Antifreeze Premium Longlife G12+ Concentrate

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878
Issue date: 1-3-2016 Revision date: 29-4-2021 Supersedes: 22-10-2020 version: 2.0

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

1.1. Product identifier

Product form : Mixture
Product name : Antifreeze Premium Longlife G12+ Concentrate
UFI : QSV3-XU70-EY7Q-0V2P
Product code : 86000A
Type of product : Anti-freezing agent

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
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 Delft - Nederland
T +31 (0)15 2514030
support@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 London	+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
Serious eye damage/eye irritation, Category 2	H319
Specific target organ toxicity — Repeated exposure, Category 2	H373

Full text of H-statements: see section 16

Adverse physicochemical, human health and environmental effects

Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure. Causes mild skin irritation. Causes serious eye damage.

2.2. Label elements

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

Hazard pictograms (CLP) :

GHS07 GHS08

CLP Signal word : Warning
Hazardous ingredients : ethanediol; ethylene glycol

Hazard statements (CLP)	: H302 - Harmful if swallowed. H319 - Causes serious eye irritation. H373 - May cause damage to organs (kidneys) through prolonged or repeated exposure (oral).
Precautionary statements (CLP)	: P264 - Wash hands, forearms and face thoroughly after handling. P280 - Wear protective gloves, face protection. P314 - Get medical advice/attention if you feel unwell. P337+P313 - If eye irritation persists: Get medical advice/attention. P501 - Dispose of Contents and container to an approved waste disposal plant.

2.3. Other hazards
No additional information available

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]
ethanediol; ethylene glycol	(CAS-No.) 107-21-1 (EC-No.) 203-473-3 (EC Index-No.) 603-027-00-1 (REACH-no) 01-2119456816-28	≥ 90 – ≤ 96	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
Potassium 2-ethylhexanoate	(CAS-No.) 3164-85-0 (EC-No.) 221-625-7 (EC Index-No.) 221-625-7	≥ 1 – < 2,99	Skin Irrit. 2, H315 Eye Dam. 1, H318 Repr. 2, H361d

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

SECTION 4: First aid measures
4.1. Description of first aid measures
General	: IF exposed or concerned: Get medical advice/attention.
After inhalation	: If necessary seek medical advice. 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 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. If eye irritation persists: Get medical advice/attention.
After ingestion	: If the person is fully conscious, make him/her drink plenty of water. Never give an unconscious person anything to drink. Do NOT induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/effects	: Ethylene glycol is harmful if swallowed. Symptoms may be delayed. Can include nausea, vomiting, cramps, can affect the level of consciousness . Can give damage to kidney.
After skin contact	: Irritation.
After eye contact	: Serious damage to eyes.

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

SECTION 5: Firefighting measures
5.1. Extinguishing media
Suitable extinguishing media	: dry chemical powder, alcohol-resistant foam, carbon dioxide (CO2).
Unsuitable extinguishing media	: None known.

5.2. Special hazards arising from the substance or mixture
Explosion hazard	: Heat from a fire could result in drum bursting.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3. Advice for firefighters
Precautionary measures fire	: Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Self-contained breathing apparatus with an air line.
Other information	: Exercise caution when fighting any chemical fire. Do not enter fire area without proper protective equipment, including respiratory protection. 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 : Stop leak if safe to do so. Do not breathe dusts or mists. Ensure adequate ventilation, especially in confined areas.

6.1.1. For non-emergency personnel

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

Emergency procedures : Ventilate spillage area. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.

6.1.2. For emergency responders

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

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if liquid 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 : Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13. Information on safe handling - see Section 7.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid all eye and skin contact and do not breathe vapour and mist. Provide sufficient air exchange and/or exhaust. Keep away from sources of ignition - No smoking.

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 : Provide local exhaust or general room ventilation. Store in a well-ventilated place. Keep container tightly closed.

Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool.

Incompatible products : Acids.

Information on mixed storage : Keep in a cool, well-ventilated place away from acids.

