



SAFETY DATA SHEET

SANDVIK ROCK DRILL PERFORMANCE FLUIDS

HEAVY-DUTY SHANK LUBRICATION OIL

SANDVIK OS220

ACCORDING TO REGULATION (EC) NO. 1907/2006 (REACH) ARTICLE 31, ANNEX II AS AMENDED.
INTERNAL NO: SDS-SANDVIK OS220/ENG/METRIC ISSUED: 13 JANUARY 2017

1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

1.1: PRODUCT IDENTIFIER

PRODUCT NAME	Sandvik Heavy-duty Shank lubrication Oil
PRODUCT CODE	Sandvik OS220

1.2: RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

IDENTIFIED USES	Hydraulic oil.
USES ADVISED AGAINST	This product must not be used in applications other than those listed in chapter 1 without first seeking the advice of the supplier.

1.3: DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

NAME	Sandvik Mining and Construction Logistics Ltd.
ADDRESS	Harcourt Road, Dublin, Ireland
EMAIL	For ALL content or SDS related inquiries contact us sds.mining@sandvik.com

1.4: EMERGENCY TELEPHONE NUMBER

EMERGENCY TELEPHONE NUMBERS	In case of chemical emergency (spill, leak, fire, exposure or accident) call our service provider UK National Chemical Emergency Centre (NCEC): For Europe and if no country-specific number listed: +44 1865 407 333 For Brazil: +55 11 3197 5891 For US: +1 202 464 2554 For Mexico: +52 55 5004 8763 For Africa: +27 21 300 2732 For Australia: +61 2 8014 4558 For NZ: +64 9 929 1483 For China (mainland): + 86 532 8388 9090 For China (outside): +86 512 8090 3042
HOURS OF OPERATION	24 hours per day / 7 days per week.



2: HAZARDS IDENTIFICATION

2.1: CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

THE PRODUCT HAS BEEN CLASSIFIED AND LABELLED AS HAZARDOUS ACCORDING TO REGULATION (EU) 1272/2008 (CLP).	
ENVIRONMENTAL HAZARDS, CHRONIC HAZARDS TO THE AQUATIC ENVIRONMENT	Category 3. H412: Harmful to aquatic life with long lasting effects.
HAZARD SUMMARY	Physical hazards: no data available.

2.2: LABEL ELEMENTS

HAZARD STATEMENT(S)	H412: Harmful to aquatic life with long lasting effects.
PRECAUTIONARY STATEMENT, PREVENTION	P273: Avoid release to the environment.
PRECAUTIONARY STATEMENT, DISPOSAL	P501: Dispose of contents / container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
SUPPLEMENTAL LABEL INFORMATION	EUH208: Contains alkyl amine. May produce an allergic reaction.

2.3: OTHER HAZARDS

	By handling of mineral oil products and chemical products no particular hazard is known when normal precautions (chapter 7) and personal protective equipment (chapter 8) are kept. The product may not be released into the environment without control.
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3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1: MIXTURES

GENERAL INFORMATION	Mixture containing severely refined base oils and additives.
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CHEMICAL NAME	IDENTIFIER	CONCENTRATION *	REACH REGISTRATION NO.
Alkyl amine	EINECS: 273-279-1	0,10 - <0,25%	01-2119456798-18
Alkenyl amine, long-chain	EINECS: 204-015-5	0,01 - <0,25%	

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

PBT: persistent, bio-accumulative and toxic substance.

vPvB: very persistent and very bio-accumulative substance.

