MPM Antifreeze Electric Vehicles Concentrate

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 23/02/2023 Revision date: 22/06/2023 version: 1.0

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

1.1. Product identifier

Product form	:	Mixture
Trade name	:	MPM Antifreeze Electric Vehicles Concentrate
UFI	:	FNQ9-GS7G-4S0T-Q9Y4
Product code	:	86000AEV
Type of product	:	Anti-freezing agents
Product group	:	Mixture

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

Relevant identified uses

Main use category	:	Professional use,Consumer use,Industrial use
Industrial/Professional use spec	:	Non-dispersive use Used in closed systems
Use of the substance/mixture	:	Anti-freezing agents
Function or use category	:	Anti-freezing agents

1.3. Details of the supplier of the safety data sheet

Manufacturer
MPM International Oil Company BV
Cyclotronweg 1
NL 2629 HN Delft, Zuid Holland
Nederland
T +31 (0)15 2514030 (08.00 - 17.00 GMT+1)
info@mpmoil.com, www.mpmoil.com

1.4. Emergency telephone number

Country/Area	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)	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Acute toxicity (oral), Category 4 H302
Specific target organ toxicity – Repeated exposure, Category 2 H373
Full text of H- and EUH-statements: see section 16

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

CLP Signal word	:	WARNING.
Contains	:	1,2 ethanediol
Hazard statements (CLP)	:	H302 - Harmful if swallowed. H373 - May cause damage to organs (Kidneys.) through prolonged or repeated exposure (oral).
Precautionary statements (CLP)	:	P102 - Keep out of reach of children. P264 - Wash hands, face thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER/doctor. P330 - Rinse mouth. P501 - Dispose of contents/container in accordance with local and national regulations.

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

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
1,2 ethanediol	CAS-No.: 107-21-1 EC-No.: 203-473-3 EC Index-No.: 603-027-00-1 REACH-no: 01-2119456816-28	≥ 80 – ≤ 98	Acute Tox. 4 (Oral), H302 STOT RE 2, H373

Comments : Contains a small amount of Bitrex (> 25 ppm), also known as Denatonium Benzoate. More information under section 11.

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General	:	Remove the victim away from contaminated area. If unconscious, place in the recovery position and seek medical advice.
After inhalation	:	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
After skin contact	:	Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. If skin irritation or rash occurs: Get medical advice/attention.
After eye contact	:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Consult an ophthalmologist if irritation persists.
After ingestion	:	Do NOT induce vomiting. If the person is fully conscious, make him/her drink plenty of water. Never give an unconscious person anything to drink. Get immediate medical advice/attention.

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

After inhalation	:	Harmful if inhaled.
After skin contact	:	May cause skin irritation / dermatitis.
After eye contact	:	Causes eye irritation.
After ingestion	:	Harmful if swallowed.

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. Fight larger fires with water spray or alcohol resistant foam.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : On exposure to high temperature, may decompose, releasing toxic vapours.

Hazardous decomposition products in case of fire : Carbon monoxide (CO). Carbon dioxide (CO2). Nitrogen oxides (NOx).

5.3. Advice for firefighters

Precautionary measures fire : Do not enter fire area without proper protective equipment, including respiratory protection.

Other information : Cool containers / tanks with spray water if possible. Use a water spray to cool exposed surfaces and to protect fire-fighters.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Ventilate well. Use protective clothing. Mark out the contaminated area with signs and prevent access to unauthorized personnel.

For non-emergency personnel

Protective equipment : Wear suitable protective clothing and eye/face protection.

For emergency responders

Protective equipment : Wear suitable protective clothing and eye/face protection. Breathing apparatus.

6.2. Environmental precautions

Dilute with plenty of water. Avoid release to the environment.

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 : Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal.

Other information : Provide adequate ventilation.

6.4. Reference to other sections

Information on safe handling - see Section 7. Information on personal protective equipment - see Chapter 8. See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Provide local exhaust or general room ventilation. Avoid aerosol formation.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	:	Ensure adequate ventilation, especially in confined areas. Store in tightly closed, leak-proof containers. Keep in a cool, well-ventilated place away from heat.
Storage conditions	:	Keep container tightly closed.
Incompatible products	:	Strong bases. Oxidizing agent.
Information on mixed storage	:	Keep in a cool, well-ventilated place away from acids.
Storage area	:	Keep in a cool, well-ventilated place. Keep away from food, drink and animal feedingstuffs.
Packaging materials	:	Keep only in the original container in a cool,well-ventilated place away from combustible materials.

7.3. Specific end use(s)

Anti-freezing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

1,2 ethanediol (107-21-1)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOELV TWA (mg/m³)	52 mg/m³
IOELV TWA (ppm)	20 ppm
EU - Binding Occupational Exposure Limit (BOEL)	
BOEL TWA	104 mg/m³ TGG 15 min.
	40 ppm

8.2. Exposure controls

Appropriate engineering controls

Technical measures:
Ensure good ventilation of the work station.

