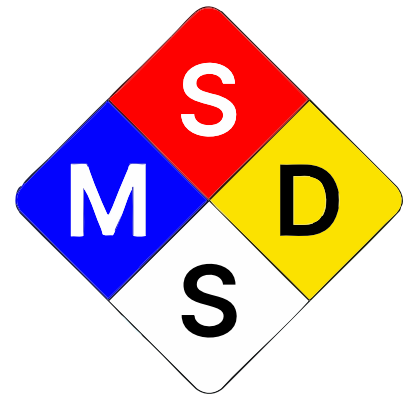




Bitumen Production Plant
ENGINEERING THE FUTURE



MATERIAL SAFETY DATA SHEET

Rev. 01, Issued (May 2025)

PERFORMANCE GRADE BITUMEN PG 76-10|PG 76-16|PG 76-22|PG 76-28| PG 76-34

ORIGINATOR	Iraq Altaqa For General Contracting, Secondary Industries and General Trading Limited
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DISCLAIMER	This Document Is Intended For Use By Iraq Altaqa And Its Nominated Consultants, Contractors, Manufacturers And Suppliers. 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	Performance Grade Bitumen
Product Use	Road construction, heavy traffic pavements, bus lanes, and waterproofing
Grades	PG 76-10 PG 76-16 PG 76-22 PG 76-28 PG 76-34
Standards	AASHTO M320 ASTM D6373
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

Classification: – Flammable Liquids, Category 3, Skin Irritation, Category 2
Carcinogenicity, Category 2

➤ LABEL ELEMENTS

- Hazard Pictogram(s): 
- Signal Word: Danger
- Hazard Statements: Flammable liquid and vapor. It causes skin irritation. Suspected of causing cancer.

➤ EFFECTS OF OVEREXPOSURE

- No significant adverse effects are anticipated.

➤ EMERGENCY RESPONSE DATA

- Black semi-solid substance. Avoid ignition sources.

See Section 11 for additional Biohazards (If applicable).

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. Wash contacts 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: > 250°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

Ensure proper ventilation and avoid inhalation or contact with vapors wherever reasonably possible. Use disposable clothes, discard when soiled, and never keep them in pockets. Avoid contact with skin, eyes, and clothing. Hot products may cause burns. Wash hands before and after using it immediately. 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. The product shall be stored in sealed and insulated steel containers equipped with heating coil at temperature below 200 °C. Avoid contact with oxidizing materials. Prevent the product from water penetration into stored products. 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)	~ 420°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

LD₅₀:

5 to 15 g/kg (oral)

>5 g/kg (oral) – mice, rats

3-8 g/kg (rat-intragastric)

>3.16 g/kg (dermal) – rabbits

➤ ORAL TOXICITY

Practically non-toxic (LD₅₀: greater than 2 g/kg).
Based on testing of similar products and/or the components.

➤ DERMAL TOXICITY

Practically non-toxic (LD₅₀: greater than 2 g/kg). 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.

➤ OTHER TOXICOLOGY DATA

Some asphalt may contain polycyclic aromatic compounds (PACs). The TLV of 0.5 mg/m³ is believed to be adequate to protect workers exposed to asphalt fumes. Trace amounts of Hydrogen Sulfide, a toxic gas, may be present when this material is handled in liquid form. Keeps face clear of tank and/or tank car opening.

SECTION 12

ECOLOGICAL INFORMATION

➤ ECOTOXICITY

The preparation has not been tested but the slow rates of bio degradation 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

➤ EXTINGUISHING MEDIA

This product is subject to shipping regulations related to the transport of hazardous materials solely in case of transport of heated products. This substance is subject to shipping regulations related to transport of hazardous materials included in **ADR (road transport)**, **RID (rail transport)**, and **IMDG (sea transport)**.

Guidelines for proper transport preparation should always be prepared by the shipper based on product knowledge, necessary analyses and after appropriate **RID/ADR** classification.

- **14.1 UN Number:** 1999.
- **14.2 UN Proper Shipping Name:** Elevated temperature liquid, N.O.S., at or above 100 °C and below its flashpoint.
- **14.3 Transport Hazard Class(es):** 9.
- **14.4 Packing Group:** III.
- **14.5 Environmental Hazards:** No.
- **14.6: Label Code:**
- **14.6 Special Precautions for User:** Refer to Section 7.



SECTION 15

REGULATORY INFORMATION

➤ IRAQ REGULATIONS

Complies with local chemical safety and environmental laws.

➤ INTERNATIONAL REGULATIONS

GHS: Classified according to the Globally Harmonized System.

REACH: Not registered under REACH (EU-specific).

Transportation: Classified as hazardous material under the UN 1999 for bitumen. Complies with ADR and IMDG for road and sea transport.

➤ ENVIRONMENTAL REGULATIONS

Complies with **IMO MARPOL** for marine pollution prevention.

Basel Convention: Not listed as hazardous waste.

➤ HEALTH & SAFETY

Complies with Occupational Safety and Health Administration (OSHA).

Contains PAHs, which are carcinogenic.

➤ CHEMICAL INVENTORY

Complies with **TSCA (USA)**.



SECTION 16

OTHER INFORMATION

Revision Statement This is a new Material Safety Data Sheet.
Revision Date 18-05-2025

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