



Product Name: Hot Mix Asphalt
Revision Date: June 10, 2015

Page 1 of 9

SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT

Product Name: Hot Mix Asphalt
Product Description: Asphalt Binder and Aggregates
Other means of Identification: Refer to delivery ticket
Product Code: Various
Intended Use: Road and Highway Paving

COMPANY IDENTIFICATION

Supplier: Syar Industries, Inc.
2301 Napa-Vallejo Highway
NAPA, CA 94558

24 Hour Health: 707-643-3261

SECTION 2 HAZARDS IDENTIFICATION

HAZARD NOT OTHERWISE CLASSIFIED (HNOC): None as defined under 29 CFR 1900.1200.

SIGNAL WORD: Danger

PHYSICAL / CHEMICAL HAZARDS

The major hazard associated with hot mix asphalt is their ability, when heated, to cause severe thermal burns. Fumes, mists or vapors may cause eye, skin or respiratory irritation. Contains or may release hydrogen sulfide gas (H₂S), which may accumulate in confined spaces. H₂S fumes and vapors may be harmful or fatal if inhaled. Avoid inhalation of dust generated from mechanical handling of hardened/dried material. Breathing silica containing dust for prolonged periods in the workplace can cause lung damage and lung disease called silicosis. Several scientific organizations have classified crystalline silica as causing lung cancer in humans. Silicosis and lung cancer can result in permanent injury or death.

HEALTH HAZARDS

The major hazard associated with asphalt mixes is their ability, when heated, to cause severe thermal burns. Avoid contact with eyes and skin. If the dried product is subjected to mechanical forces (such as demolition or asphalt recycling work), crystalline silica-containing dust particles can be generated. See Section 11 for additional information.

ENVIRONMENTAL HAZARDS

No significant hazards.

HAZARD PICTOGRAMS:





NOTE: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

This material is defined as a mixture.

Hazardous Substance(s) or Complex Substance(s) required for disclosure

Name	CAS#	Concentration*	GHS Hazard Codes
Aggregate	64742-65-0	>90	
Asphalt	8052-42-4	<10	
Silica, crystalline – Quartz	14808-60-7	Varies	

* All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

As per paragraph (i) of 29 CFR 1910.1200, formulation is considered a trade secret and specific chemical identity and percentage composition will be provided to health professionals, employees, or designated representatives in accordance with applicable provisions of paragraph (i).

SECTION 4 FIRST AID MEASURES

INHALATION

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

SKIN CONTACT

Hot Material: This material retains heat and will continue to burn until quenched with water or burn gel. Remove contaminated clothing, if possible, and immediately flush skin in cool water for at least 15 minutes. Iced water or cold packs may be applied to burned area if less than 10% of the body surface.

Cold Material: Once cold do not attempt to pick or peel material from a burn. Use mineral oil to dissolve material from the skin. Do not use solvents or thinners from skin. Get immediate medical attention.

EYE CONTACT

Immediately flush eye(s) with plenty of clean water for at least 15 minutes, while holding the eyelid(s) open. Occasionally lift the eyelid(s) to ensure thorough rinsing. Beyond flushing, do not attempt to remove material from the eye(s). Contact a physician if irritation persists or later develops. Thermal burns require immediate medical attention.

INGESTION

If swallowed, do not induce vomiting. Drink a large volume of water and get immediate medical attention. Never give anything by mouth to an unconscious person. If vomiting occurs, keep head lower than hips to prevent aspiration.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish



Product Name: Hot Mix Asphalt
Revision Date: June 10, 2015

Page 3 of 9

flames.

Inappropriate Extinguishing Media: Straight Streams of Water. Use of water on asphalt fire in a tank or other container may cause a violent eruption.

FIRE FIGHTING

Fire Fighting Instructions: Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel. Avoid breathing irritating and potentially toxic fumes, including hydrogen sulfide gas. Firefighters should wear NIOSH/MSHA approved positive pressure breathing apparatus (SCBA) with full face mask and full protective equipment.

Hazardous Combustion Products: Smoke, Fume, Aldehydes, Sulfur oxides, incomplete combustion products, Oxides of carbon.

FLAMMABILITY PROPERTIES

Flash Point [Method]: >260°C (500°F) [ASTM D-92]

Flammable Limits (Approximate volume % in air): LEL: NE UEL: NE

Autoignition Temperature: N/D

SECTION 6

ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

Ventilate area and avoid emission inhalation or skin contact by using appropriate precautions outlined in this SDS (see Section 8). Keep all sources of ignition at least 50 feet away. Prevent materials from entering streams, drainages, or sewers. Spills entering surface waters or sewers entering/leading to surface waters must be reported to the National Response Center 1-800-424-8802. Based on volume and use, components of this product may be subject to reporting requirements of Title III of SARA, 1986, and 40 CFR 372.

