

Safety Data Sheet



Product identifier

Product Name

- **Petroleum Pitch, Solid**

Synonyms

- Pitch; Residuum Vacuum; Vac Bottoms; Vacuum Residuum; Vacuum Tower Bottoms; VTBs

SDS Number/Grade

- 0108NOR002

Relevant identified uses of the substance or mixture and uses advised against

Recommended use

- Petroleum asphalt blending component

Details of the supplier of the safety data sheet

Manufacturer

- Western Refining
301 St. Paul Park Road
St. Paul Park, MN 55071
United States
www.ntenergy.com
NTE.MSDS@ntenergy.com

Telephone (General) • 651.459.9771

Emergency telephone number

Manufacturer

- 877.627.5463 - (877 MAP LINE)

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

Classification of the substance or mixture

OSHA HCS 2012

- Specific Target Organ Toxicity Repeated Exposure 1
Combustible Dust

Label elements

OSHA HCS 2012

DANGER

Hazard statements • Causes damage to organs through prolonged or repeated exposure.
May form combustible dust concentrations in air.

Precautionary statements

Prevention • Do not breathe mist, vapours and/or spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.

Response • Get medical advice/attention if you feel unwell.

Storage/Disposal • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Other hazards

OSHA HCS 2012

- Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Canada

According to: WHMIS 2015

Classification of the substance or mixture

WHMIS 2015

- Specific Target Organ Toxicity Repeated Exposure 1
Combustible Dusts 1

Label elements

WHMIS 2015

DANGER

Hazard statements • Causes damage to organs through prolonged or repeated exposure.
May form combustible dust concentrations in air.

Precautionary statements

Prevention • Do not breathe mist, vapours and/or spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.

Response • Get medical advice/attention if you feel unwell.

Storage/Disposal • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Other hazards

WHMIS 2015

- In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

Substances

- Material does not meet the criteria of a substance.

Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Residues (petroleum), solvent-extd. vacuum distilled atm. residuum	CAS:70913-85-8	97% TO 100%	NDA	OSHA HCS 2012: Not Classified WHMIS 2015: Not Classified	NDA
			Ingestion/Oral-Rat	OSHA HCS 2012: Flam. Sol. 2; Comb. Dust; STOT SE 3: Resp. Irrit. (Inhl); STOT RE 1	

Sulfur	CAS:7704-34-9	0% TO 3%	LD50 • >5000 mg/kg Skin-Rat LD50 • >5000 mg/kg	(Kidney, Liver / Inhl) WHMIS 2015: Flam. Sol. 2; Comb. Dust; STOT SE 3: Resp. Irrit. (Inhl); STOT RE 1 (Kidney, Liver / Inhl)	NDA
Hydrogen sulfide	CAS:7783-06-4	0% TO 0.01%	Inhalation-Rat LC50 • 444 ppm 4 Hour(s)	OSHA HCS 2012: Exposure limit	NDA

Description of first aid measures

Inhalation

- Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. If signs/symptoms continue, get medical attention.

Skin

- In case of contact with substance, immediately flush skin with running water for at least 20 minutes. Removal of solidified molten material from skin requires medical assistance. Remove and isolate contaminated clothing. If irritation develops and persists, get medical attention.

Eye

- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention.

Ingestion

- Ingestion not likely. If large amounts are swallowed, immediately call a physician.

Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

Indication of any immediate medical attention and special treatment needed

Notes to Physician

- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Extinguishing media

- Suitable Extinguishing Media** • LARGE FIRE: Water spray, fog or regular foam.
SMALL FIRES: Dry chemical, CO₂, water spray or regular foam.

- Unsuitable Extinguishing Media**
- No data available

Special hazards arising from the substance or mixture

- Unusual Fire and Explosion Hazards**
- Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

- Hazardous Combustion Products**
- No data available

Advice for firefighters

- Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

Personal precautions, protective equipment and emergency procedures

- Personal Precautions**
- Ventilate enclosed areas. Do not walk through spilled material. Wear appropriate personal protective equipment, avoid direct contact.

