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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Name of the substance Asphalt, oxidised
Trade name of the substance Bitumen petroleum viscous
Identification number 265-196-4 (EC number)
Registration number 01-2119498270-36-0013
Synonyms Paving grade bitumen

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Intermediate for industrial use. Use in road and construction applications. Other registered uses for this product can be found in section 15 of this SDS.
Uses advised against None known.

1.3. Details of the supplier of the safety data sheet

Supplier

Company name LUKOIL Neftohim Burgas AD
Address Burgas 8104, Bulgaria
Telephone +359 5511 5654
Fax +359 5511 5555
e-mail SDS@neftochim.bg
Contact person REACH@neftochim.bg

1.4. Emergency telephone number +1-760-476-3961 (available 24 hours a day)

Access code 333368

General in EU 112 (Available 24 hours a day.)
3E Emergency Services +1-760-476-3961 (Access code: 333368): Emergency and incident response number is provided by 3E, available 24 hours a day, 7 days a week.
National Toxicological Information Centre +359 2 9154233 (Available 24 hours a day.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 as amended

This substance does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Hazard pictograms None.
Signal word None.
Hazard statements The substance does not meet the criteria for classification.

Precautionary statements

Prevention Not assigned.
Response Not assigned.
Storage Not assigned.
Disposal Not assigned.

Supplemental information on the label None.

2.3. Other hazards

This substance does not meet vPvB / PBT criteria of Regulation (EC) No 1907/2006, Annex XIII. The substance is not included in the list established in accordance with REACH Article 59(1) for having endocrine disrupting properties. The substance is not considered to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3: Composition/information on ingredients

3.1. Substances

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Asphalt, oxidised	100	64742-93-4 265-196-4	01-2119498270-36-0013	-	

Classification: -

Composition comments

This product is registered under the REACH Regulation 1907/2006 as a UVCB. All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

SECTION 4: First aid measures

General information

Get medical attention if any discomfort develops.

4.1. Description of first aid measures

Inhalation	Move to fresh air. Get medical attention if any discomfort continues.
Skin contact	Wash with soap and water. Get medical attention if irritation develops or persists.
Eye contact	Flush eyes thoroughly with water for at least 15 minutes. Get medical attention if irritation develops or persists.
Ingestion	Immediately rinse mouth and drink plenty of water. Get medical attention if irritation develops and persists.

4.2. Most important symptoms and effects, both acute and delayed

Irritation of eyes and mucous membranes. Irritation of nose and throat.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

General fire hazards

The product is not flammable.

5.1. Extinguishing media

Suitable extinguishing media	Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media	No restrictions known.

5.2. Special hazards arising from the substance or mixture

Combustion products include fumes, smoke, carbon monoxide, carbon dioxide and sulfur dioxide.

5.3. Advice for firefighters

Special protective equipment for firefighters	Self-contained breathing apparatus, operated in positive pressure mode and full protective clothing must be worn in case of fire.
Special fire fighting procedures	Move containers from fire area if you can do it without risk. Use water spray to cool unopened containers. Cool containers with flooding quantities of water until well after fire is out.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Keep unnecessary personnel away. Do not touch or walk through spilled material.
For emergency responders	Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Avoid release to the environment. Prevent further leakage or spillage if safe to do so.

6.3. Methods and material for containment and cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal. Do not vacuum clean unless vacuum cleaners are equipped with HEPA filter.

6.4. Reference to other sections

For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Provide adequate ventilation. Ground/bond container and receiving equipment. Use work methods which minimise dust production. Avoid inhalation of dust and contact with skin and eyes. Wear appropriate personal protective equipment.

7.2. Conditions for safe storage, including any incompatibilities Keep container tightly closed. Store in a dry place.

7.3. Specific end use(s) Observe industrial sector guidance on best practices.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits No exposure limits noted for ingredient(s).

Biological limit values No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no effect levels (DNELs)

General population

Product	Value	Assessment factor	Notes
Bitumen petroleum viscous (CAS 64742-93-4) Long-term, Local, Inhalation	0,61 mg/m ³	5	Repeated dose toxicity

Workers

Product	Value	Assessment factor	Notes
Bitumen petroleum viscous (CAS 64742-93-4) Long-term, Local, Inhalation	2,88 mg/m ³	3	Repeated dose toxicity

Predicted no effect concentrations (PNECs) Not available.

8.2. Exposure controls

Appropriate engineering controls Provide sufficient ventilation for operations causing dust formation. If engineering measures are not sufficient to maintain concentrations of dust particulates below the OEL (occupational exposure limit), suitable respiratory protection must be worn.

Individual protection measures, such as personal protective equipment

General information Use personal protective equipment as required. Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection Wear goggles/face shield. Eye protection should meet standard EN 166.

