

## Safety Data Sheet



### Section 1: Identification

#### Product identifier

- Product Name** • **Petroleum Pitch, Liquid**
- Synonyms** • Pitch; Residuum Vacuum; Vac Bottoms; Vacuum Residuum; Vacuum Tower Bottoms; VTBs
- SDS Number/Grade** • 0107NOR002

#### 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
- Telephone (General)** • 651.459.9771

#### Emergency telephone number

- Chemtrec** • 800-424-9300

### Section 2: Hazard Identification

#### 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

#### Label elements

**OSHA HCS 2012**

**DANGER**



- Hazard statements** • Causes damage to organs through prolonged or repeated exposure.

#### 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

**Label elements**

**WHMIS 2015**

**DANGER**



**Hazard statements** • Causes damage to organs through prolonged or repeated exposure.

**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).

**Section 3 - Composition/Information on Ingredients**

**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
Sulfur	CAS:7704-34-9	0% TO 3%	Ingestion/Oral-Rat LD50 • >5000 mg/kg Skin-Rat LD50 • >5000 mg/kg	OSHA HCS 2012: Flam. Sol. 2; Comb. Dust; STOT SE 3: Resp. Irrit. (Inhl); STOT RE 1 (Kidney, Liver / Inhl) WHMIS 2015: Flam. Sol. 2; Comb. Dust; STOT SE 3: Resp. Irrit. (Inhl); STOT RE 1	NDA

				(Kidney, Liver / Inhl)	
Hydrogen sulfide	CAS:7783-06-4	0% TO 0.01%	Inhalation-Rat LC50 • 444 ppm 4 Hour(s)	OSHA HCS 2012: Exposure limit	NDA

## Section 4: First-Aid Measures

### 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. Get medical attention if symptoms occur.

#### Skin

- For contact with molten product, do not remove contaminated clothing or solidified material from the skin. For thermal burns, cool affected areas as quickly as possible by drenching or immersing in water. Wash skin with soap and water. Take off contaminated clothing and wash before reuse. If skin irritation occurs: Get medical advice/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

- Rinse mouth. Do NOT induce vomiting. Do not give anything by mouth to an unconscious person. Obtain medical attention immediately if ingested.

### 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.

## Section 5: Fire-Fighting Measures

### Extinguishing media

- Suitable Extinguishing Media** • For small fires, Class B fire extinguishing media such as CO<sub>2</sub>, dry chemical, foam (AFFF/ATC) or water spray.  
For large fires, water spray, fog or foam (AFFF/ATC)

#### Unsuitable Extinguishing Media

- Avoid using straight water streams.

### Special hazards arising from the substance or mixture

#### Unusual Fire and Explosion Hazards

- This product is not a combustible material per the OSHA Hazard Communication Standard, but will ignite and burn at temperatures exceeding the flash point.

#### Hazardous Combustion Products

- When heated this material may vent toxic levels of hydrogen sulfide (H<sub>2</sub>S) vapors.

### Advice for firefighters

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

## Section 6 - Accidental Release Measures

### 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

- Keep unauthorized personnel away. Stay upwind.

### Environmental precautions

- Avoid run off to waterways and sewers.

## Methods and material for containment and cleaning up

### Containment/Clean-up Measures

- Stop leak if you can do it without risk.  
SMALL SPILLS: Take up with sand or other non-combustible absorbent material and place into containers for later disposal.  
LARGE SPILLS: Dike far ahead of liquid spill for later disposal.

## Section 7 - Handling and Storage

### Precautions for safe handling

#### Handling

- Use only with adequate ventilation. When heated this material may vent toxic levels of hydrogen sulfide (h<sub>2</sub>s) vapors that accumulate in the vapor spaces of storage and transport compartments. Wear appropriate personal protective equipment. Do not breathe the mist, vapours and/or spray. 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.

## Section 8 - Exposure Controls/Personal Protection

### 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 <sup>3</sup> 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

- Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

#### Personal Protective Equipment

##### Respiratory

- In case of insufficient ventilation, wear suitable respiratory equipment.