Storage area : Store in a closed container. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

ethanediol; ethylene glycol (107-21-1)		
EU	IOELV TWA (mg/m³)	52 mg/m³
EU	IOELV TWA (ppm)	20 ppm
EU	IOELV STEL (mg/m³)	104 mg/m³
EU	IOELV STEL (ppm)	40 ppm
EU	Notes	Skin
EU	Regulatory reference	Commission Directive 2000/39/EC
Germany	Notes	
Ireland	Local name	Ethane-1,2-diol [Ethylene glycol]
Ireland	OEL (8 hours ref) (mg/m³)	10 mg/m³ particulate 52 mg/m³ vapour
Ireland	OEL (8 hours ref) (ppm)	20 ppm vapour
Ireland	OEL (15 min ref) (mg/m3)	104 mg/m³ vapour
Ireland	OEL (15 min ref) (ppm)	40 ppm vapour

ethanediol; ethylene glycol (107-21-1)		
Ireland	Notes (IE)	Sk (Substances which have the capacity to penetrate intact skin when they come in contact with it, and be absorbed into the body), IOELV (Indicative Occupational Exposure Limit Values)
Ireland	Regulatory reference	Chemical Agents Code of Practice 2020
United Kingdom	Local name	Ethane-1,2-diol
United Kingdom	WEL TWA (mg/m³)	10 mg/m³ particulate 52 mg/m³ vapour
United Kingdom	WEL TWA (ppm)	20 ppm vapour
United Kingdom	WEL STEL (mg/m³)	104 mg/m³ vapour
United Kingdom	WEL STEL (OEL STEL) [ppm]	40 ppm vapour
United Kingdom	Remark (WEL)	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
United Kingdom	Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

8.2. Exposure controls

Technical measures:

Ensure good ventilation of the work station.

Personal protective equipment:

Gloves. Protective goggles.

Materials for protective clothing:
Wear suitable protective clothing, gloves and eye/face protection

Hand protection:					
Wear suitable gloves resistant to chemical penetration					
Type	**Material**	**Permeation**	**Thickness (mm)**	**Penetration**	**Standard**
	Viton® II	6 (> 480 minutes)	>0.7		

Eye protection:
Safety goggles

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

Respiratory protection:
In case of inadequate ventilation wear respiratory protection.

Personal protective equipment symbol(s):

Environmental exposure controls:

Avoid release to the environment.

Other information:

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Hygroscopic.

Colour : Violet.

Odour : odourless.

Odour threshold : No data available

pH	: 7,5 – 9
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: -12 °C
Freezing point	: No data available
Boiling point	: 170 °C 760 mm Hg
Flash point	: 111 °C CC (closed cup)
Auto-ignition temperature	: 398 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: 0,05 kPa 20°C
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1118 kg/m³ 20°C
Solubility	: alcohols. water. Acetone.
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

Miscibility : water,acetone,alcohol

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Moisture. No naked flames, sparks, and do not smoke.

10.5. Incompatible materials

Acids. Oxidizing agent.

10.6. Hazardous decomposition products

When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, nitrogen oxides (NOx), sulphur compounds.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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

ATE CLP (oral)	520,833 mg/kg bodyweight

ethanediol; ethylene glycol (107-21-1)	
LD50 oral rat	7712 mg/kg bodyweight
LD50 dermal rat	> 3500 mg/kg Mouse
LD50 dermal rabbit	10600 mg/kg
LC50 Inhalation - Rat	> 2,5 mg/l/6Hrs

Potassium 2-ethylhexanoate (3164-85-0)	
LD50 oral rat	2043 mg/kg OECD 401
LD50 dermal rat	> 2000 mg/kg OECD 402

Skin corrosion/irritation : Not classified

pH: 7,5 – 9

Serious eye damage/irritation : Causes serious eye irritation.

pH: 7,5 – 9

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

ethanediol; ethylene glycol (107-21-1)	
NOAEL (chronic, oral, animal/male, 2 years)	1000 mg/kg bodyweight
NOAEL (chronic, oral, animal/female, 2 years)	1500 mg/kg bodyweight

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : May cause damage to organs (kidneys) through prolonged or repeated exposure (oral).

ethanediol; ethylene glycol (107-21-1)	
NOAEL (oral, rat, 90 days)	200 mg/kg bodyweight/day

Potassium 2-ethylhexanoate (3164-85-0)	
NOAEL (oral, rat, 90 days)	≈ 300 mg/kg bodyweight OECD 408

