NordBit 15/25

Material safety data sheet according to (EC) No 1907/2006

Section 1: Identification of the substance/mixture and of the company

1.1 Product identifier

Product name: NordBit 15/25

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

Use of the substance/mixture

Industrial uses: Distribution of substance, Formulation & (re)packing of substances and mixtures, Uses in Coatings, Use in Oil and Gas field drilling and production operations, Rubber production and processing, Use as a fuel, Lubricants

Professional uses: Uses in Coatings, Use in Oil and Gas field drilling and production operations, Use in road and construction applications, Lubricants

Consumer uses: Uses in Coatings

1.3 Details of the supplier of the safety data sheet

Supplier: NordBit GmbH & Co. KG
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GERMANY

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1.4 Emergency telephone number

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Section 2: Hazards identification

2.1 Classification of the substance or mixture

Regulation (EC) No. 1272/2008

This substance is not classified as hazardous in accordance with Regulation (EC) No. 1272/2008.

2.2 Label elements

Regulation (EC) No. 1272/2008
Special labelling of certain mixtures

EUH210 Safety data sheet available on request.

Additional advice on labelling

No information available.

2.3 Other hazards

Contact with hot product may cause severe thermal burns.
Avoid contact of hot bitumen products with water. Risk of splashing of hot material.
Contact with skin and eyes causes burns. The product may spontaneously combust if sprayed when hot.
Product may release H2S. H2S is toxic, even in small concentrations. Product should be stored and transported at >50°C.

Section 3: Composition/information on ingredients

3.1 Substance

Component	Product identifier	%[1)]
Bitumen. Black, solid at room temperature, complex mixture, mainly of high molecular weight organic hydrocarbons. High C/H ratio.	(EG No.) 232-490-9 (CAS No.) 8052-42-4 (REACH registration no.) 01-2119480172-44	100

[1)] Concentration is indicated in vol.-%.

3.2 Mixtures

N/A

Section 4: First aid measures

4.1 Description of first aid-measures

After inhalation

If there is any suspicion of inhalation of H2S (hydrogen sulphide). Rescuers must wear breathing apparatus, belt and safety rope, and follow rescue procedures. Remove casualty to fresh air as quickly as possible.
Immediately begin artificial respiration if breathing has ceased. Provision of oxygen may help. Obtain medical advice for further treatment.
Obtain medical assistance if breathing remains difficult.
If casualty is unconscious and not breathing: Ensure that there is no obstruction to breathing and give artificial respiration by trained personnel. If necessary, give external cardiac massage and obtain medical advice.
If casualty is unconscious and breathing, place in the recovery position. Administer oxygen if necessary.
In case of symptoms arising from inhalation of product fumes, mists or vapour: Remove casualty to a quiet and well ventilated place if safe to do so.
Get immediate medical advice/attention.
Symptoms: irritation of the respiratory tract due to excess fume, mists or vapour exposure.

After contact with skin

Never use gasoline, kerosene or other solvents for washing of contaminated skin.
Do not put ice on the burn. Remove non-sticking garments carefully. DO NOT attempt to remove portions of clothing glued to burnt skin but cut round them.
For minor thermal burns, cool the burn. Hold the burned area under cold running water for at least five minutes, or until the pain subsides. Body hypothermia must be avoided.
In the event of accidental skin contact with hot product, the injured part should be immediately plunged under cold running water for at least 10 minutes. No attempt must be made to remove the bitumen adherent to the skin at the worksite.
In the case of a circumferential burn with adhesion of the bitumen, the adhering material should be split to prevent a tourniquet effect as it cools. Send patient for specialist care.
Seek medical attention in all cases of serious burns.
Symptoms: none expected at ambient temperature. Contact with hot/molten product will cause severe burns.

After contact with eyes

In the event of eye contact with cold product, rinse cautiously with water for several minutes.
If hot product is splashed into the eye, it should be cooled down immediately to dissipate heat, under cold running water for at least 5 minutes. Immediately obtain specialist medical assessment and treatment for the casualty.
If irritation, blurred vision or swelling occurs and persists, obtain medical advice from a specialist.

Symptoms: Product at ambient temperature (dust): minimal redness and irritation. Contact with hot/molten product will cause severe burns.

