

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

#### 1.1. Product identifier

Product form : Mixture  
Product name : MASTEROIL ZHM FLUID  
Product code : 5078  
Type of product : MASTEROIL  
Product group : Blend

#### 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, Professional use, Consumer use  
Industrial/Professional use spec : Non-dispersive use  
Used in closed systems  
Function or use category : Lubricants and additives

##### 1.2.2. Uses advised against

No additional information available

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

masteroil GmbH  
Stockholmer Allee 30b  
44269 Dortmund  
Germany  
T 0231 / 44 42 47 64  
[info@masteroil.com](mailto:info@masteroil.com) - [www.masteroil.com](http://www.masteroil.com)

#### 1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
Israel	Israel Poison Information Center Rambam Health Care Campus	6 Ha'Aliya Street 31096	+972 4 854 1900	
Malta	Medicines & Poisons Info Office	Mater Dei Hospital Msida MSD 2090	+356 2545 6508	
Sweden	Giftinformationscentralen	Box 60 500 171 76 Stockholm	112 – begär Giftinformation +46 10 456 6700 (Från utlandet)	

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Acute toxicity (inhalation:dust,mist) Category 4 H332  
Aspiration hazard, Category 1 H304

Full text of H- and EUH-statements: see section 16

# MASTEROIL ZHM FLUID

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### Adverse physicochemical, human health and environmental effects

No additional information available

## 2.2. Label elements

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

Hazard pictograms (CLP)



GHS07

GHS08

Signal word (CLP)

: Danger

Contains

: 1-Decene, dimer, hydrogenated; Hydrocarbons, C16-C20, n-alkanes, isoalkanes, cyclics, <2% aromatics

Hazard statements (CLP)

: H304 - May be fatal if swallowed and enters airways.  
H332 - Harmful if inhaled.

Precautionary statements (CLP)

: P271 - Use only outdoors or in a well-ventilated area.  
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.  
P331 - Do NOT induce vomiting.  
P405 - Store locked up.  
P501 - Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.  
P101 - If medical advice is needed, have product container or label at hand.  
P102 - Keep out of reach of children.

## 2.3. Other hazards

Contains no PBT/vPvB substances  $\geq 0.1\%$  assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Comments : The mineral oils in the product contain < 3% DMSO extract (IP 346)

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
1-Decene, dimer, hydrogenated	CAS-No.: 68649-11-6 EC-No.: 500-228-5 REACH-no: 01-2119537268-33	30 – 60	Acute Tox. 4 (Inhalation), H332 Asp. Tox. 1, H304
Baseoil - unspecified	CAS-No.: 72623-86-0 EC-No.: 276-737-9 EC Index-No.: 649-482-00-X REACH-no: 01-2119474878-16	30 – 60	Not classified
Hydrocarbons, C16-C20, n-alkanes, isoalkanes, cyclics, <2% aromatics	CAS-No.: 1174522-19-0 EC-No.: 919-029-3 REACH-no: 01-2119457735-29	1 – 5	Asp. Tox. 1, H304

# MASTEROIL ZHM FLUID

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Full text of H- and EUH-statements: see section 16

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures after inhalation	: Not expected to require first aid measures.
First-aid measures after skin contact	: Wash skin with mild soap and water.
First-aid measures after eye contact	: In case of eye contact, immediately rinse with clean water for 10-15 minutes.
First-aid measures after ingestion	: Do not induce vomiting. Rinse mouth. Get immediate medical advice/attention.

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

Symptoms/effects after inhalation	: Not expected to present a significant inhalation hazard under anticipated conditions of normal use.
Symptoms/effects after skin contact	: Not expected to present a significant skin hazard under anticipated conditions of normal use.
Symptoms/effects after eye contact	: Not expected to present a significant eye contact hazard under anticipated conditions of normal use.
Symptoms/effects after ingestion	: Not expected to present a significant ingestion hazard under anticipated conditions of normal use.

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

No additional information available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media	: Water fog. Foam. Powder. Dry chemical product.
Unsuitable extinguishing media	: Do not use a heavy water stream.

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

No additional information available

#### 5.3. Advice for firefighters

Precautionary measures fire	: Exercise caution when fighting any chemical fire.
Firefighting instructions	: Use water spray or fog for cooling exposed containers.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

### SECTION 6: Accidental release measures

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

##### 6.1.1. For non-emergency personnel

Protective equipment	: Wear suitable protective clothing and gloves.
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##### 6.1.2. For emergency responders

Protective equipment	: Wear suitable protective clothing and gloves.
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#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

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

For containment	: Impound and recover large spill by mixing it with inert granular solids.
Methods for cleaning up	: Detergent. Take up liquid spill into absorbent material sand, saw dust, kieselguhr.
Other information	: Spill area may be slippery. Use suitable disposal containers.

