



MPM Antifreeze G11 Concentrate

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 10-1-2011 Revision date: 22-6-2023 Supersedes: 21-5-2021 version: 2.0

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

1.1. Product identifier

Product form : Mixture
Trade name : MPM Antifreeze G11 Concentrate
UFI : HDD3-2611-SQ77-7239
Product code : 83000A
Type of product : Anti-freezing agents
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
Use of the substance/mixture : Anti-freezing agents
Function or use category : Anti-freezing agents

1.2.2. Uses advised against

No additional information available.

1.3. Details of the supplier of the safety data sheet

MPM International Oil Company
Cyclotronweg 1
2629 HN Delft - Nederland
T +31 (0)15 2514030
info@mpmoil.nl - 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]

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.

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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)

: P264 - Wash hands thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P301+P310 - IF SWALLOWED: Immediately call a doctor, a POISON CENTER.

P330 - Rinse mouth.

P102 - Keep out of reach of children.

2.3. Other hazards

The product does not meet the PBT and vPvB classification criteria

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

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	$\geq 85 - \leq 95$	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
Sodium benzoate	CAS-No.: 532-32-1 EC-No.: 208-534-8 REACH-no: 01-2119460683-35	$\geq 1 - < 5$	Eye Irrit. 2, H319
Dipotassium Tetraborate	CAS-No.: 1332-77-0 EC-No.: 215-575-5 REACH-no: 01-2119970730-37	$\geq 1 - < 3$	Repr. 2, H361

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Specific concentration limits		
Name	Product identifier	Specific concentration limits
Dipotassium Tetraborate	CAS-No.: 1332-77-0 EC-No.: 215-575-5 REACH-no: 01-2119970730-37	(5,2 ≤C < 100) Repr. 2, H361

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 ophtalmologist 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 (NO_x).

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.

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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.

6.1.1. For non-emergency personnel

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

6.1.2. 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. Information on disposal - see Section 13.

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

Storage conditions : Keep container tightly closed. Store in a well-ventilated place. Hygroscopic liquid.

Incompatible products : Acids and bases.

Storage temperature : 0 – 40 °C

Information on mixed storage : Keep away from food, drink and animal feeding stuffs.

Storage area : Keep in a cool, well-ventilated place.

Special rules on packaging : Keep only in original container.

Packaging materials : Store always product in container of same material as original container.

7.3. Specific end use(s)

Anti-freezing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. National occupational exposure and biological limit values

1,2 ethanediol (107-21-1)

EU - Indicative Occupational Exposure Limit (IOEL)

IOELV TWA (mg/m ³)	52 mg/m ³
IOELV TWA (ppm)	20 ppm

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1,2 ethanediol (107-21-1)

EU - Binding Occupational Exposure Limit (BOEL)

BOEL TWA	104 mg/m ³ TGG 15 min.
BOEL TWA [ppm]	40 ppm

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:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:

Gloves. Protective goggles.

Personal protective equipment symbol(s):



8.2.2.1. 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

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

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available.

8.2.3. 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.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Blue.
Appearance	: Hygroscopic.
Odour	: Slight.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: -12
Boiling point	: > 180 (160 – 200) °C ASTM D 1120
Flammability	: Not available
Explosive properties	: Product is not explosive.
Oxidising properties	: No oxidising properties.
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: > 120 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: @ 20 °C (ASTM D 1287)
Viscosity, kinematic	: Not determined.
Solubility	: In water, material soluble.
Log Kow	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: 1127 kg/m ³ @ 15°C
Relative density	: Not available
Relative vapour density at 20°C	: Not available
Particle size	: Not determined.
Particle size distribution	: Not applicable
Particle shape	: Not applicable
Particle aspect ratio	: Not applicable
Particle aggregation state	: Not applicable
Particle agglomeration state	: Not applicable
Particle specific surface area	: Not applicable
Particle dustiness	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available.

9.2.2. 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.

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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
Acute toxicity (inhalation) : Not classified

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ATE CLP (oral)	526,316 mg/kg bodyweight
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1,2 ethanediol (107-21-1)

LD50 dermal	> 3500 mg/kg (Mouse)
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LC50 Inhalation - Rat	> 2,5 mg/l 6h
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Sodium benzoate (532-32-1)

LD50 oral rat	3450 mg/kg bodyweight 95% CL: 3150 - 3740
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LD50 dermal rabbit	> 2000 mg/kg bodyweight
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LC50 Inhalation - Rat	> 12,2 mg/l air
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ATE CLP (oral)	3450 mg/kg bodyweight
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Dipotassium Tetraborate (1332-77-0)

LD50 dermal rabbit	> 2000 mg/kg
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LC50 Inhalation - Rat (Dust/Mist)	> 2,04 mg/l/4h
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Skin corrosion/irritation : Not classified
pH: @ 20 °C (ASTM D 1287)

Serious eye damage/irritation : Not classified
pH: @ 20 °C (ASTM D 1287)

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 : 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.
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Sodium benzoate (532-32-1)

NOAEL (oral, rat, 90 days)	> 1000 mg/kg bodyweight
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NOAEL (dermal, rat/rabbit, 90 days)	> 2500 mg/kg bodyweight EPA OPP 82-2
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NOAEC (inhalation, rat, dust/mist/fume, 90 days)	≤ 25 mg/l air OECD 412
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Aspiration hazard : Not classified

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Viscosity, kinematic	Not determined.
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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 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 %

11.2.2. 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

: According to the criteria of the EC-classification and labelling "dangerous for the environment" (93/21/EEC) the material/product is not to be classified as dangerous to the environment.

