

I. Chemical and Manufacturer Identification

Product Name: SUPERPAVE PG 64-22 - ANACORTES
Chemical Family: Petroleum Hydrocarbon; Asphalt
Synonym(s): #52604

Hazard Type	NFPA	CERCLA	Other: Shell:
Health	5	5	1
Flammability	5	5	1
Reactivity	5	5	0
Specific Hazard	N/A		



Manufacturer: TESORO WEST COAST COMPANY

Address1: P. O. Box 700
Address2: March Point Road
City: Anacortes **State:** WA **Zip:** 98221
Phone: (360) 293-9119

Emergency Phone: 800-424-9300 (CHEMTREC)
CHEMTREC emergency Phone: 800-424-9300

Chemical Name: Mixture (See Section II)
Mixture: No **Chemical Type:** N/A
Formula: No Applicable Infor **Molecular Weight:** No Applicable Information F
MSDS Number: TNC00641 **MSDS Date:** 04/27/1998
Tracking #: N/A
Precautionary Labeling: No Applicable Information Found
Shell Code: 90095

Other Notes: * For acute and chronic health effects refer to the discussion in Section III.

BE SAFE
 Read Our Product
 Safety Information
 and
 Pass It On
 (Product Liability Law Requires It)

Special Notes: No Applicable Information Found
Composition Notes: *The specific composition is considered trade secret.
 **This chemical is a naturally occurring constituent in the petroleum stream and is not added separately to the product.
 ***Asphalt (Petroleum) Fumes
 ****OSHA PEL/STEL

II. Chemical Components

Component	Superpave	California	MSDS	Product	Material
Bitumen	N/A	48-55	8052-42-4	N/A	N/A
Hydrogen Sulfide**	N/A	<0.10	7783-06-4	N/A	N/A
Petroleum Residues Vacuum Distillates	N/A	36-42	68955-27-1	N/A	N/A
Proprietary Residue	N/A	4-7	*	N/A	N/A
Shell Superpave PG 64-22 - Anacortes	N/A	N/A	N/A	N/A	N/A

Component	Superpave	California	MSDS	Product	Material	Material	Material
Bitumen	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hydrogen Sulfide**	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Petroleum Residues Vacuum Distillates	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Proprietary Residue	N/A	10 PPM - TWA	N/A	10 PPM - TWA	N/A	15 PPM - ACGIH TLV/STEL	15 PPM****
Shell Superpave PG 64-22 - Anacortes	N/A	N/A	N/A	5 mg/m3*** TWA	N/A	N/A	N/A

III. Health Hazard Data

- Eye:** Based on essentially similar product testing product is presumed to be minimally irritating to the eyes. Contact with product at elevated temperatures can result in thermal burns.
- Skin:** Based on essentially similar product testing product is presumed to be minimally irritating to the skin. Contact with product at elevated temperatures can result in thermal burns.
- Inhalation:** WARNING - HYDROGEN SULFIDE (H₂S) and other hazardous vapors may evolve and collect in the headspace of storage tanks or other enclosed vessels. Hydrogen Sulfide is an extremely flammable, toxic gas. Inhalation of vapors, mist or fume (generated at high temperatures) may cause irritation to the nose, throat and respiratory tract.
- Ingestion:** Based on essentially similar product testing product is presumed to be no more than slightly toxic if ingested.
- Target Organ:** No Applicable Information Found
- Symptoms of Over-Exposure:** Irritation as noted above.
- Aggravated Medical Condition:** Preexisting skin and respiratory disorders may be aggravated by exposure to this product.
- Emergency Overview:** No Applicable Information Found
- Teratology Information:** No Applicable Information Found
- Cancer Information:** No Applicable Information Found
- Listed As A Carcinogen By:** NTP: N/A IARC: N/A OSHA: N/A Z-LIST: N/A
- Other Notes:** The health effects noted above are consistent with requirements under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

The International Agency of Research on Cancer has determined there is limited evidence of Carcinogenicity for undiluted steam-refined Asphalts in experimental animals and inadequate evidence of Carcinogenicity for undiluted steam-refined asphalts in humans, and sufficient evidence for the Carcinogenicity of untreated vacuum distillates in experimental animals and humans. Handling Instructions and precautions outline in this material safety data sheet should be followed when using this product.