After ingestion
Do not induce vomiting. Ask for medical advice.
Symptoms: few or no symptoms expected. If any, slight nausea might occur.
Aspiration: not applicable due to the physical state of oxidized bitumen.

4.2 Most important symptoms and effects, both acute and delayed

Individuals with pre-existing lung disorders may have increased susceptibility of the effects of exposure.

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Monitor breathing and pulse rate. Treatment should be in general symptomatic to relieve any effects.

Section 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media:
Foam (qualified personnel only), dry chemical, water spray/water fog Foam (trained personnel only).
Water fog (trained personnel only).
Dry chemical powder.
Carbon dioxide (CO2).
Other inert gases (subject to regulations).
Sand or earth.

Unsuitable extinguishing media

Do not use direct water jets on the burning product; they could cause splattering and spread the fire. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

5.2 Special hazards arising from the substance or mixture

Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates, gases, including carbon monoxide, H2S, SOx (sulfur oxides) or sulfuric acid, unidentified organic and inorganic compounds.
Contact of hot product with water will result in a violent expansion as the water turns to steam. This may cause splashing of hot product, or damage to, or complete loss of the tank roof.
Respiratory problems or nausea by excessive exposure to hot product fumes.

5.3 Advice for fire-fighting

Special protective equipment for firefighters
In case of a large fire or in confined or poorly ventilated spaces, wear full fire resistant protective clothing and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:
Small spillages: Normal antistatic working clothes are usually adequate. Large spillages: full body suit of chemically resistant and thermal resistant material should be used.
Work helmet with neck cloth. Antistatic non-skid safety shoes or boots, heat resistant.
Goggles and /or face shield, if splashes or contact with eyes is possible or anticipated.
If contact with hot product is possible or anticipated, gloves should be heat-resistant and thermally insulated.
Work gloves (preferably gauntlets) providing adequate chemical resistance. Gloves made of PVA are not water-resistant, and are not suitable for emergency use.

A half or full-face respirator with combined dust/organic vapour filter(s), or a Self-Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure.
If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.

6.2 Environmental precautions

If necessary dike the product with dry earth, sand or similar non-combustible materials.
Prevent product from entering sewers, rivers or other bodies of water, or underground spaces (tunnels, cellars, etc.). Solidified product may clog drains and sewers.

6.3 Methods and materials for containment and cleaning up

Stop or contain leak at the source, if this possible without risk. Avoid direct contact with released material. Stay upwind.
Transfer collected product and other contaminated materials to suitable containers for recovery or safe disposal.
If possible, contain the product. Contain the product and contaminated materials with mechanical means.
Transfer recovered product and other materials to suitable tanks or containers and store /dispose according to relevant regulations.
Leaks and spillages will consist of molten hot material with risk of severe burns.
When inside buildings or confined spaces, ensure adequate ventilation.
Keep non-involved personnel away from the area of spillage. Alert emergency personnel.
Except in case of small spillages: The feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency.
Collect solidified product with suitable means. (e.g. shovels).
In case of spillage in the water, the product will cool down rapidly and become solid. The solid product is denser than water and will slowly sink to the bottom, and usually no intervention will be feasible.
Let hot product cool down naturally. If necessary, cautiously use water fog to help the cooling. Do not play direct jets of foam or water on the spilled molten product, as this may cause splattering.
Eliminate all ignition sources if safe to do so (e.g. electricity, sparks, fires, flares).
If required, notify relevant authorities according to all applicable regulations.

Additional information:
Recommended measures are based on the most likely spillage scenarios for this material.
Local conditions (wind, air temperature, wave/current direction and speed) may significantly influence the choice of appropriate actions.
For this reason, local experts should be consulted when necessary. Local regulations may also prescribe or limit actions to be taken.
Concentration of H2S in tank headspaces may reach hazardous values, especially in case of prolonged storage. This situation is especially relevant for those operations which involve direct exposure to the vapours in the tank.
Spillages of limited amounts of product, especially in the open air when vapours will be usually quickly dispersed, are dynamic situations, which will presumably limit the exposure to dangerous concentrations.
As H2S has a density greater than ambient air, a possible exception may regard the build-up of dangerous concentrations in specific spots, like trenches, depressions or confined spaces.
In all these circumstances, however, the correct actions should be assessed on a case-by-case basis.
When the presence of dangerous amounts of H2S around the spilled product is suspected or proved, additional or special actions may be warranted, including access restrictions, use of special protection equipment, procedures and personnel training.

