

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Issue date: 05.01.2012 Revision date: 19.01.2024 Supersedes: 01.06.2021 version: 6.0

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

1.1. Product identifier

Product form : Mixture

Trade name : MPM Marine FC-W Engine Oil 4-Stroke Inboard 25W-40

Product code : BL022000

Type of product : Other engine, gear and lubricating oils.

Product group : Mixture

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

1.2.1. Relevant identified uses

Main use category : Professional use, Consumer use, Industrial 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

Manufacturer

MPM International Oil Company BV Cyclotronweg 1 2629 HN Delft - Nederland T +31 (0)15 2514030

info@mpmoil.com - www.mpmoil.com

1.4. Emergency telephone number

Emergency number : +31 (0)15 2514030 (08.00 - 17.00 GMT+1)

Country	Official advisory body	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER	+44 20 7188 7188	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

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2.2. Label elements

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

Precautionary statements (CLP) : P102 - Keep out of reach of children.

EUH-statements : EUH210 - Safety data sheet available on request.

2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 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 substance(s) are 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 : Highly refined mineral oil, contains <3% (w/w) DMSO extract, according to IP346

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Zinc (O,O,O',O'-tetrakis(1,3-dimethylbutyl)bis(phosphorodithioate)	CAS-No.: 2215-35-2 EC-No.: 218-679-9 REACH-no: 01-2119953275- 34	≥ 0,1 - ≤ 0,99	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411
(tetrapropenyl)succinimic acid	CAS-No.: 27859-58-1 EC-No.: 248-698-8 REACH-no: 01-2120752504- 57	≥ 0,1 - ≤ 0,254	Skin Irrit. 2, H315 Eye Dam. 1, H318 Repr. 2, H361d STOT RE 2, H373
Zinc bis[O-(-6-methylheptyl)] bis[O-(sec-butyl)]bis(dithiophosphate)	CAS-No.: 93819-94-4 EC-No.: 298-577-9 REACH-no: 01-2119543726- 33	≥ 0,1 - ≤ 0,24	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411

Specific concentration limits		
Name	Product identifier	Specific concentration limits
Zinc (O,O,O',O'-tetrakis(1,3-dimethylbutyl)bis(phosphorodithioate)	CAS-No.: 2215-35-2 EC-No.: 218-679-9 REACH-no: 01-2119953275- 34	(10 < C ≤ 100) Eye Dam. 1, H318 (10 ≤ C < 100) Eye Irrit. 2, H319
Zinc bis[O-(-6-methylheptyl)] bis[O-(sec-butyl)]bis(dithiophosphate)	CAS-No.: 93819-94-4 EC-No.: 298-577-9 REACH-no: 01-2119543726- 33	(6,25 ≤ C < 100) Skin Irrit. 2, H315 (10 ≤ C < 12,5) Eye Irrit. 2, H319 (12,5 ≤ C < 100) Eye Dam. 1, H318

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

SECTION 4: First aid measures

4.1. Description of first aid measures

After inhalation : Not required.

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After skin contact · Wash skin with mild soap and water

: In case of eve contact, immediately rinse with clean water for 10-15 minutes. After eve contact After ingestion

: Do NOT induce vomiting. Rinse mouth out with water. Get immediate medical

advice/attention.

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

After inhalation : Not expected to present a significant inhalation hazard under anticipated conditions of

normal use

After skin contact Not expected to present a significant skin hazard under anticipated conditions of normal

After eye contact : Not expected to present a significant eye contact hazard under anticipated conditions of

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 spray, powder, foam and CO2. 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

General measures : If spilled, may cause the floor to be slippery.

6.1.1. For non-emergency personnel

Protective equipment : Gloves. Safety glasses. **Emergency procedures** : Do not breathe vapours.

6.1.2. For emergency responders

Protective equipment : Wear suitable protective clothing and gloves. Safety glasses.

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 : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or

streams.

Methods for cleaning up : Detergent. Clean up any spills as soon as possible, using an absorbent material to collect it.

Other information : Spill area may be slippery. Use suitable disposal containers.

6.4. Reference to other sections

No additional information available

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Avoid all unnecessary exposure. Both local exhaust and general room ventilation are

usually required.

Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

smoking.

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

Technical measures : Store in a closed container.

Storage conditions : Keep container closed when not in use.

Storage temperature : ≤ 40 °C

Storage area : Store in dry, 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

No additional information available.

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

Additional information : Based on ACGIH TLV, a concentration of 5 mg/m3 oilspray (TWA, 8 hour workday) is

recommended.

8.1.5. Control banding

No additional information available.

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Technical measures:

No additional information available.

8.2.2. Personal protection equipment

Personal protective equipment:

Gloves. Safety glasses.

Personal protective equipment symbol(s):





8.2.2.1. Eye and face protection

Eye protection:

Safety goggles

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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:

Protective gloves

Hand protection					
Туре	Material	Permeation	Thickness (mm)	Penetration	Standard
Gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	> 0,4		EN ISO 374

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

Particle dustiness

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 Amber. Appearance Oily liquid. Odour Characteristic. Odour threshold Not available Not available Melting point Freezing point Not available Not available Boiling point Flammability Not available **Explosive limits** : Not available Lower explosion limit : Not available Upper explosion limit : Not available

Flash point : > 222 °C @ ASTM D92

Auto-ignition temperature : Not available
Decomposition temperature : Not available
pH : Not available
Viscosity, kinematic : 91 mm²/s @ 40°C

Solubility : Slightly soluble, the product remains on the water surface.