ATR

IV. First Aid Measures

- Eyes:** Flush eyes with water for 15 minutes while holding eyelids open. Get medical attention.
- Skin:** If hot asphalt strikes the skin, drench or immerse the area in water to assist cooling. If available, apply iced water or ice packs to the burned area. (Do not use ice water or cold packs if the burn area cover more than 10% of the body, as this may contribute to shock.) Do not try to remove Asphalt from a burn after it has cooled. Seek medical attention. If cool asphalt contacts the skin, wash the area with hot soapy water. Use of a waterless hand cleaner will help to remove the Asphalt.
- Inhalation:** Remove victim to fresh air and provide Oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention. be aware that H2S may be present if victim is unconscious; make sure you are using breathing protection before attempting to remove victim to fresh air.
- Ingestion:** Do not induce vomiting. In general no treatment is necessary unless large quantities of product are ingested. However, get medical advice.

Note to Physician: In general, Emesis induction is unnecessary in high viscosity, low volatility products.

Other Notes: No Applicable Information Found

V. Fire Fighting Measures

Flammable Classification Under 29 CFR: N/A

- Flammable Limits:** No Applicable Information Found **LEL:** N/AV **UEL:** N/AV
- Flash Point:** 446 **Method:** Min. (COC)
- Flame Propagation Rate:** No Applicable Information Found **Auto Ignition Temperature:** No Applicable Information Found
- Extinguishing Media:** Dry chemical or foam preferred. Water fog may be used on flat surfaces such as roads.
- Fire Fighting Procedures:** Do not use water on Asphalt fire in tank or other containers since it may cause violent eruption and spreading of burning asphalt. Material will not burn unless preheated. Do not enter confined fire-space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including a positive-pressure NIOSH-approved self-contained breathing apparatus. Cool fire exposed containers with water.
- Unusual Hazards:** Do not heat above flash points. Hot asphalt may ignite flammable mixtures on contact. Sulfur Oxides and Hydrogen Sulfide, both of which are toxic, may be released upon combustion. H2S vapors are heavier than air, may accumulate in low areas and travel along the ground to remote ignition source; If ignited will flash back to original container.
- Hazardous Products:** No Applicable Information Found
- Other Notes:** No Applicable Information Found

VI. Accidental Release Measures

- Spill/Leak Clean Up Procedures:** May burn although no readily ignitable. Use cautious judgment when cleaning up Large Spills. ***Large Spills*** Wear respirator and protective clothing as appropriate. Shut off source of leak if safe to do so. Dike and contain. Remove with vacuum trucks or pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand or other suitable material; dispose of properly. Flush area with water to remove trace residue. ***Small Spills*** Take up with an absorbent material and dispose of properly.
- Spill Evacuation Procedures:** No Applicable Information Found
- Other Notes:** No Applicable Information Found

VII. Handling and Storage Measures

- Handling Precautions:** No Applicable Information Found
- Storage Precautions:** No Applicable Information Found
- Hygiene Practices:** When Asphaltic products are heated, they often give off small amounts of hydrogen sulfide. Hydrogen Sulfide is an extremely flammable, highly toxic gas. Breathing Hydrogen Sulfide must be avoided. Minimize breathing of vapors, fumes, or mist; when possible, use ventilation or work up wind of source of vapors, fumes and mist. Launder contaminated clothing before using. Discard leather goods when they cannot be decontaminated. Observe good personal hygiene. Wash thoroughly after working with Asphalt and before eating or smoking.
- Other Precautions:** No Applicable Information Found
- Other Notes:** No Applicable Information Found

VIII. Exposures, Controls and PPE

- Engineering Controls:** No Applicable Information Found
- Mechanical Ventilation:** No Applicable Information Found
- Local Ventilation:** No Applicable Information Found
- Special Ventilation:** No Applicable Information Found
- Other Ventilation:** Use ventilation as required to control vapor concentrations.
- Respirator:** Use NIOSH-approved respirator protection as required to prevent overexposure to oil mist, vapor or fumes and H₂S. Do not enter storage compartments unless equipped with a NIOSH-approved self-contained breathing apparatus with full face piece operated in a positive pressure mode.
- Eye Protection:** Avoid contact with eyes. Wear safety glasses or goggles as appropriate.
- Hand Protection:** Avoid prolonged or repeated contact with skin. Wear gloves and other clothing as required to minimize contact.
- Protective Clothing:** Avoid prolonged or repeated contact with skin. Wear gloves and other clothing as required to minimize contact.
- Other Protection:** No Applicable Information Found
- Other Notes:** No Applicable Information Found