Skin protection

- Hand protection Wear suitable gloves tested to EN374. Suitable gloves can be recommended by the glove supplier.

- Other Wear suitable protective clothing.

Respiratory protection In case of inadequate ventilation or risk of inhalation of dust, use suitable respiratory equipment with particle filter. Use filter type P2 according to EN 143.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

Hygiene measures Wash hands after handling. Routinely wash work clothing and protective equipment to remove contaminants. Handle in accordance with good industrial hygiene and safety practices. Follow up on any medical surveillance requirements.

Environmental exposure controls Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Fume scrubbers, filters or engineering modifications to the process equipment may be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid.
Form	Solid.
Colour	Black. Dark brown.
Odour	Characteristic.
Melting point/freezing point	> 38 - < 130 °C (> 100,4 - < 266 °F)
Boiling point or initial boiling point and boiling range	> 308 °C (> 586,4 °F)
Flammability	Will burn if involved in a fire.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not determined.
Explosive limit - upper (%)	Not determined.

Flash point	> 250 °C (> 482 °F)
Auto-ignition temperature	> 400 °C (> 752 °F)
Decomposition temperature	Not determined.
pH	Not applicable.
Kinematic viscosity	>= 486 - <= 1382 mm ² /s (160 °C (320 °F))
Solubility	
Solubility (water)	Insoluble in water.
Partition coefficient (n-octanol/water) (log value)	Not applicable.
Vapour pressure	< 0,1 kPa @ 20 °C
Density and/or relative density	
Relative density	> 1,02 - < 1,07 @ 15°C
Vapour density	Not determined.
Particle characteristics	Not determined.

9.2. Other information

9.2.1. Information with regard to physical hazard classes No relevant additional information available.

9.2.2. Other safety characteristics

Dynamic viscosity	>= 100 - <= 1000 Pas (200 °C (392 °F))
Surface tension	>= 20,6 - <= 31,2 mN/m (333 °C (631,4 °F))

SECTION 10: Stability and reactivity

10.1. Reactivity	The product is non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Stable at normal conditions.
10.3. Possibility of hazardous reactions	Hazardous polymerisation does not occur. Hazardous reactions do not occur.
10.4. Conditions to avoid	Moisture. Contact with incompatible materials.
10.5. Incompatible materials	Strong oxidising agents.
10.6. Hazardous decomposition products	No hazardous decomposition products are known.

SECTION 11: Toxicological information

General information Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Inhalation	Dust may irritate respiratory system.
Skin contact	Dust may irritate skin.
Eye contact	Dust may irritate the eyes.
Ingestion	Ingestion may cause irritation and malaise.

Symptoms Irritation of eyes and mucous membranes. Irritation of nose and throat.

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity May cause eye and respiratory tract irritation.

Product	Species	Test Results
Asphalt, oxidised (CAS 64742-93-4)		
Acute		
Dermal		
LD50		>= 2000 mg/kg
Inhalation		
LC50		>= 94,4 mg/m ³
Oral		
LD50		>= 5000 mg/kg

Skin corrosion/irritation May cause irritation through mechanical abrasion.

Serious eye damage/eye irritation May cause irritation through mechanical abrasion.

Respiratory sensitisation Based on available data, the classification criteria are not met.

Skin sensitisation Based on available data, the classification criteria are not met.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Product: Asphalt, oxidised (air-rectified)
 Test: Guideline (OECD 451)
 Species: Rat
 Route: Inhalation
 Test Duration: 2 years
 Result: Negative
 Remarks: Study exposed animals to fumes collected from an air-rectified asphalt.

Conclusion/Summary: Based on available data, classification criteria are not met.

IARC Monographs. Overall Evaluation of Carcinogenicity

Asphalt, oxidised (CAS 64742-93-4) 2A Probably carcinogenic to humans.

Reproductive toxicity Based on available data, the classification criteria are not met.

Specific target organ toxicity - single exposure Based on available data, the classification criteria are not met.

Specific target organ toxicity - repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

Mixture versus substance information Not available.

11.2. Information on other hazards

Endocrine disrupting properties This substance does not have endocrine disrupting properties with respect to human health, as it does not meet the assessment criteria laid out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605.

Other information Prolonged and repeated overexposure to dust can lead to pneumoconiosis.

SECTION 12: Ecological information

12.1. Toxicity The product is not expected to be hazardous to the environment.

Product	Species	Test Results
Asphalt, oxidised (CAS 64742-93-4)		
Aquatic		
Algae	EL50	Pseudokirchneriella subcapitata >= 1000 mg/l, 72 hours
Fish	LL50	Oncorhynchus mykiss >= 1000 mg/l, 96 hours

12.2. Persistence and degradability The product is not biodegradable.

12.3. Bioaccumulative potential The product is not bioaccumulating.

Partition coefficient n-octanol/water (log Kow) Not applicable.