: Not applicable

Log Kow : Not available Vapour pressure : Not available : Not available Vapour pressure at 50°C : 855 kg/m³ @ 15°C Density : Not available Relative density Relative vapour density at 20°C : Not available : Not applicable Particle size : Not applicable Particle size distribution : Not applicable Particle shape Particle aspect ratio : Not applicable : Not applicable Particle aggregation state Particle agglomeration state Not applicable Particle specific surface area : Not applicable

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9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available.

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 of use.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

No naked flames, sparks, and do not smoke.

10.5. Incompatible materials

Strong oxidizing agent. Acids and 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) : Not classified

,		
Zinc bis[O-(-6-methylheptyl)] bis[O-(sec-butyl)]bis(dithiophosphate) (93819-94-4)		
LD50 oral rat	2600 mg/kg 67/548/EEG annex V	
LD50 dermal rabbit	> 3160 mg/kg bodyweight OECD 402	
LC50 Inhalation - Rat	> 2 mg/l 1h OECD 403 -read across	
ATE CLP (oral)	2600 mg/kg bodyweight	

Zinc (O,O,O',O'-tetrakis(1,3-dimethylbutyl)bis(phosphorodithioate) (2215-35-2)

LD50 oral rat	2230 mg/kg OECD 401
ATE CLP (oral)	2230 mg/kg bodyweight

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met.)

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

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(tetrapropenyl)succinimic acid (27859-58-1)		
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.	
Zinc (O,O,O',O'-tetrakis(1,3-dimethylbutyl)bis(phosphorodithioate) (2215-35-2)		
NOAEL (oral, rat, 90 days)	160 mg/kg bodyweight OECD 422	
Aspiration hazard :	Not classified	
MPM Marine FC-W Engine Oil 4-Stroke Inboard 25W-40		
Viscosity, kinematic	91 mm²/s @ 40°C	

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties

: 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 substance(s) are 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 %

11.2.2. Other information

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term

: Not classified

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

(chronic)

MPM Marine FC-W Engine Oil 4-Stroke Inboard 25W-40		
LC50 fish 1	No data available.	
Zinc bis[O-(-6-methylheptyl)] bis[O-(sec-butyl)]bis(dithiophosphate) (93819-94-4)	
LC50 fish 1	4,5 mg/l OECD 203 (oncorhynchys mykiss, 96h)	
EC50 Daphnia 1	5,4 mg/l OECD 202, (Daphnia magna, 72h)	
EC50 72h - Algae [1]	2,1 mg/l Selenastrum capricornutum UTEX 1648	
Zinc (O,O,O',O'-tetrakis(1,3-dimethylbutyl)bis(phosphorodithioate) (2215-35-2)		
LC50 fish 1	4,5 mg/l (Oncorhynchus mykiss)	
LC50 fish 2	46 mg/l (Cyprinodon variegatus)	
EC50 Daphnia 1	23 mg/l	
EC50 72h - Algae [1]	21 mg/l	
NOEC (chronic)	0,4 mg/l	
NOEC chronic fish	1,8 mg/l OECD 203	
NOEC chronic crustacea	0,8 (0,4 – 0,8) mg/l	
NOEC chronic algae	10 mg/l	
NOEC (acute)	1.8 mg/l OECD 203 (Oncorhynchus mykiss)	

12.2. Persistence and degradability

MPM Marine FC-W Engine Oil 4-Stroke Inboard 25W-40	
Persistence and degradability	Not soluble in water, so only minimally biodegradable.

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MPM Marine FC-W Engine Oil 4-Stroke Inboard 25W-40		
Chemical oxygen demand (COD)	<	
Zinc bis[O-(-6-methylheptyl)] bis[O-(sec-butyl)]bis(dithiophosphate) (93819-94-4)		
Biodegradation	1,5 % OECD 301B 28d	
Zinc (O,O,O',O'-tetrakis(1,3-dimethylbutyl)bis(phosphorodithioate) (2215-35-2)		
Persistence and degradability	Not readily biodegradable.	
Biodegradation	1,5 % @28d	

12.3. Bioaccumulative potential

Zinc bis[O-(-6-methylheptyl)] bis[O-(sec-butyl)]bis(dithiophosphate) (93819-94-4)		
Log Pow	0,9 @ 23C	
Zinc (O,O,O',O'-tetrakis(1,3-dimethylbutyl)bis(phosphorodithioate) (2215-35-2)		
Bioconcentration factor (BCF REACH)	2,2 0.1d	
Log Kow	2,21 (20°C)	

12.4. Mobility in soil

MPM Marine FC-W Engine Oil 4-Stroke Inboard 25W-40		
Log Koc	≤	
Zinc bis[O-(-6-methylheptyl)] bis[O-(sec-butyl)]bis(dithiophosphate) (93819-94-4)		
Soil	Adsorbs into the soil.	
Zinc (O,O,O',O'-tetrakis(1,3-dimethylbutyl)bis(phosphorodithioate) (2215-35-2)		
Soil	No data available.	