- Emergency Procedures**
- LARGE SPILL: Consider initial downwind evacuation for at least 100 meters (330 feet)
As an immediate precautionary measure, isolate spill or leak area for at least 25

meters (75 feet) in all directions. Keep out of low areas. Keep unauthorized personnel away. Stay upwind. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

Environmental precautions

- Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Containment/Clean-up Measures

- Stop leak if you can do it without risk.
Avoid generating dust.
Carefully shovel or sweep up spilled material and place in suitable container.
Use clean nonsparking tools to collect material.
All equipment used when handling the product must be grounded.
Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).

Precautions for safe handling

Handling

- Use only in well ventilated areas. Keep away from heat, sparks, and flame. Do not use sparking tools. All equipment used when handling the product must be grounded. Take precautionary measures against static charges. Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Wear appropriate personal protective equipment, avoid direct contact. Do not breathe dust. Avoid contact with skin, eyes, and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

Conditions for safe storage, including any incompatibilities

Storage

- Keep container tightly closed. Store in a cool, dry, well-ventilated place.

Control parameters

Exposure Limits/Guidelines				
	Result	ACGIH	NIOSH	OSHA
Hydrogen sulfide (7783-06-4)	Ceilings	Not established	10 ppm Ceiling (10 min); 15 mg/m ³ Ceiling (10 min)	20 ppm Ceiling
	STELs	5 ppm STEL	Not established	Not established
	TWAs	1 ppm TWA	Not established	Not established

Exposure controls

Engineering Measures/Controls

- Ensure that dust handling systems (such as exhaust ducts, dust collectors, vessels and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is not leakage from the equipment). It is recommended that dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment. Use explosion-proof electrical/ventilating/lighting/equipment.

Personal Protective Equipment

Respiratory

- For limited exposure use an N95 dust mask. For prolonged exposure use an air-purifying respirator with high efficiency particulate air (HEPA) filters. Follow the OSHA respirator regulations found in 29 CFR 1910.134. Use a NIOSH/MSHA approved

respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

- Goggles and faceshield when handling hot material. Dust goggles if use produces excessive dust/fume concentrations.

Skin/Body

- Wear appropriate gloves. Wear long sleeves and/or protective coveralls.

Environmental Exposure Controls

- Follow best practice for site management and disposal of waste. Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

STEL = Short Term Exposure Limits are based on 15-minute exposures

NIOSH = National Institute of Occupational Safety and Health

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

OSHA = Occupational Safety and Health Administration

Information on Physical and Chemical Properties

Material Description			
Physical Form	Solid	Appearance/Description	Light brown to black solid.
Color	Light brown to black.	Odor	No data available
Odor Threshold	No data available		
General Properties			
Boiling Point	No data available	Melting Point/Freezing Point	80 to 130 °C(176 to 266 °F)
Decomposition Temperature	No data available	pH	Neutral
Specific Gravity/Relative Density	0.98 to 1.1 Water=1	Water Solubility	No data available
Viscosity	No data available		
Volatility			
Vapor Pressure	18 mmHg (torr) @ 100 °F(37.7778 °C)	Vapor Density	No data available
Evaporation Rate	No data available		
Flammability			
Flash Point	> 290 °F(> 143.3333 °C)	UEL	No data available
LEL	No data available	Autoignition	No data available
Flammability (solid, gas)	No data available		
Environmental			
Octanol/Water Partition coefficient	No data available		

Reactivity

- No dangerous reaction known under conditions of normal use.

Chemical stability

- Stable

Possibility of hazardous reactions

- Hazardous polymerization will not occur.

Conditions to avoid

- Excessive heat, sources of ignition and open flames.

Incompatible materials

- Strong oxidizers such as nitrates, chlorates, peroxides.

Hazardous decomposition products

- Carbon monoxide, carbon dioxide, oxides of nitrogen, oxides of sulfur, polynuclear aromatic hydrocarbons.

