Hot Mix Asphalt

Flushing Asphalt LLC

SAFETY DATA SHEET

Revision #1: 03/07/2023

1. IDENTIFICATION

PRODUCT NAME:	Hot Mix Asphalt
SYNONYMS:	Blacktop; Asphaltic Concrete; Bituminous Concrete; Tarmac
RECOMMENDED USE:	Road Paving
USE RESTRICTIONS:	None.
SUPPLIER:	Flushing Asphalt LLC
ADDRESS:	120-01 31st Ave Flushing, NY 11354
TELEPHONE:	718-961-9288
EMERGENCY CONTACT:	Not classified as dangerous for supply/use. Please contact the supplier above during normal business hours.

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

OSHA HCS (29 CFR 1910.1200) / GHS Classification	Not classified as dangerous for supply/use.

Label elements

Hazard Symbol	None
Signal Word(s)	None
Hazard Statement(s)	None
Precautionary Statement(s)	None

Other hazards

Contact with hot ASPHALT PAVING MATERIALS causes skin burns. May cause eye irritation.
Fumes may cause upper respiratory irritation (nose & throat).
Skin contact may increase susceptibility to sunburn.
Poisonous hydrogen sulfide gas can accumulate in the head-spaceof containers of certain asphalt products.
Mechanical disruption (e.g., milling, cutting, chipping) of cured asphalt pavement may release crystalline silica dust from the aggregate.

Additional Information

Avoid breathing dust/fume/gas/mist/vapors/spray.
As necessary, Wear protective gloves/protective clothing/eye protection/face protection.
Wash hands and exposed skin after use.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Composition/information on ingredients	% wt.	CAS No.
Aggregate (crushed stone, sand, gravel, slag)	70 - 97	Various
Petroleum asphalt / bitumen^	3 - 7	8052-42-4
Reclaimed Asphalt Pavement (RAP)	0 - 25	Mixture
Reclaimed Asphalt Shingles (RAS)	0 - 10	Mixture
Polymers and Natural Rubbers	< 0.5	Various
Process oils (inherent in refined petroleum asphalt)	< 0.1	Various
Anti-strip or other amine-based additives	< 0.1	Various
Warm-mix additives	< 0.1	Various

Contains: <0.05% of 3 - 7 ring Polycyclic Aromatic Hydrocarbons (PAHs).
Other Substances in the product which may present a health or environmental hazard, or which have been assigned occupational exposure limits, are detailed below. Please see Section 8 of SDS for more details.

- Contains: <0.1% airborne crystalline silica (inherent in aggregate) and <0.1% hydrogen sulfide.
- Hydrogen sulfide gas can accumulate in the head space of containers of certain asphalt products.
- Heated product releases asphalt fume.

Additional Information - None

4. FIRST AID MEASURES

Description of first aid measures

Inhalation	Not normally required. Move person to fresh air. Apply artificial respiration if necessary. If symptoms persist, obtain medical
Skin Contact	Causes burns. Immediately cool skin where asphalt binder has adhered to skin. Allow asphalt binder which remains on the skin to fall off naturally. DO NOT REMOVE. If problem persist or
Eye Contact	Flush eyes with water for at least 15 minutes while holding eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation develops and persists, get medical attention
Ingestion	Not normally required. Do not induce vomiting. Do not give anything by mouth to an unconscious person. Get medical
Most important symptoms and effects, both acute and delayed	None known
Indication of any immediate medical attention and special treatment needed	None known

5. FIRE FIGHTING MEASURES

Extinguishing Media

-Suitable Extinguishing Media	Extinguish with carbon dioxide, dry chemical, foam or water spray.
-Unsuitable Extinguishing Media	None anticipated.

Special hazards arising from the substance or mixture	Combustion causes toxic fumes. Combustion products: Carbon monoxide, Carbon dioxide, Nitrogen oxides, Sulfur oxides
Advice for fire-fighters	A self-contained breathing apparatus and suitable protective clothing should be worn in fire conditions.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures	Avoid contact with skin and eyes.
Environmental precautions	Not normally required.
Methods and material for containment and cleaning up	Allow product to cool/solidify and pick up as a solid.
Reference to other sections	None
Additional Information	None.

7. HANDLING & STORAGE

Precautions for safe handling Avoid contact with skin and eyes.

Conditions for safe storage, including any incompatibilities

-Storage temperature	Store at temperatures not exceeding the product's
-Incompatible materials	Strong oxidizing agents.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters
Occupational Exposure Limits

SUBSTANCE.	CAS No.	(8hr TWA)		(STEL)		Note:
		PEL (OSHA) *	TLV (ACGIH)	PEL (OSHA)	TLV	
Asphalt fume	------	------	0.5 mg/m3 (I)	------	------	See below
Crystalline Silica (respirable particulate)	------	10 mg/m3 _____	0.025 mg/m3 ^	------	------	See below
Hydrogen sulfide	7783-06-4	------	1 ppm	20 ppm ceiling	5 ppm	50 ppm peak

(I) Inhalable benzene-soluble fraction; ^Suspected Human Carcinogen; *Refer to OSHA 29 CFR 1910.1000 & 29 CFR 1926.55; 8hr TWA = 8 hour time-weighted average; STEL = Short Term Exposure Limit.

Recommended monitoring method NIOSH 5042 (Asphalt Fume), NIOSH 7500 (Crystalline Silica), Electrochemical sensor (hydrogen sulfide).