PROTECTIVE MEASURES

Keep unnecessary personnel away. Local authorities should be advised if significant spills cannot be contained. Keep upwind. Keep out of low areas. Ventilate closed spaces before entering. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. See Section 8 of the SDS for Personal Protective Equipment.

SPILL MANAGEMENT

Personnel involved in cleanup processes should implement controls as identified in Section VIII as appropriate. Keep all ignition sources at least 50 feet away. Avoid personal contact with heated material. Prevent materials from entering streams, drainages, or sewers.

ENVIRONMENTAL PRECAUTIONS

Stop leak and contain spilled material with sand, aggregate fines, or other inert adsorbent. Collect adsorbed product and clean up materials in appropriate container for proper disposal. Notify proper authorities.

SECTION 7

HANDLING AND STORAGE

HANDLING

Follow personal protection and protective controls set forth in Section 8 of this MSDS when handling this product. Do not store near food, beverages or smoking materials. Avoid personal contact with heated material. Respirable crystalline silica-containing dust may be generated when hardened asphalt concrete is subjected to



mechanical forces, such as demolition work, surface treatment (sanding, grooving, chiseling, etc.), and/or recycling of pavement. Do not attempt to clean empty containers since residue is difficult to remove. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition as they may explode and cause injury or death. Tripping accidents have occurred because of asphalt buildup on bottoms of shoes and boots; buildup should be removed regularly to prevent such accidents. Do not use solvents or thinners to clean footwear

STORAGE

Store away from all ignition sources and open flames in accordance with applicable laws and regulations. Storage containers should be ventilated to reduce fire and explosion hazard, and possible overexposure of personnel to fumes and vapors. Vapors containing hydrogen sulfide may accumulate during storage or transport of asphaltic materials. When petroleum asphalt products are heated, potentially irritating emissions (fumes, mists, vapors) may be released.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

Exposure limits/standards (Note: Exposure limits are not additive)

Substance Name	Form	Limit / Standard	NOTE	Source
ASPHALT FUMES	Fume	TLV 5 mg/m ³	N/A	ACGIH
CRYSTALLINE SILICA (QUARTZ, CRISTOBALITE, TRIDYMITE)	Solid	TLV 0.025 mg/m ³	N/A	ACGIH
PARTICULATE NOT OTHERWISE CLASSIFIED	Dust	TLV 10 mg/m ³ (inhalable fraction) 3 mg/m ³ (respirable fraction)	N/A	OSHA

Exposure limits/standards for materials that can be formed when handling this product: When mists/aerosols can occur the following are recommended: 5 mg/m³ - ACGIH TLV (inhalable fraction), 5 mg/m³ - OSHA PEL.

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

No biological limits allocated.

ENGINEERING CONTROLS

General dilution or local exhaust ventilation as required to maintain exposures below appropriate exposure limits. Use only in well-ventilated areas. Activities with dried/hardened product that generate dust require the use of general ventilation, local exhaust and/or wet suppression methods to maintain exposures below appropriate exposure limits.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: Not expected to be necessary under normal use and working conditions. All respirators must be NIOSH-approved for the exposure levels present. (See NIOSH Respirator Selection Guide). The need for respiratory protection should be evaluated by a qualified safety and health professional. For air-contaminant concentrations which exceed or are likely to exceed applicable exposure limits, use a



Product Name: Hot Mix Asphalt

Revision Date: June 10, 2015

Page 5 of 9

NIOSH approved, contaminant-specific, air purifying respirator. If such conditions are sufficiently high that the air purifying respirator is inadequate, or if oxygen adequate to sustain life is not present, use a positive-pressure, self-contained breathing apparatus. Activities that generate dust require the use of an appropriate dust respirator where dust levels exceed or are likely to exceed allowable exposure limits. For respirable silica levels that exceed or are likely to exceed an 8-hour Time Weighted Average (TWA) of 0.5 mg/m³, a high-efficiency particulate filter respirator must be worn at a minimum; however, if respirable silica levels exceed or are likely to exceed an 8-hour TWA of 5.0 mg/m³ a positive-pressure, full-face respirator or equivalent is required. Respirator use must comply with applicable MSHA (42 CFR 84) or OSHA (29 CFR 1910.134) standards, which include provisions for a user training program, respirator inspection, repair and cleaning, respirator fit testing, medical surveillance and other requirements. For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

No protection is ordinarily required under normal conditions of use.

