



SAFETY DATA SHEET

SECTION 1.0	PRODUCT AND COMPANY IDENTIFICATION
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Product Identifier

ASPHALT 1000 ES

Other means of identification

Asphalt/Bitumen/Asphalt Blend Stock;

Recommended use (identified)

Road paving and other industrial applications

Manufacturer/Importer/Supplier/Distributor Information

UNISOURCE-ENERGY, LLC

40 Shuman Blvd, Suite 290

Naperville, IL 60563

E-mail

orders@unisource-energy.com

Telephone number

Phone: 630-470-6030 Fax: 630-470-6031

Emergency telephone number

UNISOURCE-ENERGY, LLC

1-800-444-5510

CHEMTREC

1-800-424-9300

SECTION 2.0	HAZARD(S) IDENTIFICATION
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Classification of the substance or mixture

Skin Irritation – Category 2

Eye Irritation – Category 2

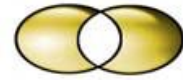
Carcinogenicity – Category 2

GHS label elements

Signal word



WARNING



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Hazard statement

Vapors may contain hydrogen sulfide gas (H₂S) which can be harmful or fatal if inhaled.
 Heated material can cause thermal burns.
 Contact with water may cause violent eruption.
 Prolonged repeated contact with cold material or condensed vapors may produce skin irritation.
 Avoid overheating to minimize fume production.
 Avoid breathing fumes from hot material.

Hazard(s) not otherwise classified (HNOC)

Vapors may contain hydrogen sulfide gas (H₂S) which can be harmful or fatal if inhaled.
 Heated material can cause thermal burns.
 Contact with water may cause violent eruption.
 Prolonged repeated contact with cold material or condensed vapors may produce skin irritation.

SECTION 3.0

COMPOSITION/INFORMATION ON INGREDIENTS

CAS number/other identifiers

Ingredient Name	%	CAS number
Asphalt	100	8052-42-4
Hydrogen Sulfide (in the vapor space)	< .2%	7783-06-4

SECTION 4.0

FIRST AID MEASURES

Description of necessary first aid measures

General

Remove from exposure. Lie down. Remove outer layers of clothing, as necessary and as long as clothing is not adhering to person. Do not attempt to remove material in direct skin contact. Seek immediate medical attention.

Eye contact

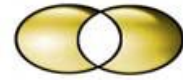
For contact with hot molten material, flush with plenty of water for 15 minutes holding eyelids apart and away from eyeball. Seek immediate medical attention.

Inhalation

Remove exposed individual to fresh air; administer oxygen or artificial respiration as needed. Seek immediate medical attention.

Skin contact

For contact with hot molten material, cool area with water. Do not attempt to remove congealed solid material. Seek immediate medical attention. Clean skin with waterless hand cleaner. Do not use petroleum solvents to remove solid.

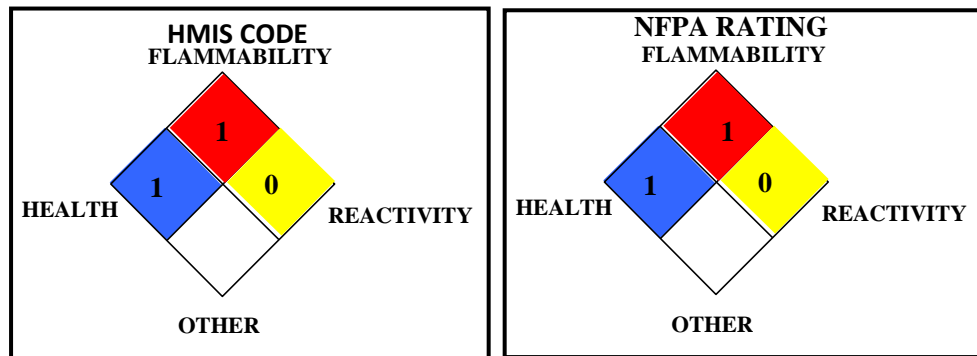


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Ingestion

DO NOT induce vomiting. Seek immediate medical attention. Clean mouth with water and drink afterwards plenty of water. If person vomits, sit person upright and notify medical attention.

