

SAFETY DATA SHEET



PERFORMANCE GRADE ASPHALT

DENV00000089

Version 11.0

Revision Date 2019/03/08

Print Date 2019/03/08

SECTION 1. IDENTIFICATION

- Product name : PERFORMANCE GRADE ASPHALT
- Synonyms : PG 52-34, PG 58-28, PG 58-28 W/ WMA (WARM MIX ADDITIVE)0.2-1.0%, PG 58-34, PG 58-34 W/ ANTISTRIP 0.2-1.0%, PG 58-34 W/ WMA 0.2-1.0%, PG 58-40, PG 64-22, PG 64-22 W/ WMA 0.2-1.0%, PG 64-28, PG 64-28 W/ ANTISTRIP 0.2-1.0%, PG 64-28 W/ WMA 0.2-1.0%, PG 64-34, PG 64-34 W/ ANTISTRIP 0.2-1.0%, PG 64-34 W/ WMA 0.2-1.0%, PG 70-28, PG 70-28 W/ ANTISTRIP 0.2-1.0%, PG 70-28 W/ WMA 0.2-1.0%, PG 76-28, PG 76-28 W/ ANTISTRIP 0.2-1.0%, PG 76-28 W/ WMA 0.2-1.0%, POLYMER MODIFIED EMULSION BASE (PMEB) 206, PMEB 203, PG 70-34, PG 70-28 RCI, PG 46-40, PG 46-34, PG 58-22, PG 70-22, PG 76-22, PG 82-22, PG 64-16, PG 64-10, PG 46-34 W/ ANTISTRIP 0.2-1.0%, PG 46-40 W/ ANTISTRIP 0.2-1.0%, PG 58-40 W/ ANTISTRIP 0.2-1.0%, PG 52-34 W/ ANTISTRIP 0.2-1.0%, PG 70-34 W/ ANTISTRIP 0.2-1.0%, PG 58-22 W/ ANTISTRIP 0.2-1.0%, PG 70-22 W/ ANTISTRIP 0.2-1.0%, PG 76-22 W/ ANTISTRIP 0.2-1.0%, PG 82-22 W/ ANTISTRIP 0.2-1.0%, PG 64-16 W/ ANTISTRIP 0.2-1.0%, PG 64-10 W/ ANTISTRIP 0.2-1.0%, PG 46-40 W/ WMA 0.2-1.0%, PG 58-40 W/ WMA 0.2-1.0%, PG 46-34 W/ WMA 0.2-1.0%, PG 52-34 W/ WMA 0.2-1.0%, PG 70-34 W/ WMA 0.2-1.0%, PG 58-22 W/ WMA 0.2-1.0%, PG 70-22 W/ WMA 0.2-1.0%, PG 76-22 W/ WMA 0.2-1.0%, PG 82-22 W/ WMA 0.2-1.0%, PG 64-16 W/ WMA 0.2-1.0%, PG 64-10 W/ WMA 0.2-1.0%, PG 58E-34, PG 58E-34 W/ANTISTRIP 0.2-1.0%, PG 58E-34 W/WMA (WARM MIX ADDITIVE) 0.2-1.0%, PG 58H-34, PG 58H-34 W/ANTISTRIP 0.2-1.0%, PG 58H-34 W/WMA (WARM MIX ADDITIVE) 0.2-1.0%, PG 58S-34, PG 58S-34 W/ANTISTRIP 0.2-1.0% , PG 58V-34, PG 58V-34 W/ANTISTRIP 0.2-1.0%, PG 58V-34 W/WMA (WARM MIX ADDITIVE) 0.2-1.0% , PG 64-28NV, PG 64-28NV W/ANTISTRIP 0.2-1.0%, PG 64-28NV W/WMA (WARM MIX ADDITIVE) 0.2-1.0%, PG 76-22NV, PG 76-22NV W/ANTISTRIP 0.2-1.0% PG 76-22NV W/WMA (WARM MIX ADDITIVE) 0.2-1.0%
- Product code : 102977, 102986, 102985, 103011, 102963, 102962, 102961, 102960, 102958, 102954, 102950, 102946, 102942, 102938, 102934, 102929, 102925, 102966, 102956, 102952, 102948, 102944, 102940, 102936, 102932, 102927, 102923, 102964, 102957, 102953, 102949, 102945, 102941, 102937, 102933, 102928, 102924, 102965, 102959, 102955, 102951, 102947, 102943, 102939, 102935, 102930, 102926, 102967, 102838, 102836, 102771, 102672, 102673, 102671, 102670, 102669, 102659, 102587, 102523, 102522, 102521, 102520, 102518, 102517, 102516, 102515, 102513, 102512, 102511, 102492, 102494, 102497, 102501, 102504, 102505, 102506, 102507, 102508, 102509, 102510, 102496, 102499, 102495, 102491,