Personal protection equipment

Personal protective equipment:
Gloves. Protective goggles.
Personal protective equipment symbol(s):

Eye and face protection

Eye protection:
No special eye protection equipment recommended under normal conditions of use. Eye protection should only be necessary where hot liquid could be splashed or sprayed

Skin protection

Skin and body protection:
No special clothing/skin protection equipment is recommended under normal conditions of use

Hand protection:
protective gloves

Respiratory protection

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

Environmental exposure controls

Environmental exposure controls:
Avoid release to the environment.
Other information:
Do not eat, drink or smoke when using this product. Avoid contact with skin.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid.
Colour	:	Light blue.
Appearance	:	Hygroscopic.
Odour	:	Slight.
Odour threshold	:	Not available
Melting point	:	Not available
Freezing point	:	Not available
Boiling point	:	180 °C
Flammability (solid, gas)	:	Burns on contact with fire.
Explosive properties	:	Product is not explosive.
Oxidising properties	:	No oxidising properties.
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Flash point	:	Not available
Auto-ignition temperature	:	398 °C
Decomposition temperature	:	Not available
pH	:	Not available
Viscosity, kinematic	:	17 mm²/s
Solubility	:	In water, material soluble.
Log Kow	:	Not available
Vapour pressure	:	Not available
Vapour pressure at 50°C	:	Not available
Density	:	1112 kg/m³ @ 20 °C
Relative density	:	Not available
Relative vapour density at 20°C	:	Not available
Particle characteristics	:	Not applicable

9.2. Other information

Other safety characteristics

Miscibility	:	water,acetone,alcohol

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

No additional information available

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Contact with incompatible materials.

10.5. Incompatible materials

No information available.

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) : Harmful if swallowed.
Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met.)
Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met.)
Additional information : Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, breathing arrest.

MPM Antifreeze Electric Vehicles Concentrate	
ATE CLP (oral)	510.204 mg/kg bodyweight

1,2 ethanediol (107-21-1)	
LD50 dermal	> 3500 mg/kg (Mouse)
LC50 Inhalation - Rat	> 2.5 mg/l 6h
ATE CLP (oral)	500 mg/kg bodyweight

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met.)

1,2 ethanediol (107-21-1)	
pH	≈ 8.7

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

1,2 ethanediol (107-21-1)	
pH	≈ 8.7

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 : May cause damage to organs (Kidneys.) through prolonged or repeated exposure (oral).

1,2 ethanediol (107-21-1)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

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

MPM Antifreeze Electric Vehicles Concentrate	
Viscosity, kinematic	17 mm²/s

1,2 ethanediol (107-21-1)	
Viscosity, kinematic	14.505 mm²/s

11.2. Information on other hazards

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 %

Other information

Other information : The mixture contains a small amount of Bitrex, which is a bittering agent and is a general description of chemical additives that are added to dangerous products to give it a bitter taste, which creates a strong aversion and as such prevents accidental poisonings for young people in particular children and pets. There are a number of possible chemicals that can be used, but the best known is the Denatonium benzoate (CAS 3734-33-6).

SECTION 12: Ecological information

12.1. Toxicity

General : Based on available data, the classification criteria are not met.
Hazardous to the aquatic environment, short–term (acute) : Not classified (Based on available data, the classification criteria are not met.)
Hazardous to the aquatic environment, long–term (chronic) : Not classified (Based on available data, the classification criteria are not met.)

1,2 ethanediol (107-21-1)	
LC50 fish 1	72860 mg/l @96h Dikkop witvis (Pimephales promelas)
EC50 Daphnia 1	> 100 mg/l OECD 202 (Daphnia magna)
EC50 96h - Algae [1]	6500 – 13000 mg/l (EPA 600/9-78-018)
NOEC (chronic)	≥ 1000 mg/l Mysidopsis bahia (Duration: 23 d)
NOEC chronic fish	15380 mg/l (EPA EPA 600/4-89/001 (7d), Pimephales promelas) semi-static
NOEC chronic crustacea	8590 mg/l (EPA 600/4-89/001, Ceriodaphnia dubia)

12.2. Persistence and degradability

MPM Antifreeze Electric Vehicles Concentrate	
Persistence and degradability	Readily biodegradable.

1,2 ethanediol (107-21-1)	
Persistence and degradability	Readily biodegradable.

12.3. Bioaccumulative potential

1,2 ethanediol (107-21-1)	
Log Pow	-1.36

12.4. Mobility in soil

MPM Antifreeze Electric Vehicles Concentrate	
Soil	Prevent soil and water pollution.

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

Other adverse effects : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation : Comply with local regulations for disposal.
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) : 16 01 14* - antifreeze fluids containing dangerous substances

SECTION 14: Transport information

In accordance with ADR / IMDG

ADR	IMDG
14.1. UN number or ID number	
Not regulated for transport	
14.2. UN proper shipping name	
Not regulated	Not regulated
14.3. Transport hazard class(es)	
Not regulated	Not regulated
14.4. Packing group	
Not regulated	Not regulated
14.5. Environmental hazards	
Not regulated	Not regulated
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

EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)	
Reference code	**Applicable on**
3(b)	MPM Antifreeze Electric Vehicles Concentrate

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)

Council Regulation (EC) for the control of dual-use items

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

Explosives Precursors Regulation (EU 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 (EC 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)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

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)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit

Abbreviations and acronyms:	
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disruptor

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
H302	Harmful if swallowed.
H373	May cause damage to organs (Kidneys.) through prolonged or repeated exposure (oral).
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2

The classification complies with : ATP 12

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.