

associated with irritation of eyes nose and throat. Also, lower respiratory effects have been reported. Hydrogen sulfide (H₂S) can evolve when this product is stored or handled at elevated temperatures. H₂S can cause respiratory irritation and hypoxia. At low concentrations, H₂S has an odor of rotten eggs. At higher concentrations, H₂S odor is not apparent. DO NOT use odor as an indicator of exposure to H₂S.

Target Organs : Eyes, Skin, Respiratory system, Kidney, Liver

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Weight %
Asphalt	8052-42-4	100%
Hydrogen Sulfide	7783-06-4	Trace

SECTION 4. FIRST AID MEASURES

- General advice** : Remove from exposure, lie down. Take off all contaminated clothing immediately. When symptoms persist or in all cases of doubt seek medical advice. Never give anything by mouth to an unconscious person.
- Inhalation** : Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Seek medical attention immediately.
- Skin contact** : Cool skin rapidly with cold water after contact with molten material. Take off all contaminated clothing immediately. Wash off with soap and water but do not attempt to remove asphalt that adheres to skin before obtaining medical assistance. Wash contaminated clothing before re-use. If symptoms persist, seek medical attention immediately.
- Eye contact** : Remove contact lenses. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, seek medical attention.
- Ingestion** : Do NOT induce vomiting. Seek medical attention immediately. Clean mouth with water and drink afterwards plenty of water. If a person vomits when lying on his back, place him in the recovery position.

SECTION 5. FIRE-FIGHTING MEASURES

- Form** : Solid form, viscous liquid when heated
- Flash point** : > 218 °C (> 424 °F)
- Lower explosive limit** : 0.9 % (V)
- Upper explosive limit** : 7 % (V)
- Suitable extinguishing media** : SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO₂, water spray, fire fighting foam, or Halon.
LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.
- Specific hazards during fire fighting** : Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of

unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

Special protective equipment for fire-fighters : Use NIOSH/MSHA approved positive pressure self-contained breathing apparatus and fully protective clothing such as bunker gear if needed to prevent exposure. Withdraw immediately from the area if there is a rising sound from a venting safety device or discoloration of vessels, tanks, or pipelines.

Further information : Vapors may form explosive mixture with air. Flammable vapor production at ambient temperature in the open is expected to be minimal unless the oil is heated above its flash point. When heated above flash point and mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions : ACTIVATE FACILITY'S SPILL CONTINGENCY OR EMERGENCY RESPONSE PLAN. Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Response and clean-up crews must be properly trained and must utilize proper protective equipment.

Environmental precautions : Carefully contain and stop the source of the spill, if safe to do so. Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. Authorities should be notified if reportable quantity release occurs.

Methods for cleaning up : Soak up condensate with inert absorbent material and collect in ventilated waste container for disposal.

CERCLA Hazardous substances and corresponding RQs :

Asphalt	8052-42-4	100 lbs
Hydrogen Sulfide	7783-06-4	100 lbs

SECTION 7. HANDLING AND STORAGE

Handling : Use only in well-ventilated areas.

Advice on protection against fire and explosion : Do not smoke near areas where material is handled or stored. The product should only be used in areas where electrical classification meets the product rating for this product, i.e. intrinsically safe. Use only in area provided with appropriate exhaust ventilation. Vapors may form explosive mixtures with air.

Dust explosion class : Not applicable

Requirements for storage areas and containers : Product is generally transported and stored hot (typically at temperatures above 110°F and below 350°F). Handle as a combustible liquid. Keep away from heat, sparks, and open flame! Electrical equipment should be approved for classified area. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion. Consult API Recommended Practice 2023 for additional guidance. Store distant from fire and ignition sources. No smoking near areas where material is stored or

used.

Advice on common storage : Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Store in a well-ventilated area. Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks".

Hydrogen sulfide may accumulate in tanks and bulk transport compartments. Consider appropriate respiratory protection (see Section 8). Stand upwind. Avoid vapors when opening hatches and dome covers. Confined spaces should be ventilated prior to entry.

Other data : Stable under normal conditions.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

List	Components	CAS-No.	Type:	Value
ACGIH	Asphalt	8052-42-4	TWA	0.5 mg/m ³
	Hydrogen Sulfide	7783-06-4	TWA	10 ppm
		7783-06-4	STEL	15 ppm

Engineering measures : Engineering controls are normally required when handling hot materials. Use process enclosures, local exhaust ventilation, or other controls to maintain airborne levels below recommended exposure limits (see below). Engineering controls should meet applicable requirements of the National Electrical Code (NEC) Standards. Ensure that an emergency eye wash station and safety shower is located near the work-station.

Eye protection : Use a full-face shield and chemical safety goggles if handling heated material. With product at ambient temperatures, safety glasses equipped with side shields are recommended as minimum protection in industrial settings. An eye wash station immediately available to the work area.

Hand protection : When handling product at elevated temperatures, use long-cuffed leather or heat-resistant gloves. When product is at ambient temperatures, use gloves constructed of chemical resistant materials such as heavy nitrile rubber if frequent or prolonged contact is expected.

Skin and body protection : Use insulated, heat-resistant clothing when handling heated material. Use a full-body heat-resistant or internally cooled suit when work conditions dictate.