6.4 Reference to other sections

Protection measures in section 7, 8 and 13.

Section 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Ensure that all relevant regulations regarding handling and storage facilities of flammable products are followed.
Avoid contact of hot bitumen products with water. Risk of splashing of hot material.
Avoid contact with the hot product.
Product may release Hydrogen Sulphide: A specific assessment of inhalation risks from the presence of hydrogen sulphide in tank headspaces, confined spaces, product residue, tank waste and waste water, and unintentional releases should be made to help determine controls appropriate to local circumstances.
Do not breathe fumes from hot product.
Ground/bond containers, tanks and transfer/receiving equipment.
Use adequate personal protective equipment as required. For more information regarding protective equipment see section "Exposure control/personal protection".

Further information on handling

Reduce exposure to fume by keeping operating temperatures as low as possible taking into account occupational exposure limits and safe handling temperatures (see 7). Where practicable handle within an enclosed process. Alternatively local exhaust ventilation should be considered.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Storage installations should be designed with adequate bunds in case of leaks or spills.
Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations.
Recommended materials for containers, or container linings use mild steel, stainless steel.
Selfheating leading to auto ignition at the surfaces of porous or fibrous materials impregnated with oils ormbitumen, can occur at temperatures as low as 100°C.
Oil and bitumen contamination of thermal insulation materials and the accumulation of oily rags or similar material near hot surfaces, should therefore be avoided, and lagging should be replaced where necessary by a nonabsorbent type of insulation.
Deposits (carbonaceous materials and iron sulphides) can develop on the internal walls and roofs of tanks in case of long term storage. These deposits may be pyrophoric and self-ignite in contact with the air.
Most synthetic materials are unsuitable for containers or container linings, due to low heat resistance.
Before entering storage tanks and commencing any operation in a confined area, check the atmosphere for oxygen content, hydrogen sulphide (H_2S) and flammability.
Use adequate personal protective equipment as required.
Keep only in the original container or in a suitable container for this kind of product.
Storage area layout, tank design, equipment and operating procedures must comply with the relevant European, national or local legislation.
Hot product must never be filled into containers without first checking that the container is completely dry.

Hints on joint storage

Store separately from oxidising agents.

Further information on storage conditions

Empty containers may contain combustible product residues. Do not weld, solder, drill, cut or incinerate empty containers, unless they have been properly cleaned.

7.3 Specific end uses

Recommendation:
Ensure that proper housekeeping measures are in place.
Do not eat, drink or smoke when using this product.
Contaminated materials should not be allowed to accumulate in the workplaces and should never be kept inside the pockets.
Keep away from food and beverages.
Wash the hands thoroughly after handling.
Do not use solvents or other products with a defatting effect on the skin.

Section 8: Exposure controls/personal protection

8.1 Control parameters

Exposure limits (EH40)

CAS-No.	Substance	ppm	mg/m³	F/m³	Category	Origin
7783-06-4	Hydrogen sulphide	5	7		2(I)	
6-052-42-4	Bitumen: fumes and aerosols of hot finishing straight-run bitumen and air-rectified bitumen		1,5		2(II)	

CAS-No.		Substance	
8052-42-4		Asphalt	
DNEL Typ	Exposure route	Effect	Value
Worker DNEL, long-term	inhalation	local	2.88 mg/m³
Consumer DNEL, long-term	inhalation	local	0.61 mg/m³

Additional advice on limit values

Monitoring procedures should be chosen according to the indications set by national authorities or Labour contracts.
In absence of such indications, direct exposure to bitumen fumes can be assessed with a number of Methods. Any comparison should be made only between data obtained with the same procedure.
Dermal exposure can be assessed by the dermal patch method.

8.2 Exposure controls

Appropriate engineering controls

Urinary biomarkers of exposure to PAHs may provide an indication of exposure to bitumen .
Recommended values for occupational exposure limits are not meant to replace any value set by official regulations or labour contracts.
Material handled at elevated temperature may cause thermal burns by contact with molten product.
Heated bitumen will give off fumes.
Reduce exposure to fume by keeping operating temperatures as low as possible taking into account occupational exposure limits and safe handling temperatures (see 7). Where practicable handle within an enclosed process. Alternatively local exhaust ventilation should be considered.
Do not enter empty storage tanks until measurements of available oxygen have been carried out.
Hydrogen sulphide (H2S) can accumulate in the headspace of product storage tanks and reach potentially hazardous concentrations.

