



Safety Data Sheet

Section 1: Identification

Product identifier

- Product Name** • **Petroleum Asphalt**
- Synonyms** • Asphalt Cement (ACs); Asphalt Flux; Penetration Grade Asphalts (Pen); Recycling Agents (RAs); Roofing Flux
- CAS Number** • 8052-42-4
- SDS Number/Grade** • 0010NOR001

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

- Recommended use** • Consult manufacturer for the recommended product use

Details of the supplier of the safety data sheet

- Manufacturer** • Northern Tier Energy
 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** • Skin Irritation 2
 Specific Target Organ Toxicity Repeated Exposure 1

Label elements

OSHA HCS 2012

DANGER



- Hazard statements** • Causes skin irritation
 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.
Wear protective gloves/protective clothing/eye protection/face protection.

- Response** • If on skin: Wash with plenty of water .
Specific treatment, see supplemental first aid information.
Take off contaminated clothing and wash before reuse.
If skin irritation occurs: Get medical advice/attention.
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

Classification of the substance or mixture

- WHMIS**
- Other Toxic Effects - D2A
 - Other Toxic Effects - D2B

Label elements

WHMIS



- Other Toxic Effects - D2A
- Other Toxic Effects - D2B

Other hazards

WHMIS

- 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
Asphalt	CAS:8052-42-4	99% TO 100%	Ingestion/Oral-Rat LD50 • >5000 mg/kg Inhalation-Rat LC50 • >94.4 mg/m ³	OSHA HCS 2012: Skin Irrit. 2; STOT RE 1 (Kidney, Lungs, Liver);	NDA
Sulfur [0% TO 5%]	CAS:7704-34-9	0% TO 5%	NDA	OSHA HCS 2012: Flam. Sol. 1; STOT SE 3: Resp. Irrit.; STOT RE 1 (Kidney, Lungs, Liver);	NDA

Hydrogen sulfide [0% TO 0.1%]	CAS:7783-06-4	0% TO 0.1%	Inhalation-Rat LC50 • 444 ppm 4 Hour(s)	OSHA HCS 2012: Flam. Gas 1; Press. Gas - Comp.; Eye Irrit. 2; Acute Tox. 2 (Inhl); STOT SE 3; Resp. Irrit.;	NDA
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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**
- 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**
- 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 CO₂, 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**
- No data available.

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. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. Do not cut, drill, grind or weld on empty containers since they may contain explosive residues. Wear appropriate personal protective equipment. Do not breathe 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/m3 Ceiling (10 min)	20 ppm Ceiling
	STELs	5 ppm STEL	Not established	Not established
	TWAs	1 ppm TWA	Not established	Not established
Asphalt (8052-42-4)	TWAs	0.5 mg/m3 TWA (fume, inhalable fraction, as benzene soluble aerosol)	Not established	Not established
	Ceilings	Not established	5 mg/m3 Ceiling (fume, 15 min)	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 impermeable gloves (e.g., nitrile, viton, tyvek/saranex 23)

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	A black-brown solid or semi-solid with tar odor.
Color	Black-brown	Odor	Tar
Odor Threshold	No data available		
General Properties			
Boiling Point	> 700 F(> 371.1111 C)	Melting Point/Freezing Point	115 to 199 F(46.1111 to 92.7778 C)
Decomposition Temperature	No data available	pH	Neutral
Specific Gravity/Relative Density	0.95 to 1.13 Water=1	Density	7.9 to 9.4 lbs/gal
Water Solubility	Negligible < 0.1 %	Viscosity	No data available
Volatility			
Vapor Pressure	No data available	Vapor Density	No data available
Evaporation Rate	No data available	Volatiles (Wt.)	0 %
Volatiles (Vol.)	0 %		
Flammability			
Flash Point	500 to 600 F(260 to 315.5556 C)	UEL	6 %
LEL	1 %	Autoignition	905 F(485 C)
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

- Combustion produces toxic oxides of sulfur, carbon monoxide, sulfur dioxide, hydrogen sulfide and hydrocarbons.

