## SAFETY DATA SHEET



#### 1. Identification

Product identifier Hot Mix Asphalt (HMA)

Other means of identification

Synonyms Asphaltic Concrete, Bitumen, Bituminous Concrete, Blacktop, Dense Friction Course (DFC),

DuraClimeTM, DuraCycleTM, DuraPhaltTM, DuraPhaltTM HM, DuraPlayTM, DuraTintTM, DuraToughTM, DuraWayTM, DuraWhisperTM, Gap Graded, Heavy Duty Binder Course (HDBC), Hot Laid Asphaltic Cement, Hot Mix Asphalt Concrete (HMAC), Hot Mix Paving Material, Lafarge Hot Mix Asphalt, Medium Duty Binder Course, (MDBC), Open Friction Course (OFC), Open Graded Friction Course, Stone Matrix Asphalt (SMA), SuperPave Mix, Tarmac, Ultra Thin Bonded

Overlay, Warm Mix Asphalt

Recommended use Construction.

Recommended restrictions Workers (and your customers or users in the case of resale) should be informed of the potential

presence of respirable dust and respirable crystalline silica as well as their potential hazards. Appropriate training in the proper use and handling of this material should be provided as required

Category 2 (Lungs)

under applicable regulations. Uses other than the recommended use.

Manufacturer/Importer/Supplier/Distributor information

Company name Amrize Inc.

Address 6509 Airport Road

Mississauga, Ontario L4V 157

Telephone Eastern Canada: (905) 738-7070

Western Canada: (403) 225-5400

Website www.amrize.com
E-mail sdsinfo@amrize.com

**Emergency telephone** 

number

CHEMTREC within USA and Canada: 1-800-424-9300

CHEMTREC outside USA and Canada: +1 703-527-3887 (collect calls accepted)

#### 2. Hazard identification

Physical hazards Not classified.

Health hazards Carcinogenicity (inhalation) Category 1A

Specific target organ toxicity - repeated

exposure (inhalation)

Label elements



Signal word Danger

Hazard statement May cause cancer by inhalation. May cause damage to organs (Lungs) through prolonged or

repeated exposure by inhalation.

**Precautionary statement** 

**Prevention** Obtain special instructions before use. Do not handle until all safety precautions have been read

and understood. Do not breathe dust. Wear protective gloves/protective clothing/eye

protection/face protection.

**Response** IF exposed or concerned: Get medical advice/attention.

**Storage** Store locked up.

**Disposal** Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental information None.

Other hazards Vapors containing hydrogen sulfide may accumulate during storage or transport of asphaltic

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materials. Hydrogen sulphide (H2S) may be given off when this material is heated. Do not depend

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on sense of smell for warning.

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## 3. Composition/information on ingredients

| Mixtures   |  |                                  |                     |
|--|--|----------------------------------|---------------------|
| Chemical name  | Common name and synonyms   | CAS number                       | %                   |
| Quartz   |  | 14808-60-7                       | 10 - 30             |
| Composition comments   | All concentrations are in percent by weight. C below reportable limits. Any concentration sho batch variation.   |                                  |                     |
| 4. First-aid measures  |  |                                  |                     |
| Inhalation   | Move to fresh air. If not breathing, give artificial or persist.   | al respiration. Call a physician | if symptoms develop |
| Skin contact   | Wash off with soap and water. Get medical attention if irritation develops and persists.   |                                  |                     |
| Eye contact  | Rinse with water. Get medical attention if irritation develops and persists.   |                                  |                     |
| Ingestion  | Rinse mouth. Get medical attention if symptoms occur.  |                                  |                     |
| Most important symptoms/effects, acute and delayed                     | Coughing. Prolonged exposure may cause chronic effects.  |                                  |                     |
| Indication of immediate medical attention and special treatment needed | Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.   |                                  |                     |
| General information  | IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.                                       |                                  |                     |
| 5. Fire-fighting measures  |  |                                  |                     |
| Suitable extinguishing media   | Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).  |                                  |                     |
| Unsuitable extinguishing media   | Do not use water jet as an extinguisher, as this will spread the fire.   |                                  |                     |
| Specific hazards arising from the chemical                             | During fire, gases hazardous to health may be formed. Combustion products may include: Carbon oxides. Smoke. Fumes. Hydrocarbons. Sulphur oxides. Nitrogen oxides. Hydrogen sulphide (H2S) may be given off when this material is heated. Do not depend on sense of smell for warning. |                                  |                     |
| Special protective equipment   | Self-contained breathing apparatus and full protective clothing must be worn in case of fire.  |                                  |                     |

and precautions for firefighters

Fire fighting Move containers from fire area if you can do so without risk.