SECTION 5.0	FIRE-FIGHTING MEASURES
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Suitable extinguishing media

Small Fires: Any extinguisher suitable for Class B fires, dry chemical, or CO2
 Large Fires: Water spray, fog or fire fighting foam. Foam is the preferred medium.

Specific hazards arising from the chemical

Isolate hazard area and keep unauthorized personnel from entering. (If in use,) Request the disconnection of internal heat source (heating coils). Stop, control and contain any spills when it can be safely done. If water is applied to control fire, a violent eruption may occur, a boil over may occur, and/or material may float on surface creating the possibility of asphalt/oil sheen may occur. In the case of a major fire, it may be necessary to allow the fire to burn itself out.

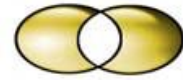
Special protective actions for fire-fighters

Use NIOSH/MSHA approved positive pressure self-contained breathing apparatus and fully protective clothing such as bunker gear. Withdraw from the fire when there is rising sound from venting safety device or discoloration of vessel, tanks, or pipelines. In addition, wear other appropriate protective equipment as conditions warrant.

SECTION 6.0	ACCIDENTAL RELEASE MEASURES
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Personal precautions, protective equipment and emergency procedures

ACTIVATE YOUR COMPANY'S SPILL OR EMERGENCY RESPONSE PLAN.
 Carefully contain and stop the source of the spill, when safe to do so. Protect water by diking,



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absorbents, and/or absorbent boom. Remove by mechanical means. Authorities should be notified if reportable quantity release occurs.

Methods and materials for containment and cleaning up

Allow to solidify. Collect materials in a ventilated waste container for disposal.

SECTION 7.0	HANDLING AND STORAGE
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Precautions for safe handling

Use only in ventilated areas.

Do not smoke near areas where material is handled or stored.

Vapors (from H₂S) may form explosive mixtures in air.

Conditions for safe storage, including any incompatibilities

This material is stored at an elevated temperature in excess of 280oF.

Keep away from flame, sparks, excessive temperature change and open flames.

Keep containers closed when not in use and clearly labeled.

Maintain adequate ventilation.

Do not enter confined spaces without proper ventilating before entrance.

Do not mix with water as a violent eruption may occur, a boil over may occur, and/or material may float on surface creating the possibility of asphalt/oil sheen may occur.

SECTION 8.0	EXPOSURE CONTROLS/PERSONAL PROTECTION
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Exposure Guidelines

Chemical Name	ACGIH	OSHA
Asphalt	TWA: 0.5 mg/m ³	
Hydrogen Sulfide (H ₂ S)	TWA: 1 ppm STEL: 5 ppm	STEL 20 ppm

Engineering Controls

Engineering controls are generally required when handling elevated temperature products.

Provide adequate ventilation.

Ensure that an emergency wash station and emergency shower are located in the work station.

Eye/Face Protection

Use a full face shield when handling product.

Safety glasses meeting ANSI Z.87.1 are recommended as minimal protection when working in an industrial location.

Skin/Hand Protection

Wear long sleeved shirts and work pants preferably 100% cotton.

Wear work boots made of leather that cover the ankle.

Use insulated gloves when handling hot product.



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Use work gloves when handling cooled product.

Respiratory Protection

Use adequate ventilation.

Contaminant air concentrations determine the level of respiratory protection required. Use only NOISH approved respiratory equipment within the limits of the appropriate protection factor(s).

Use supplied air when H₂S concentrations are expected to exceed workplace exposure limits.

Other Protection

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet facilities.

Use a full body heat resistant or internally cooled suit when work conditions dictate.

SECTION 9.0

PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Black, viscous
Physical form	Semi-solid (ambient temp.) Liquid (elevated temp.)
Odor	Sour tar like, asphalt
Odor threshold	No data
pH	Not applicable
Melting point/freezing point	86-149oF, 30-130oC
Initial boiling point	>752 oF, >400oC
Flash point	>446 oF, >230oC
Flammability (solid, gas)	Not applicable
Lower and upper explosive (flammable) limits	Not applicable
Vapor pressure	Negligible
Vapor density	Not applicable
Specific Gravity (water = 1)	1-1.1
Solubility In Water	No data
Partition coefficient n-octanol/water	No data
Auto-ignition temperature	No data
Decomposition temperature	No data
Viscosity	No data

SECTION 10.0

STABILITY AND REACTIVITY

Reactivity

Not chemically reactive.