Information on toxicological effects

Components		
Sulfur (0% TO 3%)	7704-34-9	<p>Acute Toxicity: Inhalation-Mammal LC50 • 1660 mg/m³; Multi-dose Toxicity: Inhalation-Rat TClO • 1.76 mg/m³ 4 Hour(s) 15 Day(s)-Intermittent; <i>Liver:Other changes; Kidney, Ureter, and Bladder.Changes in tubules (including acute renal failure, acute tubular necrosis)</i>; Inhalation-Rat TClO • 1.76 mg/m³ 4 Hour(s) 30 Day(s)-Intermittent; <i>Liver:Hepatitis (hepatocellular necrosis), diffuse; Kidney, Ureter, and Bladder.Changes in tubules (including acute renal failure, acute tubular necrosis)</i>; Inhalation-Rat TClO • 12.68 mg/m³ 4 Hour(s) 15 Day(s)-Intermittent; <i>Liver:Hepatitis (hepatocellular necrosis), diffuse; Kidney, Ureter, and Bladder.Changes in tubules (including acute renal failure, acute tubular necrosis)</i></p>

GHS Properties	Classification
Acute toxicity	OSHA HCS 2012 • No data available WHMIS 2015 • No data available
Skin corrosion/Irritation	OSHA HCS 2012 • No data available WHMIS 2015 • No data available
Serious eye damage/Irritation	OSHA HCS 2012 • No data available WHMIS 2015 • No data available
Skin sensitization	OSHA HCS 2012 • No data available WHMIS 2015 • No data available
Respiratory sensitization	OSHA HCS 2012 • No data available WHMIS 2015 • No data available
Aspiration Hazard	OSHA HCS 2012 • No data available WHMIS 2015 • No data available
Carcinogenicity	OSHA HCS 2012 • No data available WHMIS 2015 • No data available
Germ Cell Mutagenicity	OSHA HCS 2012 • No data available WHMIS 2015 • No data available
Toxicity for Reproduction	OSHA HCS 2012 • No data available WHMIS 2015 • No data available
STOT-SE	OSHA HCS 2012 • No data available WHMIS 2015 • No data available
STOT-RE	OSHA HCS 2012 • Specific Target Organ Toxicity Repeated Exposure 1 WHMIS 2015 • Specific Target Organ Toxicity Repeated Exposure 1

Potential Health Effects

Inhalation

Acute (Immediate)

- Exposure to dust may cause irritation. Processes such as cutting, grinding, crushing, or impact may result in generation of excessive amounts of airborne dusts in the workplace. Nuisance dust may affect the lungs but reactions are typically reversible.

Chronic (Delayed)

- No data available

Skin

Acute (Immediate)

- Exposure to dust may cause mechanical irritation. Exposure to hot melted material can cause thermal burns.

Chronic (Delayed)

- No data available.

Eye

Acute (Immediate)

- Exposure to dust may cause mechanical irritation. Excessive concentrations of nuisance dust in the workplace may reduce visibility and may cause unpleasant deposits in eyes.

Chronic (Delayed)

- No data available.

Ingestion

Acute (Immediate)

- Excessive concentrations of nuisance dust in the workplace may cause mechanical irritation to mucous membranes.

Chronic (Delayed)

- No data available

Other

Chronic (Delayed)

- Repeated and prolonged exposure may cause damage to the liver and kidney.

Key to abbreviations

LC = Lethal Concentration

TC = Toxic Concentration

Toxicity

- Non-mandatory section - information about this substance not compiled for this reason.

Persistence and degradability

- Non-mandatory section - information about this substance not compiled for this reason.

Bioaccumulative potential

- Non-mandatory section - information about this substance not compiled for this reason.

Mobility in Soil

- Non-mandatory section - information about this substance not compiled for this reason.

Other adverse effects

- Non-mandatory section - information about this substance not compiled for this reason.

Waste treatment methods

Product waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

	UN number	UN proper shipping name	Transport hazard class(es)	Packing group	Environmental hazards
DOT	Not Applicable	Not Regulated	Not Applicable	Not Applicable	NDA
TDG	Not Applicable	Not Regulated	Not Applicable	Not Applicable	NDA

Special precautions for user • None specified.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code • No data available

Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications • Chronic, Pressure(Sudden Release of)

Inventory				
Component	CAS	Canada DSL	Canada NDSL	TSCA
Hydrogen sulfide	7783-06-4	Yes	No	Yes
Residues (petroleum), solvent-extd. vacuum distilled atm. residuum	70913-85-8	Yes	No	Yes
Sulfur	7704-34-9	Yes	No	Yes