equipment/instructions Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards Will burn if involved in a fire.

## 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe dust. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

The product is immiscible with water and will sediment in water systems. Stop the flow of material, if this is without risk. Following product recovery, flush area with water. Put material in suitable, covered, labelled containers. For waste disposal, see section 13 of the SDS. The product is insoluble in water.

**Environmental precautions** 

Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

Precautions for safe handling

Hydrogen sulphide (H2S) may be given off when this material is heated. Do not depend on sense of smell for warning. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep formation of airborne dusts to a minimum. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust. Avoid prolonged exposure. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Vapors containing hydrogen sulfide may accumulate during storage or transport of asphaltic materials. Store locked up. Store in tightly closed container. Store away from incompatible materials (see section 10 of the SDS).

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# 8. Exposure controls/personal protection

## **Occupational exposure limits**

| US. ACGIH Threshold Limit<br>Components                   | Type   | Value                                   | Form                  |
|---|--|---|-----------------------|
| Quartz (CAS 14808-60-7)                                   | TWA  | 0.025 mg/m3                             | Respirable fraction.  |
| Canada. Alberta OELs (Occ<br>Components                   | cupational Health & Safety Code, Scho<br>Type  | edule 1, Table 2), as amended<br>Value  | Form                  |
| Quartz (CAS 14808-60-7)                                   | TWA  | 0.025 mg/m3                             | Respirable particles. |
| Canada. British Columbia (<br>Safety Regulation 296/97, a | DELs. (Occupational Exposure Limits amended)   | for Chemical Substances, Oc             | cupational Health and |
| Components  | Туре   | Value                                   | Form                  |
| Quartz (CAS 14808-60-7)                                   | TWA  | 0.025 mg/m3                             | Respirable fraction.  |
| Canada. Manitoba OELs (R                                  | eg. 217/2006, The Workplace Safety A   | and Health Act), as amended             |                       |
| Components  | Туре   | Value                                   | Form                  |
| Quartz (CAS 14808-60-7)                                   | TWA  | 0.025 mg/m3                             | Respirable fraction.  |
| Canada. New Brunswick Of Publication (New Brunswic        | ELs: Threshold Limit Values (TLVs) B<br>k Regulation 91-191)   | ased on the 1991 and 1997 AG            | CGIH TLVs and BEIs    |
| Components  | Туре   | Value                                   | Form                  |
| Quartz (CAS 14808-60-7)                                   | TWA  | 0.025 mg/m3                             | Respirable fraction.  |
| Canada. Ontario OELs. (Co<br>Components                   | ntrol of Exposure to Biological or Cho<br>Type   | emical Agents), as amended<br>Value     | Form                  |
| Quartz (CAS 14808-60-7)                                   | TWA  | 0.1 mg/m3                               | Respirable fraction.  |
| Canada. Quebec OELs. (Mi Components                       | nistry of Labor - Regulation respectin<br>Type   | g occupational health and sa<br>Value   | fety)<br>Form         |
| Quartz (CAS 14808-60-7)                                   | TWA  | 0.05 mg/m3                              | Respirable dust.      |
| Canada. Saskatchewan OE<br>Components                     | Ls (Occupational Health and Safety R<br>Type   | egulations, 1996, Table 21), a<br>Value | s amended<br>Form     |
| Quartz (CAS 14808-60-7)                                   | 8 hour   | 0.05 mg/m3                              | Respirable fraction.  |
| logical limit values                                      | No biological exposure limits noted fo   | r the ingredient(s).                    |                       |
| oosure guidelines   | Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.  |   |                       |
| propriate engineering<br>trols                            | 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.  |   |                       |
| ividual protection measures<br>Eye/face protection        | , such as personal protective equipme<br>Wear safety glasses with side shields   |   |                       |
| Skin protection   |  |   |                       |
| Hand protection   | Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.  |   |                       |
| Other   | Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.   |   |                       |
| Respiratory protection                                    | If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Selection and use of respiratory protective equipment should be in accordance with CSA Standard Z94.4. |   |                       |
| Thermal hazards   | When material is heated, wear gloves to protect against thermal burns. Wear appropriate thermal protective clothing, when necessary.   |   |                       |
| neral hygiene<br>esiderations                             | Observe any medical surveillance red<br>measures, such as washing after han  |   |                       |