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102086, 101362, 101402, 101401, 101390, 101389, 101388,
101387, 101385, 101391, 101352, 101338, 101328, 101327,
101325, 101324, 101311

Manufacturer or supplier's details

Suncor Energy (U.S.A.)
5801 Brighton Blvd.
Commerce City Colorado 80022
United States

Emergency telephone number

Suncor Energy: +1 403-296-3000;
CHEMTREC Transport Emergency: 1-800-424-9300 or 1-703-527-3887 (call collect);
Poison Control Centre: Consult local telephone directory for emergency number(s).

Recommended use of the chemical and restrictions on use

Recommended use : Asphalt

Prepared by : Product Safety: +1 905-804-4752

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance	Liquid at elevated temperatures
Colour	Black or dark brown
Odour	musty, "Rotten egg" if H ₂ S present, but odour is an unreliable warning, since it may deaden the sense of smell.

GHS Classification

Acute toxicity (Inhalation) : Category 4
Skin irritation : Category 2
Eye irritation : Category 2A
Carcinogenicity : Category 2
Specific target organ toxicity - repeated exposure : Category 2 (Liver)

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GHS label elements

Hazard pictograms



Signal word

: Warning

Hazard statements

: Causes skin irritation.
Causes serious eye irritation.
Harmful if inhaled.
Suspected of causing cancer.
May cause damage to organs (Liver) through prolonged or repeated exposure.

Precautionary statements

: **Prevention:**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Wash skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
IF ON SKIN: Wash with plenty of soap and water.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/ attention.
If skin irritation occurs: Get medical advice/ attention.
If eye irritation persists: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.
Storage:
Store locked up.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Potential Health Effects

Primary Routes of Entry

: Inhalation
Ingestion
Eye contact
Skin contact

Aggravated Medical Condition

: None known.

Other hazards

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Possible burns as a result of skin contact with hot product.
Possible burns as a result of eye contact with hot product.
Fumes from heated material can cause irritation.
Vapor or fumes may cause watering of the eyes.
Continued exposure to sunlight can result in more serious skin problems including pigmentation, skin eruptions and possible skin cancers.
The effect is similar in appearance to an exaggerated sunburn and is temporary in duration if exposure is discontinued.

IARC Group 2B: Possibly carcinogenic to humans
Asphalt 8052-42-4

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Concentration
Asphalt	8052-42-4	50 - 100 %
fuel oil no. 2	68476-30-2	<= 20 %
sulfur	7704-34-9	0 - 2 %
hydrogen sulphide	7783-06-4	0 - 1 %

All concentrations are in percent by weight.

SECTION 4. FIRST AID MEASURES

If inhaled : Move to fresh air.
Artificial respiration and/or oxygen may be necessary.
Seek medical advice.

In case of skin contact : Cover wound with sterile dressing.
Cool melted product on skin with plenty of water. Do not remove solidified product.
Contaminated clothing may be removed provided it is not adhering to the skin.
Immediate medical attention is required.

In case of eye contact : For contact with molten material, gently open eyes and flush affected eye(s) with cold, not icy, water.
Obtain medical attention.

