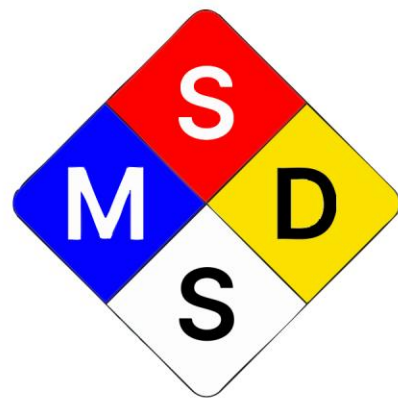




MATERIAL SAFETY DATA SHEET

Rev. 02, Issued (July 2026)

PENETRATION GRADE BITUMEN

40/50 | 60/70 | 85/100 | 120/150 | 200/300

ORIGINATOR	Iraq Altaqa For General Contracting, Secondary Industries and General Trading Limited
DOC NO	IQTB-800-QL-MSDS-0037
DISCLAIMER	Certain content in the MSDS is based on estimated ideal real-time considerations, as on-ground operations have not yet started. Updates will follow a thorough review of relevant standards and protocols, factoring in production scaling and product compliance. Future revisions may reflect improvements based on these factors.



SECTION 1

PRODUCT AND COMPANY IDENTIFICATION

CATEGORY	DETAILS
Product Name	Penetration Grade Bitumen
Product Use	Highways, Re-habitation / Pavement Maintenance, Waterproofing and Asphalt Emulsion.
Grades	Penetration Grade 40/50 60/70 85/100 120/150 200/300
Standards	ASTM D946
CAS Code	8052-42-4
HS Code	27132000
Company Identification	Iraq Altaqa
Plant Address	IRAQ: Karbala Governorate, District 3, Island 61, near Karbala Refinery.
Office Address	UAE: 24th Floor, Silver Tower, Cluster I, JLT, Dubai.
Website	www.iraqaltaqa.com
Email	info@iraqaltaqa.com
Emergency Contact Info	TBD
Contact Email	TBD
Packing	Bulk Drums (150, 180, 220) Kg Jumbo Bags (1 MT) Flexitanks (20MT)

SECTION 2

COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS Number	Amount
Bitumen	8052-42-4	0 – 100 % weight
Oxidized Bitumen	64742-93-4	0 – 100 % weight



SECTION 3

HAZARDS IDENTIFICATION

- ▶ **GHS INFORMATION — PRODUCT AT AMBIENT TEMPERATURE (COOLED, DRUM-PACKED)**
 - **Classification:** Not classified as a hazardous substance or mixture according to the Globally Harmonized System (GHS) or OSHA Hazard Communication Standard (29 CFR 1910.1200).
 - **Hazard Pictogram(s):** None required.
 - **Signal Word:** None.
 - **Hazard Statements:** None applicable for the product at ambient temperature.
- ▶ **HAZARDS ASSOCIATED WITH HEATED / MOLTEN PRODUCT**

If the product is heated or handled in a molten state, the following hazards apply:

 - **Thermal Burns:** Contact with hot/molten product will cause severe thermal burns.
 - **Inhalation:** Heating may release asphalt fumes, which can cause respiratory tract irritation. IARC has classified occupational exposures to oxidized bitumens and their emissions during roofing as probably carcinogenic to humans (Group 2A), and straight-run bitumen fumes as possibly carcinogenic (Group 2B).
 - **Toxic Gas:** Trace amounts of Hydrogen Sulfide (H₂S), a highly toxic and flammable gas, may accumulate in the headspaces of heated storage tanks or transport vessels. Keep face clear of tank and/or tank car openings.
- ▶ **EMERGENCY RESPONSE DATA**
 - Black semi-solid to solid substance at ambient temperature.

SECTION 4

FIRST AID MEASURES

- ▶ **EYE CONTACT**

Rinse thoroughly with water. If irritation persists, seek medical attention.
- ▶ **SKIN CONTACT**

If burned by contact with hot material, cool molten material adhering to skin as quickly as possible with water and see a doctor for removal of adhering material and treatment of the burn. Do not attempt to peel the cooled bitumen from the skin. For ambient temperature contact, wash contact areas with soap and water.
- ▶ **INHALATION**

Move to fresh air. If experiencing respiratory discomfort, dizziness, nausea, or unconsciousness, get medical help immediately. If breathing stops, perform artificial breathing.



SECTION 5

FIRE-FIGHTING MEASURES

► **EXTINGUISHING MEDIA**

Carbon Dioxide, Foam, Dry chemicals.