Section 11 - Toxicological Information

Information on toxicological effects

Components	
	Acute Toxicity: Ingestion/Oral-Rat LD50 • >5000 mg/kg; <i>Gastrointestinal:Hypermotility, diarrhea</i> ; Inhalation-Rat

Asphalt (99% TO 100%)	8052-42-4	LC50 • >94.4 mg/m ³ ; Mutagen: Micronucleus test • Unreported Route-Rat • Other Cell Type • 57.8 µg/L; Tumorigen / Carcinogen: Skin-Mouse TDLo • 905 g/kg 2 Year(s)-Intermittent; <i>Tumorigenic:Neoplastic by RTECS criteria; Lungs, Thorax, or Respiration:Tumors; Skin and Appendages:Other:Tumors</i>
Sulfur (0% TO 5%)	7704-34-9	Acute Toxicity: Inhalation-Mammal LC50 • 1660 mg/m ³ ; Irritation: Eye-Human • 8 ppm; Multi-dose Toxicity: Inhalation-Rat TCLo • 1.76 mg/m ³ 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>
Hydrogen sulfide (0% TO 0.1%)	7783-06-4	Acute Toxicity: Inhalation-Rat LC50 • 444 ppm 4 Hour(s); Irritation: Eye-Human • 0.000125 ppm 5 Hour(s); Reproductive: Inhalation-Rat TCLo • 10 mg/m ³ (48D pre/1-22D preg); <i>Reproductive Effects:Effects on Fertility:Pre-implantation mortality; Reproductive Effects:Effects on Fertility:Post-implantation mortality; Reproductive Effects:Specific Developmental Abnormalities:Urogenital system</i>

GHS Properties	Classification
Respiratory sensitization	OSHA HCS 2012 • No data available
Serious eye damage/Irritation	OSHA HCS 2012 • No data available
Acute toxicity	OSHA HCS 2012 • No data available
Aspiration Hazard	OSHA HCS 2012 • No data available
Carcinogenicity	OSHA HCS 2012 • No data available
Skin corrosion/Irritation	OSHA HCS 2012 • Skin Irritation 2
Skin sensitization	OSHA HCS 2012 • No data available
STOT-RE	OSHA HCS 2012 • Specific Target Organ Toxicity Repeated Exposure 1
STOT-SE	OSHA HCS 2012 • No data available
Toxicity for Reproduction	OSHA HCS 2012 • No data available
Germ Cell Mutagenicity	OSHA HCS 2012 • No data available

Potential Health Effects

Inhalation

Acute (Immediate)

- Hydrogen sulfide can cause respiratory paralysis and death, depending on the concentration and duration of exposure. Do not rely on ability to smell vapors, since loss of smell rapidly occurs. Effects of overexposure include irritation of the nose and throat, nausea, vomiting, diarrhea, abdominal pain and signs of nervous system depression (e.g. headache, drowsiness, dizziness, loss of coordination and fatigue), irregular heartbeats, pulmonary edema, weakness and convulsions.

Chronic (Delayed)

- No data available.

Skin

Acute (Immediate)

- Causes skin irritation.

Chronic (Delayed)

- No data available.

Eye

Acute (Immediate)

- Contact with heated material may cause thermal burns. May cause irritation.

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)
Carcinogenic Effects**

- Repeated and prolonged exposure may cause damage to the lungs, liver, kidney.
- This material does contain a component that may cause cancer, however this material as a whole is not classified as a carcinogen.