Exposure controls
Appropriate engineering controls Use only outdoors or in a well-ventilated area.
Personal protective equipment

Eye/face protection	The following to be used as necessary: Safety Glasses
	
Skin protection (Hand protection/ Other)	The following to be used as necessary: Leather or thick textile gloves.
	
Respiratory protection	In case of inadequate ventilation wear respiratory protection. Use NIOSH approved respiratory protection. Air-purifying respirator with combination organic vapor cartridge / particulate filter may be sufficient. Check with protective equipment manufacturer's data.
	
Thermal hazards	Use gloves with insulation for thermal protection, when needed.
Environmental Exposure Controls	Do not discharge waste and/or cleaning water via public sewer system. Ensure waste is collected and contained.

9. PHYSICAL & CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Solid
Color.	Dark brown / Black
Odor	Asphalt / Bitumen
Odor Threshold (ppm)	Not available.
pH (Value)	Not available.
Melting Point (°C) / Freezing Point (°C)	Not available.
Boiling point/boiling range (°C):	> 371 (>700 ºF)
Flash Point (°C)	> 232 (> 450 ºF)
Evaporation Rate	Not available.
Flammability (solid, gas)	Not applicable.
Explosive Limit Ranges	Not applicable.
Vapor pressure (Pascal)	Not determined.
Vapor Density (Air=1)	Not determined.
Density (g/ml)	2.2 - 2.7
Solubility (Water)	Negligible
Solubility (Other)	Not known
Partition Coefficient (n-Octanol/water)	Not available.
Auto Ignition Point (°C)	Not available.
Decomposition Temperature (°C)	Not available.
Kinematic Viscosity (cSt) @ 40°C	Not available
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Other information	Not available.

10. STABILITY & REACTIVITY

Reactivity	Stable under normal conditions.
Chemical stability	Stable.

Possibility of hazardous reactions	May react violently with: Strong oxidizing agents
Conditions to avoid	Incompatible materials
Incompatible materials	Oxidizers
Hazardous decomposition product(s)	Combustion causes toxic fumes. Combustion products: Carbonmonoxide, Carbon dioxide, Nitrogen oxides, Sulfur oxides

11. TOXICOLOGICAL INFORMATION

Exposure routes: Inhalation, Skin Contact, Eye Contact

Information on toxicological effects

Acute toxicity	LD50 (rat): >5000 mg/kg bw
	LD50 (dermal): >2000 mg/kg bw
	LC50 (inhalation, fume): >94.4 mg/m3
Irritation/Corrosivity	May cause irritation to skin, eyes and respiratory system.
Sensitization	Not to be expected
Repeated dose toxicity	NOAEL(rat): 28 mg/m3
	LOAEL (rat): 149 mg/m3
Carcinogenicity	Not to be expected at typical road paving temperatures.

NTP	IARC	ACGIH	OSHA
No.	2B*	No.	No.

Mutagenicity	Not to be expected.
Reproductive toxicity	Not to be expected.

Other information

* IARC (2013, volume 103) identifies that "occupational exposures to straight-run bitumens and their emissions during road paving are possibly carcinogenic to humans (Group 2B)." However, classification as a carcinogen under OSHA 29 CFR 1910.1200 is not warranted given the absence of positive cancer findings in human epidemiological studies and in cancer studies with laboratory animals when exposed dermally or by inhalation to asphalt products or fume condensates that are typical of road paving applications. IARC (2013, volume 103) also identifies that "occupational exposures to oxidized bitumens and their emissions during roofing are probably carcinogenic to humans (Group 2A)." Roofing shingle are sometimes recycled into road paving asphalt mix. Emissions from oxidized bitumen, e.g., from shingles, at road paving temperatures are not expected to be qualitatively different than emissions from straight-run bitumens, and therefore would not warrant a carcinogen classification under OSHA 29 CFR 1910.1200.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Short term	LL50 (48 hour): >1000 mg/l (Fish)
	LL50 (48 hour): >1000 mg/L (Aquatic Invertebrates)
	EL50 (48 hour): >1000 mg/L (Aquatic Plants)
Long Term	No data
Persistence and degradability	The product is poorly biodegradable.
Bioaccumulative potential	The product has low potential for bioaccumulation.
Mobility in soil	The product has low mobility in soil.

Results of PBT and vPvB assessment	Not classified as PBT or vPvB.
Other adverse effects	None known.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods	Disposal should be in accordance with local, state or national legislation. Consult an accredited waste disposal contractor or the local authority for advice.
Additional Information	None known.

14. TRANSPORT INFORMATION

Ground or Water Domestic Voyage	Not regulated when transported below 240°C (464

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:
TSCA (Toxic Substance Control Act) - Inventory Status: All components listed or polymer exempt.
RCRA Hazardous Waste Number (40 CFR 261.33): None
US RCRA Hazard Class: Not applicable.
Designated Hazardous Substances and Reportable Quantities (40 CFR 302.4):

Chemical Name	CAS No.	Typical %wt.	RQ (Pounds)
None	-----	-----	-----

SARA 311/312 - Hazard Categories: None
☐ Fire ☐ Sudden Release ☐ Reactivity ☐ Immediate (acute) ☐ Chronic (delayed)

SARA 313 - Toxic Chemicals (40 CFR 372):

Chemical Name	CAS No.	Typical %wt.
None	-----	-----

SARA 302 - Extremely Hazardous Substances(40 CFR 355):

Chemical Name	CAS No.	Typical %wt.	TPQ (pounds)
None	-----	-----	-----

16. OTHER INFORMATION

Additional Information
The following sections contain revisions or new statements: 1-16.

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