CLASSIFICATION:

CHEMICAL NAME	IDENTIFIER	CLASSIFICATION
Alkyl amine	EINECS: 273-279-1	CPL: Acute Tox. 4;H302, Acute Tox. 2;H330, Acute Tox. 3;H311, Skin Corr. 1B;H314, Aquatic Acute 1;H400, Aquatic Chronic 1;H410, Skin Sens. 1A;H317, STOT SE 3;H335
Alkenyl amine, long-chain	EINECS: 204-015-5	CLP: Acute Tox. 4;H302, Asp. Tox. 1;H304, STOT SE 3;H335, STOT RE 2;H373, Skin Corr. 1B;H314, Aquatic Acute 1;H400, Aquatic Chronic 1;H410; M-Factor (aquatic acute): 10; M-Factor (aquatic chronic): 10

CLP: Regulation No. 1272/2008.

For the wording of the listed risk phrases refer to section 16.

Please note that the mineral oils and petroleum distillates used in our products are severely refined and have a DMSO extract < 3% as measured by method IP 346 and are not classified as carcinogenic according to Note L of Annex VI of Regulation EC 1272/2008.

4: FIRST AID MEASURES

GENERAL ADVICE	Instantly remove any clothing soiled by the product.
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4.1: DESCRIPTION OF FIRST AID MEASURES

PROTECTION OF FIRST-AIDERS	When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to the incident, injury and surroundings.
IF INHALED	Supply fresh air. If symptoms persist, obtain medical advice.
IN CASE OF SKIN CONTACT	Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. The product is not skin irritating. When using high pressure equipment, injection of product under the skin can occur. If high pressure injuries occur, the casualty should be sent immediately to a hospital. Do not wait for symptoms to develop. Obtain medical attention even in the absence of apparent wounds.
IN CASE OF EYE CONTACT	Flush eye with copious quantities of water while lifting the eye lids. If persistent irritation occurs, obtain medical attention.
IN CASE OF INGESTION	Rinse mouth thoroughly.
IF SWALLOWED	In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.



4.2: MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

SYMPTOMS	May cause skin and eye irritation.
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4.3: INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

HAZARDS	No data available.
TREATMENT	Get medical attention if symptoms occur. Notes to doctor / physician: Treat symptomatically. High pressure injection injuries require prompt surgical intervention and possibly steroid therapy, to minimise tissue damage and loss of function.

5: FIRE-FIGHTING MEASURES

5.1: EXTINGUISHING MEDIA

SUITABLE EXTINGUISHING MEDIA	CO ₂ , fire extinguishing powder or fog like water spraying. Extinguish larger fires with alcohol resistant foam or spray water with suitable surfactant added.
UNSUITABLE EXTINGUISHING MEDIA	Do not use water in a jet.

5.2: SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

SPECIFIC HAZARDS DURING FIRE-FIGHTING	Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide may be evolved if incomplete combustion occurs. Unidentified organic and inorganic compounds.
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5.3: ADVICE FOR FIRE-FIGHTERS

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS	Proper protective equipment is to be worn. Self-contained breathing apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant standards (e.g. Europe: EN469).
SPECIAL FIRE-FIGHTING PROCEDURES	Move container from fire area if it can be done without risk. Dispose of fire debris and contaminated fire-fighting water in-accordance with official regulations. Collect contaminated fire-fighting water separately. It must not enter drains.

6: ACCIDENTAL RELEASE MEASURES

6.1: PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

PERSONAL PRECAUTIONS	In case of spills, beware of slippery floors and surfaces. Avoid contact with skin and eyes.
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6.2: ENVIRONMENTAL PRECAUTIONS

ENVIRONMENTAL PRECAUTIONS	Prevent from spreading (e.g. by binding or oil barriers).
	Avoid release to the environment. Environmental manager must be informed of all major spillages. Prevent further leakage or spillage if safe to do so. Do not allow to enter drainage system, surface or ground water.