12.5. Results of PBT and vPvB assessment

No additional information available.

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties

: The product does not contain any substances with endocrine disrupting properties.

12.7. Other adverse effects

No additional information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Additional information : This material and its container must be disposed of in a safe way, and as per local

legislation.

European List of Waste (LoW, EC 2000/532) : 13 02 05* - mineral-based non-chlorinated engine, gear and lubricating oils

SECTION 14: Transport information

In accordance with ADR / IMDG

14.1. UN number or ID number

UN-No. : Not regulated

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UN-No. (IMDG) : Not regulated

14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not regulated Proper Shipping Name (IMDG) : Not regulated

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : Not regulated

IMDG

Transport hazard class(es) (IMDG) : Not regulated

14.4. Packing group

Packing group (ADR) : Not regulated Packing group (IMDG) : Not regulated

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

Not regulated

Transport by sea

Not regulated

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

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	
3(b)	Zinc bis[O-(-6-methylheptyl)] bis[O-(sec-butyl)]bis(dithiophosphate); Zinc (O,O,O',O'-tetrakis(1,3-dimethylbutyl)bis(phosphorodithioate); (tetrapropenyl)succinimic acid	
3(c)	Zinc bis[O-(-6-methylheptyl)] bis[O-(sec-butyl)]bis(dithiophosphate); Zinc (O,O,O',O'-tetrakis(1,3-dimethylbutyl)bis(phosphorodithioate)	

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

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

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

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

15.1.2. National regulations

No additional information available.

15.2. Chemical safety assessment

No additional information available.

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SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
	Comments (on top of composition)	Added	
	Revision date	Modified	
	Supersedes	Modified	
1.2	Industrial/Professional use spec	Added	
1.2	Main use category	Added	
2.2	Precautionary statements (CLP)	Added	
3	Composition/information on ingredients	Modified	
9.1	Flash point	Modified	
10.1	Reactivity	Modified	
10.2	Chemical stability	Modified	
10.4	Conditions to avoid	Modified	
10.5	Incompatible materials	Modified	
10.6	Hazardous decomposition products	Modified	
11.1	Reason for no classification	Added	
12.2	Chemical oxygen demand (COD)	Added	
12.4	Log Koc	Added	
13.1	European List of Waste (LoW, EC 2000/532)	Modified	
13.1	Additional information	Added	
16	Data sources	Added	
16	Training advice	Added	
16	Other information	Modified	
16	Abbreviations and acronyms	Modified	

Abbreviations and acronyms		
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	
ATE	Acute Toxicity Estimate	
BCF	Bioconcentration factor	
BLV	Biological limit value	
BOD	Biochemical oxygen demand (BOD)	
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008	
COD	Chemical oxygen demand (COD)	
DMEL	Derived Minimal Effect level	
DNEL	Derived-No Effect Level	
EC50	Median effective concentration	
ED	Endocrine disrupting properties	
EC-No.	European Community number	

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Abbreviations and acronyms		
vPvB	Very Persistent and Very Bioaccumulative	
SDS	Safety Data Sheet	
TRGS	Technical Rules for Hazardous Substances	
TLM	Median Tolerance Limit	
ThOD	Theoretical oxygen demand (ThOD)	
STP	Sewage treatment plant	
PNEC	Predicted No-Effect Concentration	
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006	
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail	
PBT	Persistent Bioaccumulative Toxic	
OEL	Occupational Exposure Limit	
OECD	Organisation for Economic Co-operation and Development	
NOEC	No-Observed Effect Concentration	
NOAEC	No-Observed Adverse Effect Concentration	
LOAEL	Lowest Observed Adverse Effect Level	
LD50	Median lethal dose	
N.O.S.	Not Otherwise Specified	
NOAEL	No-Observed Adverse Effect Level	
LC50	Median lethal concentration	
IOELV	Indicative Occupational Exposure Limit Value	
IATA	International Air Transport Association	
IARC	International Agency for Research on Cancer	
IMDG	International Maritime Dangerous Goods	
EN	European Standard	

Data sources Training advice

Other information

- : Supplier's safety documents. ECHA (European Chemicals Agency).
- : Normal use of this product shall imply use in accordance with the instructions on the packaging.
- : 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		
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2	
EUH210	Safety data sheet available on request.	
Eye Dam. 1	Serious eye damage/eye irritation, Category 1	
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2	
H315	Causes skin irritation.	

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Full text of H- and EUH-statements		
H318	Causes serious eye damage.	
H319	Causes serious eye irritation.	
H361d	Suspected of damaging the unborn child	
H373	May cause damage to organs through prolonged or repeated exposure.	
H411	Toxic to aquatic life with long lasting effects.	
Repr. 2	Reproductive toxicity, Category 2	
Skin Irrit. 2	Skin corrosion/irritation, Category 2	
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2	

SDS MPM REACH

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.