► **SPECIAL FIRE-FIGHTING PROCEDURES**

Water or foam may cause frothing. Use water to cool exposed containers. Water spray can help flush spills away from ignition sources. Prevent fire control runoff from entering water supplies, drains, or sewers.

► **SPECIAL PROTECTIVE EQUIPMENT**

Firefighters should use Self-Contained Breathing Apparatus (SCBA) in enclosed areas.

► **UNUSUAL FIRE AND EXPLOSION HAZARDS**

Avoid ignition sources. Flash Point: > 230°C (ASTM D-92).

► **NFPA HAZARD ID**

- HEALTH: 1
- FLAMMABILITY: 1
- REACTIVITY: 0



► **HAZARDOUS DECOMPOSITION PRODUCTS**

Sulfur oxides, hydrogen sulfide, and carbon monoxide.

SECTION 6

ACCIDENTAL RELEASE MEASURES

► **NOTIFICATION PROCEDURES**

Report spills as required to appropriate authorities.

► **PROCEDURES IF THE MATERIAL IS RELEASED OR SPILLED**

Shovel up and dispose at an appropriate waste disposal facility in accordance with current applicable laws and regulations, and product characteristics at time of disposal.

► **ENVIRONMENTAL PRECAUTIONS**

Prevent spills from entering storm sewers or drains and contact with soil.

For Personal Precautions: See SECTION 10



SECTION 7

HANDLING AND STORAGE

► HANDLING

The product is supplied, stored, and transported fully cooled at ambient temperature in steel drums, jumbo bags, or flexitanks. In this state, it presents minimal handling hazards. Avoid contact with skin, eyes, and clothing. Wash hands before and after using it immediately. Use disposable clothes, discard when soiled, and never keep them in pockets.

When handling heated product: Ensure proper ventilation and avoid inhalation or contact with vapors wherever reasonably possible. Hot products will cause severe burns. The product may release hydrogen sulfide gases in tank headspaces, confined spaces, product residues, and wastewater, which could lead to inhalation risks.

► STORAGE

Store and dispense only in well-ventilated areas away from heat and sources of ignition. For product stored in drums, ensure drums are kept upright and protected from severe weather to prevent water accumulation.

When stored heated: The product shall be stored in sealed and insulated steel containers equipped with heating coil at temperature below 177 °C. Avoid contact with oxidizing materials. Prevent the product from water penetration into stored products, as this can cause violent boil-over. Remember that pyrolysis (self-igniting) deposits may accumulate on container's walls and bottom. Use only packaging made of steel.



SECTION 8

PHYSICAL AND CHEMICAL PROPERTIES

PROPERTY	VALUE
Appearance	Semi-solid; black viscous liquid at high temperatures, solid at ambient temperatures
Color	Dark brown or black
Odor	Asphaltic
Odor Threshold (ppm)	NA
pH	NA
Boiling Point (°C)	350°C – 470°C
Melting Point (°C)	Not specified
Oxidizing properties	NA
Evaporation rate	NA
Density @ 15.6°C (kg/l)	1.01 – 1.06
Solubility in water	Negligible
Freezing point (°C)	NE

NA = Not Applicable, NE = Not Established, D = Decomposes

SECTION 9

STABILITY AND REACTIVITY

► **STABILITY (THERMAL, LIGHT, ETC)**

Stable.

► **CONDITIONS TO AVOID**

Overheating may result in thermal cracking and produce flammable vapors.

► **INCOMPATIBILITY (MATERIALS TO AVOID)**

Strong oxidizers and water.

► **HAZARDOUS DECOMPOSITION PRODUCTS**

Sulfur oxides. Hydrogen Sulfide. Carbon monoxide.

► **HAZARDOUS POLYMERIZATION**

Will not occur.



SECTION 10

EXPOSURE CONTROLS / PERSONAL PROTECTIVE EQUIPMENT



► **VENTILATION**

Use in a well-ventilated area.

► **HAND PROTECTION**

Wear the following personal protective equipment: Rubber gloves, PVC. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. *Breakthrough time not determined as preparation; consult PPE manufacturers.*

► **RESPIRATORY PROTECTION**

Use approved respiratory protection in confined or enclosed spaces when handling hot product or when hydrogen sulfide and/or asphalt fumes exceed permissible limits.

► **EYE PROTECTION**

Generally, eye contact with solid material is unlikely; however, when handling in liquid form, chemical type goggles should be worn.

► **SKIN PROTECTION**

Use chemical-resistant aprons and/or other clothing to protect against hot liquid and to avoid skin contact.