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## 9. Physical and chemical properties

Solid. Physical state

Granular solid. **Form** 

Black. Colour

Odour Slight petroleum odor.

**Odour threshold** Property has not been measured. Melting point/freezing point Property has not been measured. Property has not been measured. **Boiling point or initial boiling** 

point and boiling range

Will burn if involved in a fire. **Flammability** 

Upper/lower flammability or explosive limits

Explosive limit - lower (%) Not applicable, material is a solid. Explosive limit - upper Not applicable, material is a solid.

(%)

Flash point Not applicable, material is a solid. **Auto-ignition temperature** Property has not been measured. **Decomposition temperature** Property has not been measured.

pН Not applicable (material is insoluble in water).

pH concentration Property has not been measured. Kinematic viscosity Not applicable, material is a solid.

Solubility

Insoluble Solubility (water)

**Partition coefficient** Not applicable for inorganic substances.

(n-octanol/water) (log value)

Vapour pressure Property has not been measured. Vapour pressure temp. Property has not been measured.

Density and/or relative density

**Density** Property has not been measured.

2 - 2.5Relative density

Property has not been measured. Relative density

temperature

Vapour density Not applicable, material is a solid.

**Particle characteristics** 

Particle size Property has not been measured.

Other information

**Evaporation rate** Not applicable, material is a solid.

Not explosive. **Explosive properties** Oxidising properties Not oxidising.

**Viscosity** Not applicable, material is a solid.

## 10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Material is stable under normal conditions. **Chemical stability** 

Possibility of hazardous

reactions

No dangerous reaction known under conditions of normal use.

Conditions to avoid Contact with incompatible materials.

Incompatible materials Acids. Powerful oxidizers. Chlorine. Fluorine. Magnesium. Aluminium. Ammonium salts.

Formaldehyde. When molten: Water.

**Hazardous decomposition** 

products

No hazardous decomposition products are known.

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## 11. Toxicological information

Information on likely routes of exposure

**Inhalation** May cause damage to organs through prolonged or repeated exposure by inhalation. May cause

cancer by inhalation.

**Skin contact** Prolonged skin contact may cause temporary irritation. **Eye contact** Direct contact with eyes may cause temporary irritation.

**Ingestion** May cause discomfort if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Coughing. Prolonged exposure may cause chronic effects.

Information on toxicological effects

Acute toxicity Not expected to be acutely toxic.

Components Species Test Results

Quartz (CAS 14808-60-7)

Chronic Inhalation

LOEC Human 0.0563 mg/m3

Skin corrosion/irritation Serious eye damage/eye

irritation

Prolonged skin contact may cause temporary irritation. Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitisation

**Respiratory sensitisation** Not a respiratory sensitiser.

**Skin sensitisation** This product is not expected to cause skin sensitisation.

**Germ cell mutagenicity**No data available to indicate product or any components present at greater than 0.1% are

mutagenic or genotoxic.

Carcinogenicity In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica

inhaled from occupational sources can cause lung cancer in humans. However in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.) In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk..." (SCOEL SUM Doc 94-final, June 2003) According to the current state of the art, worker

occupational exposure limits. May cause cancer by inhalation. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled.

protection against silicosis can be consistently assured by respecting the existing regulatory

**ACGIH Carcinogens** 

Quartz (CAS 14808-60-7)

A2 Suspected human carcinogen.

