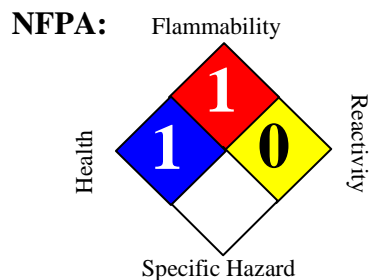


Safety Data Sheet

Asphalt



SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	Asphalt			
Synonyms	:	Pitch, Paving Asphalt, Performance Graded Asphalt, (PG) PG 52-28, PG 58-22, PG 64-25, 888100004477			
SDS Number	:	888100004477	Version	:	1.15
Product Use Description	:	Construction material			
Company	:	For: Tesoro Refining & Marketing Co. 19100 Ridgewood Parkway, San Antonio, TX 78259			
Tesoro Call Center	:	(877) 783-7676	Chemtrec (Emergency Contact)	:	(800) 424-9300

SECTION 2. HAZARDS IDENTIFICATION

Classifications	:	Skin Irritation – Category 2 Eye Irritation – Category 2 Carcinogenicity – Category 2
Pictograms		
Signal Word		WARNING
Hazard Statements		Causes skin irritation. Causes eye irritation. Suspected of causing cancer. May release toxic hydrogen sulfide gas that could accumulate at toxic concentrations inside containers of heated asphalt.
Precautionary Statements		
Prevention		Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash hands and any contacted skin thoroughly after handling. Wear protective gloves of materials such as leather or thick rubber, and long sleeved clothing. Wear safety eye glasses with side shields, and if needed to prevent splattering

onto face, wear face shield.

Response

If exposed or concerned: Get medical advice or attention.
 If on skin: Wash with plenty of water and hand cleaner. See Section 4 for additional skin contact first aid measures.
 Specific treatment: See Section 4 First Aid Measures for additional information.
 If skin irritation occurs: Get medical attention.
 Take off contaminated clothing and wash it before reuse.
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
 If eye irritation persists: Get medical attention.

Storage

Store locked up.

Disposal

Dispose of contents/containers in accordance with local, state and national regulations.

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

Suitable extinguishing media	: SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO ₂ , 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	: Isolate area around container involved in fire. Cool tanks, shells, and containers

fighting	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.
	: 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.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling	: Use only in well-ventilated areas.
	: 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.
Conditions for safe storage, including incompatibilities	: 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.
	: 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.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

List	Components	CAS-No.	Type:	Value
OSHA	Hydrogen Sulfide	7783-06-4	STEL	20 ppm
ACGIH	Asphalt	8052-42-4	TWA	0.5 mg/m3
	Hydrogen Sulfide	7783-06-4	TWA	1 ppm
		7783-06-4	STEL	5 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 H₂S concentrations are expected to exceed applicable workplace exposure levels. Do not use air purifying respiratory equipment when considering elevated H₂S 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

Appearance	: Brown to black solid at ambient temperature, viscous liquid when heated
Odor	Characteristic sour, tar-like odor
Odor Threshold	No data available
pH	Not applicable
Melting point / freezing point	30 – 130°C (86 – 149°F)
Boiling point	>400°C (>752°F)
Flash point	>230°C (>446°F)
Evaporation rate	Negligible
Flammability (solid, gas)	Not applicable
Lower explosive limit	Not applicable
Upper explosive limit	Not applicable
Freezing point	No data available
Vapor Pressure	Negligible
Vapor Density (air =1)	Not applicable
Relative Density (water = 1)	1.0 – 1.1 g/mL
Solubility	No data available
Partition coefficient (n-octanol/water)	>6
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity, kinematic	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Forms a pressure-sensitive explosive if contacted by liquid oxygen until oxygen dissipates as a gas out of the asphalt.
Chemical stability	Stable under ambient and anticipated storage and handling conditions

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.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	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.

SECTION 11. TOXICOLOGICAL INFORMATION

Inhalation	: No significant adverse health effects are expected to occur upon short-term exposure to this product at ambient temperatures. Asphalt fumes have been associated with irritation of eyes nose and throat. Also, lower respiratory effects have been reported. Hydrogen sulfide (H ₂ S) can evolve when this product is stored or handled at elevated temperatures. H ₂ S can cause respiratory irritation and hypoxia. At low concentrations, H ₂ S has an odor of rotten eggs. At higher concentrations, H ₂ S odor is not apparent. DO NOT use odor as an indicator of exposure to H ₂ S.
Skin irritation	Heated asphalt can cause burns to the skin. May cause skin irritation with redness, an itching or burning feeling, and swelling of the skin. Exposure to sunlight and to asphalt vapors may amplify tendency for sunburns.
Eye irritation	Heated asphalt can cause burns to the eyes. Mists, vapors or fumes from this material can cause eye irritation with tearing, redness, or a stinging or burning feeling.
Ingestion	Contact with heated asphalt may cause burns. If asphalt at ambient temperatures is swallowed, no significant adverse health effects are anticipated. If swallowed in large quantities, asphalt can obstruct the intestine.
Further information	Heated asphalt could release hydrogen sulfide gas. Toxic amounts H ₂ S could accumulate inside vessels containing heated asphalt.
<u>Component:</u>	:
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
<u>Component:</u>	:
NTP	This product, Asphalt (CAS-No.: 8052-42-4), may contain trace amounts of benzene a chemical known to cause cancer.
IARC	Asphalt (Bitumin) (CAS-No.: 8052-42-4) Group 2B possibly carcinogenic to humans
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)

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. (Asphalt)
UN-No. : 3257
Class : 9
Packing group : III
Hazard inducer : (Asphalt)

TDG

Proper shipping name : Elevated temperature liquid, n.o.s. (Asphalt)
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**CERCLA SECTION 103 and SARA SECTION 304 (RELEASE TO THE ENVIROMENT)**

The CERCLA definition of hazardous substances contains a "petroleum exclusion" clause which exempts crude oil. Fractions of crude oil, and products (both finished and intermediate) from the crude oil refining process and any indigenous components of such from the CERCLA Section 103 reporting requirements. However, other federal reporting requirements, including SARA Section 304, as well as the Clean Water Act may still apply.

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)
<u>Components</u>		<u>CAS-No.</u>
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)
<u>Components</u>		<u>CAS-No.</u>
Asphalt		8052-42-4
NJ RTK		US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)
<u>Components</u>		<u>CAS-No.</u>
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 INFORMATIONFurther 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.

Revision Date : 07/19/2012

150, 299, 302, 1561, 1596