Canada

- Hydrogen sulfide 7783-06-4 A, B1, D1A, D2B
- Sulfur 7704-34-9 B4
- Residues (petroleum), solvent-extd. vacuum distilled atm. residuum 70913-85-8 Not Listed

Canada - WHMIS 1988 - Ingredient Disclosure List

- Hydrogen sulfide 7783-06-4 1 %
- Sulfur 7704-34-9 Not Listed
- Residues (petroleum), solvent-extd. vacuum distilled atm. residuum 70913-85-8 Not Listed

- Hydrogen sulfide 7783-06-4 Not Listed
- Sulfur 7704-34-9 Not Listed
- Residues (petroleum), solvent-extd. vacuum distilled atm. residuum 70913-85-8 Not Listed

United States

Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

- Hydrogen sulfide 7783-06-4 1500 lb TQ
- Sulfur 7704-34-9 Not Listed
- Residues (petroleum), solvent-extd. vacuum distilled atm. residuum 70913-85-8 Not Listed

• Hydrogen sulfide	7783-06-4	Not Listed
• Sulfur	7704-34-9	Not Listed
• Residues (petroleum), solvent-extd. vacuum distilled atm. residuum	70913-85-8	Not Listed

Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

• Hydrogen sulfide	7783-06-4	Not Listed
• Sulfur	7704-34-9	Not Listed
• Residues (petroleum), solvent-extd. vacuum distilled atm. residuum	70913-85-8	Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

• Hydrogen sulfide	7783-06-4	100 lb final RQ; 45.4 kg final RQ
• Sulfur	7704-34-9	Not Listed
• Residues (petroleum), solvent-extd. vacuum distilled atm. residuum	70913-85-8	Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

• Hydrogen sulfide	7783-06-4	Not Listed
• Sulfur	7704-34-9	Not Listed
• Residues (petroleum), solvent-extd. vacuum distilled atm. residuum	70913-85-8	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

• Hydrogen sulfide	7783-06-4	100 lb EPCRA RQ
• Sulfur	7704-34-9	Not Listed
• Residues (petroleum), solvent-extd. vacuum distilled atm. residuum	70913-85-8	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

• Hydrogen sulfide	7783-06-4	500 lb TPQ
• Sulfur	7704-34-9	Not Listed
• Residues (petroleum), solvent-extd. vacuum distilled atm. residuum	70913-85-8	Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

• Hydrogen sulfide	7783-06-4	1.0 % de minimis concentration
• Sulfur	7704-34-9	Not Listed
• Residues (petroleum), solvent-extd. vacuum distilled atm. residuum	70913-85-8	Not Listed

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

• Hydrogen sulfide	7783-06-4	Not Listed
• Sulfur	7704-34-9	Not Listed
• Residues (petroleum), solvent-extd. vacuum distilled atm. residuum	70913-85-8	Not Listed

United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List

• Hydrogen sulfide	7783-06-4	Not Listed
• Sulfur	7704-34-9	Not Listed
• Residues (petroleum), solvent-extd. vacuum distilled atm. residuum	70913-85-8	Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

• Hydrogen sulfide	7783-06-4	Not Listed
• Sulfur	7704-34-9	Not Listed
• Residues (petroleum), solvent-extd. vacuum distilled atm. residuum	70913-85-8	Not Listed

• Hydrogen sulfide	7783-06-4	Not Listed
• Sulfur	7704-34-9	Not Listed
• Residues (petroleum), solvent-extd. vacuum distilled atm. residuum	70913-85-8	Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

• Hydrogen sulfide	7783-06-4	Not Listed
• Sulfur	7704-34-9	Not Listed
• Residues (petroleum), solvent-extd. vacuum distilled atm. residuum	70913-85-8	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

• Hydrogen sulfide	7783-06-4	Not Listed
• Sulfur	7704-34-9	Not Listed
• Residues (petroleum), solvent-extd. vacuum distilled atm. residuum	70913-85-8	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

• Hydrogen sulfide	7783-06-4	Not Listed
• Sulfur	7704-34-9	Not Listed
• Residues (petroleum), solvent-extd. vacuum distilled atm. residuum	70913-85-8	Not Listed

Revision Date

- 21/June/2017

Preparation Date

- 21/February/2017

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Key to abbreviations

NDA = No Data Available