Aspiration hazard : Not classified

Potential adverse human health effects and symptoms : This product contains ethylene glycol (EG). The toxicity of EG via inhalation or skin contact is expected to be slight at room temperature. The estimated oral lethal dose is about 100 cc (3.3 oz.) for an adult human. Ethylene glycol is oxidized to oxalic acid which results in the deposition of calcium oxalate crystals mainly in the brain and kidneys. Early signs and symptoms of EG poisoning may resemble those of alcohol intoxication. Later, the victim may experience nausea, vomiting, weakness, abdominal and muscle pain, difficulty in breathing and decreased urine output. When EG was heated above the boiling point of water, vapors formed which reportedly caused unconsciousness, increased lymphocyte count, and a rapid, jerky movement of the eyes in persons chronically exposed. When EG was administered orally to pregnant rats and mice, there was an increase in fetal deaths and birth defects. Some of these effects occurred at doses that had no toxic effects on the mothers. We are not aware of any reports that EG causes reproductive toxicity in human beings.
2-Ethylhexanoic acid (2-EXA) caused an increase in liver size and enzyme levels when repeatedly administered to rats via the diet. When administered to pregnant rats by gavage or in drinking water, 2-EXA caused teratogenicity (birth defects) and delayed postnatal development of the pups. Additionally, 2-EXA impaired female fertility in rats. Birth defects were seen in the offspring of mice who were administered sodium 2-ethylhexanoate via intraperitoneal injection during pregnancy.

Other information : Contains small amount Bitrex.
Bitterant agent is a general description for chemical additives that are added to hazardous products to give it a bitter taste, which creates a strong aversion and as such avoids accidental poisonings for especially young children and household pets. It is often used in household cleaners, pesticides and also engine coolants. There are a number of possible chemicals that can be used, however, most commonly 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

ethanediol; ethylene glycol (107-21-1)	
LC50 fish 1	72860 mg/l 96 hrs / Pimephales promelas
EC50 Daphnia 1	> 100 mg/l 48 hrs
EC50 other aquatic organisms 2	> 9600 mg/l 96 hrs / Selenastrum capricornutum
EC50 96h - Algae [1]	3536 mg/l grenn algae

EC50 96h - Algae [2]	6500 – 13000 mg/l Pseudokirchneriella subcapitata
NOEC (chronic)	15380 mg/l Fish Early Life Stage / Pimephales promelas / 7 days

Potassium 2-ethylhexanoate (3164-85-0)	
LC50 fish 1	> 100 mg/l OECD 203 Oryzias latipes
EC50 Daphnia 1	910 mg/l OECD 202 Daphnia magna
EC50 Daphnia 2	112,1 mg/l static (bacteria) (DIN 38412, part 8, Pseudomonas putida
EC50 72h - Algae [1]	49,3 mg/l static read across CAS 149057-5 nominal
NOEC (chronic)	25 mg/l Daphnia magna @21d
NOEC chronic crustacea	25 mg/l Daphnia @OECD 211, Daphnia magna 21d

12.2. Persistence and degradability

ethanediol; ethylene glycol (107-21-1)	
Biodegradation	Readily biodegradable

Potassium 2-ethylhexanoate (3164-85-0)	
Biodegradation	99 % OECD 301E

12.3. Bioaccumulative potential

ethanediol; ethylene glycol (107-21-1)	
Log Pow	-1,36
Bioaccumulative potential	There is no bioaccumulation.

Potassium 2-ethylhexanoate (3164-85-0)	
Log Pow	2,96 OECD 107

12.4. Mobility in soil

Antifreeze Premium Longlife G12+ Concentrate	
Soil	Avoid release to the environment.

ethanediol; ethylene glycol (107-21-1)	
Soil	This material has low volatility and is water soluble hence the potential for mobility is high.

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : Disposal must be done according to official regulations.

Product/Packaging disposal recommendations : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Waste disposal recommendations : Dispose as hazardous waste.

Waste materials : Empty the packaging completely prior to disposal.

European List of Waste (LoW) code : 16 01 14* - antifreeze fluids containing dangerous substances

SECTION 14: Transport information

In accordance with ADR / IMDG

ADR	IMDG
14.1. UN number	
Not applicable	Not applicable
14.2. UN proper shipping name	
Not applicable	Not applicable

14.3. Transport hazard class(es)	
Not applicable	Not applicable

14.4. Packing group	
Not applicable	Not applicable

14.5. Environmental hazards	
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No
No supplementary information available	

14.6. Special precautions for user

Overland transport

No data available

Transport by sea

No data available

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

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 REACH substances with Annex XVII restrictions
Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances
Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.
Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 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

SECTION 16: Other information

Indication of changes:

Section	Changed item	Change	Comments
	Supersedes	Modified	
	Revision date	Modified	
2.2	Precautionary statements (CLP)	Modified	
3	Composition/information on ingredients	Modified	
11.1	ATE CLP (oral)	Modified	

Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
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
H302	Harmful if swallowed.
H315	Causes skin irritation.

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.

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.