Eye Protection: Use a full-face shield and chemical safety goggles if handling heated material. Safety glasses with side shields should be worn as minimum protection at ambient temperatures. Contact lens should not be worn when eye contact with product is possible.

Skin and Body Protection: Avoid skin contact with material by wearing impervious gloves and protective clothing. With product at ambient temperatures, use disposable nitrile, neoprene or butyl rubber material. When handling hot material, use heat-resistant gloves. Use insulated, heat resistant clothing as necessary

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

ENVIRONMENTAL CONTROLS

Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9

PHYSICAL AND CHEMICAL PROPERTIES

Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.

GENERAL INFORMATION

Physical State: Solid

Color: Black

Odor: Strong petroleum

Odor Threshold: N/A

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Specific Gravity: 2.0-2.5



Product Name: Hot Mix Asphalt
Revision Date: June 10, 2015

Page 6 of 9

Flammability (Solid, Gas): N/A
Flash Point: >177°C (350°F) Closed Cup
Flammable Limits (Approximate volume % in air): LEL > 0.9 UEL < 7
Autoignition Temperature: N/A
Boiling Point / Range: > 470°C (878°F)
Decomposition Temperature: N/D
Vapor Density (Air = 1): N/D
Vapor Pressure: N/A
Evaporation Rate (n-butyl acetate = 1): N/D
pH: N/A
Log Pow (n-Octanol/Water Partition Coefficient): N/A
Solubility in Water: Negligible
Viscosity: N/A
Oxidizing Properties: See Hazards Identification Section.

OTHER INFORMATION

Freezing Point: N/D
Melting Point: N/A
Pour Point: N/A
DMSO Extract (mineral oil only), IP-346: N/A

SECTION 10 STABILITY AND REACTIVITY

REACTIVITY: N/A

STABILITY: Material is stable under normal conditions.

CONDITIONS TO AVOID: Excessive heat. High energy sources of ignition. Flames and sparks. Contact with incompatible materials.

MATERIALS TO AVOID: Strong oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide and other compounds (such as aldehydes, amines, nitrogen dioxide, sulfur dioxide, ozone, hydrogen sulfide, and various hydrocarbons) may be released by thermal decomposition. Hazardous vapors may collect in enclosed vessels or areas if not properly ventilated.

POSSIBILITY OF HAZARDOUS REACTIONS: Silica reacts violently with powerful oxidizing agents such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, oxygen difluoride and hydrogen peroxide yielding possible fire and/or explosions. Silica is also incompatible with acetylene and ammonia. Silica dissolves readily in hydrofluoric acid producing a corrosive gas – silicon tetrafluoride.

SECTION 11 TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

<u>Hazard Class</u>	<u>Conclusion / Remarks</u>
Inhalation	
Acute Toxicity: No end point data for material.	May be harmful if inhaled.



Product Name: Hot Mix Asphalt

Revision Date: June 10, 2015

Page 7 of 9

Ingestion	
Acute Toxicity: No end point data for material.	May be harmful if ingested.
Skin	
Acute Toxicity: No end point data for material.	May cause skin irritation.
Eye	
Serious Eye Damage/Irritation: No end point data for material.	May cause eye irritation.
Sensitization	
Respiratory Sensitization: No end point data for material.	Based on available data, the classification criteria are not met.
Skin Sensitization: No end point data for material.	Based on available data, the classification criteria are not met.
Aspiration: Data available.	Based on available data, the classification criteria are not met.
Germ Cell Mutagenicity: No end point data for material.	Based on available data, the classification criteria are not met.
Carcinogenicity: No end point data for material.	Crystalline silica, a component of this product, is listed by IARC as a carcinogen. The IARC has determined that there is sufficient evidence of carcinogenicity in experimental animals exposed to crystalline silica and limited evidence of its carcinogenicity in humans. The NTP has listed respirable crystalline silica as a known human carcinogen. The American Conference of Governmental Industrial Hygienists (ACGIH) has listed respirable crystalline silica (quartz) as a suspected human carcinogen (A-2 designation). Contains polycyclic aromatic compounds (PACs). Prolonged and/or repeated skin contact with certain PACs has been shown to cause skin cancer. Prolonged and/or repeated exposures by inhalation of certain PACs may also cause cancer of the lung and of other sites of the body. Occupational exposure to straight-run asphalts and their emissions during road paving: 2B Possibly carcinogenic to humans.
Reproductive Toxicity: No end point data for material.	Based on available data, the classification criteria are not met.
Lactation: No end point data for material.	Based on available data, the classification criteria are not met.
Specific Target Organ Toxicity (STOT)	
Single Exposure: No end point data for material.	Based on available data, the classification criteria are not met.
Repeated Exposure: No end point data for material.	Based on available data, the classification criteria are not met.

