and fatigue. May cause nausea, damage to kidney and liver, and CNS 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

The substance is harmful to the nervous system, digestive system, skin, eyes. Signs and symptoms of chronic exposure are similar to those of acute exposure.

Carcinogenic Effects

Not listed as carcinogen by OSHA, NTP, or IARC.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE

No additional remark.

OVEREXPOSURE/SIGNS/SYMPTOMS

Overexposure may cause nausea, dizziness, agitation, headaches, and fatigue.

(See Toxicological Information – Section 11)



SECTION 4	FIRST AID MEASURES
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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
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FLAMMABILITY CLASS: IIIA Combustible

FLASH POINT: Closed Cup: 87.7°C (189.9°F)

AUTO-IGNITION TEMPERATURE: Not available

FLAMMABLE LIMITS: Not available

PRODUCTS OF COMBUSTION: Carbon oxides (COx)

FIRE HAZARDS IN PRESENCE OF VARIOUS SUBSTANCES

Flammable in presence of open flames, sparks, and heat.

EXPLOSION HAZARDS IN PRESENCE OF VARIOUS SUBSTANCES:

Risks of explosion of the product in presence of mechanical impact: Not expected.

Risks of explosion of the product in presence of static discharge: Possible.

May form explosive peroxide in presence of oxygen.

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).

NFPA HAZARD ID

Health: 2 Fire Hazard: 2 Reactivity: 0 Special Notice: None

HMIS HAZARD ID

Health: 2 Flammability: 2 Physical Hazard : 0 Personal Protection: j

SECTION 6	ACCIDENTAL RELEASE MEASURES
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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. Use good personal hygiene practices. Wash thoroughly after handling this product.

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. 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: Splash goggles; 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. Discard contaminated gloves.

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: 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 below).

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
DIPHENYLMETHANE	Not established
1,1-DIPHENYLETHANE	Not established
1,2-DIPHENYLETHANE	Not established
OTHER HEAVY AROMATICS	Not established

Consult local authorities for acceptable exposure limits.

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES****PHYSICAL STATE AND APPEARANCE:** Liquid**ODOR:** Aromatic**COLOR:** Dark brown**BOILING/CONDENSATION PT:** 235.6 to 317.8°C (456.1 to 604°F)**SPECIFIC GRAVITY:** 0.95 to 0.98**VAPOR PRESSURE:** 0.03 mm Hg @ 20°C**VAPOR DENSITY:** Not available**VOLATILITY:** 100% (v/v)**EVAPORATION RATE:** < 1 (Butyl Acetate = 1)**VOC:** 100%**IONICITY IN WATER:** Non-ionic**SOLUBILITY IN WATER:** Negligible**SECTION 10 STABILITY AND REACTIVITY****STABILITY AND REACTIVITY:** The product is stable.**CONDITIONS OF INSTABILITY:** Do not store under O₂ atmosphere.**INCOMPATIBILITY WITH VARIOUS SUBSTANCES:** Extremely reactive/ 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): 4518 mg/kg [Rat] (1,2-Diphenylethane)**CHRONIC EFFECTS ON HUMANS:**

The substance is harmful to the nervous system, digestive system, skin, eyes.

OTHER TOXIC EFFECTS ON HUMANS:

Hazardous in case of skin or eye contact (irritant).

SPECIAL REMARKS ON TOXICITY TO ANIMALS:

No additional remark.

SECTION 12 ECOLOGICAL INFORMATION**ECOTOXICITY:** Not available**BOD₅ and COD:** Not available**BIODEGRADABLE/OECD:** Not available**MOBILITY:** Not available**TOXICITY OF THE PRODUCTS OF BIODEGRADATION:** No information available**SPECIAL REMARKS ON THE PRODUCTS OF BIODEGRADATION:** No additional remark**SECTION 13 DISPOSAL CONSIDERATIONS****WASTE DISPOSAL**

Recover free liquid. Transfer to a safe disposal area in accordance with federal, state, and local regulations.

Consult your local or regional authorities.**SECTION 14 TRANSPORT INFORMATION****U.S. DOT CLASSIFICATION FOR BULK SHIPMENTS****Proper Shipping Name:** Combustible Liquid, n.o.s. (Polyethylbenzene residues), Combustible Liquid, NA1993, III**Hazard Class & Division:** Combustible Liquid having a flash point between 37.8°C (100°F) and 93.3°C (200°F)**UN/NA Number:** NA 1993**Packing Group:** III



USCG PROPER SHIPPING NAME: Naphtha: Aromatic

MARINE POLLUTANT: Not listed in Appendix B of 49 CFR 172.101

HAZARDOUS SUBSTANCES REPORTABLE QUANTITY: Not listed in Appendix A of 49 CFR 172.101

SPECIAL PROVISIONS FOR TRANSPORT: See codes as shown in 49 CFR 172.101 Column 7

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: The following are listed on TSCA Inventory:

BENZENE, ETHYLENATED RESIDUES (CAS RN 68987-42-8)

SARA 301/302/303

No chemicals in this product are listed as extremely hazardous substances - 40 CFR 55, Emergency Planning and Notification (Appendix A to Part 355).

SARA 304

No chemicals in this product require reporting under the requirements of 40 CFR 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).

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	Delayed	Fire	Pressure	Reactivity
	Hazard	Hazard	Hazard	Hazard	Hazard
BENZENE, ETHYLENATED RESIDUES	X	X	X	-	-

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).

SARA 313 SUPPLIER NOTIFICATION

This product contains no chemicals in excess of the applicable de minimis concentration that is subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372 – Table 372.65.

CLEAN WATER ACT (CWA)

CWA 307: No products were found

CWA 311: No products were found

CLEAN AIR ACT (CAA) 112

Accidental Release Prevention: No products were found

Regulated Flammable Substances: No products were found

Regulated Toxic Substances: No products were found

**INTERNATIONAL REGULATIONS****CANADA**

WHMIS: Class B-3: Combustible liquid having a flash point between 37.8°C (100°F) and 93.3°C (200°F).

CEPA DSL: Not available

EUROPE

EINECS: 273-494-0

DSCL (EEC): R36/38 – Irritating to eyes and skin

INTERNATIONAL LISTS: No products were found

STATE REGULATIONS

California Prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: No products were found.

Please consult with local state agencies for regulatory compliance.

SECTION 16**OTHER INFORMATION****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

COMBUSTIBLE LIQUID AND VAPOR.

VAPOR MAY CAUSE FIRE.

MAY CAUSE RESPIRATORY TRACT, EYES AND SKIN IRRITATION.

CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE.

ASPIRATION HAZARD IF SWALLOWED – CAN ENTER LUNGS AND CAUSE DAMAGE.

DATE PREPARED: APRIL 2009**UNIAROM® SX 180 IF**

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.