	<b>SAFETY DATA SHEET</b>	Page : 1 / 9
	<b>Mineral 20W-50 4 Stroke oil MA2</b>	Revision nr : 2.0
		Issue date : 27/04/2018
		Supersedes : 03/10/2017
		YMD650320104

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

### 1.1. Product identifier

Product form : Mixture  
Trade name/designation : Mineral 20W-50 4 Stroke oil MA2

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

#### 1.2.1. Relevant identified uses

Main use category : Industrial use

#### 1.2.2. Uses advised against

No data available

### 1.3. Details of the supplier of the safety data sheet

JX Nippon Oil & Energy Europe Limited  
2F Bury House, 31 Bury Street, London, EC3A 5AR, UK  
T +44 20 7186 0400  
[info@jxeurope.com](mailto:info@jxeurope.com)

### 1.4. Emergency telephone number

Emergency number : +44 20-7186-400  
Only available during office hours.

Country	Official advisory body	Address	Emergency number
Ireland	National Poisons Information Centre Beaumont Hospital	Beaumont Hospital Beaumont Road 9 Dublin	+353 1 809 21 66 (public, 8am - 10pm, 7/7) +353 01 809 2566 (Professionals, 24/7)
United Kingdom	National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre, Wolfson Unit	Claremont Place Newcastle-upon-Tyne NE1 4LP Newcastle	0844 892 0111 (UK only, 24/7, healthcare professionals only)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

### 2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Not applicable.

### 2.3. Other hazards


Other hazards : Results of PBT and vPvB assessment : Not applicable.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

	<b>SAFETY DATA SHEET</b>	Page : 2 / 9
		Revision nr : 2.0
	<b>Mineral 20W-50 4 Stroke oil MA2</b>	Issue date : 27/04/2018
		Supersedes : 03/10/2017

Substance name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Lubricating oils, DMSO< 3%	(CAS-No.) 74869-22-0 (EC-No.) 278-012-2 (EC Index) 649-484-00-0	80 - 90	Not classified
Additive	(CAS-No.) additive (EC-No.) - (EC Index) -	< 20	Not classified

#### SECTION 4: First aid measures

##### 4.1. Description of first aid measures

Additional advice	: First aider: Pay attention to self-protection. Concerning personal protective equipment to use, see section 8. Never give anything by mouth to an unconscious person. In case of doubt or persistent symptoms, consult always a physician. Show this safety data sheet to the doctor in attendance.
Inhalation	: Remove person to fresh air and keep comfortable for breathing. In case of doubt or persistent symptoms, consult always a physician.
Skin contact	: Take off contaminated clothing. Gently wash with plenty of soap and water. In case of doubt or persistent symptoms, consult always a physician.
Eyes contact	: Rinse immediately carefully and thoroughly with eye-bath or water. In case of doubt or persistent symptoms, consult always a physician.
Ingestion	: Rinse mouth thoroughly with water. Do not induce vomiting. Get medical advice/attention.

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

Inhalation	: May cause respiratory irritation.
Skin contact	: May be irritating. The following symptoms may occur: Itching, Redness.
Eyes contact	: May cause eye irritation.
Ingestion	: May cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

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

Treat symptomatically.

#### SECTION 5: Firefighting measures

##### 5.1. Extinguishing media


Suitable extinguishing media	: carbon dioxide (CO <sub>2</sub> ), powder, alcohol-resistant foam, water spray.
Unsuitable extinguishing media	: Strong water jet.

##### 5.2. Special hazards arising from the substance or mixture

Specific hazards	: Not flammable. Heating causes rise in pressure with risk of bursting.
Hazardous decomposition products in case of fire	: Carbon oxides (CO, CO <sub>2</sub> ). Other toxic gases.

##### 5.3. Advice for firefighters

Firefighting instructions	: Evacuate area. Use water spray or fog for cooling exposed containers. Contain the extinguishing fluids by bunding. Prevent fire fighting water from entering the environment.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus.
Other information	: Do not allow run-off from fire-fighting to enter drains or water courses. Dispose of waste in accordance with environmental legislation.

