

Safety Data Sheet

Product: Oxidized Bitumen - All Grades
Product abbreviation: PN-OB | Preparation date: 2026-06-08

SECTION 1: IDENTIFICATION

Product identifier	Oxidized Bitumen
Grades covered	75/25, 75/30, 75/35, 85/25, 85/30, 85/35, 85/40, 90/10, 90/15, 90/40, 95/25, 105/15, 105/35, 110/30, 115/15, and 150/5
Other names	Blown bitumen, air-blown bitumen, oxidized asphalt, blown asphalt.
Chemical identity	Asphalt, oxidized.
CAS number	64742-93-4
EC number	265-196-4
Typical HS code	2713.20 - Petroleum bitumen.
Recommended uses	Roofing compounds and membranes, waterproofing, mastics, joint fillers, sealants, pipe coating, anti-corrosion systems, electrical insulation compounds, adhesives, and other professional industrial formulations.
Restrictions on use	Industrial and professional use only. Not intended for food, pharmaceutical, cosmetic, or direct consumer use.
Manufacturer	PETRO NAFT PETROKIMYA MADEN SANAYI TICARET LIMITED SIRKETI
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SECTION 2: HAZARDS IDENTIFICATION

GHS classification: Based on available data, oxidized bitumen does not meet the classification criteria for physical, health, or environmental hazards in its normal solid or semi-solid form.

Hazard pictograms	None required.
Signal word	None required.
Hazard statements	None required for GHS classification.
Precautionary statements	No mandatory GHS precautionary statements; the operational precautions below remain essential.

Other hazards not resulting in classification:

- Molten product can cause severe thermal burns.
- Product is not classified as flammable but will burn when strongly heated.
- Contact between molten bitumen and water or other liquids can cause violent eruption, foaming, and splashing.
- Heating can generate irritating bitumen fumes and may release hydrogen sulphide (H2S), especially in tanks and confined spaces.
- H2S is highly toxic and may be fatal; odour must not be relied upon as a warning.
- Carbonaceous and iron-sulphide deposits in tanks may be pyrophoric when exposed to air.
- Bitumen-contaminated porous insulation or fibrous material may self-heat and ignite.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Substance	CAS No.	EC No.	Concentration	Remarks
Asphalt, oxidized	64742-93-4	265-196-4	100%	Complex black solid obtained by controlled air blowing of petroleum residuum or deasphalting raffinate.

Hydrogen sulphide (CAS 7783-06-4) may be present in the vapour space or released during heating; it is not intentionally added. Some legacy commercial documents may use CAS 8052-42-4 for asphalt/bitumen.

SECTION 4: FIRST-AID MEASURES

General advice	Do not delay treatment following significant fume, H ₂ S, or molten-product exposure. Protect rescuers from fumes and H ₂ S.
Inhalation	Move the person to fresh air immediately. Keep at rest. If breathing is difficult, trained personnel may administer oxygen. If breathing stops, begin artificial respiration with a barrier device and obtain urgent medical attention. Rescuers must use suitable respiratory protection where H ₂ S may be present.
Skin contact - cool product	Remove contaminated clothing. Wash with soap and water. Seek medical advice if irritation persists.
Skin contact - molten product	Immediately cool the affected area with clean running water for at least 20 minutes. Do not use ice. Do not remove adherent bitumen and do not use solvents. Cover loosely with a sterile dressing and obtain urgent medical treatment.
Eye contact	Rinse cautiously with clean water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing and seek medical attention if pain, redness, or blurred vision persists.
Ingestion	Not an expected route of occupational exposure. Do not induce vomiting. Rinse mouth and obtain medical advice after significant ingestion.
Most important symptoms	Thermal burns; eye and respiratory irritation; coughing; headache; nausea; dizziness; breathing difficulty; effects of H ₂ S exposure including collapse or unconsciousness.
Advice to physician	Treat symptomatically. Adherent cooled bitumen normally should be left in place unless removal is medically required.