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil This substance has very low solubility in water and low mobility in the environment.

Mobility in general The product is insoluble or slightly soluble in water.

12.5. Results of PBT and vPvB assessment This substance does not meet vPvB / PBT criteria of Regulation (EC) No 1907/2006, Annex XIII.

12.6. Endocrine disrupting properties This substance does not have endocrine disrupting properties with respect to the environment, as it does not meet the assessment criteria laid out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605.

12.7. Other adverse effects Not expected to be harmful to aquatic organisms. However in case of accidental release of large amounts a hazardous effect cannot be excluded.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste Dispose in accordance with local regulations.

Contaminated packaging Recover and reclaim or recycle, if practical.

EU waste code 05 01 17
17 03 02

Disposal methods/information Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. UN number	UN3257
14.2. UN proper shipping name	ELEVATED TEMPERATURE LIQUID, N.O.S. (Asphalt, oxidised)
14.3. Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9
Hazard No. (ADR)	99
Tunnel restriction code	D
14.4. Packing group	III
14.5. Environmental hazards	No.
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling. When transported at non elevated temperatures (solid form): Not regulated as dangerous goods.

RID

14.1. UN number	UN3257
14.2. UN proper shipping name	ELEVATED TEMPERATURE LIQUID, N.O.S. (Asphalt, oxidised)
14.3. Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9
14.4. Packing group	III
14.5. Environmental hazards	No.
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling. When transported at non elevated temperatures (solid form): Not regulated as dangerous goods.

ADN

14.1. UN number	UN3257
14.2. UN proper shipping name	ELEVATED TEMPERATURE LIQUID, N.O.S. (Asphalt, oxidised)
14.3. Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9
14.4. Packing group	III
14.5. Environmental hazards	No.
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling. When transported at non elevated temperatures (solid form): Not regulated as dangerous goods.

IATA

14.1. UN number	UN3257
14.2. UN proper shipping name	ELEVATED TEMPERATURE LIQUID, N.O.S. (Asphalt, oxidized)
14.3. Transport hazard class(es)	
Class	9
Subsidiary risk	-
14.4. Packing group	-
14.5. Environmental hazards	No.
ERG Code	9L
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling. When transported at non elevated temperatures (solid form): Not regulated as dangerous goods.

IMDG

14.1. UN number	UN3257
14.2. UN proper shipping name	ELEVATED TEMPERATURE LIQUID, N.O.S. (Asphalt, oxidized)
14.3. Transport hazard class(es)	
Class	9
Subsidiary risk	-
14.4. Packing group	III
14.5. Environmental hazards	
Marine pollutant	No.

EmS

F-A, S-P

14.6. Special precautions for user

Read safety instructions, SDS and emergency procedures before handling.
When transported at non elevated temperatures (solid form):
Not regulated as dangerous goods.

14.7. Maritime transport in bulk according to IMO instruments

Not applicable. However, this product is a solid. When transported in bulk, it is not covered under Appendix I of the IMSBC Code.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EU) 2019/1021 On persistent organic pollutants (recast), as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Not listed.

Other regulations

The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006 as amended.

National regulations

Follow national regulation for work with chemical agents.

15.2. Chemical safety assessment

A chemical safety assessment has not been developed for air-rectified asphalts ($PI \leq 2$) for either human health or the environment as the substance does not meet classification criteria.

SECTION 16: Other information

List of abbreviations

ADN: European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways.
ADR: European Agreement Concerning the International Carriage of Dangerous Goods by Road.
CAS: Chemical Abstract Service.
CEN: European Committee for Standardization.
DNEL: Derived No-Effect Level.
EL50: Effective level, 50%.
IATA: International Air Transport Association.
IMDG Code: International Maritime Dangerous Goods Code.
LC50: Lethal Concentration, 50%.
LD50: Lethal Dose, 50%.
LL50: Lethal level, 50%.
PNEC: Predicted No-Effect Concentration.
PBT: Persistent, bioaccumulative and toxic.

	RID: Regulations concerning the International Carriage of Dangerous Goods by Rail. vPvB: Very Persistent and very Bioaccumulative.
References	Chemical safety report.
Information on evaluation method leading to the classification of mixture	The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.
Full text of any statements, which are not written out in full under sections 2 to 15	None.
This SDS contains revisions in the following section(s):	2, 8, 9, 11, 12, 16
Training information	Follow training instructions when handling this material.
Disclaimer	The information in the sheet was written based on the best knowledge and experience currently available at the date of revision and exclusively refer to the product in its as-delivered condition. The information and recommendations are offered for the user's consideration and examination. The logo and the name "LUKOIL oil company" may include anyone or more of LUKOIL Neftohim Burgas AD or LUKOIL or any affiliates in which they directly or indirectly hold any interest.