Protective and hygiene measures

Wear suitable protective clothing, gloves and eye/face protection.
Use of personal protective equipment must be consistent with good occupational hygiene practices.

Eye/face protection

If splashing is likely, full head and face protection (protective shield and/or safety goggles) should be used.

Hand protection
When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.
Avoid skin contact with fumes or surfaces where fumes may have condensed.
Suitable gloves, coveralls, or other chemical resistant clothing should be used to protect exposed areas of skin.
Heat resistant gloves with long cuffs, or gauntlets.
Gloves must be periodically inspected and changed in case of wear, perforations or contaminations.

Skin protection
Wear protective clothing for operations with hot material : heat resistant coveralls (with trousers legs over boots and sleeves over cuffs of gloves), heat resistant heavy duty antiskid boots (e. g. leather).
Coveralls should be changed at the end of the work shift and cleaned as necessary to avoid transfer of product to clothes or underwear.
For loading/unloading operations: wear safety helmet with integrated full face visor and neck protection.

Respiratory protection
Approved respiratory protection equipment shall be used in spaces where hydrogen sulphide may accumulate: full face mask with cartridge/filter type "B" (grey for inorganic vapours including H2S) or self-contained breathing apparatus (SCBA).
If worker exposure is likely to exceed workplace exposure levels, wear a respirator conforming to EN 140 with type A/P2 filter or better.

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Data represents typical values and is not intended for specification purposes.

Appearance, color:	black
Physical state:	solid
Odor:	mild
Odor threshold:	N/D
pH:	N/A
Melting point/-range:	ca. 55 °C (DIN EN 1427)
Freezing point:	N/B
Initial boiling point/-range:	> 320 °C
Flash point:	> 280 °C (ISO 2592)
Evaporation rate:	N/D
Inflammability (solid, fuel):	N/D
Upper explosion limit (Vol-% in air):	N/D
Lower explosion limit (Vol-% in air):	N/D
Vapor pressure (DVPE):	N/D
Relative vapor density (Air=1):	N/D
Density:	N/D
Solubility:	N/D
Partition coefficient (n-octanol/water):	N/D

Self ignition temperature:	> 400 °C (ASTM E 659)
Decomposition temperature:	N/D
Viscosity:	N/D
Explosive properties:	The product is not explosive.
Oxidation properties:	N/A

9.2 Other information

No data available.

Section 10: Stability and reactivity

10.1 Reactivity

Chemically unreactive.

10.2 Chemical stability

Stable under normal temperature and intended use.

10.3 Possibility of hazardous reactions

No dangerous reactions are expected.

10.4 Conditions to avoid

Prevent overheating. Prevent contact with water when product is hot. Prevent contamination with tank isolation (may reduce the ignition temperature as low as 150 °C).

10.5 Incompatible materials

Materials to avoid:
Contact with strong oxidizers (peroxides, chromates, etc.) may cause a fire hazard.
A mixture with nitrates or other strong oxidisers (e.g. chlorates, perchlorates, liquid oxygen) may create an explosive mass. Sensitivity to heat, friction or shock cannot be assessed in advance.

10.6 Hazardous decomposition products

Combustion (incomplete) will likely generate oxides of carbon, sulphur and nitrogen, as well as additional
undetermined organic compounds of the same elements.
None under normal conditions at ambient temperatures.

Further information
This substance is stable under all ordinary circumstances at ambient temperatures, and if released into the environment.

Section 11: Toxicological information

11.1 Information on toxicological effects

11.1.1 Substance information

Acute oral toxicity:	LD_{50} > 5000 mg/kg (rat); Method: equivalent with OECD 401.
Acute dermal toxicity:	LD_{50} > 2000 mg/kg (rabbit); Method: equivalent with OECD 402
Irritability skin:	Not irritating (rabbit); Method: equivalent with OECD 404.
Irritability eye:	Not irritating (rabbit); Method: equivalent with OECD 405.
Skin sensitization:	Not sensitizing (guinea pigs); Method: equivalent with

