

SAFETY DATA SHEET

Forrex EVO

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

Product identifier

Trade name

Forrex EVO

Product no.

14-2500-01

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

Relevant identified uses of the substance or mixture

Appliance protection

Restricted to professional users.

Uses advised against

None known.

Details of the supplier of the safety data sheet

Company and address

Dafo Vehicle Fire Protection AB

Mediavägen 10 , Box 2039

S-13502 Tyresö

Sweden

+ 46 10 1768100

<http://www.dafo-vehicle.com>

Manufacturer

Dafo Fomtec AB

Box 683

SE-13526 Tyresö

Sweden

+46 8 506 405 00

info@fomtec.comwww.fomtec.com

Contact person

CHR

E-mail

support@dafo-vehicle.com

SDS date

4/02/2025

SDS Version

1.0

Date of previous version

4/02/2025 (1.0)

Emergency telephone number

National Poisons Centre: 0800 764 766 (24 hour service)

See also section 4 "First aid measures"

SECTION 2: Hazards identification

Classified according to the Hazardous Substances (Hazard Classification) Notice.

Classification of the substance or mixture

Eye Irrit. 2; H319, Causes serious eye irritation.

STOT RE 2; H373, May cause damage to organs through prolonged or repeated exposure.

Label elements

Hazard pictogram(s)



Signal word

Warning

Hazard statement(s)

Causes serious eye irritation. (H319)

May cause damage to organs through prolonged or repeated exposure. (H373)

Precautionary statement(s)

General

-

Prevention

Wear eye protection/protective gloves/protective clothing. (P280)

Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing. (P305+P351+P338)

If eye irritation persists: Get medical advice/attention. (P337+P313)

Storage

-

Disposal

-

Hazardous substances

ethanediol

Additional labelling

Not applicable.

Other hazards

SECTION 3: Composition/information on ingredients

Substances

Not applicable. This product is a mixture.

Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
ethanediol	CAS No.: 107-21-1 EC No.: 203-473-3	15-25%	Acute Tox. 4, H302 STOT RE 2, H373 (Oral)	
D-Glucopyranose, oligomers, decyl octyl glycosides	CAS No.: 68515-73-1 EC No.: 500-220-1	1-3%	Eye Dam. 1, H318 (SCL: 10.00 %) Eye Irrit. 2, H319 (SCL: 3.00 %)	[19]
ammonium chloride	CAS No.: 12125-02-9 EC No.: 235-186-4	1-3%	Acute Tox. 4, H302 Eye Irrit. 2, H319	
1-Propanaminium, N-(3-aminopropyl)-2-hydroxy-N,N-dimethyl-3-sulfo-, N-(C8-18(even numbered) acyl) derivs., hydroxides, inner salts	CAS No.: 1469983-49-0 EC No.: 939-455-3	>2%	Eye Dam. 1, H318 Aquatic Chronic 2, H411	
Sodium 4(or 5)-methyl-1H-benzotriazolide	CAS No.: 64665-57-2 EC No.: 265-004-9	<0.25%	Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Chronic 2, H411	

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

Other information

[19] UVCB = Unknown or variable composition, complex reaction products or of biological materials

SECTION 4: First aid measures

Description of first aid measures

General information

In the case of accident: Contact a doctor or casualty department – bring 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

Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.

If skin irritation occurs: Get medical advice/attention.

Eye contact

If in eyes: Flush eyes immediately with plenty of water or isotonic water (20-30 °C) for at least 5 minutes and continue until irritation stops. Remove contact lenses. Make sure to flush under upper and lower eyelids. If irritation continues, contact a doctor. 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.

Most important symptoms and effects, both acute and delayed

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

Indication of any immediate medical attention and special treatment needed

If eye irritation persists: Get medical advice/attention.

Information to medics

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

SECTION 5: Firefighting measures

Extinguishing media

The product is not flammable

Special hazards arising from the substance or mixture

None

Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact the National Poisons Centre: 0800 764 766 (24 hour service) in order to obtain further advice.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid direct contact with spilled substances.

Ensure adequate ventilation, especially in confined areas.

Contaminated areas may be slippery.

Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.

Keep unauthorized persons away from the spill

Methods and material for containment and cleaning up

Limit spillage and collect using granular absorbent or similar materials, and dispose of it in accordance with the regulations on dangerous waste.

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.

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

Precautions for safe handling

Avoid direct contact with the product.

Avoid contact during pregnancy and while nursing.

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.