##### Eye/Face

- Goggles and faceshield when handling hot material.

##### 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

NIOSH = National Institute of Occupational Safety and Health

OSHA = Occupational Safety and Health Administration

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

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

## Section 9 - Physical and Chemical Properties

## Information on Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Light to dark brown viscous liquid with rotten egg odor.
Color	Light to dark brown.	Odor	Rotten egg.
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	> 500 °F(> 260 °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		

## Section 10: Stability and Reactivity

### 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.

## Section 11 - Toxicological Information

### Information on toxicological effects

Components	
	<p><b>Acute Toxicity:</b> Inhalation-Mammal LC50 • 1660 mg/m<sup>3</sup>;  <b>Multi-dose Toxicity:</b> Inhalation-Rat TCLo • 1.76 mg/m<sup>3</sup> 4 Hour(s) 15 Day(s)-Intermittent; <i>Liver</i>.<b>Other changes:</b> <i>Kidney, Ureter,</i></p>

Sulfur (0% TO 3%)	7704- 34-9	<i>and Bladder:Changes in tubules (including acute renal failure, acute tubular necrosis)</i> ; Inhalation-Rat TCLo • 1.76 mg/m <sup>3</sup> 4 Hour(s) 30 Day(s)-Intermittent; <i>Liver:Hepatitis (hepatocellular necrosis), diffuse</i> ; <i>Kidney, Ureter, and Bladder:Changes in tubules (including acute renal failure, acute tubular necrosis)</i> ; Inhalation-Rat TCLo • 12.68 mg/m <sup>3</sup> 4 Hour(s) 15 Day(s)-Intermittent; <i>Liver:Hepatitis (hepatocellular necrosis), diffuse</i> ; <i>Kidney, Ureter, and Bladder:Changes in tubules (including acute renal failure, acute tubular necrosis)</i>
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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)**
  - Contact with heated material may cause a thermal burn.
- Chronic (Delayed)**
  - No data available.

### Skin

- Acute (Immediate)**
  - Contact with heated material may cause thermal burns.
- Chronic (Delayed)**
  - No data available.

### Eye

- Acute (Immediate)**
  - Contact with heated material may cause thermal burns.
- Chronic (Delayed)**
  - No data available.

### Ingestion

- Acute (Immediate)**
  - Ingestion can produce damage (thermal burns) to tissues of the gastrointestinal tract.
- 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

**Section 12 - Ecological Information****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.

**Section 13 - Disposal Considerations****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.

**Section 14 - Transport Information**

	UN number	UN proper shipping name	Transport hazard class(es)	Packing group	Environmental hazards
DOT	UN3257	Elevated Temperature Material Liquid n.o.s. (contains petroleum distillates)	9	III	NDA
TDG	UN3257	Elevated Temperature Material Liquid n.o.s. (contains petroleum distillates)	9	III	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**Section 15 - Regulatory Information****Safety, health and environmental regulations/legislation specific for the substance or mixture**

**SARA Hazard Classifications • Chronic**

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**

Labor			
Canada - WHMIS 1988 - Classifications of Substances			
• 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	

Environment			
Canada - CEPA - Priority Substances 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	

**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	
U.S. - OSHA - Specifically Regulated Chemicals			
• 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

**U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)**

• 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

## Section 16 - Other Information

**Revision Date**

- 22/June/2017

**Preparation Date**

- 21/February/2017

**Disclaimer/Statement of Liability**

- The information and recommendations contained herein are based upon tests believed to be reliable. However, Northern Tier Energy does not guarantee their accuracy or completeness nor shall any of this information constitute a warranty, whether expressed or implied, as to the safety of the goods, the merchantability of the goods, or the fitness of the goods for a particular purpose. Adjustment to conform to actual conditions of usage maybe required. Northern Tier Energy assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied.

**Key to abbreviations**

NDA = No Data Available