If swallowed : First aid is not normally required for the solid material; however, if molten material is swallowed, seek immediate medical

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attention.

- Most important symptoms and effects, both acute and delayed : Respiratory, skin and eye irritation; nausea; cancer. In high doses hydrogen sulphide may produce pulmonary edema and respiratory depression or paralysis. Exposure to very high levels of hydrogen sulphide (> 500 ppm) will result in unconsciousness and death. Long term inhalation of vapors or fumes may cause chronic bronchitis and pneumonitis. Long term skin exposure can increase sensitivity to the sun and cause discoloration. Frequent or prolonged contact may irritate the skin and cause inflammation (dermatitis).
- Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Dry chemical
Carbon dioxide (CO₂)
Foam
- Unsuitable extinguishing media : No information available.
- Specific hazards during fire-fighting : Cool closed containers exposed to fire with water spray.
- Hazardous combustion products : Carbon oxides (CO, CO₂), nitrogen oxides (NO_x), sulphur oxides (SO_x), smoke and irritating vapours as products of incomplete combustion.
- Further information : Prevent fire extinguishing water from contaminating surface water or the ground water system.
- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : For personal protection see section 8.
Ensure adequate ventilation.
Evacuate personnel to safe areas.
- Environmental precautions : If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Prevent further leakage or spillage if safe to do so.
Remove all sources of ignition.

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Clean up promptly by sweeping or vacuum.
Non-sparking tools should be used.
Ensure adequate ventilation.
Contact the proper local authorities.

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
In case of insufficient ventilation, wear suitable respiratory equipment.
Avoid contact with skin, eyes and clothing.
Do not ingest.
Keep away from heat and sources of ignition.
Keep container closed when not in use.
Hydrogen sulphide may accumulate in enclosed spaces.
Open tank car hatches with caution.
- Conditions for safe storage : Store in original container.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep in a dry, cool and well-ventilated place.
Keep in properly labelled containers.
To maintain product quality, do not store in heat or direct sunlight.
Hydrogen sulphide may be released and collect in the vapor space of process vessels and storage tanks.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Asphalt	8052-42-4	TWA (Fume, inhalable fraction)	0.5 mg/m ³ (benzene soluble aerosol)	ACGIH
		C (Fumes)	5 mg/m ³	NIOSH REL
		PEL (Fumes)	5 mg/m ³	CAL PEL
hydrogen sulphide	7783-06-4	TWA	1 ppm	ACGIH
		STEL	5 ppm	ACGIH
		C	10 ppm 15 mg/m ³	NIOSH REL
		CEIL	20 ppm	OSHA Z-2
		Peak	50 ppm (10 minutes once only if no other measured exposure occurs)	OSHA Z-2
		TWA	10 ppm 14 mg/m ³	OSHA P0

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		STEL	15 ppm 21 mg/m3	OSHA P0
		STEL	15 ppm 21 mg/m3	CAL PEL
		C	50 ppm	CAL PEL
		PEL	10 ppm 14 mg/m3	CAL PEL

Engineering measures : Use adequate ventilation and/or engineering controls to prevent exposure to gas or vapors.
Ensure that eyewash station and safety shower are proximal to the work-station location.

Personal protective equipment

Respiratory protection : Concentration in air determines protection needed.
Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
If hydrogen sulphide is present full-face supplied air respirator with escape bottle or SCBA is required.

Filter type : organic vapour cartridge or canister with a dust, fume or mist filter (R, or P series) may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited.

Hand protection

Remarks : When handling hot material, use heat resistant gloves.
Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eye protection : Wear safety glasses with side shields to prevent eye contact.

Skin and body protection : Wear long sleeve clothing or coveralls.
Avoid contact with skin.

Protective measures : Wash contaminated clothing before re-use.