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Chemical stability

Stable under normal use

Possibility of hazardous reactions

Stable under normal use.

Incompatible with strong acid and strong oxidizers. (Chlorine, hydrogen peroxide, organic peroxides, nitric acid, oxygen under pressure)

Do not mix with water as a violent eruption may occur, a boil over may occur, and/or material may float on surface creating the possibility of asphalt/oil sheen may occur.

Conditions to avoid

Do not mix with water as a violent eruption may occur, a boil over may occur, and/or material may float on surface creating the possibility of asphalt/oil sheen may occur.

Incompatible materials

Strong Acids and strong oxidizers. (Chlorine, hydrogen peroxide, organic peroxides, nitric acid, oxygen under pressure)

Hazardous decomposition products

Thermal decomposition can produce toxic gases: oxides of carbon, nitrogen and sulfur.

SECTION 11.0	TOXICOLOGICAL INFORMATION
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Specific toxicity tests on this product have not been done. This hazard assessment is based upon information provided by our suppliers on similar products, other manufacturers, and scientific literature. The International Agency for Research on Cancer has found that there is limited evidence of carcinogenicity for undiluted steam-refined asphalts in laboratory animals, but inadequate evidence of carcinogenicity for undiluted steam-refined asphalts in humans.

Eye Irritation

At an elevated temperature, this material can cause burns to the eyes. Mists, vapors or fumes may cause eye irritation with tearing, redness, or a stinging or burning feeling.

Ingestion:

Chronic –If consumed in large quantities, material may obstruct the intestine.

Acute – Contact with heated material may cause burns. If material is consumed at ambient temperature, no significant adverse health effects are anticipated

Inhalation:

Chronic - No significant health effects were observed during lifetime inhalation studies with laboratory animals, but lung damage was observed including bronchitis, pneumonitis, abscess formation, and other irritations.

Acute - Hydrogen sulfide (H₂S) can accumulate in the headspace of heated asphalt storage tanks or transport vessels. Inhalation of H₂S can produce eye and respiratory irritation, unconsciousness, and even death. Due to rapid fatigue of the olfactory senses you can not rely upon odor to detect this toxic gas. Use caution to avoid breathing of vapors when working around bulk containers of HOT liquid asphalt.



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HMIS CODE: (Health:1) (Flammability:1) (Reactivity:0)	NFPA CODE: (Health:1) (Flammability:1) (Reactivity:0)
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Skin Irritation:

Chronic -This material contains Polynuclear Aromatic Hydrocarbons, some of which may be types shown to induce skin cancer in mice in lifetime skin-painting tests at the site of application. Prolonged repeated exposure to condensed vapors can cause skin irritation. Wash areas of exposed skin following contact and do not continue to wear contaminated clothing.
Acute – Heated asphalt may cause burns to the skin.

Acute Toxicity	Hazard	Additional Information	LC50/LD50 Data
Inhalation	Unlikely to be harmful	May contain or release poisonous H ₂ S gas	Not Applicable
Dermal	Unlikely to be harmful		>2 g/kg
Oral	Unlikely to be harmful		>5 g/kg

SECTION 12.0	ECOLOGICAL INFORMATION
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No ecological studies are available for this product.

SECTION 13.0	DISPOSAL CONSIDERATIONS
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Disposal instructions

Recovered spilled material may be reused or recycling.
Dispose only in accordance with federal, state, and/or local regulations. Recovered liquid may be incinerated at an approved facility. Contaminated solid absorbent or diking material(s) may be deposited in an approved landfill.

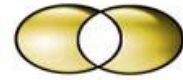
SECTION 14.0	TRANSPORT INFORMATION
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U.S. Department of Transportation (DOT)

Shipping Description: ***Shipping description is for bulk shipments that meet the Elevated temperature criteria, non-bulk is unregulated.***
UN3257, Elevated temperature liquid, n.o.s. (Asphalt), 9, III

Non-Bulk Packaging Marking: None
Non-Bulk Packaging Labels: None

ASPHALT 1000 ES
Issue date: October 8, 2015



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Bulk Package/Placard Marking: None/ 3257 & [HOT mark] or class 9/ 3257 & [HOT mark]

Hazardous Substance None

Note: This material is regulated by the DOT when shipped in bulk packages at temperatures >212oF (100oC). The word **HOT** must be marked on the bulk package on two opposing sides.



