

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 Issue date: 10-1-2011 Revision date: 19-7-2022 Supersedes: 21-5-2021 version: 2.0

	lentification of the subst	ance/mixture and of the	company/undertaking	
1.1. Product ide	entifier	- Missieren		
Product form		: Mixture	to 1100	
		: Coolant -38°C G11 Ready	to Use	
		: 83000C		
Type of product		: Anti-freezing agents		
Product group		: Mixture		
1.2. Relevant id	entified uses of the substa	nce or mixture and uses ac	lvised against	
1.2.1. Relevant ide	entified uses			
Main use category		: Professional use,Consumer	use,Industrial use	
Industrial/Professio	onal use spec	: Non-dispersive use Used in closed systems		
Use of the substan	ce/mixture	: Anti-freezing agents		
Function or use ca	tegory	: Anti-freezing agents		
1.2.2. Uses advise	•			
No additional inform		te elsest		
MPM International Cyclotronweg 1 2629 HN Delft Delf T +31 (0)15 25140 info@mpmoil.nl - w	ft - Nederland 30	ומ שוופט		
	telephone number			
Emergency numbe		: +31 (0)15 2514030 (08.00 - 17	7.00 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	
2.1. Classificati	azards identification on of the substance or mix cording to Regulation (EC) No.			
), Category 4 an toxicity – Repeated exposure ments: see section 16	H302 , Category 2 H373		
Adverse physicoo No additional inform 2.2. Label elemo		nvironmental effects		
Labelling accordi Hazard pictograms	ng to Regulation (EC) No. 1272 s (CLP)	2/2008 [CLP]	>	
Hazardous ingredients :		GHS07 GHS08 : Warning : 1,2-ethanediol : H302 - Harmful if swallowe H373 - May cause damage		alapsed or reported every
H373 - May cause damage to organs (kidneys) through prolonged or repeated exposure (oral).				

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

Precautionary statements (CLP)	 P260 - Do not breathe dusts or mists. P264 - Wash the hands thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. P301+P312 - IF SWALLOWED: Call doctor, a POISON CENTER if you feel unwell. P330 - Rinse mouth. P501 - Dispose of Contents and container to an approved waste disposal plant.
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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]
Water	(CAS-No.) 7732-18-5 (EC-No.) 231-791-2	≤ 50	Not classified
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	≥ 42,5 – ≤ 47,5	Acute Tox. 4 (Oral), H302
Sodium benzoate	(CAS-No.) 532-32-1 (EC-No.) 208-534-8 (REACH-no) 01-2119460683-35	≥ 0,5 – < 2,5	Eye Irrit. 2, H319
Dipotassium Tetraborate	(CAS-No.) 1332-77-0 (EC-No.) 215-575-5 (REACH-no) 01-2119970730-37	≥ 0,5 – < 1,5	Repr. 2, H361
Specific concentration limits:			
Name	Product identifier	Specific con	centration 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

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 at No additional information available.	tention and special treatment needed

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.

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

5.2. Special hazards arising from the substance or mixture		
Fire hazard	: On exposure to high temperature, may decompose, releasing toxic vapours.	
5.3. Advice for firefighters		
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 equipm	ent 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 enviro	nment.		
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. Poterance to other costions			

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 a	ny incompatibilities
Storage conditions	: Keep container tightly closed. Store in a well-ventilated place. Hydroscopic 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		
1,2-ethanediol (107-21-1)		
EU	IOELV TWA (mg/m ³)	52 mg/m³
EU	IOELV TWA (ppm)	20 ppm
EU	IOELV STEL (mg/m ³)	104 mg/m ³
EU	IOELV STEL (ppm)	40 ppm
Germany	Notes	

8.2. Exposure controls

Technical measures:

Ensure good ventilation of the work station.

Personal protective equipment:

Gloves. Protective goggles.