	<b>SAFETY DATA SHEET</b>	Page : 3 / 9
	<b>Mineral 20W-50 4 Stroke oil MA2</b>	Revision nr : 2.0
		Issue date : 27/04/2018
		Supersedes : 03/10/2017

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.  
 For non-emergency personnel : Evacuate unnecessary personnel. Keep upwind. Provide adequate ventilation. Wear recommended personal protective equipment. Concerning personal protective equipment to use, see section 8. Do not breathe vapours. Avoid contact with skin, eyes and clothing.

#### 6.1.2. For emergency responders

For emergency responders : Ensure procedures and training for emergency decontamination and disposal are in place. Concerning personal protective equipment to use, see section 8.

### 6.2. Environmental precautions

Do not allow to enter into surface water or drains. Notify authorities if product enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

For containment : Stop leak if safe to do so. Dam up the liquid spill.  
 Methods for cleaning up : Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. Recover large spills by pumping (use an explosion proof or hand pump). Place in a suitable container for disposal in accordance with the waste regulations (see Section 13). This material and its container must be disposed of in a safe way, and as per local legislation.

### 6.4. Reference to other sections

Concerning personal protective equipment to use, see section 8. Concerning disposal elimination after cleaning, see section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Provide adequate ventilation. Use personal protective equipment as required. Concerning personal protective equipment to use, see section 8. Do not breathe vapours. Avoid contact with skin, eyes and clothing. Take any precaution to avoid mixing with Incompatible materials, Refer to Section 10 on Incompatible Materials. Ensure proper process control to avoid excess waste discharge (temperature, concentration, pH, time). Avoid release to the environment.  
 Hygiene measures : Keep good industrial hygiene. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product. Keep away from food, drink and animal feedingstuffs. Remove contaminated clothes. Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse.

### 7.2. Conditions for safe storage, including any incompatibilities


Storage conditions : Store in a dry, cool and well-ventilated place. Do not store near or with any of the incompatible materials listed in section 10. Bund storage facilities to prevent soil and water pollution in the event of spillage.  
 Incompatible substances or mixtures : Oxidizing agent. Halogens. Strong acids. alkalis.  
 Heat and ignition sources : Keep away from open flames, hot surfaces and sources of ignition. Keep out of direct sunlight. Do not smoke.  
 Packaging materials : Keep only in the original container.

### 7.3. Specific end use(s)

For industrial use only.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters


	<b>SAFETY DATA SHEET</b>	Page : 4 / 9
		Revision nr : 2.0
	<b>Mineral 20W-50 4 Stroke oil MA2</b>	Issue date : 27/04/2018
		Supersedes : 03/10/2017

Additional information	: Personal air monitoring :. Room air monitoring. Recommended monitoring procedures
<b>8.2. Exposure controls</b>	
Engineering measure(s)	: Provide adequate ventilation. Organisational measures to prevent /limit releases, dispersion and exposure. Safe handling: see section 7 .
Personal protective equipment	: The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Hand protection	: Wear chemically resistant gloves (tested to EN374) . Suitable material: Nitrile rubber. Thickness > 0.3 mm. Breakthrough time : > 8 h. 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.
Eye protection	: Use suitable eye protection. (EN166): Use splash goggles when eye contact due to splashing is possible
Body protection	: Wear suitable protective clothing. Long sleeved clothing
Respiratory protection	: Not required for normal conditions of use. In case of insufficient ventilation, wear suitable respiratory equipment. Half-face mask (EN 140). Full face mask (EN 136). Filter type: A. The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used. (EN 137)
Thermal hazard protection	: Not required for normal conditions of use. Use dedicated equipment.
Environmental exposure controls	: Avoid release to the environment. Comply with applicable Community environmental protection legislation.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Colour	: light brown.
Odour	: slightly.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting / freezing point	: No data available
Freezing point	: No data available
Initial boiling point and boiling range	: No data available
Flash point	: 244 °C (COC)
Auto-ignition temperature	: 200 - 410 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable,liquid
Vapour pressure	: No data available
Vapour density	: No data available
Relative density	: No data available
Density	: 0,887 g/cm <sup>3</sup> (@ 15°C)
Solubility	: Insoluble in water.
Partition coefficient n-octanol/water	: No data available
Kinematic viscosity	: > 20,5 mm <sup>2</sup> /s
Dynamic viscosity	: No data available

