

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Issue date: 14-2-2011 Revision date: 13-6-2024 Supersedes: 12-7-2023 version: 5.0

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

1.1. Product identifier

Product form	: Mixture
Trade name	: MPM DSG Direct Shift Gearbox Special Fluid
Product code	: 16000DSG
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	Organisation/Company	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)	
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)	
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

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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 : EUH208 - Contains: 2-tetradecyloxirane, reaction products with boric acid. May produce an allergic reaction. EUH210 - Safety data sheet available on request.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII Contains no PBT and/or 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 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]
Isooctadecanoic acid, reaction products with tetraethylenepentamine	CAS-No.: 68784-17-8 EC-No.: 701-204-9 REACH-no: 01-2119960832- 33	≥ 1 – ≤ 1,49	Skin Irrit. 2, H315 Eye Irrit. 2, H319
Methyl-1H-benzotriazole	CAS-No.: 29385-43-1 EC-No.: 249-596-6 REACH-no: 01-2119979081- 35	≥ 0,1 – ≤ 0,99	Acute Tox. 4 (Oral), H302 Repr. 2, H361d Aquatic Chronic 2, H411
2-tetradecyloxirane, reaction products with boric acid	EC-No.: 701-392-2 REACH-no: 01-2119976364- 28	≥ 0,1 – ≤ 0,99	Skin Sens. 1B, H317
2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol	CAS-No.: 1218787-32-6 EC-No.: 620-540-6 REACH-no: 01-2119510877- 33	≥ 0,01 – ≤ 0,1	Acute Tox. 4 (Oral), H302 Skin Corr. 1C, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=1)

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

SECTION 4: First aid measures

4.1. Description of first aid measure	95
After inhalation After skin contact	: Not required. : Wash skin with mild soap and water.
After eye contact	: In case of eye contact, immediately rinse with clean water for 10-15 minutes.
After ingestion	 Do NOT induce vomiting. Rinse mouth out with water. Get immediate medical advice/attention.

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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 use. 	
After eye contact	 Not expected to present a significant eye contact hazard under anticipated conditions of normal use. 	
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 Unsuitable extinguishing media	Water spray, powder, foam and CO2.Do not use a heavy water stream.
5.2. Special hazards arising from the su	bstance or mixture
No additional information available	
5.3. Advice for firefighters	
Precautionary measures fire Firefighting instructions Protection during firefighting	 Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers. Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures		
6.1. Personal precautions, protect	ctive 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 contain	ment 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 Other information	 Detergent. Clean up any spills as soon as possible, using an absorbent material to collect it Spill area may be slippery. Use suitable disposal containers.
6.4. Reference to other sections	

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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

No additional information available

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

No additional information available

8.2.3. Environmental exposure controls

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 Melting point : Not available Freezing point : Not available Boiling point : Not available Erezing point : Not available Evaluation : Not available Evaluation : Not available Evaluation : Not available Evaluation : Not available Lower explosion limit : Not available Upper explosion itemperature : Not available Pd : : Not available Viscosity, kinematic : : Not available Viscosity, kinematic : : Not available Vapour pressure : Not available Viscosity <th></th> <th></th>		
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Particle agglomeration state : Not applicable	Particle aggregation state	
	Particle agglomeration state	: Not applicable
Particle specific surface area : Not applicable	Particle specific surface area	: Not applicable
Particle dustiness : Not applicable	Particle dustiness	: 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 (dermal) :	Not classified (Based on available data, the classification criteria are not met.) Not classified (Based on available data, the classification criteria are not met.) Not classified (Based on available data, the classification criteria are not met.)
Isooctadecanoic acid, reaction products with	tetraethylenepentamine (68784-17-8)
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
Methyl-1H-benzotriazole (29385-43-1)	
ATE CLP (oral)	500 mg/kg bodyweight
2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol (1218787-32-6)	
ATE CLP (oral)	1200 mg/kg bodyweight
Serious eye damage/irritation:Respiratory or skin sensitisation:Germ cell mutagenicity:Carcinogenicity:Reproductive toxicity:	Not classified (Based on available data, the classification criteria are not met.) Not classified (Based on available data, the classification criteria are not met.) Not classified (Based on available data, the classification criteria are not met.) Not classified (Based on available data, the classification criteria are not met.) Not classified (Based on available data, the classification criteria are not met.) Not classified (Based on available data, the classification criteria are not met.) Not classified (Based on available data, the classification criteria are not met.) Not classified (Based on available data, the classification criteria are not met.)