Hygiene measures : Remove and wash contaminated clothing and gloves, including the inside, before re-use.
Wash face, hands and any exposed skin thoroughly after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid at elevated temperatures

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Colour	: Black or dark brown
Odour	: musty, "Rotten egg" if H ₂ S present, but odour is an unreliable warning, since it may deaden the sense of smell.
Odour Threshold	: No data available
pH	: No data available
Melting point/freezing point	: No data available
Boiling point	: No data available
Decomposition temperature	: No data available
Flash point	: > 230 °C (446 °F)
Fire Point	: No data available
Auto-Ignition Temperature	: No data available
Evaporation rate	: No data available
Flammability	: Low fire hazard. This material must be heated before ignition will occur. Hydrogen sulphide may be released if the product is overheated and may accumulate in the tank headspace or any other confined space.
Upper explosion limit	: not determined
Lower explosion limit	: not determined
Vapour pressure	: Based on water 13.33 hPa (25 °C / 77 °F)
Relative vapour density	: No data available
Relative density	: 0.8 - 1.2 Water = 1
Density	: 0.8 - 1.2 g/cm ³
Solubility(ies)	
Water solubility	: insoluble
Partition coefficient: n-octanol/water	: No data available
Viscosity	
Viscosity, dynamic	: < 3 Pa.s
Viscosity, kinematic	: > 20.5 cSt (40 °C / 104 °F)
Explosive properties	: Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Container explosion may occur under fire conditions or when heated.

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No dangerous reaction known under conditions of normal use.

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Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Hazardous polymerisation does not occur.
Conditions to avoid	: No data available
Incompatible materials	: Reactive with oxidising agents.
Hazardous decomposition products	: May release CO _x , NO _x , SO _x , H ₂ S, hydrocarbons, smoke and irritating vapours when heated to decomposition.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation
Ingestion
Eye contact
Skin contact

Acute toxicity

Product:

Acute oral toxicity	: Remarks: No data available
Acute inhalation toxicity	: Remarks: Harmful by inhalation.
Acute dermal toxicity	: Remarks: No data available

Components:

Asphalt:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg,

fuel oil no. 2:

Acute oral toxicity : LD50 (Rat): 12,000 mg/kg,

sulfur:

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg,

hydrogen sulphide:

Acute inhalation toxicity : LC50 (Rat): 444 ppm
Exposure time: 4 h
Test atmosphere: gas

Skin corrosion/irritation

Product:

Remarks: Causes skin irritation.

Serious eye damage/eye irritation

Product:

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Remarks: Causes serious eye irritation.

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

Product:

Carcinogenicity - Assessment

Suspected of causing cancer.

Reproductive toxicity

Product:

Reproductive toxicity - Assessment

Based on available data, the classification criteria are not met.

STOT - single exposure

Product:

Remarks: No data available

STOT - repeated exposure

Product:

Remarks: May cause damage to organs through prolonged or repeated exposure.

No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish : Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

Toxicity to algae : Remarks: No data available

Toxicity to bacteria : Remarks: No data available

Persistence and degradability

Product:

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Biodegradability : Remarks: No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Contact waste disposal services.

Contaminated packaging : Contact local or business unit authorities for guidance on disposal of product.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR

Not regulated as a dangerous good

The product is regulated by UN3257 only when shipped in bulk/non-bulk packages at temperatures >212°F (100°).

SECTION 15. REGULATORY INFORMATION

The components of this product are reported in the following inventories:

TSCA

All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

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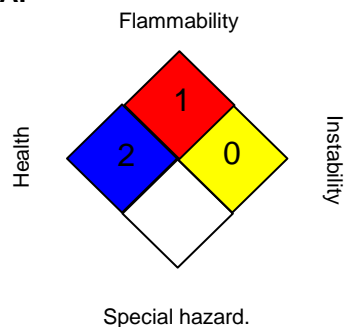
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SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	2*
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	G

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

For Copy of SDS : For Product Safety Information: 1 905-804-4752

Prepared by : Product Safety: +1 905-804-4752

Revision Date : 2019/03/08

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 a 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.