SECTION 12 ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

ECOTOXICITY

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
Hydrogen sulfide (CAS 7783-06-4)		
Aquatic		
Fish	LC50 Lake whitefish (<i>Coregonus clupeaformis</i>)	0.002 mg/l, 96 hours



Product Name: Hot Mix Asphalt
Revision Date: June 10, 2015

Page 8 of 9

MOBILITY

Not available.

PERSISTENCE AND DEGRADABILITY

Biodegradation:

Not available.

BIOACCUMULATION POTENTIAL

Not available.

OTHER ADVERSE EFFECTS

Not available.

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

DISPOSAL RECOMMENDATIONS

Place contaminated materials in appropriate containers and dispose of in a manner consistent with applicable federal, state, and local regulations. Prevent from entering drainage, sewer systems, and unintended bodies of water. It is the responsibility of the user to determine, at the time of disposal, whether product meets criteria for hazardous waste. Product uses, transformations, mixture and processes, may render the resulting material hazardous.

REGULATORY DISPOSAL INFORMATION

RCRA Information: Disposal of unused product may be subject to RCRA regulations (40 CFR 261). Disposal of the used product may also be regulated due to ignitability, corrosivity, reactivity or toxicity as determined by the Toxicity Characteristic Leaching Procedure (TCLP). Potential RCRA characteristics: TCLP (BENZENE)

SECTION 14 TRANSPORT INFORMATION

LAND (DOT): If the shipping temperature of a solid equals or exceeds 464 °F, D.O.T. regulations classify the solid as an "Elevated Temperature Material", and a "HOT" label is required. Label as required by the OSHA and MSHA Hazard Communication standards [29 CFR 1910.1200 (f) and 30 CFR Part 42], and applicable state and local regulations.

LAND (TDG): Not Regulated for Land Transport

SEA (IMDG): Not Regulated for Sea Transport according to IMDG-Code

Marine Pollutant: No

AIR (IATA): Not Regulated for Air Transport

SECTION 15 REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION STANDARD: The components in this product are listed on the TSCA Inventory or are exempt.

Complies with the following national/regional chemical inventory requirements:

Special Cases:



Product Name: Hot Mix Asphalt
Revision Date: June 10, 2015

Inventory	Status
AICS	Restrictions Apply
IECSC	Restrictions Apply

EPCRA SECTION 302: Hydrogen Sulfide.

SARA (311/312) REPORTABLE HAZARD CATEGORIES: Yes.

SARA (313) TOXIC RELEASE INVENTORY: Not regulated.

The following ingredients are cited on the lists below:

Chemical Name	CAS Number	List Citations
ASPHALT	8052-42-4	
HYDROGEN SULFIDE	7783-06-4	

SECTION 16 OTHER INFORMATION

HMIS Ratings Health: 2
Flammability: 1
Reactivity: 0

NFPA Ratings Health: 1
Flammability: 1
Reactivity: 0

KEY TO THE H-CODES CONTAINED IN SECTION 3 OF THIS DOCUMENT (for information only):

H304: May be fatal if swallowed and enters airways; Aspiration, Cat 1

H315: Causes skin irritation; Skin Corr/Irritation, Cat 2

H320(2B): Causes eye irritation; Serious Eye Damage/Irr, Cat 2B

H360(1B)(F): May damage fertility; Repro Tox, Cat 1B (Fertility)

H400: Very toxic to aquatic life; Acute Env Tox, Cat 1

H410: Very toxic to aquatic life with long lasting effects; Chronic Env Tox, Cat 1

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:

Updates made in accordance with implementation of GHS requirements.

Disclaimer

This material Safety Data Sheet (SDS) was prepared in accordance with 29 CFR 1910.1200 by Syar Industries, Inc (Syar). Syar, and its subsidiaries, does not assume any liability arising out of product use by others. The information, recommendations, and suggestions presented in this SDS are based upon test results and data believed to be reliable. The end user of the product has the responsibility for evaluating the adequacy of the data under the conditions of use, determining the safety, toxicity and suitability of the product under these conditions, and obtaining additional or clarifying information where uncertainty exists. No guarantee expressed or implied is made as to the effects of such use, the results to be obtained, or the safety and toxicity of the product in any specific application. Furthermore, the information herein is not represented as absolutely complete, since it is not practicable to provide all the scientific and study information in the format of this document, plus additional information may be necessary under exceptional conditions of use, or because of applicable laws or government regulations.