Respiratory protection	: Contaminant air concentrations determine the level of respiratory protection required. Use only NIOSH-approved respiratory equipment within the limits of the protection factors for that equipment. Use supplied air respirators when H ₂ S concentrations are expected to exceed applicable workplace exposure levels. Do not use air purifying respiratory equipment when considering elevated H ₂ S concentrations. Respiratory equipment must be selected on the basis of the maximum expected air concentration.
Hygiene measures	: Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using toilet facilities. DO NOT use gasoline, kerosene, solvents, or harsh abrasive skin cleaners to clean skin. Prevent skin contact when handling heated material. Use insulated, heat-resistant clothing when handling heated material. Use a full-body heat-resistant or internally cooled suit when work conditions dictate.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form	: Solid form, viscous liquid when heated
Appearance	: Brown to black
Odor	: Characteristic sour, tar-like odor
Flash point	: > 218 °C (> 424 °F)
Thermal decomposition	: No decomposition if stored and applied as directed.
Lower explosive limit	: 0.9 % (V)
Upper explosive limit	: 7 % (V)
pH	: Not applicable
Freezing point	: No data available
Boiling point	: 343 °C (649 °F)
Vapor Pressure	: No data available
Density	: 0.9 – 1.05 g/mL
Viscosity, kinematic	: No data available
Percent Volatiles	: Negligible volatility

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid	: Heat, flames and sparks.
Materials to avoid	: Strong acids and oxidizing agents
Hazardous decomposition products	: In case of fire hazardous decomposition products may be produced such as: Carbon oxides Hydrogen sulfide and other sulfur-containing gases can evolve from this product particularly at elevated temperatures. No decomposition products in case of appropriate storage / handling / transport.
Thermal decomposition	: No decomposition if stored and applied as directed.

Hazardous reactions : Stable under normal conditions of use; however, incompatible with strong acids and strong oxidizers. Keep away from oxidizing agents, and acidic or alkaline products. Do not allow molten products to contact water or liquids as this can cause violent eruptions. Hydrogen Sulfide from the product can react with iron in asphalt storage tank to form iron sulfide, a pyrophoric (a material which ignites spontaneously in air below 130°F) material.

SECTION 11. TOXICOLOGICAL INFORMATION

Carcinogenicity

NTP : This product, Asphalt (CAS-No.: 8052-42-4), may contain trace amounts of benzene a chemical known to cause cancer.

IARC : Asphalt (CAS-No.: 8052-42-4)

OSHA : This product, Asphalt (CAS-No.: 8052-42-4), may contain trace amounts of benzene a chemical known to cause cancer.

CA Prop 65 : WARNING! This product contains a chemical known to the State of California to cause cancer.
Asphalt (CAS-No.: 8052-42-4)

Skin irritation : Result: Mild skin irritation
Prolonged skin contact may cause skin irritation and/or dermatitis.

Eye irritation : Result: Mild eye irritation
Contact with eyes may cause irritation.

Further information : Certain preparations of this material are classified as carcinogenic by OSHA, NTP, or IARC. See section entitled: Carcinogenicity: of this MSDS for additional information concerning the carcinogenic potential of this product.

Component:

Asphalt	8052-42-4	<u>Acute oral toxicity:</u> LD50 rat Dose: 5,001 mg/kg <u>Acute dermal toxicity:</u> LD50 rat Dose: 2,001 mg/kg
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SECTION 12. ECOLOGICAL INFORMATION

Additional ecological information : This product is estimated to have a slow rate of biodegradation. This product is not expected to bioaccumulate through food chains in the environment. Analysis for ecological effects has not been conducted on this product. Spills into water ways may be harmful to organisms and bottom feeders.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal : Recover as much spilled material as possible for reuse or recycling. Disposal of waste material must be conducted in accordance with RCRA regulations (see 40CFR 260 through 40 CFR 271).

SECTION 14. TRANSPORT INFORMATION

CFR

Proper shipping name : Elevated temperature liquid, n.o.s.
 UN-No. : 3257
 Class : 9
 Packing group : III
 Hazard inducer : (Asphalt)

TDG

Proper shipping name : Elevated temperature liquid, n.o.s.
 UN-No. : UN3257
 Class : 9
 Packing group : III
 Hazard inducer : (Asphalt)

IATA Cargo Transport

UN-No. : UN3257
 Class : 9
 Not permitted for transport

IATA Passenger Transport

UN-No. : UN3257
 Class : 9
 Not permitted for transport

IMDG-Code

UN-No. : UN 3257
 Description of the goods : Elevated temperature liquid, n.o.s.
 (Asphalt)
 Class : 9
 Packaging group : III
 IMDG-Labels : 9
 EmS Number : F-A S-P
 Marine pollutant : No

SECTION 15. REGULATORY INFORMATION

OSHA Hazards : Moderate skin irritant
 Moderate eye irritant
 Toxic by inhalation.
 Possible carcinogen.

TSCA Status : On TSCA Inventory

DSL Status : All components of this product are on the Canadian DSL list.

SARA 311/312 Hazards : Acute Health Hazard

PENN RTK US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

Components

CAS-No.

Asphalt

8052-42-4

MASS RTK

US. Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)

Components

CAS-No.

Asphalt 8052-42-4
 NJ RTK US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)

Components CAS-No.

Asphalt 8052-42-4

hydrogen sulfide 7783-06-4

California Prop. 65 : WARNING! This product contains a chemical known to the State of California to cause cancer.

Asphalt 8052-42-4

SECTION 16. OTHER INFORMATION

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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