SAFETY DATA SHEET

MC Zero Central Heating System Anti-Freeze

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

1.1. Product identifier

Trade name

MC Zero Central Heating System Anti-Freeze

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

Relevant identified uses of the substance or mixture

Water treatment additive

Uses advised against

None known.

1.3. Details of the supplier of the safety data sheet

Company and address

Adey Innovation SAS
Adey Innovation SAS
119 bis, Rue de Colombes
92600 Asnières sur Seine,
France

France
+33 (0) 4 50 18 33 33
www.adey.com

E-mail

info@adey.com

Revision

08/05/2025

SDS Version

1.0

1.4. Emergency telephone number

The National Poisons Information Centre (NPIC)
Public: +353 (0) 1 809 2166 (7 days a week, 8am- 10pm)
Healthcare professionals: +353 (0) 1 809 2566 (24 h service)
See also section 4 “First aid measures”

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Not classified according to Regulation (EC) No. 1272/2008 (CLP).

2.2. Label elements

Hazard pictogram(s)

Not applicable.

Signal word

Not applicable.

Hazard statement(s)

Not applicable.

Precautionary statement(s)

General

-

Prevention

-

Response

-

Storage

-

Disposal

-

Hazardous substances

Does not contain any substances required to report

Additional labelling

EUH208, Contains 1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one;1,2-benzisothiazolin-3-one. May produce an allergic reaction.
EUH210, Safety data sheet available on request.

2.3. Other hazards

Additional warnings

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification. This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2023/707.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable. This product is a mixture.

3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one;1,2-benzisothiazolin-3-one	CAS No.: 2634-33-5 EC No.: 220-120-9 REACH: Index No.: 613-088-00-6	<0.031%	Acute Tox. 4, H302 (ATE: 450.00 mg/kg) Skin Irrit. 2, H315 Skin Sens. 1A, H317 (SCL: 0.036 %) Eye Dam. 1, H318 Acute Tox. 2, H330 (ATE: 0.21 mg/L) Acute Tox. 2, H330 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information

-

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

Inhalation

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

Skin contact

IF ON SKIN: Wash with plenty of water and soap.
Remove contaminated clothing and shoes. Ensure to wash exposed skin thoroughly with water and soap. DO NOT use solvents or thinners.
If skin irritation occurs: Get medical advice/attention.

Eye contact

If in eyes: Flush eyes with water or saline water (20-30 °C) for at least 5 minutes. Remove contact lenses. Seek medical assistance and continue flushing during transport.

Ingestion

If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink.
In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid

inhalation of or choking on vomited material.

Burns

Not applicable.

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

Sensitisation: This product contains substances, which may trigger allergic reaction upon dermal contact.
Manifestation of allergic reactions typically takes place within 12-72 hours after exposure.

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

Treat symptomatically.

Information to medics

Bring this safety data sheet or the label from this product.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.
Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.
If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:
Carbon oxides (CO / CO2)

5.3. Advice for firefighters

No specific requirements.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation, especially in confined areas.
Contaminated areas may be slippery.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.
Keep unauthorized persons away from the spill

6.3. Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.
Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section 13 “Disposal considerations” on handling of waste.
See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Smoking, drinking and consumption of food is not allowed in the work area.
See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage material

Always store in containers of the same material as the original container.

Storage conditions

No specific requirements

Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

propane-1,2-diol
Long term exposure limit (8 hours) (mg/m³): 470
Long term exposure limit (8 hours) (ppm): 150

2,2,2-nitrilotriethanol
Long term exposure limit (8 hours) (mg/m³): 5

2024 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations (2001-2021) and the Safety, Health and Welfare at Work (Carcinogens, Mutagens and Reprotoxic Substances) Regulations (2024).

DNEL
No data available.

PNEC
No data available.

8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations
Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios
There are no exposure scenarios implemented for this product.

Exposure limits
Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

Appropriate technical measures
The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked.
Apply standard precautions during use of the product. Avoid inhalation of vapours.

Hygiene measures
In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Pay special attention to hands, forearms and face.

Measures to avoid environmental exposure
No specific requirements.

Individual protection measures, such as personal protective equipment

Generally
No specific requirements

Respiratory Equipment
No specific requirements

Skin protection
No specific requirements.

Hand protection
No specific requirements.

Eye protection
No specific requirements.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state
Liquid

Colour
Pale yellow, Clear

Odour / Odour threshold
Mild

pH
7.0 - 8.0

pH in solution
(100%)

Density (g/cm³)
1.05

Kinematic viscosity
No data available.
Particle characteristics
Does not apply to liquids.
Phase changes
Melting point/Freezing point (°C)
No data available.
Softening point/range (°C)
Does not apply to liquids.
Boiling point (°C)
No data available.
Vapour pressure
No data available.
Relative vapour density
No data available.
Decomposition temperature (°C)
No data available.
Data on fire and explosion hazards
Flash point (°C)
No data available.
Flammability (°C)
No data available.
Auto-ignition temperature (°C)
No data available.
Lower and upper explosion limit (% v/v)
No data available.
Solubility
Solubility in water
No data available.
n-octanol/water coefficient (LogKow)
No data available.
Solubility in fat (g/L)
No data available.
9.2. Other information
Other physical and chemical parameters
No data available.
Oxidizing properties
No data available.