# MASTEROIL ZHM FLUID

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Avoid all unnecessary exposure. Both local exhaust and general room ventilation are usually required.

Handling temperature : < 40 °C

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

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

Storage temperature : ≤ 40 °C

Storage area : Store in dry, cool, well-ventilated area.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1 National occupational exposure and biological limit values

MASTEROIL ZHM FLUID	
Belgium - Occupational Exposure Limits	
Local name	Huiles minérales (brouillards) # Olie (minerale-; nevel)
OEL TWA	5 mg/m <sup>3</sup>
OEL STEL	10 mg/m <sup>3</sup>
Regulatory reference	Koninklijk besluit/Arrêté royal 02/09/2018

#### 8.1.2. Recommended monitoring procedures

No additional information available

#### 8.1.3. Air contaminants formed

No additional information available

#### 8.1.4. DNEL and PNEC

No additional information available

#### 8.1.5. Control banding

No additional information available

### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering controls

No additional information available

#### 8.2.2. Personal protection equipment

**Personal protective equipment:**

Safety glasses. Gloves.

# MASTEROIL ZHM FLUID

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### Personal protective equipment symbol(s):



#### 8.2.2.1. Eye and face protection

No additional information available

#### 8.2.2.2. Skin protection

##### Skin and body protection:

No special clothing/skin protection equipment is recommended under normal conditions of use

##### Hand protection:

Permeation time: minimum >480min long term exposure; material / thickness [mm]: >0,35 mm. Nitrile rubber (NBR) /

#### 8.2.2.3. Respiratory protection

##### Respiratory protection:

No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation.

#### 8.2.2.4. Thermal hazards

No additional information available

### 8.2.3. Environmental exposure controls

No additional information available

## SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Colour	: Green.
Appearance	: Oily liquid.
Odour	: Characteristic.
Odour threshold	: Not available
Melting point	: < -50 °C
Freezing point	: Not available
Boiling point	: > 290 °C
Flammability	: Not available
Explosive limits	: 0.6 – 6.5 vol %
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: > 120 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: 18.8 mm <sup>2</sup> /s @ 40°C
Solubility	: Slightly soluble, the product remains on the water surface.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: 0.1 kPa @20°C
Vapour pressure at 50°C	: Not available
Density	: ≈ 830 kg/m <sup>3</sup> @15°C
Relative density	: Not available
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

Explosion limits : 0.6 – 6.5 vol %

# MASTEROIL ZHM FLUID

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### 9.2.2. Other safety characteristics

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

None under normal conditions.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

None under normal conditions.

### 10.4. Conditions to avoid

No data available.

### 10.5. Incompatible materials

Strong oxidizers. acids. Bases.

### 10.6. Hazardous decomposition products

None under normal conditions.

## SECTION 11: Toxicological information

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

Acute toxicity (oral) : Not classified  
Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Harmful if inhaled.

MASTEROIL ZHM FLUID	
ATE CLP (dust,mist)	3 mg/l/4h
1-Decene, dimer, hydrogenated (68649-11-6)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 3000 mg/kg
Hydrocarbons, C16-C20, n-alkanes, isoalkanes, cyclics, <2% aromatics (1174522-19-0)	
LD50 oral	> 5000 mg/kg bodyweight
LD50 dermal	> 2000 mg/kg bodyweight
LC50 Inhalation - Rat	> 5000 mg/m <sup>3</sup>
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Hydrocarbons, C16-C20, n-alkanes, isoalkanes, cyclics, <2% aromatics (1174522-19-0)	
NOAEL (oral, rat, 90 days)	5000 mg/kg bodyweight/day

# MASTEROIL ZHM FLUID

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### Hydrocarbons, C16-C20, n-alkanes, isoalkanes, cyclics, <2% aromatics (1174522-19-0)

NOAEL (dermal, rat/rabbit, 90 days)	495 mg/kg bodyweight/day
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Aspiration hazard : May be fatal if swallowed and enters airways.

### MASTEROIL ZHM FLUID

Viscosity, kinematic	18.8 mm <sup>2</sup> /s @ 40°C
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### 11.2. Information on other hazards

No additional information available

## SECTION 12: Ecological information

### 12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

### 1-Decene, dimer, hydrogenated (68649-11-6)

LC50 - Fish [1]	> 1000 mg/l <i>Oncorhynchus mykiss</i>
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EC50 - Crustacea [1]	> 1000 mg/l <i>Daphnia magna</i>
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ErC50 algae	> 1000 mg/l @ 72h <i>Selenastrum capricornutum</i>
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NOEC chronic crustacea	125 mg/l @ 21d <i>Daphnia magna</i>
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### 12.2. Persistence and degradability

### MASTEROIL ZHM FLUID

Persistence and degradability	Not soluble in water, so only minimally biodegradable.
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### Hydrocarbons, C16-C20, n-alkanes, isoalkanes, cyclics, <2% aromatics (1174522-19-0)

Biodegradation	74 % OECD 306; 28d
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### 12.3. Bioaccumulative potential

### 1-Decene, dimer, hydrogenated (68649-11-6)

Partition coefficient n-octanol/water (Log Pow)	> 6.5
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### 12.4. Mobility in soil

### Baseoil - unspecified (72623-86-0)

Ecology - soil	Adsorbs into the soil.
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### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Endocrine disrupting properties

No additional information available

### 12.7. Other adverse effects

No additional information available

# MASTEROIL ZHM FLUID

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Additional information : Dispose in a safe manner in accordance with local/national regulations.