	OECD 406.
Subacute Toxicity:	rabbit dermal NOAEL: 200 mg/kg_{KW}/Tag; Method: equivalent with OECD 410.
Subchronic Toxicity:	Rat NOAEC: 172,5 mg/m^3; Method: OECD 451.
Mutagenicity:	Negative.
Reproduction-Toxicity:	NOAEC > 300 mg/m^3; Method: OECD 421 or 422
Carcinogenicity:	Based on available data, the classification criteria are not met.
STOT-single exposure	Based on available data, the classification criteria are not met. No known symptoms to date.
STOT-repeated exposure	Based on available data, the classification criteria are not met. No known symptoms to date.
Aspiration hazard	Based on available data, the classification criteria are not met. No known symptoms to date.
Additional information on tests	The substance is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

11.1.2 Mixture information

N/A

Section 12: Ecological information

12.1. Toxicity

Ecotoxicological effects	Value	Species	Method	Remark
Fish	LL_{50} > 1000 mg/L (96 h)	-	QSAR assessment	-
Daphnia	LL_{50} > 1000 mg/L (48 h)	-	QSAR assessment	-
Algae	LL_{50} > 1000 mg/L (72 h)	-	QSAR assessment	-

12.2 Persistence and degradability

Substance is a hydrocarbon UVCB. Standard tests for persistence and degradability are intended for single substances and are not appropriate for this complex substance.

12.3 Bioaccumulative potential

Substance is a hydrocarbon UVCB. Standard Tests for bioaccumulation potential are intended for single substances and are not appropriate for this complex substance.

12.4 Mobility in soil

The product is virtually insoluble in water. It can be removed by mechanical separation from the water.

12.5 Results of vPvB assessment

N/A

12.6 Other adverse effects

N/A

Section 13: Disposal considerations

13.1 Waste treatment methods

European waste catalog: 05 01 17 "bitumen". The listed waste code represents only a recommendation. The waste producer is responsible for the concrete specification of the waste.

Section 14: Transport information

14.1 UN number

UN number:	UN 3257

14.2 Proper UN shipping name

ADR/RID:	ELEVATED TEMPERATURE LIQUID, N.O.S. (BITUMEN), PG 9, III; applies exclusively to transport temperatures above 100 ° C.
IMDG-Code:	ELEVATED TEMPERATURE LIQUID, N.O.S. (BITUMEN), PG 9, III; applies exclusively to transport temperatures above 100 ° C.

14.4 Packing Group

Packing Group:	III

14.4 Special precautions for user

The product is not classified as dangerous good, if the transport temperature is below 100 ° C.

14.5 Bulk transport in accordance with Annex II of MARPOL 73/78 and the IBC Code

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

Section 15: Regulatory information

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

15.1.1 Remarks for labeling

This product is not subject to classification according to directives of the European Union an the german GefStoffV.

15.1.2 S-Phrases

S 36/37: Wear suitable protective clothing and gloves.

15.1.2 P-Phrases

P 280: Wear protective gloves/protective clothing/eye protection/face protection.

15.1.2 National regulations

German water hazard class	Not harmful to water according to german VwVwS, Annex 1
German StörfallV:	Not mentioned.
German TA-Luft:	Not applicable.

15.2 Chemical safety assessment

A Chemical Safety Assessment was performed for this substance.

Section 16: Other information

Date of issue: 20.05.2020

Revision of sheet dated: 13.02.2018

Revised sections: N/A

Important literature and data sources that was used to compile the safety data sheet

This data sheet is based on manufacturer data. For further information, please contact us.

Description of Identified uses (Use Descriptor System)

Product group: Bitumen

Abbreviations and Acronyms

N/A	= Not applicable
N/D	= Not determined
STEL	= Short Term Exposure Limit
L_{50}	= effective loading rate lethal to 50 % of the test population
E_rL_{50}	= effective loading rate that causes 50 % reduction in algal growth rate
LL_{50}	= Lethal loading rate required to kill 50 % of test population
PBT	= Persistent, bioaccumulative, toxic
vPvB	= very persistent, very bioaccumulative
IARC	= International agency for research on cancer
PPE	= Personal protective equipment

Note: The information in this MSDS is based on our current knowledge and experience. These data is not a guarantee of the properties of the product. The use of the product for other use than intended can be dangerous. Data contained in this MSDS does not release the user from the obligation to inform themselves about current regulations and apply them to his work. He has to bear the sole responsibility for the precautions required when using this product.