Canada - Alberta OELs: Carcinogen category

Quartz (CAS 14808-60-7) Suspected human carcinogen.

Canada - Manitoba OELs: carcinogenicity

Quartz (CAS 14808-60-7) Suspected human carcinogen.

Canada - Quebec OELs: Carcinogen category

Quartz (CAS 14808-60-7) Suspected carcinogenic effect in humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Quartz (CAS 14808-60-7) 1 Carcinogenic to humans.

**US. National Toxicology Program (NTP) Report on Carcinogens** 

Quartz (CAS 14808-60-7) Known To Be Human Carcinogen.

**Reproductive toxicity**This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - Not classified.

single exposure

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Specific target organ toxicity -

repeated exposure

May cause damage to organs (Lungs) through prolonged or repeated exposure by inhalation.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful. May cause damage to organs through prolonged or

repeated exposure. Prolonged exposure may cause chronic effects.

12. Ecological information

**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.

Persistence and degradability The product contains inorganic compounds which are not biodegradable.

Bioaccumulative potential No data available.

**Mobility in soil** The product is insoluble in water. Not expected to be mobile in soil.

Other adverse effects No data available.

13. Disposal considerations

**Disposal instructions**Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of

contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

Hazardous waste code

The waste code should be assigned in discussion between the user, the producer and the waste

disposal company.

Waste from residues / unused

products

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is

emptied. Empty containers should be taken to an approved waste handling site for recycling or

disposal.

## 14. Transport information

**TDG** 

UN number UN3258

UN proper shipping name Transport hazard class(es) ELEVATED TEMPERATURE SOLID, N.O.S. , at or above 240 °C (Asphalt)

Class 9
Subsidiary hazard Packing group III
Environmental hazards No.

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

**IATA** 

UN number UN3258

UN proper shipping name

Elevated temperature solid, n.o.s. at or above 240°C (Asphalt)

Transport hazard class(es)
Class

Class 9
Subsidiary hazard Packing group III
Environmental hazards No.
ERG Code 9L

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

**IMDG** 

UN number UN3258

UN proper shipping name EL

Transport hazard class(es)

ELEVATED TEMPERATURE SOLID, N.O.S. at or above 240°C (Asphalt)

Class 9
Subsidiary hazard Packing group |||

Environmental hazards

Marine pollutant

No.

nS F-A, <u>S</u>-<u>P</u>

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

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

Not applicable.

## 15. Regulatory information

Canadian regulations

This product has been classified in accordance with the hazard criteria of the HPR and the SDS

contains all the information required by the HPR.

## **Controlled Drugs and Substances Act**

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

**Greenhouse Gases** 

Not listed.

**Precursor Control Regulations** 

Not regulated.

## International regulations

#### **Stockholm Convention**

Not applicable.

## **Rotterdam Convention**

Not applicable.

## **Kyoto Protocol**

Not applicable.

#### **Montreal Protocol**

Not applicable.

#### **Basel Convention**

Not applicable.

## **International Inventories**

| Country(s) or region | Inventory name  | On inventory (yes/no)* |
|----------------------|---|------------------------|
| Australia            | Australian Inventory of Industrial Chemicals (AICIS)              | Yes                    |
| Canada               | Domestic Substances List (DSL)                                    | Yes                    |
| Canada               | Non-Domestic Substances List (NDSL)                               | No                     |
| China                | Inventory of Existing Chemical Substances in China (IECSC)        | Yes                    |
| Japan                | Inventory of Existing and New Chemical Substances (ENCS)          | Yes                    |
| Korea                | Existing Chemicals List (ECL)                                     | Yes                    |
| New Zealand          | New Zealand Inventory   | Yes                    |
| Philippines          | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes                    |

Taiwan Taiwan Chemical Substance Inventory (TCSI) Yes United States & Puerto Rico Toxic Substances Control Act (TSCA) Inventory Yes

## 16. Other information

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**Disclaimer** Amrize Inc. cannot anticipate all conditions under which this information and its product, or the

products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the

sheet was written based on the best knowledge and experience currently available.

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<sup>\*</sup>A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s) A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).