International Civil Aviation Org./International Air Transport Assoc. (ICAO/IATA)

Elevated temperature liquid, n.o.s. – is forbidden shipment.

Not regulated at temperatures below 100oC.

International Maritime Dangerous Goods (IMDG)

Shipping Description: UN3257, Elevated temperature liquid, n.o.s. (Asphalt), 9, III

Non-Bulk Packaging Marking: Elevated temperature liquid, n.o.s., UN3257

Labels: Class 9

Placard/Markings Bulk: Class 9/3257 and [Elevated Temperature Mark]

EMS F-A, S-P

Transport in bulk according to Annex II of MARPOL, 73/78 and the IBC code

Note: Not regulated as temperature below 100°C. If transported in bulk by marine vessel in international waters, product is being carried under the scope of MARPOL Annex I

SECTION 15.0

REGULATORY INFORMATION

US Federal Regulations

OSHA

Hazardous by definition 29 CFR 1910.1299 (Hazard Communication Standard). Contains a component listed by ACGIH

TSCA

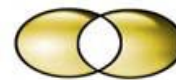
All of the components of this product are listed on the TSCA inventory.

CERCLA

This material is exempt from CERCLA reporting requirements under 40 CFR Part 302.4. There is no RQ for This material or any component greater than 1% or 0% (carcinogen). However, if spilled into the waters of the United States, it may be reportable under 33 CFR Part 153 if it produces a sheen.

SARA Title III Section 313

This material is exempt from the reporting requirements of Section 313 SARA and 40 CFR Part



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Sara Title III Section 302

There is no TQP for this material under 40 CFR Part 355, however, if heated, vapors may cause H₂S which is on the Extremely Hazardous Substances List (TPQ 10,000 lbs., RQ 2,000lbs.).

RCRA

This material is not subject to the 40 CFR Part 268.30 land ban on the disposal of certain hazardous wastes.

California:

Warning: This material contains a chemical known to the State of California to cause cancer, birth defects or other reproductive harm, and which may be subject to the warning requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5).

Canada:

This material has been classified in accordance with hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by regulations

WHMIS

None

SECTION 16.0	OTHER INFORMATION
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Abbreviations

ACGIH = American Conference of Governmental Industrial Hygienists; ADR = European Road Transport; AICS = Australia Inventory of Chemical Substances; ASTM = American society of Testing and Materials; ATE = Acute Toxicity Estimation: AU = Australia; Autoignition Temperature = The minimum temperature required to initiate combustion in air with no other source of ignition, BCF = Bioconcentration Factor; BEI = - Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV, BEL = Biological exposure limits; BOD = Biochemical Oxygen Demand; BTEX = Benzene, Toluene, Ethylbenzene, Xylenes; C = Celsius, CA = Canada, CAS = Chemical Abstracts Service; CEFIC = European Chemical Industry Council; CEILING = Ceiling Limit (15 minutes); CERCLA = The Comprehensive Environmental Response, Compensation, and Liability Act; CLP = Classification Packaging and Labelling; COC = Cleveland Open Cup; CN = China; CPR= Controlled Products Regulations; CWA = Clean Water Act; DEA – Drug Enforcement Administration; DFG = Deutsche Forschungsgemeinschaft; DIN = Deutsches Institut fur Normung; DMEL = Derived Minimal Effect Level; DNEL = Derived No Effect Level; DOT = Department of Transportation; DSL = Domestic Substances List (Canada); EC = European Commission; EC50 = Effective Concentration fifty; ECC = European Economic Community; ECETOC = European Center on Ecotoxicology and Toxicology Of Chemicals; ECHA = European Chemicals Agency; EINECS - European Inventory of Existing Commercial Chemical Substances; ELINCS = European List of Notified Chemical Substances; EL50 = Effective Loading fifty; ENCS = Japan Existing and New Chemical Substances; EPA = Environmental Protection Agency; EU = European Union; EWC = European Waste Code; F = Fahrenheit; Flash Point = Minimum temperature at which a liquid gives off sufficient vapors to form an ignitable mixture with air. GHS = Globally Harmonized System of Classification and Labelling of Chemicals; HAPs = Hazardous Air Pollutants; IARC = International Agency for Research on Cancer; IATA = International Air Transport Association; IBC = Intermediate Bulk Container; IC50 = Inhibitory Concentration fifty; ICAO = International Civil Aviation Organization; IDL = Ingredient Disclosure List; IDLH = Immediately Dangerous to Life and Health; IL50 = Inhibitory Level fifty; IMDG = International Maritime Dangerous Goods; INSHT = National Institute for Health and Safety at Work; INV = Chinese Chemicals Inventory; IOPC = International Oil Pollution Compensation; IP346 = Institute of Petroleum test method N° 346 for the determination of polycyclic aromatics