	<b>SAFETY DATA SHEET</b>	Page : 5 / 9
		Revision nr : 2.0
	<b>Mineral 20W-50 4 Stroke oil MA2</b>	Issue date : 27/04/2018
		Supersedes : 03/10/2017

Explosive properties : Not applicable. The study does not need to be conducted because there are no chemical groups associated with explosive properties present in the molecule.

Oxidising properties : Not applicable. The classification procedure needs not to be applied because there are no chemical groups present in the molecule which are associated with oxidising properties.

Explosive limits : 1 - 7 %

**9.2. Other information**

Other properties : Pour point -33 °C.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

None under normal conditions. Reference to other sections: 10.4 & 10.5.

### 10.2. Chemical stability

Stable at normal ambient temperature and pressure.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Safe handling: see section 7.

### 10.5. Incompatible materials

Safe handling: see section 7.

### 10.6. Hazardous decomposition products

Reference to other sections: 5.2.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified (Based on available data, the classification criteria are not met.)

Lubricating oils, DMSO< 3% (74869-22-0)	
LD50/oral/rat	> 5000 mg/kg
LD50/dermal/rabbit	> 2000 mg/kg
LC50/inhalation/4h/rat	2,18 mg/l/4h

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met.)  
pH: No data available

Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met.)  
pH: No data available

Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met.)

Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met.)

Carcinogenicity : Not classified (Based on available data, the classification criteria are not met.)

Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met.)


STOT-single exposure : Not classified (Based on available data, the classification criteria are not met.)

STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met.)

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met.)

Mineral 20W-50 4 Stroke oil MA2	
Kinematic viscosity	> 20,5 mm <sup>2</sup> /s

Other information : Symptoms related to the physical, chemical and toxicological characteristics. For further information see section 4.

	<b>SAFETY DATA SHEET</b>	Page : 6 / 9
		Revision nr : 2.0
	<b>Mineral 20W-50 4 Stroke oil MA2</b>	Issue date : 27/04/2018
		Supersedes : 03/10/2017

## SECTION 12: Ecological information

### 12.1. Toxicity

Environmental properties : According to the criteria of the European classification and labelling system, the substance/the product has not to be labelled as "dangerous for the environment".

Lubricating oils, DMSO < 3% (74869-22-0)	
LC50 fish 1	> 5000 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 Daphnia 1	> 1000 mg/l (Exposure time: 48 h - Species: Daphnia magna)

### 12.2. Persistence and degradability

Mineral 20W-50 4 Stroke oil MA2	
Persistence and degradability	No data available.

### 12.3. Bioaccumulative potential

Mineral 20W-50 4 Stroke oil MA2	
Partition coefficient n-octanol/water	No data available
Bioaccumulative potential	No data available.

### 12.4. Mobility in soil

Mineral 20W-50 4 Stroke oil MA2	
Mobility in soil	No data available

### 12.5. Results of PBT and vPvB assessment

Mineral 20W-50 4 Stroke oil MA2	
Results of PBT assessment	No data available

### 12.6. Other adverse effects

Other adverse effects : No data available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods


Product/Packaging disposal recommendations : Avoid release to the environment. Dispose of empty containers and wastes safely. Safe handling: see section 7. Refer to manufacturer/supplier for information on recovery/recycling. Recycling is preferred to disposal or incineration. If recycling is not possible, eliminate in accordance with local valid waste disposal regulations. Handle contaminated packages in the same way as the substance itself. Dispose of contaminated materials in accordance with current regulations.