6.3: METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

METHODS FOR CLEANING UP	Slippery when spilled. Avoid accidents, clean up immediately. Stop the flow of material, if this is without risk. Absorb with liquid-binding material (sand, diatomite, acid-binders, universal binders, sawdust). Dispose of the material collected according to regulations.
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6.4: REFERENCE TO OTHER SECTIONS

For guidance on selection of personal protective equipment see chapter 8 of this Safety Data Sheet. See chapter 7 for information on safe handling. For guidance on disposal of spilled material see chapter 13 of this Safety Data Sheet.
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7: HANDLING AND STORAGE

GENERAL PRECAUTIONS	Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.
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7.1: PRECAUTIONS FOR SAFE HANDLING

<p>Provide adequate ventilation. Observe good industrial hygiene practices. Do not eat, drink or smoke when working with the product. Take usual precautions when handling mineral oil products or chemical products.</p> <p>Avoid prolonged or repeated contact with skin.</p> <p>When handling product in drums, safety footwear should be worn and proper handling equipment should be used.</p>

7.2: CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

<p>Local regulations concerning handling and storage of water-polluting products have to be followed. Prevent formation of aerosols. Do not heat up to temperatures close to the flash point.</p> <p>Keep container tightly closed and in a cool, well-ventilated place. Use properly labelled and closable containers.</p> <p>Store at ambient temperature. Refer to chapter 15 for any additional specific legislation covering the packaging and storage of this product.</p>
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7.3: SPECIFIC END USE(S)

SPECIFIC USE(S)	Not applicable.
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8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1: CONTROL PARAMETERS

OCCUPATIONAL EXPOSURE LIMITS		
CHEMICAL NAME	TYPE / EXPOSURE LIMIT VALUES	SOURCE
Base oil paraffinic	STEL / 5 mg/m ³	Russian Federation. Hygiene Norm GN 2.2.5.1313-03. Executive No. 76 of 30 April 2003. Maximum allowable concentration (MAC) of harmful substances in the air of working zones.
Base oil paraffinic - aerosol.	CEIL / 5 mg/m ³	Russian Federation. Hygiene Norm GN 2.2.5.1313-03. Executive No. 76 of 30 April 2003. Maximum allowable concentration (MAC) of harmful substances in the air of working zones.



8.2: EXPOSURE CONTROLS

APPROPRIATE ENGINEERING CONTROLS:

Provide adequate ventilation. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

INDIVIDUAL PROTECTION MEASURES SUCH AS PERSONAL PROTECTIVE EQUIPMENT:

GENERAL	Wash hands before breaks and after work. Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. The usual precautionary measures should be adhered to in-handling the chemicals or the mineral oil products.
EYE / FACE PROTECTION	Safety glasses (EN 166) recommended during refilling.
SKIN / HAND PROTECTION	Material: nitrile butyl rubber (NBR). Min. breakthrough time: ≥ 480 min. Recommended thickness of the material: ≥ 0.38 mm. Avoid long-term and repeated skin contact. Suitable gloves can be recommended by the glove supplier. Use skin protection cream for preventive skin protection. Protective gloves, where permitted in acc. to safety directions. The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
OTHER	Do not carry cleaning cloths impregnated with the product in trouser pockets. Wear suitable protective clothing.
RESPIRATORY PROTECTION	Seek advice from local supervisor. Ensure good ventilation/exhaustion at the workplace. Avoid breathing vapour/aerosol.
THERMAL HAZARDS	Not known.
HYGIENE MEASURES	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

ENVIRONMENTAL EXPOSURE CONTROLS:

GENERAL ADVICE	Take appropriate measures to fulfil the requirements of relevant environmental protection legislation. Avoid contamination of the environment by following advice given in chapter 6. If necessary, prevent undissolved material from being discharged to waste water. Waste water should be treated in a municipal or industrial waste water treatment plant before discharge to surface water. Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.
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9: PHYSICAL AND CHEMICAL PROPERTIES