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

Dry, cool and well ventilated (<60 C)

Incompatible materials

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

Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

Control parameters

ethanediol

Ceiling value (ppm): 50

Ceiling value (mg/m³): 127

ammonium chloride

Long term exposure limit (8 hours) (mg/m³): 10

Short term exposure limit (15 minutes) (mg/m³): 20

Workplace exposure standards and biological exposure indices. Edition 14, November 2023.

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


Keep damming materials near the workplace. If possible, collect spillage during work.

Individual protection measures, such as personal protective equipment


Generally

Use only protective equipment that have been approved by IANZ or NATA, or a laboratory accredited under a recognised Mutual Recognition Arrangement.



Respiratory Equipment

Work situation	Type	Class	Colour	Standards	
In case of inadequate ventilation	A	Class 1 (low capacity)	Brown	EN14387	


Skin protection

Recommended	Type/Category	Standards	
Dedicated work clothing should be worn.	-	-	

Hand protection

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
Vinyl/PVC	0.6	-	-	
Latex	0.08	-	-	

Eye protection

Type	Standards	
Safety glasses	EN166	

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Form

Liquid

Colour

Pale yellow

Odour

Characteristic

Odour threshold (ppm)

No relevant or available data due to the nature of the product.

pH

7,5-9

Density (g/cm³)

~1,18

Kinematic viscosity

No relevant or available data due to the nature of the product.

Phase changes

Melting point (°C)

-40

Softening point/range (°C)

Does not apply to liquids.

Boiling point (°C)

No relevant or available data due to the nature of the product.

Vapour pressure

No relevant or available data due to the nature of the product.

Relative vapour density

No relevant or available data due to the nature of the product.

Decomposition temperature (°C)

No relevant or available data due to the nature of the product.

Evaporation rate (n-butylacetate = 100)

Data on fire and explosion hazards

Flash point (°C)

No relevant or available data due to the nature of the product.

Flammability (°C)

No relevant or available data due to the nature of the product.

Auto-ignition temperature (°C)

No relevant or available data due to the nature of the product.

Explosion limits (% v/v)

No relevant or available data due to the nature of the product.

Solubility

Solubility in water

Completely soluble

n-octanol/water coefficient (LogKow)

No relevant or available data due to the nature of the product.

Solubility in fat (g/L)

No relevant or available data due to the nature of the product.

Other information

Other physical and chemical parameters

No data available.

Oxidizing properties

No relevant or available data due to the nature of the product.

SECTION 10: Stability and reactivity

Reactivity

No data available.

Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

Possibility of hazardous reactions

None known.

Conditions to avoid

None known.

Incompatible materials

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

Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Product/substance	ethanediol
Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	5840.00 mg/kg

Product/substance	ethanediol
Species:	Rabbit
Route of exposure:	Dermal
Test:	LD50
Result:	9530.00 mg/kg

Product/substance ethanediol
 Species: Rat
 Route of exposure: Oral
 Test: LD50
 Result: 7712.00 mg/kg

Product/substance ethanediol
 Species: Mouse
 Route of exposure: Dermal
 Test: LD50
 Result: 3500.00 mg/kg

Product/substance D-Glucopyranose, oligomers, decyl octyl glycosides
 Species: Rat
 Route of exposure: Dermal
 Test: LD50
 Result: 2000.00 mg/kg

Product/substance D-Glucopyranose, oligomers, decyl octyl glycosides
 Species: Rat
 Route of exposure: Oral
 Test: LD50
 Result: 2000.00 mg/kg

Product/substance ammonium chloride
 Species: Rat
 Route of exposure: Oral
 Test: LD50
 Result: 1410.00 mg/kg

Product/substance ammonium chloride
 Species: Rat
 Route of exposure: Dermal
 Test: LD50
 Result: 2000.00 mg/kg

Product/substance 1-Propanaminium, N-(3-aminopropyl)-2-hydroxy-N,N-dimethyl-3-sulfo-, N-(C8-18(even numbered) acyl) derivs., hydroxides, inner salts
 Test method: OECD 401
 Species: Rat, male/female
 Route of exposure: Oral
 Test: LD50
 Result: 2950 mg/kg

Product/substance 1-Propanaminium, N-(3-aminopropyl)-2-hydroxy-N,N-dimethyl-3-sulfo-, N-(C8-18(even numbered) acyl) derivs., hydroxides, inner salts
 Test method: OECD 402
 Species: Rat, male/female
 Route of exposure: Dermal
 Test: LD50
 Result: >2000 mg/kg

Product/substance Sodium 4(or 5)-methyl-1H-benzotriazolide
 Species: Rat
 Route of exposure: Dermal
 Test: LD50
 Result: 2000.00 mg/kg

Skin corrosion/irritation

Product/substance 1-Propanaminium, N-(3-aminopropyl)-2-hydroxy-N,N-dimethyl-3-sulfo-, N-(C8-18(even numbered) acyl) derivs., hydroxides, inner salts
 Test method: OECD 405
 Species: Rabbit

Result: No adverse effect observed (Not irritating)

Serious eye damage/irritation

Product/substance 1-Propanaminium, N-(3-aminopropyl)-2-hydroxy-N,N-dimethyl-3-sulfo-, N-(C8-18(even numbered) acyl) derivs., hydroxides, inner salts
 Test method: OECD 405
 Species: Rabbit

Causes serious eye irritation.