### SECTION 14: Transport information

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

#### 14.1. UN number or ID number

UN-No. (ADR) : Not applicable  
UN-No. (IMDG) : Not applicable  
UN-No. (IATA) : Not applicable  
UN-No. (ADN) : Not applicable  
UN-No. (RID) : Not applicable

#### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not applicable  
Proper Shipping Name (IMDG) : Not applicable  
Proper Shipping Name (IATA) : Not applicable  
Proper Shipping Name (ADN) : Not applicable  
Proper Shipping Name (RID) : Not applicable

#### 14.3. Transport hazard class(es)

**ADR**  
Transport hazard class(es) (ADR) : Not applicable

**IMDG**  
Transport hazard class(es) (IMDG) : Not applicable

**IATA**  
Transport hazard class(es) (IATA) : Not applicable

**ADN**  
Transport hazard class(es) (ADN) : Not applicable

**RID**  
Transport hazard class(es) (RID) : Not applicable

#### 14.4. Packing group

Packing group (ADR) : Not applicable  
Packing group (IMDG) : Not applicable  
Packing group (IATA) : Not applicable  
Packing group (ADN) : Not applicable  
Packing group (RID) : Not applicable

#### 14.5. Environmental hazards

Dangerous for the environment : No  
Marine pollutant : No  
Other information : No supplementary information available

#### 14.6. Special precautions for user

**Overland transport**  
No data available



# MASTEROIL ZHM FLUID

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### Transport by sea

No data available

### Air transport

No data available

### Inland waterway transport

No data available

### Rail transport

No data available

## 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

##### REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

##### REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

##### REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

##### PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

##### POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

##### Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

##### Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

##### Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

#### 15.1.2. National regulations

##### Germany

Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1).  
Storage class (LGK, TRGS 510) : LGK 10-13 - Other combustible and non-combustible substances.  
Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

##### Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed  
SZW-lijst van mutagene stoffen : None of the components are listed  
SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed  
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : None of the components are listed  
SZW-lijst van reprotoxische stoffen – Ontwikkeling : None of the components are listed

# MASTEROIL ZHM FLUID

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### Denmark

Danish National Regulations

: Young people below the age of 18 years are not allowed to use the product

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out for the substance or the mixture by the supplier

## SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
	Revision date	Modified	
	Supersedes	Modified	
	Comments (on top of composition)	Added	
2.1	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Modified	
2.2	Hazard statements (CLP)	Modified	
2.2	Hazard pictograms (CLP)	Modified	
2.2	Signal word (CLP)	Modified	
2.2	Precautionary statements (CLP)	Modified	
3	Composition/information on ingredients	Modified	
9.1	Melting point	Added	
9.1	Boiling point	Added	
9.1	Vapour pressure	Modified	
9.1	Flash point	Modified	
9.1	Viscosity, kinematic	Modified	
11.1	ATE CLP (dust,mist)	Added	
11.1	ATE CLP (dermal)	Added	
11.1	ATE CLP (oral)	Added	
15.1	Storage class (LGK, TRGS 510)	Added	
15.1	Water hazard class (WGK)	Added	

### Abbreviations and acronyms:

	ACGIH: American Conference of Governmental Industrial Hygienists
	TWA: Time Weighted Average
	TLV: Threshold Limit Value
	ASTM: American Society for Testing and Materials
	ADR: Accord Européen Relatif au Transport International des Marchandises Dangereuses par Route
	RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail
	ADNR: Accord Européen relatif au Transport International des Marchandises Dangereuses par voie de Navigation du Rhin
	IMDG: International Maritime Dangerous Goods
	ICAO: International Civil Aviation Organization

# MASTEROIL ZHM FLUID

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### Abbreviations and acronyms:

	IATA: International Air Transport Association
	STEL: Short Term Exposure Limit
	LD50: median Lethal Dose for 50% of subjects
	ATE: acute toxicity estimate
	LC50: median Lethal Concentration for 50% of subjects
	EC50: concentration producing 50% effect

### Other information

: 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 MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

### Full text of H- and EUH-statements:

Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Asp. Tox. 1	Aspiration hazard, Category 1
H304	May be fatal if swallowed and enters airways.
H332	Harmful if inhaled.

### Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.