9.1: INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Liquid.
COLOUR	Light brown.
ODOUR	Characteristic.
ODOUR THRESHOLD	Not applicable for mixtures.
pH	Not applicable.
FREEZING POINT	-21 °C.
BOILING POINT	Value not relevant for classification.
FLASH POINT	240 °C (DIN EN ISO 2592).
EVAPORATION RATE	Not applicable for mixtures.
FLAMMABILITY (SOLID, GAS)	Value not relevant for classification.
FLAMMABILITY LIMIT - UPPER (%)	Not applicable for mixtures.
FLAMMABILITY LIMIT - LOWER (%)	Not applicable for mixtures.
VAPOUR PRESSURE	Not applicable for mixtures.
VAPOUR DENSITY (AIR=1)	Not applicable for mixtures.
DENSITY	0.87 - 0.92 g/cm ³ (15.0 °C, DIN EN ISO 12185).
SOLUBILITY IN WATER	Insoluble in water.
SOLUBILITY IN OTHER SOLVENTS	No data available.
Partition coefficient (n-octanol/water)	Not applicable for mixtures.
AUTOIGNITION TEMPERATURE	Value not relevant for classification.
DECOMPOSITION TEMPERATURE	Value not relevant for classification.
KINEMATIC VISCOSITY	68 - 320 mm ² /s (40.0 °C, DIN EN ISO 3104).
EXPLOSIVE PROPERTIES	Value not relevant for classification.
OXIDIZING PROPERTIES	Value not relevant for classification.

9.2: OTHER INFORMATION

No data available.

10: STABILITY AND REACTIVITY

10.1: REACTIVITY

Stable under normal use conditions.

10.2: CHEMICAL STABILITY

Stable under normal use conditions.

10.3: POSSIBILITY OF HAZARDOUS REACTIONS

Stable under normal use conditions.

10.4: CONDITIONS TO AVOID

Stable under normal use conditions.

10.5: INCOMPATIBLE MATERIALS

Strong oxidizing substances. Strong acids. Strong bases.

10.6: HAZARDOUS DECOMPOSITION PRODUCTS

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.



11: TOXICOLOGICAL INFORMATION

11.1: INFORMATION ON TOXICOLOGICAL EFFECTS

ACUTE TOXICITY:	
ORAL PRODUCT SPECIFIED SUBSTANCE(S)	Not classified for acute toxicity based on available data. Alkylen amine: LD 50 (rat): 1.689 mg/kg.
DERMAL PRODUCT	ATEmix: 265.017 mg/kg.
INHALATION PRODUCT	ATEmix: 450.53 mg/l, vapour.
SKIN CORROSION / IRRITATION PRODUCT	Based on available data, the classification criteria are not met.
SERIOUS EYE DAMAGE / EYE IRRITATION PRODUCT	Based on available data, the classification criteria are not met.
RESPIRATORY OR SKIN SENSITIZATION PRODUCT	Based on available data, the classification criteria are not met.
GERM CELL MUTAGENICITY PRODUCT	Based on available data, the classification criteria are not met.
CARCINOGENICITY PRODUCT	Based on available data, the classification criteria are not met.
REPRODUCTIVE TOXICITY PRODUCT	Based on available data, the classification criteria are not met.
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE PRODUCT	Based on available data, the classification criteria are not met.
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE PRODUCT	Based on available data, the classification criteria are not met.
ASPIRATION HAZARD PRODUCT	Based on available data, the classification criteria are not met.
OTHER ADVERSE EFFECTS	No data available.

12: ECOLOGICAL INFORMATION

12.1: TOXICITY

ACUTE TOXICITY PRODUCT	Based on available data, the classification criteria are not met.
FISH, SPECIFIED SUBSTANCE(S)	Alkylen amine: LC 50 (fish, 96 h): > 0.11 - 1 mg/l.
AQUATIC INVERTEBRATES, SPECIFIED SUBSTANCE(S)	Alkylen amine: EC 50 (water flea, 48 h): > 0.11 - 1 mg/l.
CHRONIC TOXICITY PRODUCT	Based on available data, the classification criteria are not met.