SECTION 5: FIRE-FIGHTING MEASURES

- Suitable extinguishing media: Dry chemical powder, foam, carbon dioxide, water fog/spray, sand, or earth for small fires.
- Unsuitable media: Do not use a direct water jet on burning or molten product.
- Specific hazards: The product will burn when strongly heated. Water entering hot product or tanks can cause violent boil-over or eruption.
- Hazardous combustion products: Carbon monoxide, carbon dioxide, sulphur oxides, hydrogen sulphide, smoke, and unidentified organic or inorganic compounds.
- Firefighter protection: Wear self-contained breathing apparatus and full protective clothing. Cool fire-exposed tanks and containers with water fog from a protected position.

SECTION 6: ACCIDENTAL RELEASE MEASURES

- Personal precautions: Isolate the area. Avoid contact with hot material and inhalation of fumes. Monitor for H₂S where tanks, pits, or confined areas are involved.
- Protective equipment: Wear heat-resistant gloves, protective clothing, eye/face protection, and suitable respiratory protection where fumes or H₂S may be present.
- Environmental precautions: Prevent entry into drains, sewers, soil, groundwater, and surface water.
- Containment and cleanup: If safe, stop the source. Allow molten product to cool and solidify, then remove mechanically. Use sand, earth, or other suitable barriers to prevent spreading.
- Prohibited action: Do not wash molten product with water. Do not enter tanks or confined spaces without a permit, atmospheric testing, ventilation, and rescue arrangements.
- Reporting: Notify relevant authorities if a significant release cannot be contained.

SECTION 7: HANDLING AND STORAGE

- General handling: Use closed or covered systems where practical. Avoid skin contact with hot material and inhalation of fumes.
- Temperature control: Use the lowest practical temperature. Unless a validated grade-specific procedure states otherwise, keep prolonged storage and routine handling below 200°C. Never exceed the grade-specific maximum stated in the TDS and avoid temperatures above 230°C.
- Heating: Use indirect, uniform heating such as thermal oil or properly designed steam systems. Avoid local overheating and flame impingement.
- Water exclusion: Prevent water or wet material from entering tanks, kettles, lines, or containers holding molten bitumen.
- Ventilation: Provide adequate local exhaust and general ventilation, particularly during melting, loading, mixing, and application.
- Hydrogen sulphide: Stand upwind when opening tanks. Vent thoroughly. Monitor H₂S and oxygen before and during confined-space entry.
- Tank deposits: Treat iron sulphide and carbonaceous deposits as potentially pyrophoric. Follow controlled tank-opening and cleaning procedures.
- Storage: Store packaged product in a dry, covered area away from water, direct flame, strong oxidizing agents, and contamination. Store molten product only in compatible, engineered tanks with temperature and level controls.
- Materials: Stainless steel and suitable carbon-steel systems are generally compatible. Confirm gaskets, seals, linings, and packaging for the operating temperature.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Agent	Exposure limit / basis	Remarks
Asphalt / bitumen fumes	NIOSH REL: Ceiling 5 mg/m ³ during any 15-minute period	OSHA has no substance-specific PEL for asphalt fumes; local limits govern.
Hydrogen sulphide	OSHA ceiling: 20 ppm; peak: 50 ppm under specified conditions	Use stricter national, site, or customer limits where applicable. Continuous monitoring may be required.