IX. Physical and Chemical Properties

	N/A	N/A	N/A	N/A	N/A
	>900	Deg F	N/A		
	N/A	Deg F	Pour Point		
	N/A	N/A	AIR=1		
	N/A	mmHg	N/A		
	N/A	N/A	N/A		

Specific Gravity: 1.017
Bulk Density: N/A
% Volatile: N/A
Evaporation Rate: N/A (N-Butyl Acetate = 1)
State: Semisolid
pH: N/A
Odor: Asphalt Odor
Appearance: Black Viscous Semisolid



Solubility in Water: Negligible
Other Solubility: No Applicable Information Found
Other Notes: No Applicable Information Found

X. Stability and Reactivity**Stable:** Yes

Conditions to Avoid: Do not allow milten product to contact water or liquids as this can cause violent eruptions, splatter hot material or ignite flammable materials.

Hazard Polymerization: Will not occur

Conditions to Avoid: No Applicable Information Found

Incompatibility: No Applicable Information Found

Hazardous Decomposition: Thermal decomposition products are highly dependent on the combustion conditions. A complex mixture of airborne solid, liquid, particulates and gases with evolve when this material undergoes pyrolysis or combustion. Carbon monoxide, Sulfur Oxide, Hydrogen Sulfide and other unidentified organic compounds may be formed upon combustion.

Other Notes: No Applicable Information Found

XI. Toxicological Information

Eye: No Applicable Information Found
Skin: Acute Dermal LD50:
 Bitumen: >2.0 g.kg (rabbit)

There is no evidence that H2S will accumulate in the body tissue after repeated exposure.

Asphalt fume condensates have been shown to produce a tumorigenic response when repeatedly applied to the skin of experimental animals. The relevance of this data to humans is not known at this time.

Ingestion: Acute Oral LD50:
 Shell superpave PG 64-22 - Anacortes: Not Available
 Bitumen: >5.0 g/kg (rat)

Inhalation: Do not depend on sense of smell for warning. Gas causes rapid olfactory fatigue (deadens sense of smell).

Breathing Asphalt Aerosol or Asphalt smoke for protracted periods of time has produced damage to the lungs of mice. Among the changes observed were bronchitis, pneumonitis and abscess formation.

Chronic Effect: No Applicable Information Found

Mutagenicity: Modified Ames Assay on an equivalent substance resulted in a mutagenicity index (MI) of zero. Results of the Modified Ames Assay are considered to be good predictor of whether certain oil products may or may not have the potential for causing skin tumors in laboratory animals following repeated dermal application. Substances with an MI of less than 1 are unlikely to be dermal Carcinogens if subjected to skin painting studies in mice. The proprietary residue in this product has also been tested in the Modified Ames Test. The neat residue may be either positive or negative in the Assay; Asphalt containing up to 11% proprietary residue had an MI of zero.

RTECS #: No Applicable Information Found

Other Toxic Effects: No Applicable Information Found

Other Notes: H2S is irritating to the eyes and respiratory tract at low concentrations. 0.02 PPM - Odor threshold. 10 PPM - Eye irritation. 100 PPM - Headache, dizziness, vomiting, coughing. 200-300 PPM - Eye Inflammation, Respiratory tract irritation after 1 hour exposure. 500-700 PPM - Loss of consciousness or possibly death in 30 min. to an hour. 700-900 PPM - Rapid loss of consciousness; death can result. >1000 PPM - Unconsciousness in seconds; death in minutes unless victim is removed from contaminated area and breathing is restored.

XII. Ecological Information

Ecotoxicological Information: No Applicable Information Found
Chemical Fate Information: No Applicable Information Found
Other Ecological Notes: No Applicable Information Found
Other Notes: For additional information on this Environmental Data please call: (713) 241-2252.

For Emergency Assistance Please Call:
SHELL: (713) 473-9461
CHEMTREC: (800) 424-9300

XIII. Disposal Methods

Disposal Methods: Place in an appropriate disposal facility in compliance with local regulations.
Other Notes: No Applicable Information Found

XIV. Transportation Information

Proper Shipping Name: Elevated Temperature Liquid, N.O.S. (Petroleum Asphalt)

UN/NA #: 3257

US Customs Harmonization #: N/A

Hazard Class: Class 9 (Miscellaneous Hazardous Material), III

Packaging Group: N/A

Reportable Quantity: N/A

Placard: N/A

Regulatory References: N/A

Marking: N/A

Label: N/A

Hazard Class: N/A

Packaging Group: N/A

Marine Pollutant: N/A

Page: N/A

Regulatory References: N/A

Packaging Group: N/A

Label: N/A

Hazard Class: N/A

Regulatory References: N/A

Label: N/A

ADR: No Applicable Information Found

RID: No Applicable Information Found

Other Notes: Guide 128. Not regulated by D.O.T. if in a container of 119 gallon capacity or less.