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Isooctadecanoic acid, reaction products with tetraethylenepentamine (68784-17-8)	
LOAEL (oral, rat)	> 1000 mg/kg bodyweight OECD 421
STOT-repeated exposure :	Not classified (Based on available data, the classification criteria are not met.)
Isooctadecanoic acid, reaction products with tetraethylenepentamine (68784-17-8)	
NOAEL (oral, rat, 90 days)	> 1000 mg/kg bodyweight OECD 407
Aspiration hazard :	Not classified (Based on available data, the classification criteria are not met.)
MPM DSG Direct Shift Gearbox Special Fluid	
Viscosity, kinematic	34 mm²/s @ 40°C (ASTM D445)
11.2. Information on other hazards	

SECTION 12: Ecological information		
12.1. Toxicity		
Hazardous to the aquatic environment, short-term : (acute)	Not classified (Based on available data, the classification criteria are not met.)	
	Not classified (Based on available data, the classification criteria are not met.)	
Isooctadecanoic acid, reaction products with tetraethylenepentamine (68784-17-8)		
LC50 fish 1	> 1000 mg/l OECD 203	
EC50 Daphnia 1	> 1000 mg/l OECD 202	
Methyl-1H-benzotriazole (29385-43-1)		
LC50 fish 1	25,5 mg/l (Pimephales promelas)	
LC50 fish 2	65 mg/l (Brachydanio rerio)	
EC50 Daphnia 1	87,4 mg/l (Daphnia magna)	
EC50 Daphnia 2	8,58 mg/l (Daphnia magna)	
EC50 72h - Algae [1]	62 mg/l (Selenastrum capricomutum)	
ErC50 (algae)	75 mg/l @ OECD Guideline 201, Pseudokirchnerielle subcapitata	
NOEC chronic crustacea	184 mg/l @21DY (Daphnia magna)	
2-tetradecyloxirane, reaction products with be	pric acid	
LC50 fish 1	> 100 mg/l (Oncorhynchus mykiss)	
EC50 Daphnia 1	> 100 mg/l (Daphnia magna)	
EC50 72h - Algae [1]	> 100 mg/l (Selenastrum capiricomutum)	
NOEC chronic algae	10 mg/l Daphnia magna	
NOEC (acute)	NOEC Acute 32 mg/l @ 2DY (Daphnia Magna)	
2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol (1218787-32-6)		
LC50 fish 1	0,1 mg/l Brachydanio rerio	
EC50 Daphnia 1	0,043 mg/l Daphnia magna	
EC50 72h - Algae [1]	0,0053 mg/l Pseudokirchneriella subcapitata	
NOEC chronic algae	0,0156 mg/l @3DY (Pseudokirchneriella subcapitata)	

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12.2. Persistence and degradability	
MPM DSG Direct Shift Gearbox Special Fluid	
Persistence and degradability	Not soluble in water, so only minimally biodegradable.
Isooctadecanoic acid, reaction products with	tetraethylenepentamine (68784-17-8)
Persistence and degradability	Readily biodegradable.
2-tetradecyloxirane, reaction products with be	pric acid
Persistence and degradability	Not readily biodegradable.
Biodegradation	26,7 % @28d
2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol (1218787-32-6)	
BOD (% of ThOD)	63 % ThOD @28DY OECD TG 301 D
12.3. Bioaccumulative potential	
Methyl-1H-benzotriazole (29385-43-1)	
Log Kow	1,71
2-tetradecyloxirane, reaction products with boric acid	
Log Kow	9,4
2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol (1218787-32-6)	
BCF fish 1	110,2 mg/kg
Log Kow	3,6
12.4. Mobility in soil	
MPM DSG Direct Shift Gearbox Special Fluid	
Soil	Prevent soil and water pollution.
12.5. Results of PBT and vPvB assessment	
MPM DSG Direct Shift Gearbox Special Fluid	
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	
12.6. Endocrine disrupting properties	
Adverse effects on the environment caused by : The product does not contain any substances with endocrine disrupting properties. endocrine disrupting properties	
12.7. Other adverse effects	
No additional information available	
SECTION 13: Disposal considerations	
13.1. Waste treatment methods	

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

legislation.

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SECTION 14: Transport information	
In accordance with ADR / IMDG	
14.1. UN number or ID number	
UN-No. UN-No. (IMDG)	: Not regulated : Not regulated
14.2. UN proper shipping name	
Proper Shipping Name (ADR) Proper Shipping Name (IMDG)	: Not regulated : 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) Packing group (IMDG)	: Not regulated : Not regulated
14.5. Environmental hazards	
Dangerous for the environment Marine pollutant Other information	: No : No : 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

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

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 chemical safety assessment has been carried out for the substance or the mixture by the supplier

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SECTION 16: Other i	SECTION 16: Other information	
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	
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	
ΙΑΤΑ	International Air Transport Association	
IARC	International Agency for Research on Cancer	
IMDG	International Maritime Dangerous Goods	
EN	European Standard	

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Data sources	: Supplier's safety documents. ECHA (European Chemicals Agency).
Training advice	 Normal use of this product shall imply use in accordance with the instructions on the packaging.
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 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
EUH208	Contains: 2-tetradecyloxirane, reaction products with boric acid. May produce an allergic reaction.
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
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H361d	Suspected of damaging the unborn child
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
Repr. 2	Reproductive toxicity, Category 2
Skin Corr. 1C	Skin corrosion/irritation, Category 1, Sub-Category 1C
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1B	Skin sensitisation, category 1B

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.