- Engineering controls: Enclose hot processes where practical. Use local exhaust ventilation at melting, mixing, loading, and application points.
- Eye and face protection: Safety glasses plus a full face shield with chin protection where splashing is possible.
- Hand protection: Heat-resistant gloves suitable for molten bitumen. Ensure cuffs prevent entry of hot material.
- Body protection: Heat-resistant coveralls, neck protection, safety helmet, and heavy-duty heat-resistant boots. Wear sleeves over glove cuffs and trouser legs over boots.
- Respiratory protection: Use a properly selected respirator for fumes where engineering controls are insufficient. Use positive-pressure supplied-air equipment or SCBA for unknown concentrations, oxygen deficiency, confined spaces, or H₂S risk.
- Hygiene: Wash hands and exposed skin after handling. Remove contaminated clothing and clean before reuse. Do not eat, drink, or smoke in work areas.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Property	Family information for Petro Naft oxidized grades
Physical state	Solid to semi-solid at ambient temperature; liquid at elevated processing temperatures.
Colour	Black to dark brown.
Odour	Characteristic petroleum / bituminous odour.
Odour threshold	No applicable information available.
pH	Not applicable.
Softening point	Approximately 70-155°C, grade dependent (ASTM D36 / EN 1427).
Penetration @ 25°C	Approximately 4-45 dmm, grade dependent (ASTM D5 / EN 1426).
Initial boiling point / range	Approximately $\geq 500^{\circ}\text{C}$; decomposition may occur before boiling.
Flash point, COC	Generally $\geq 230^{\circ}\text{C}$; Petro Naft grade specifications are typically $\geq 250^{\circ}\text{C}$ (ASTM D92).
Flammability	Not classified as flammable, but combustible and will burn.
Explosion limits	No applicable information available for the substance.
Vapour pressure	Negligible at ambient temperature; fumes may be generated during heating.
Relative vapour density	Not applicable at ambient temperature.
Relative density	Approximately 1.00-1.10; typical Petro Naft grades are around 1.04-1.06.
Water solubility	Negligible / insoluble.
Solubility in organic solvents	Soluble in selected hydrocarbon and chlorinated solvents; grade and method dependent.
Partition coefficient	Log Pow >6 (indicative for bituminous hydrocarbon material).
Auto-ignition temperature	$>300^{\circ}\text{C}$ (indicative).
Decomposition temperature	No specific data; degradation increases with excessive heating.
Viscosity	Strongly temperature and grade dependent; refer to grade-specific processing data.
Particle characteristics	Supplied as blocks, slabs, pellets, granules, or packed solid forms depending on contract.

SECTION 10: STABILITY AND REACTIVITY

Reactivity	No additional reactivity hazard is expected under recommended handling and storage conditions.
Chemical stability	Stable under normal ambient storage. Excessive or prolonged heating may cause degradation and fume generation.
Hazardous reactions	Molten bitumen contacting water or other liquids can erupt violently. Deposits containing iron sulphides may self-ignite when exposed to air.
Conditions to avoid	Overheating, direct flame, water contamination, strong oxidizers, oxygen-deficient atmospheres, and uncontrolled opening of tanks.
Incompatible materials	Strong oxidizing agents. Avoid incompatible tank linings, seals, and plastics at elevated temperature.
Hazardous decomposition products	Hydrogen sulphide, carbon monoxide, carbon dioxide, sulphur oxides, smoke, and hydrocarbon decomposition products.

SECTION 11: TOXICOLOGICAL INFORMATION

- Likely routes of exposure: Skin and eye contact are the primary routes; inhalation may occur when fumes, vapours, or mists are generated during heating.
- Acute toxicity: No adequate numerical acute-toxicity data are available for the substance as a whole. Acute systemic toxicity is expected to be low under normal handling.
- Inhalation: Hot fumes may cause temporary burning of the nose and throat, coughing, headache, nausea, or breathing difficulty. H₂S can cause rapid unconsciousness and death.
- Skin: Cool product may cause mechanical contamination or mild irritation. Molten product causes severe thermal burns.
- Eyes: Fumes may cause burning, redness, swelling, tearing, or blurred vision. Molten product can cause severe injury.
- Sensitization: No applicable information available to classify the substance as a sensitizer.
- Mutagenicity and reproductive toxicity: No applicable information available to classify the substance.
- Carcinogenicity: IARC concluded that occupational exposures to oxidized bitumens and their emissions during roofing are probably carcinogenic to humans (Group 2A). This occupational-exposure evaluation is not the same as a GHS classification of the solid product.
- Repeated exposure: Repeated exposure to fumes or contaminated skin may contribute to irritation or dermatitis. Fume exposure should be minimized.
- Aspiration hazard: Not applicable to the solid or semi-solid product under normal conditions.