12.2: PERSISTENCE AND DEGRADABILITY

BIODEGRADATION PRODUCT	Not applicable for mixtures.
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12.3: BIO-ACCUMULATIVE POTENTIAL

BIO-ACCUMULATIVE POTENTIAL PRODUCT	Not applicable for mixtures.
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12.4: MOBILITY IN SOIL

MOBILITY	Not applicable for mixtures.
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12.5: RESULTS OF PBT AND vPvB ASSESSMENT

ASSESSMENT	The product does not contain any substances fulfilling the PBT/vPvB criteria.
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12.6: OTHER ADVERSE EFFECTS

Harmful to aquatic life with long lasting effects.
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13: DISPOSAL CONSIDERATIONS

13.1: WASTE TREATMENT METHODS

GENERAL INFORMATION	Dispose in accordance with all applicable regulations.
DISPOSAL METHODS	Do not empty into drains; dispose of this material and its container in a safe way. When storing used products, ensure that the waste categories and mixing instructions are observed. Discharge, treatment or disposal may be subject to national, state or local laws.
EUROPEAN WASTE CODES	13 02 05*: mineral based non-chlorinated engine, gear and lubricating oils.

14: TRANSPORT INFORMATION

14.1: UN NUMBER

ADR	-
RID	-
IMDG	-
IATA	-

14.2: UN PROPER SHIPPING NAME

ADR	-
RID	-
IMDG	-
IATA	-

14.3: TRANSPORT HAZARD CLASS(ES)

ADR	Non-dangerous goods.
RID	Non-dangerous goods.
IMDG	Non-dangerous goods.
IATA	Non-dangerous goods.

14.4: PACKING GROUP

ADR	-
RID	-
IMDG	-
IATA	-

14.5: ENVIRONMENTAL HAZARD(S)

ADR	-
RID	-
IMDG	-
IATA	-



14.6: SPECIAL PRECAUTION(S) FOR USER

ADR	-
RID	-
IMDG	-
IATA	-

14.7: TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE

Not applicable.

15: REGULATORY INFORMATION

15.1: SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS / LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

EU REGULATIONS	Regulation (EC) No. 2037/2000 substances that deplete the ozone layer: none. Regulation (EC) No. 850/2004 on persistent organic pollutants: none.
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15.2: CHEMICAL SAFETY ASSESSMENT

No chemical safety assessment has been carried out for this substance / mixture.

16: OTHER INFORMATION

REVISION INFORMATION	Vertical lines in the margin indicate an amendment.
WORDING OF THE H-STATEMENTS IN SECTION 2 AND 3	H302: Harmful if swallowed. H304: May be fatal if swallowed and enters airways. H311: Toxic in contact with skin. H314: Causes severe skin burns and eye damage. H317: May cause an allergic skin reaction. H318: Causes serious eye damage. H330: Fatal if inhaled. H335: May cause respiratory irritation. H373: May cause damage to organs through prolonged or repeated exposure. H400: Very toxic to aquatic life. H410: Very toxic to aquatic life with long lasting effects. H412: Harmful to aquatic life with long lasting effects.

OTHER INFORMATION	The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies. The classification results from the Conventional Method mentioned in regulation EU 1272/2008 (CLP).
REVISION DATE	
<p>The data contained in this safety data sheet are based on our current knowledge and experience and are given to the best of our knowledge and belief. It characterizes the product only with regard to safety requirements for handling, transport and disposal. The data do not describe the product's properties (tech. product specification). Neither should any agreed property nor the suitability of the product for any specific technical application be deduced from the data contained in this safety data sheet. Modifications on this document are not allowed. The data are not transferable to other products. In the case of mixing the product with other products or in the case of processing, the data in this safety data sheet are not necessarily valid for the new-made material. It is the responsibility of the recipient of the product to observe federal, state and local law. Please contact us via sds.mining@sandvik.com to obtain up-to-date safety data sheets. This document was issued electronically and has no signature.</p>	

END OF SAFETY DATA SHEET