SECTION 10: Stability and reactivity

10.1. Reactivity
No data available.
10.2. Chemical stability
The product is stable under the conditions, noted in section 7 “Handling and storage”.
10.3. Possibility of hazardous reactions
None known.
10.4. Conditions to avoid
None known.
10.5. Incompatible materials
Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.
10.6. Hazardous decomposition products
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008
Acute toxicity
Based on available data, the classification criteria are not met.

Skin corrosion/irritation
Based on available data, the classification criteria are not met.

Serious eye damage/irritation
Based on available data, the classification criteria are not met.

Respiratory sensitisation
Based on available data, the classification criteria are not met.

Skin sensitisation
This product contains substances that may trigger an allergic reaction in already sensitized persons.

Germ cell mutagenicity
Based on available data, the classification criteria are not met.

Carcinogenicity
Based on available data, the classification criteria are not met.

Reproductive toxicity
Based on available data, the classification criteria are not met.

STOT-single exposure
Based on available data, the classification criteria are not met.

STOT-repeated exposure
Based on available data, the classification criteria are not met.

Aspiration hazard
Based on available data, the classification criteria are not met.

11.2. Information on other hazards

Long term effects
None known.

Endocrine disrupting properties
This mixture/product does not contain any substances known to have hormone-disrupting properties in relation to health.

Other information
2,2,2-nitrilotriethanol has been classified by IARC as a group 3 carcinogen.

SECTION 12: Ecological information

12.1. Toxicity

Product/substance	1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one;1,2-benzisothiazolin-3-one
Test method:	OECD 201
Species:	Algae, Pseudokirchneriella subcapitata
Compartment:	Water
Duration:	72 hours
Test:	EC50
Result:	0.6 mg/L

Product/substance	1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one;1,2-benzisothiazolin-3-one
Test method:	OECD 202
Species:	Daphnia
Compartment:	Water
Duration:	48 hours
Test:	EC50
Result:	16 mg/L

Product/substance	1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one;1,2-benzisothiazolin-3-one
Test method:	OECD 203
Species:	Fish, Oncorhynchus mykiss
Compartment:	Water
Duration:	96 hours
Test:	LC50
Result:	8 mg/L

Product/substance	1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one;1,2-benzisothiazolin-3-one
Test method:	OECD 211
Species:	Daphnia
Compartment:	Water
Duration:	21 days
Test:	NOEC
Result:	6 mg/L

Product/substance	1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one;1,2-benzisothiazolin-3-one
Test method:	OECD 215
Species:	Fish, Oncorhynchus mykiss
Compartment:	Water
Duration:	28 days
Test:	NOEC
Result:	1 mg/L

Product/substance	1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one;1,2-benzisothiazolin-3-one
Test method:	OECD 201
Species:	Algae
Compartment:	Water
Duration:	72 hours
Test:	NOEC
Result:	0.2 mg/L

Based on available data, the classification criteria are not met.

12.2. Persistence and degradability

Based on available data, the classification criteria are not met.

12.3. Bioaccumulative potential

Product/substance	1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one;1,2-benzisothiazolin-3-one
Compartment:	Water
BCF:	6.95
LogKow:	0.7 (n-octanol/water)
Conclusion:	Potential for bioaccumulation is low
Test:	OECD 117

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

12.6. Endocrine disrupting properties

This mixture/product does not contain any substances considered to have endocrine-disrupting properties in relation to the environment.

12.7. Other adverse effects

None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product is not covered by regulations on dangerous waste.
Commission Regulation (EU) No 1357/2014 of 18 December 2014 on waste.

EWC code

Not applicable.

Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: Transport information

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
ADR	-	-	-	-	-	-
IMDG	-	-	-	-	-	-
IATA	-	-	-	-	-	-

* Packing group

** Environmental hazards

Additional information

Not dangerous goods according to ADR, IATA and IMDG.

14.6. Special precautions for user

Not applicable.

14.7. Maritime transport in bulk according to IMO instruments

No data available.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Restrictions for application

No special.

Demands for specific education

No specific requirements.

SEVESO - Categories / dangerous substances

Not applicable.

Additional information

Not applicable.

Sources

Commission Regulation (EU) No 1357/2014 of 18 December 2014 on waste.
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (CLP).
Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

15.2. Chemical safety assessment

No

SECTION 16: Other information

Full text of H-phrases as mentioned in section 3

H302, Harmful if swallowed.
H315, Causes skin irritation.
H317, May cause an allergic skin reaction.
H318, Causes serious eye damage.
H330, Fatal if inhaled.
H400, Very toxic to aquatic life.
H410, Very toxic to aquatic life with long lasting effects.

Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
CE = Conformité Européenne (European conformity)
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
CSA = Chemical Safety Assessment
CSR = Chemical Safety Report
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EINECS = European Inventory of Existing Commercial chemical Substances
ES = Exposure Scenario
EUH statement = CLP-specific Hazard statement
EuPCS = European Product Categorisation System
EWC = European Waste Catalogue
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
GWP = Global warming potential
IARC = International Agency for Research on Cancer (IARC)
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
OECD = Organisation for Economic Co-operation and Development
PBT = Persistent, Bioaccumulative and Toxic

PNEC = Predicted No Effect Concentration
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SCL = A specific concentration limit
SVHC = Substances of Very High Concern
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TWA = Time weighted average
UN = United Nations
UVBC = Unknown or variable composition, complex reaction products or of biological materials
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Additional information

Not applicable.

The safety data sheet is validated by

NHP

Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.
The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.
It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.
Country-language: IE-en