Carcinogenic Effects		
	CAS	IARC
Petroleum Asphalt	8052-42-4	Group 2B-Possible Carcinogen
Asphalt	8052-42-4	Group 2B-Possible Carcinogen

Key to abbreviations

- LC = Lethal Concentration
- LD = Lethal Dose
- TC = Toxic Concentration
- TD = Toxic Dose

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 liquid, n.o.s.	9	III	NDA
TDG	UN3257	ELEVATED TEMPERATURE LIQUID, N.O.S.	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 • Acute, Chronic

Inventory				
Component	CAS	Canada DSL	Canada NDSL	TSCA
Asphalt	8052-42-4	Yes	No	Yes
Hydrogen sulfide	7783-06-4	Yes	No	Yes
Sulfur	7704-34-9	Yes	No	Yes

Canada

Labor

Canada - WHMIS - Classifications of Substances

- Asphalt 8052-42-4 Not Listed
- Hydrogen sulfide 7783-06-4 A, B1, D1A, D2B
- Sulfur 7704-34-9 B4

Canada - WHMIS - Ingredient Disclosure List

- Asphalt 8052-42-4 Not Listed
- Hydrogen sulfide 7783-06-4 1 %
- Sulfur 7704-34-9 Not Listed

Environment

Canada - CEPA - Priority Substances List

- Asphalt 8052-42-4 Not Listed
- Hydrogen sulfide 7783-06-4 Not Listed
- Sulfur 7704-34-9 Not Listed

United States

Labor

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

- Asphalt 8052-42-4 Not Listed
- Hydrogen sulfide 7783-06-4 1500 lb TQ
- Sulfur 7704-34-9 Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

- Asphalt 8052-42-4 Not Listed
- Hydrogen sulfide 7783-06-4 Not Listed
- Sulfur 7704-34-9 Not Listed

Environment

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

- Asphalt 8052-42-4 Not Listed
- Hydrogen sulfide 7783-06-4 Not Listed
- Sulfur 7704-34-9 Not Listed

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

• Asphalt	8052-42-4	Not Listed
• Hydrogen sulfide	7783-06-4	100 lb final RQ; 45.4 kg final RQ
• Sulfur	7704-34-9	Not Listed

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

• Asphalt	8052-42-4	Not Listed
• Hydrogen sulfide	7783-06-4	Not Listed
• Sulfur	7704-34-9	Not Listed

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

• Asphalt	8052-42-4	Not Listed
• Hydrogen sulfide	7783-06-4	100 lb EPCRA RQ
• Sulfur	7704-34-9	Not Listed

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

• Asphalt	8052-42-4	Not Listed
• Hydrogen sulfide	7783-06-4	500 lb TPQ
• Sulfur	7704-34-9	Not Listed

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

• Asphalt	8052-42-4	Not Listed
• Hydrogen sulfide	7783-06-4	1.0 % de minimis concentration
• Sulfur	7704-34-9	Not Listed

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

• Asphalt	8052-42-4	Not Listed
• Hydrogen sulfide	7783-06-4	Not Listed
• Sulfur	7704-34-9	Not Listed

United States - California

Environment

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

• Asphalt	8052-42-4	Not Listed
• Hydrogen sulfide	7783-06-4	Not Listed
• Sulfur	7704-34-9	Not Listed

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

• Asphalt	8052-42-4	Not Listed
• Hydrogen sulfide	7783-06-4	Not Listed
• Sulfur	7704-34-9	Not Listed

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

• Asphalt	8052-42-4	Not Listed
• Hydrogen sulfide	7783-06-4	Not Listed
• Sulfur	7704-34-9	Not Listed

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

• Asphalt	8052-42-4	Not Listed
• Hydrogen sulfide	7783-06-4	Not Listed
• Sulfur	7704-34-9	Not Listed

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

• Asphalt	8052-42-4	Not Listed
• Hydrogen sulfide	7783-06-4	Not Listed
• Sulfur	7704-34-9	Not Listed

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

• Asphalt	8052-42-4	Not Listed
• Hydrogen sulfide	7783-06-4	Not Listed
• Sulfur	7704-34-9	Not Listed

Section 16 - Other Information

Revision Date

- 02/November/2015

Preparation Date

- 30/November/2010

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Key to abbreviations

NDA = No data available