Hazardous to the aquatic environment, short-term (acute)

: Not classified

Hazardous to the aquatic environment, long-term (chronic)

: Not classified

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)

Sodium benzoate (532-32-1)

LC50 fish 1	484 mg/l Pimephales promelas
EC50 72h - Algae [1]	> 30,5 mg/l Pseudokirchneriella subcapitata
NOEC chronic fish	10 mg/l Danio rerio @144h

12.2. Persistence and degradability

1,2 ethanediol (107-21-1)

Persistence and degradability	Readily biodegradable.
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12.3. Bioaccumulative potential

1,2 ethanediol (107-21-1)

Log Pow	-1,36
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12.4. Mobility in soil

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Soil	Avoid release to the environment.
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12.5. Results of PBT and vPvB assessment

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The product does not meet the PBT and vPvB classification criteria

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

Regional legislation (waste) : 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) code : 16 01 14* - antifreeze fluids containing dangerous substances

SECTION 14: Transport information

In accordance with ADR / IMDG

14.1. UN number or ID number

UN-No. : Not applicable
UN-No. (IMDG) : Not applicable

14.2. UN proper shipping name

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

14.3. Transport hazard class(es)

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

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

14.4. Packing group

Packing group (ADR) : Not applicable
Packing group (IMDG) : 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.

Transport by sea

No data available.

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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 additional information available.

SECTION 16: Other information

Indication of changes

Section	Changed item	Change	Comments
	Adverse health effects caused by endocrine disrupting properties	Added	
	Revision date	Modified	
	Supersedes	Modified	
	PBT Comment	Added	
	Type of product	Modified	
1.2	Industrial/Professional use spec	Added	
1.2	Main use category	Modified	
2.2	Precautionary statements (CLP)	Modified	
3	Composition/information on ingredients	Modified	
4.1	General	Added	
4.1	After skin contact	Modified	
4.1	After inhalation	Modified	
4.1	After ingestion	Modified	
4.1	After eye contact	Modified	
4.2	After skin contact	Added	
4.2	After inhalation	Added	
4.2	After ingestion	Added	
4.2	After eye contact	Added	
4.3	Treatment	Modified	
5.1	Unsuitable extinguishing media	Modified	
5.1	Suitable extinguishing media	Modified	

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Indication of changes			
Section	Changed item	Change	Comments
5.2	Fire hazard	Added	
5.2	Hazardous decomposition products in case of fire	Added	
5.3	Precautionary measures fire	Added	
5.3	Other information	Modified	
6.1	Protective equipment	Modified	
6.1	General measures	Modified	
6.2	Environmental precautions	Modified	
6.3	Other information	Added	
6.4	Reference to other sections (8, 13)	Modified	
7.1	Precautions for safe handling	Modified	
7.2	Incompatible products	Modified	
7.2	Storage conditions	Added	
7.2	Storage temperature	Added	
7.2	Storage area	Modified	
7.2	Prohibitions on mixed storage	Modified	
7.2	Special rules on packaging	Added	
7.2	Packaging materials	Added	
7.2	Technical measures	Modified	
7.3	Specific end uses	Added	
8.2	Other information	Added	
8.2	Environmental exposure controls	Added	
8.2	Respiratory protection	Modified	
8.2	Personal protective equipment	Modified	
8.2	Hand protection	Modified	
8.2	Eye protection	Modified	
8.2	Skin and body protection	Modified	
9.1	Solubility in water	Added	
9.1	Explosive properties	Added	
9.1	Vapour pressure	Added	
9.1	Oxidising properties	Added	
9.1	Solubility	Modified	
9.1	Odour	Modified	
9.1	Flash point	Modified	
9.1	Boiling point	Modified	
9.1	Density	Modified	
9.1	Colour	Modified	
10.1	Reactivity	Added	

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Indication of changes			
Section	Changed item	Change	Comments
10.2	Chemical stability	Modified	
10.4	Conditions to avoid	Modified	
10.5	Incompatible materials	Modified	
10.6	Hazardous decomposition products	Modified	
11.1	Other information	Modified	
11.1	ATE CLP (oral)	Modified	

Full text of H- and EUH-statements	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
Repr. 2	Reproductive toxicity, 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.