Respiratory sensitisation

Product/substance 1-Propanaminium, N-(3-aminopropyl)-2-hydroxy-N,N-dimethyl-3-sulfo-, N-(C8-18(even numbered) acyl) derivs., hydroxides, inner salts
 Test method: OECD 406
 Species: Guinea pig
 Result: No adverse effect observed (not sensitising)

Skin sensitisation

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

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

Product/substance 1-Propanaminium, N-(3-aminopropyl)-2-hydroxy-N,N-dimethyl-3-sulfo-, N-(C8-18(even numbered) acyl) derivs., hydroxides, inner salts
 Test method: OECD 422
 Species: Rat, male/female
 Test: NOAEL
 Result: 300 mg/kg
 Conclusion: No adverse effect observed

Product/substance 1-Propanaminium, N-(3-aminopropyl)-2-hydroxy-N,N-dimethyl-3-sulfo-, N-(C8-18(even numbered) acyl) derivs., hydroxides, inner salts
 Test method: OECD 414
 Species: Rat
 Conclusion: No adverse effect observed

STOT-single exposure

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

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

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

Long term effects

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs.
 Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

SECTION 12: Ecological information

Toxicity

Product/substance ethanediol
 Species: Fish
 Duration: 96 hours
 Test: LC50
 Result: 72860.00 mg/L

Product/substance ethanediol
 Species: Algae
 Duration: 96 hours
 Test: EC50
 Result: 6500.00 mg/L

Product/substance ethanediol
 Species: Daphnia

Duration: No data available.
 Test: NOEC
 Result: 8590.00 mg/L

Product/substance D-Glucopyranose, oligomers, decyl octyl glycosides
 Species: Algae
 Duration: 72 hours
 Test: EC50
 Result: 20.71 mg/L

Product/substance D-Glucopyranose, oligomers, decyl octyl glycosides
 Species: Fish
 Duration: 96 hours
 Test: LC50
 Result: 21.00 mg/L

Product/substance D-Glucopyranose, oligomers, decyl octyl glycosides
 Species: Algae
 Duration: 72 hours
 Test: EC50
 Result: 37.00 mg/L

Product/substance D-Glucopyranose, oligomers, decyl octyl glycosides
 Species: Daphnia
 Duration: 48 hours
 Test: EC50
 Result: 100.00 mg/L

Product/substance D-Glucopyranose, oligomers, decyl octyl glycosides
 Species: Crustacean
 Duration: 96 hours
 Test: EC50
 Result: 151 mg/L

Product/substance ammonium chloride
 Species: Fish
 Duration: 96 hours
 Test: LC50
 Result: 43.00 mg/L

Product/substance ammonium chloride
 Species: Daphnia
 Duration: 48 hours
 Test: EC50
 Result: 136.60 mg/L

Product/substance 1-Propanaminium, N-(3-aminopropyl)-2-hydroxy-N,N-dimethyl-3-sulfo-, N-(C8-18(even numbered) acyl) derivs., hydroxides, inner salts
 Test method: OECD 203
 Species: Fish, Pimephales promelas
 Duration: 96 hours
 Test: LC50
 Result: 2,66 mg/L

Product/substance 1-Propanaminium, N-(3-aminopropyl)-2-hydroxy-N,N-dimethyl-3-sulfo-, N-(C8-18(even numbered) acyl) derivs., hydroxides, inner salts
 Species: Daphnia, Daphnia magna
 Duration: 48 hours
 Test: EC50
 Result: 4 mg/L

Product/substance 1-Propanaminium, N-(3-aminopropyl)-2-hydroxy-N,N-dimethyl-3-sulfo-, N-(C8-18(even numbered) acyl) derivs., hydroxides, inner salts
 Species: Algae

Conforms to the Hazardous Substances (Safety Data Sheets) Notice 2017

Duration: 72 hours
 Test: EC50
 Result: 2,26 mg/L

Product/substance 1-Propanaminium, N-(3-aminopropyl)-2-hydroxy-N,N-dimethyl-3-sulfo-, N-(C8-18(even numbered) acyl) derivs., hydroxides, inner salts
 Species: Algae
 Duration: 72 hours
 Test: NOEC
 Result: 0,76 mg/L