This product is an oil under 49 CFR (DOT) Part 130. If shipped by rail or highway in a tank with a capacity of 3,500 gallons or more, it is subject to the requirements of part 130. Mixture solutions in which this product is present at 10% or more may also be subject to this rule. This product is covered by EPA's Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Petroleum Exclusion. Therefore, releases to air, land, or water are not reportable under CERCLA ("SUPERFUND"). However, under Section 311 of EPA's Cleanwater Act (CWA), this product is considered an oil. As such, spills into or leading to surface waters that cause a sheen must be reported to the National Response Center, 800-424-8802.

XV. Regulatory Information

Inventory: YES

Exempt: N/A

5(a)(2): No Applicable Information Found

5(e): No Applicable Information Found

5(h)(3): No Applicable Information Found

8(b): No Applicable Information Found

12(b): No Applicable Information Found

Notes: This product is listed on the EPA/TSCA inventory of Chemical Substances. Protection of stratospheric ozone (pursuant to Section 611 of Clean Air Act Amendments of 1990): per 40 CFR part 82, this product does not contain nor was it directly manufactured with any class I or class II ozone depleting substances.

Acute: YES

Chronic: YES

Flammability: N/A

Pressure: YES

N/A	Proprietary Residue	500	100
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SARA 302 Notes: N/A

SARA 311 Hazard Class: Yes

N/A	N/A	N/A	N/A
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SARA 313 Notes: In accordance with SARA Title III, Section 313, the attached Environmental Data Sheet (EDS) should always be copied and sent with the MSDS.

SARA Notes: This product is classified as an oil under Section 311 of the Clean Water Act. Spills entering (A) Surface waters or (B) any water courses or sewers entering/leading to surface waters that cause a sheen must be reported to the National Response Center, 800-424-8802.

Hazardous Substance: N/A

Reportable Quantity: N/A

Notes: This product is covered by EPA's Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Petroleum Exclusion. Therefore releases to air, land, or water are not reportable under CERCLA ("SUPERFUND").

EINECS: No Applicable Information Found

Canadian WHMIS: No Applicable Information Found

CEPA: No Applicable Information Found

Local & State Regulations: The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

User Defined Regulations:

State Code:

1. MA
2. CA, CT, FL, IL, LA, MA, ME, MN, NJ, PA, RI
3. CA65C

1. Hydrogen Sulfide	1. 7783-06-4	1. <0.10
2. Bitumen	2. 8052-42-4	2. 48-55
3. Soots, Tars, and Untreated M Internal Oils	3. 68965-27-1	3. 36-42

Section 611 of the Clean Air Act Protection of Stratospheric Ozone: Per 40 CFR Part 82, this product does not contain nor was it directly manufactured with any Class I or Class II ozone depleting substances.

Hazard Communication Rule, 29CFR 1900.1210: No Applicable Information Found

Regulatory Notes: CA = California Haz. Subst. List; CA65C, CA65R, CA65C/R = California Safe Drinking Water and Toxics Enforcement Act of 1986 or Proposition 65 List; CT = Connecticut Toxic. Subst. List; FL = Florida Subst. List; IL = Illinois Tox. Subst. List; LA = Louisiana Haz. Subst. List; MA = Massachusetts Subst. List; ME = Maine Haz. Subst. List; MN = Minnesota Haz. Subst. List; NJ = New Jersey Haz. Subst. List; PA = Pennsylvania Haz. Subst. List; RI = Rhode Island Haz. Subst. List

Other Notes: No Applicable Information Found

XVI. Other Information

Manufacturer's Statement: The information contained herein is based on the data available to us and is believed to be correct. However, Tesoro makes no warranty, expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Tesoro assumes no responsibility for injury from the use of the product described herein.

Revision Information: New MSDS.
Bibliography: No Applicable Information Found

XVII. Plant Specific Information

Plant Spill Response: No Applicable Information Found
Plant PPE: No Applicable Information Found
Plant Emergency Response: No Applicable Information Found

MSDS Review Information

Reviewed By	Reviewed Date	Reviewed