SECTION 11

TOXICOLOGICAL DATA

► **ACUTE TOXICOLOGY**

- **ORAL TOXICITY:** Practically non-toxic (LD50: greater than 2 g/kg). LD50: 5 to 15 g/kg (oral), >5 g/kg (oral) – mice, rats. Based on testing of similar products and/or the components.
- **DERMAL TOXICITY:** Practically non-toxic (LD50: greater than 2 g/kg). >3.16 g/kg (dermal) – rabbits. Based on testing of similar products and/or the components.
- **INHALATION TOXICITY:** Not established.
- **EYE IRRITATION:** Practically non-irritating. (Draize score: 0 or greater but 6 or less). Based on testing of similar products and/or the components.
- **SKIN IRRITATION:** Practically non-irritating. (Primary Irritation Index: 0.5 or less). Based on testing of similar products and/or the components.



SECTION 12

ECOLOGICAL INFORMATION

► ECOTOXICITY

The preparation has not been tested but the slow rates of biodegradation of bitumen can cause interference with the normal functioning of ecological cycles. Bitumen should therefore be contained and spills avoided.

SECTION 13

DISPOSAL CONSIDERATIONS

► WASTE DISPOSAL

Dispose of waste at an appropriate waste disposal facility in accordance with current applicable laws and regulations, and product characteristics at time of disposal.

SECTION 14

TRANSPORT INFORMATION

The transport classification depends on the temperature of the material during transport.

► TRANSPORT AT AMBIENT TEMPERATURE — COOLED IN STEEL DRUMS / JUMBO BAGS / FLEXITANKS

When transported fully cooled at ambient temperature, this product does not meet the criteria for classification as Dangerous Goods under any applicable international transport regulation.

Mode	Classification	Details
LAND (ADR/RID)	Not Regulated as Dangerous Goods for Transport	—
SEA (IMDG)	Not Regulated as Dangerous Goods for Transport	—
AIR (IATA)	Not Regulated as Dangerous Goods for Transport	—

► TRANSPORT AT ELEVATED TEMPERATURE — HOT / MOLTEN ($\geq 100^{\circ}\text{C}$)

If transported in bulk liquid form at temperatures equal to or above 100°C , the following Dangerous Goods classification applies:



PARAMETER	DETAILS
Proper Shipping Name	ELEVATED TEMPERATURE LIQUID, N.O.S. (Bitumen)
UN Number	3257
Hazard Class	9
Packing Group	III
Marine Pollutant	No

SECTION 15

REGULATORY INFORMATION

▶ IRAQ REGULATIONS

Complies with local chemical safety and environmental laws.

▶ INTERNATIONAL REGULATIONS

- **GHS:** Not classified as hazardous at ambient temperature.
- **REACH:** Not registered under REACH (EU-specific).
- **Transportation:** Not regulated as Dangerous Goods when transported at ambient temperature in cooled drum-packed condition. Transportation of hot or molten bitumen ($\geq 100^{\circ}\text{C}$) is subject to Dangerous Goods regulations under UN 3257 (Class 9).

▶ ENVIRONMENTAL REGULATIONS

- **IMO MARPOL:** Complies with IMO MARPOL for marine pollution prevention.
- **Basel Convention:** Not listed as hazardous waste.

▶ HEALTH & SAFETY

- **OSHA:** Complies with Occupational Safety and Health Administration standards.
- **Carcinogenicity:** Contains PAHs. Fumes generated during heating are classified by IARC as potentially carcinogenic. The solid product at ambient temperature is not classified as a carcinogen.

▶ CHEMICAL INVENTORY

- **TSCA (USA):** Complies with TSCA.



SECTION 16

OTHER INFORMATION

Revision Statement Revised MSDS to accurately reflect international transport classifications for ambient-temperature bitumen in drums.

Revision Date July 2026

ABBREVIATION	MEANING
TLV	Threshold Limit Value
CAS	Chemical Abstract Service Number
NFPA	National Fire Protection Association (USA)
ICAO	International Civil Aviation Organization
OSHA	Occupational Safety and Health Administration
MSDS	Material Safety Data Sheet
IMDG	International Maritime Dangerous Goods Code
LD50	Lethal dose required to kill half the members of a tested population
LC50	Lethal concentration required to kill half the members of a tested population
RID	Regulatory for International Carriage of Hazardous Materials by Railroads
ADR	The European Agreement concerning the International Carriage of Hazardous Goods by Road
API	American Petroleum Institute

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