SECTION 12: ECOLOGICAL INFORMATION

- Ecotoxicity: No adequate data are available for the substance as a whole. The product is not classified as an environmental hazard based on available information.
- Persistence: Expected to be persistent because of its high molecular weight and very low water solubility.
- Bioaccumulation: Log Pow is high, but the large molecular structure and low bioavailability limit interpretation for the substance as a whole.
- Mobility: Very low mobility in water. Solid product adheres to soil and surfaces; molten product can cause physical fouling.
- Other effects: Not expected to damage the ozone layer. Prevent uncontrolled release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

- Recover or recycle clean product where practical.
- Do not allow product, tank residues, or contaminated water to enter drains, soil, or watercourses.
- Dispose of waste through an authorized collector or contractor in accordance with local and destination-country regulations.
- Waste classification depends on contamination, processing history, and jurisdiction; the waste generator must assign the correct code.
- Empty packaging and tanks may retain hot-product, fume, H₂S, or pyrophoric-deposit hazards and must be cleaned and gas-freed by competent personnel.

SECTION 14: TRANSPORT INFORMATION

Ambient-temperature packed product	Generally not regulated as dangerous goods under ADR/RID, IMDG, or IATA when transported as solid or semi-solid at ambient temperature.
Molten / elevated-temperature product	UN 3257 - ELEVATED TEMPERATURE LIQUID, N.O.S. (Bitumen), Class 9, Packing Group III, when transported in molten form at or above 100°C and below its flash point, subject to current modal regulations.
IATA	Molten elevated-temperature material is generally not permitted for air transport. Ambient solid product classification must be confirmed before shipment.
Marine pollutant	No, based on available product information.
Bulk sea transport	MARPOL Annex I provisions may apply to bulk bitumen cargoes. Confirm vessel and cargo requirements.
Special precautions	Protect from water ingress, control temperature, prevent container damage, and follow Section 7. Verify the actual shipping temperature and current transport rules before dispatch.

SECTION 15: REGULATORY INFORMATION

This SDS is prepared in the standard 16-section sequence used by the UN Globally Harmonized System and OSHA Hazard Communication Appendix D. The product shall be assessed under the regulations applicable in Türkiye and each destination market, including SEA/KKDIK, EU CLP/REACH where applicable, occupational exposure rules, chemical inventories, and dangerous-goods regulations. This document does not constitute a statement of product registration in any jurisdiction.

SECTION 16: OTHER INFORMATION

Document title	Safety Data Sheet - Oxidized Bitumen - All Grades
Product abbreviation	PN-OB
Document number	PN-SDS-OB-260608-01
Preparation date	2026-06-08
Issue status	Initial issue.
Prepared for	PETRO NAFT PETROKIMYA MADEN SANAYI TICARET LIMITED SİRKETİ
Validity	Until replaced by an updated SDS or a grade-specific SDS.

Grades covered: 75/25, 75/30, 75/35, 85/25, 85/30, 85/35, 85/40, 90/10, 90/15, 90/40, 95/25, 105/15, 105/35, 110/30, 115/15, and 150/5.

Reference framework: Petro Naft oxidized-bitumen TDS documents; OSHA 29 CFR 1910.1200 Appendix D; ECHA substance identity for Asphalt, oxidized; NIOSH guidance for asphalt fumes; IARC Monograph Volume 103; current industry SDS practice for oxidized bitumen; and applicable UN/ADR/IMDG transport provisions.

Important notice: This is a master SDS for the Petro Naft oxidized-bitumen grade family. It applies where the chemical identity, hazard profile, and handling conditions remain substantially similar. The grade-specific TDS, applicable contractual documentation, actual shipping temperature, customer process, and destination-country requirements must be reviewed before supply, transport, or use. The information is safety guidance and is not a warranty or quality specification.