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DMSO-extractables; JP – Japan; , Kow = Octanol/water partition; KECI = Korea Existing Chemicals Inventory, LC₅₀ = Lethal Concentration (gases) which kills 50% of the exposed animals, LD₅₀ = :Lethal Dose (solids & liquids) which kills 50% of the exposed animals; . LL/EL/IL = Lethal Loading/Effective Loading/Inhibitory loading; LL₅₀ = Lethal Loading fifty; LEL = The lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source.; LogPow = logarithm of the octanol/water partition coefficient; LOLI = List of Lists™ - ChemADVISOR's Regulatory Database; MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution; MAK = Maximum Concentration Value in the Workplace; MEL = Maximum Exposure Limits; mg/m³ = : Concentration expressed in weight of substance per volume of air, mg/kg = Quantity of material, by weight, administered to a test subject, based on their body weight in kg, NDSL = Non-Domestic Substances List (Canada); NE = Not Established; NFPA = National Fire Protection Association; NIOSH = National Institute for Occupational Safety and Health; NJTSR = New Jersey Trade Secret Registry; NOEC/NOEL = No Observed Effect Concentration / No Ob-served Effect Level; NTP = National Toxicology Program; NZ = New Zealand; OE_HP V = Occupational Exposure - High Production Volume; OSHA = U.S. Occupational Safety and Health Administration; PAH = Polycyclic Aromatic Hydrocarbon; PBT = Persistent, Bioaccumulative and Toxic; PEL = Permissible Exposure Limit (OSHA); PH= Philippines; PICCS = Philippines Inventory of Chemicals and Chemical Substances; ppm = Concentration expressed in parts of material per million parts of air or water, PMCC = Pensky Martin Closed Cup; PNEC = Predicted No Effect Concentration; RCRA = Resource Conservation and Recovery; REACH = Registration Evaluation And Authorization Of Chemicals; RID = European Rail Transport; RQ = Reportable Quantity; RTECS = Registry of Toxic Effects of Chemical Substances®; RTK = Right To Know; SARA = Superfund Amendments and Reauthorization Act; SKIN_DES = Skin Designation; STEL = Short Term Exposure Limit (15 minutes); SCBA = Self-Contained Breathing Apparatus; SDWA = Safe Drinking Water Act; STOT = Specific Target Organ Toxicity, TDLo, = the lowest dose to cause a symptom, TCLo = the lowest concentration to cause a symptom; TDo, LDLo, and LDo, or TC, TCo, LCLo, and LCo, the lowest dose (or concentration) to cause lethal or toxic effects, TDG = Transportation of Dangerous Goods; TLV = Threshold Limit Value (ACGIH); TRA = Targeted Risk Assessment; TSCA = Toxic Substances Control Act ; TWA = Time Weighted Average (8 hours); UEL = The highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source.; UN = United Nations; US = United States; vPvB = very Persistent and very Bioaccumulative; WHMIS = Worker Hazardous Materials Information System (Canada)

Disclaimer

The information presented herein has been compiled from sources considered to be dependable and is accurate as of the date of preparation of this Safety Data Sheet. However, Seller does not assume any liability whatsoever for the accuracy or completeness of the information contained herein. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license. 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.