European waste catalogue (2001/573/EC, 75/442/EEC, 91/689/EEC) : This material and its container must be disposed of as hazardous waste. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.2. UN proper shipping name</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.3. Transport hazard class(es)</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

	<b>SAFETY DATA SHEET</b>	Page : 7 / 9
		Revision nr : 2.0
	<b>Mineral 20W-50 4 Stroke oil MA2</b>	Issue date : 27/04/2018
		Supersedes : 03/10/2017

ADR	IMDG	IATA	ADN	RID
<b>14.4. Packing group</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.5. Environmental hazards</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

**14.6. Special precautions for user**

Special precautions for user : No data available

**- Overland transport**

Not applicable

**- Transport by sea**

Not applicable

**- Air transport**

Not applicable

**- Inland waterway transport**

Not applicable

**- Rail transport**

Not applicable

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

Code: IBC : No data available.

**SECTION 15: Regulatory information**

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

**15.1.1. EU-Regulations**

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

**15.1.2. National regulations**

France

Installations classées :

Not applicable.

**Germany**

Reference to AwSV : Water hazard class (WGK) 3, severe hazard to waters (Classification according to AwSV, Annex 1)


12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

**Netherlands**

SZW-lijst van kankerverwekkende stoffen : Lubricating oils, DMSO < 3% is listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

	<b>SAFETY DATA SHEET</b>	Page : 8 / 9
		Revision nr : 2.0
	<b>Mineral 20W-50 4 Stroke oil MA2</b>	Issue date : 27/04/2018
		Supersedes : 03/10/2017

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Abbreviations and acronyms:

ABM = Algemene beoordelingsmethodiek
ADN = Accord Européen relatif au Transport International des Marchandises Dangereuses par voie de Navigation du Rhin
ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
CLP = Classification, Labelling and Packaging Regulation according to 1272/2008/EC
IATA = International Air Transport Association
IMDG = International Maritime Dangerous Goods Code
LEL = Lower Explosive Limit/Lower Explosion Limit
UEL = Upper Explosion Limit/Upper Explosive Limit
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
BTT = Breakthrough time (maximum wearing time)
DMEL = Derived Minimal Effect level
DNEL = Derived No Effect Level
EC50 = Median Effective Concentration
EL50 = Median effective level
ErC50 = EC50 in terms of reduction of growth rate
ErL50 = EL50 in terms of reduction of growth rate
EWC = European waste catalogue
LC50 = Median lethal concentration
LD50 = Median lethal dose
LL50 = Median lethal level
NA = Not applicable
NOEC = No observed effect concentration
NOEL: no-observed-effect level
NOELR = No observed effect loading rate
NOAEC = No observed adverse effect concentration
NOAEL = No observed adverse effect level
N.O.S. = Not Otherwise Specified
OEL = Occupational Exposure Limits - Short Term Exposure Limits (STELs)
PNEC = Predicted No Effect Concentration
Quantitative structure-activity relationship (QSAR)
STOT = Specific Target Organ Toxicity
TWA = time weighted average
VOC = Volatile organic compounds
WGK = Wassergefährdungsklasse (Water Hazard Class under German Federal Water Management Act)


Sources of key data used to compile the datasheet : Safety Data Sheet: Supplier. echa.europa.eu.

Training advice : Training staff on good practice.

Other information : Assessment/classification CLP. Article 9. Calculation method.

According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830  
Classification according to Regulation (EC) No. 1272/2008 [CLP]



	<b>SAFETY DATA SHEET</b>	Page : 9 / 9
		Revision nr : 2.0
	<b>Mineral 20W-50 4 Stroke oil MA2</b>	Issue date : 27/04/2018
		Supersedes : 03/10/2017

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

**DISCLAIMER OF LIABILITY** The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.