Product/substance 1-Propanaminium, N-(3-aminopropyl)-2-hydroxy-N,N-dimethyl-3-sulfo-, N-(C8-18(even numbered) acyl) derivs., hydroxides, inner salts
 Test method: OECD 209
 Species: Bacteria
 Compartment: Activated Sludge Plant
 Duration: 3 hours
 Test: NOEC
 Result: 1000 mg/L

Product/substance Sodium 4(or 5)-methyl-1H-benzotriazolide
 Species: Fish
 Duration: 96 hours
 Test: LC50
 Result: 100.00 mg/L

Persistence and degradability

Product/substance ethanediol
 Result: 90 %
 Conclusion: Readily biodegradable

Product/substance D-Glucopyranose, oligomers, decyl octyl glycosides
 Result: 100 %
 Conclusion: Readily biodegradable
 Test: OECD 301 E

Product/substance 1-Propanaminium, N-(3-aminopropyl)-2-hydroxy-N,N-dimethyl-3-sulfo-, N-(C8-18(even numbered) acyl) derivs., hydroxides, inner salts
 Result: 57%
 Conclusion: Readily biodegradable

Bioaccumulative potential

Product/substance ethanediol
 LogKow: -1,36
 Conclusion: No potential for bioaccumulation

Product/substance D-Glucopyranose, oligomers, decyl octyl glycosides
 LogKow: 1.77
 Conclusion: -

Product/substance ammonium chloride
 Conclusion: No potential for bioaccumulation

Product/substance 1-Propanaminium, N-(3-aminopropyl)-2-hydroxy-N,N-dimethyl-3-sulfo-, N-(C8-18(even numbered) acyl) derivs., hydroxides, inner salts
 Conclusion: No potential for bioaccumulation

Mobility in soil

No data available.

Results of PBT and vPvB assessment

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

Other adverse effects

This product contains substances that are toxic to the environment. May result in adverse effects to aquatic organisms.

This product contains substances, which may cause adverse long-term effects to the aquatic environment.

SECTION 13: Disposal considerations

Waste treatment methods

Dispose of contents/container to an approved waste disposal plant.

Specific labelling

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 informatio n:
ADR	-	-	-	-	-	-
IMDG	-	-	-	-	-	-
IATA	-	-	-	-	-	-

* Packing group

** Environmental hazards

Additional information

Not dangerous goods according to ADR, IATA and IMDG.

Special precautions for user

Not applicable.

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

No data available.

SECTION 15: Regulatory information

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

Restrictions for application

Restricted to professional users.

Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

Demands for specific education

No specific requirements.

Control of major hazard facilities

Not applicable.

Additional information

Not applicable.

New Zealand Inventory of Chemicals (NZIoC)

ethanediol is listed

D-Glucopyranose, oligomers, decyl octyl glycosides is listed

ammonium chloride is listed

Sodium 4(or 5)-methyl-1H-benzotriazolide is listed

Sources

Hazardous Substances (Hazard Classification) Notice 2020

Hazardous Substances and New Organisms Act 1996

Chemical safety assessment

No

SECTION 16: Other information

Full text of H-phrases as mentioned in section 3

H302, Harmful if swallowed.
H314, Causes severe skin burns and eye damage.
H318, Causes serious eye damage.
H319, Causes serious eye irritation.
H373, May cause damage to organs through prolonged or repeated exposure. (Oral)
H411, Toxic to aquatic life with long lasting effects.

[The full text of identified uses as mentioned in section 1](#)

None known.

[Abbreviations and acronyms](#)

AS/NZS = Australian New Zealand Standard
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
EINECS = European Inventory of Existing Commercial chemical Substances
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
Hazchem = Hazardous chemicals
HSNO = Hazardous Substances and New Organisms Act
IANZ = International Accreditation New Zealand
IARC = International Agency for Research on Cancer
IATA = International Air Transport Association
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)
NATA = National Association of Testing Authorities
NZIoC = New Zealand Inventory of Chemicals
OECD = Organisation for Economic Co-operation and Development
PBT = Persistent, Bioaccumulative and Toxic
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
SCL = A specific concentration limit
STEL = Short-term exposure limits
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](#)

The classification of the mixture in regard of health hazards is in accordance with the calculation methods given by the Hazardous Substances (Hazard Classification) Notice.

[The safety data sheet is validated by](#)

Charlotta Reimertz

[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: NZ-en