Hand protection:

protective gloves

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

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 and body protection:

No special clothing/skin protection equipment is recommended under normal conditions of use

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):



Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties		
9.1. Information on basic physical and chemical properties		
Physical state	: Liquid	
Appearance	: Hygroscopic.	
Colour	: Blue.	
Odour	: Slight.	
Odour threshold	: No data available	
pH	: No data available	
Relative evaporation rate (butylacetate=1)	: No data available	
Melting point	: No data available	
Freezing point	: No data available	
Boiling point	: 180 (160 – 200) °C ASTM D 1120	
Flash point	: > 111 °C	
Auto-ignition temperature	: > 400 °C	
Decomposition temperature	: No data available	
Flammability (solid, gas)	: Not applicable	
Vapour pressure	: 0,1 mPa	
Relative vapour density at 20 °C	: No data available	
Relative density	: 1,13 @ 20°C	
Density	: 1064 kg/m³ @ 20°C	
Solubility	: In water, material soluble.	
	Water: alcoholic	
	Acetone: Miscibility	
Log Pow	: No data available	
Viscosity, kinematic	: 21 mm²/s @ 20°C	
Viscosity, dynamic	: 23,52 mPa.s @ 20°C	
Explosive properties	: Product is not explosive.	
Oxidising properties	: No oxidising properties.	
Explosive limits	: No data available	
9.2. Other information		
Miscibility	: water,acetone,alcohol	

SECTION 10: Stability and reactivity
10.1. Reactivity
Stable under normal conditions of use.
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
Contact with incompatible materials.

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

10.5. Incompatible materials Oxidizing substances. Peroxides, e.g. hydrogen peroxide. Strong acid. Nitrates. Chlorates.

10.6. Hazardous decomposition products On exposure to high temperature, may decompose, releasing : Ketones. Aldehydes.

SECTION 11: Toxicological info	rmation	
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)	526,316 mg/kg bodyweight	

1,2-ethanediol (107-21-1)	
LD50 dermal rat	> 3500 mg/kg
LC50 Inhalation - Rat	> 2,5 mg/l @ 6h

Sodium benzoate (532-32-1)	
LD50 oral rat	3450 mg/kg bodyweight 95% CL: 3150 - 3740
LD50 dermal rabbit	> 2000 mg/kg bodyweight
LC50 Inhalation - Rat	> 12,2 mg/l air

Dipotassium Tetraborate (1332-77-0)	
LD50 dermal rabbit	> 2000 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	> 2,04 mg/l/4h
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
1,2-ethanediol (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-single exposure	
STOT-repeated exposure	: May cause damage to organs (kidneys) through prolonged or repeated exposure (oral).
Sodium benzoate (532-32-1)	
NOAEL (oral, rat, 90 days)	> 1000 mg/kg bodyweight
NOAEL (dermal, rat/rabbit, 90 days)	> 2500 mg/kg bodyweight EPA OPP 82-2
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	≤ 25 mg/l air OECD 412
Aspiration hazard	: Not classified
Coolant -38°C G11 Ready to Use	
Viscosity, kinematic	21 mm²/s @ 20°C
Other information	: Having regard to the physical, chemical and toxicological properties of the ingredients. For further information see section 4.

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.

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

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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 (Pimephales promelas)
EC50 Daphnia 1	> 100 mg/l @ 48h (EOCD Guideline 202, Daphnia magna)
EC50 96h - Algae [2]	6500 – 13000 mg/l @ Pseudokirchneriella subcapitata
NOEC chronic fish	15380 mg/l @ 7d, Pimephales promelas
NOEC chronic crustacea	8590 mg/l @ 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)		
Biodegradation	Readily biodegradable	
12.3. Bioaccumulative potential		
1,2-ethanediol (107-21-1)		
Log Pow	-1,36	
Bioaccumulative potential	There is no bioaccumulation.	
12.4. Mobility in soil		
Coolant -38°C G11 Ready to Use		
Soil	Avoid release to the environment.	

1,2-ethanediol (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 materials	: Waste disposal according to official state regulations.
European List of Waste (LoW) code	: 16 01 14* - antifreeze fluids containing dangerous substances

SECTION 14: Transpo In accordance with ADR / IM	
ADR	IMDG
14.1. UN number	
Not applicable	Not applicable
14.2. UN proper shippin	g name
Not applicable	Not applicable
14.3. Transport hazard o	lass(es)
Not applicable	Not applicable
14.4. Packing group	
Not applicable	Not applicable
19-7-2022 (version: 2.0)	EN (English) 6

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

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 additional information available.

SECTION 16: Other information

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
Repr. 2	Reproductive toxicity, Category 2
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H361	Suspected of damaging fertility or the unborn child.
Н373	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.