

Safety Data Sheet

according to UK REACH Regulation

ADDINOL Antifreeze Extra 4060

Revision date: 04.10.2023

Product code: 796025

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Hazard statements

H360D May damage the unborn child.
 H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P102 Keep out of reach of children.
 P201 Obtain special instructions before use.
 P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 P501 Dispose of contents/container to an appropriate recycling or disposal facility.

Special labelling of certain mixtures

Restricted to professional users.

Additional advice on labelling

The product is classified and labelled according to EC directives or corresponding national laws.

2.3. Other hazards

Spilled product must not leak into the ground.
 Do not allow uncontrolled leakage of product into the environment.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
107-21-1	ethanediol; ethylene glycol			20 - < 40 %
	203-473-3	603-027-00-1		
	Acute Tox. 4, STOT RE 2; H302 H373			
19766-89-3	Sodium 2-ethylhexanoate			2.5 - < 5 %
	243-283-8		01-2119972937-17	
	Repr. 1B; H360D			

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

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
107-21-1	203-473-3	ethanediol; ethylene glycol	20 - < 40 %
	inhalation: LC50 = >2,5 mg/l (vapours); dermal: LD50 = > 3500 mg/kg; oral: LD50 = 7712 mg/kg		
19766-89-3	243-283-8	Sodium 2-ethylhexanoate	2.5 - < 5 %
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = 2043 mg/kg		

Further Information

Classification system: The classification corresponds to the current EC lists and is completed by information from specialist literature and company information.

SECTION 4: First aid measures**4.1. Description of first aid measures**

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General information

Self-protection of the first aider. Change contaminated clothing. Do not put any product-impregnated cleaning rags into your trouser pockets. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After inhalation

Move victim to fresh air. Put victim at rest and keep warm. In case of breathing difficulties administer oxygen. In all cases of doubt, or when symptoms persist, seek medical advice.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Change contaminated clothing. In case of skin irritation, seek medical treatment.

After contact with eyes

In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

After ingestion

Do NOT induce vomiting.

Rinse mouth thoroughly with water. Call a physician immediately.

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

Ingestion causes nausea, weakness and central nervous system effects. The following symptoms may occur: Dizziness. Headache. drowsiness. Disorientation.

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

Treat symptomatically. Symptoms can occur only after several hours.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Extinguishing powder. Carbon dioxide (CO₂). alcohol resistant foam.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Carbon monoxide Carbon dioxide (CO₂). ketone. aldehydes.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Co-ordinate fire-fighting measures to the fire surroundings. Use water spray jet to protect personnel and to cool endangered containers. In case of fire and/or explosion do not breathe fumes. Contaminated fire-fighting water must be collected separately. Do not allow to enter into surface water or drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

High slip hazard because of leaking or spilled product. Remove all sources of ignition. Wear breathing apparatus if exposed to vapours/dusts/aerosols. Avoid contact with skin, eye and clothing. Wear suitable protective clothing. Provide adequate ventilation.

For non-emergency personnel

Only allow access to authorised staff.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities. Prevent spread over a wide area (e.g. by containment or oil barriers).

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6.3. Methods and material for containment and cleaning up**Other information**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal. Clean contaminated articles and floor according to the environmental legislation.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Section 12: Ecological Information (non-mandatory)

Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Keep away from sources of ignition - No smoking. The following must be prevented: inhalation. Provide adequate ventilation as well as local exhaustion at critical locations. Wear personal protection equipment. Avoid contact with skin, eyes and clothes.

Advice on protection against fire and explosion

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop. Take precautionary measures against static discharges. Use only antistatically equipped (spark-free) tools.

Advice on general occupational hygiene

Wash hands before breaks and after work. Take off immediately all contaminated clothing. Wash contaminated clothing prior to re-use. Do not eat, drink, smoke or sneeze at the workplace.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep locked up. Keep/Store only in original container. Keep away from clothing as well as other incompatible materials. Keep the packing dry and well sealed to prevent contamination and absorption of humidity.

Hints on joint storage

Keep away from food, drink and animal feedingstuffs.

Keep away from: Oxidizing agent

Further information on storage conditions

Protect against: UV-radiation/sunlight. frost. heat.

Recommended storage temperature: 5 - 40°C

7.3. Specific end use(s)

Refrigerant. Anti-freezing agent. Further information: see technical data sheet.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
107-21-1	Ethane-1,2-diol, vapour	20	52		TWA (8 h)	WEL
		40	104		STEL (15 min)	WEL

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DNEL/DMEL values

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
107-21-1	ethanediol; ethylene glycol		
Worker DNEL, long-term	inhalation	local	35 mg/m ³
Worker DNEL, long-term	dermal	systemic	106 mg/kg bw/day
Consumer DNEL, long-term	inhalation	local	7 mg/m ³
Consumer DNEL, long-term	dermal	systemic	53 mg/kg bw/day
19766-89-3	Sodium 2-ethylhexanoate		
Worker DNEL, long-term	inhalation	systemic	14 mg/m ³
Worker DNEL, long-term	dermal	systemic	2 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	3,5 mg/m ³
Consumer DNEL, long-term	dermal	systemic	1 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	1 mg/kg bw/day

PNEC values

CAS No	Substance	
Environmental compartment	Value	
19766-89-3	Sodium 2-ethylhexanoate	
Freshwater	0,36 mg/l	
Freshwater (intermittent releases)	0,493 mg/l	
Marine water	0,036 mg/l	
Freshwater sediment	0,301 mg/kg	
Marine sediment	0,03 mg/kg	
Micro-organisms in sewage treatment plants (STP)	71,7 mg/l	
Soil	0,058 mg/kg	

Additional advice on limit values

source:

8.2. Exposure controls**Appropriate engineering controls**

Provide adequate ventilation as well as local exhaust at critical locations.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Tightly sealed safety glasses. German Industry Norms (DIN) / European Norms (EN): EN 166

Hand protection

Tested protective gloves are to be worn: German Industry Norms (DIN) / European Norms (EN): EN ISO 374

Duration of wearing with permanent contact: 480 min

Suitable material: NBR (Nitrile rubber).

Thickness of glove material: 0.7 mm.

Wearing time with occasional contact (splashes): 30 min

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Suitable material: NBR (Nitrile rubber).
Thickness of glove material: 0.2 mm

Protect skin by using skin protective cream.

Skin protection

Wear suitable protective clothing. Change contaminated clothing. Do not put any product-impregnated cleaning rags into your trouser pockets.

Respiratory protection

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Breathing protection with filter against organic gases and vapours type A - boiling point > 65°C: A1: < 1000 ppm; A2: < 5000 ppm; A3: < 10000 ppm

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	liquid
Colour:	orange
Odour:	characteristic
Odour threshold:	not determined

Test method

Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	109 °C
Flammability:	not determined
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	not applicable
Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
pH-Value (at 20 °C):	8,4
Viscosity / kinematic:	not applicable
Water solubility:	easily soluble.
Solubility in other solvents	
not determined	
Partition coefficient n-octanol/water:	not determined
Vapour pressure:	not determined
Density (at 20 °C):	1,056 g/cm ³ DIN 51757
Relative vapour density:	not determined

9.2. Other information**Information with regard to physical hazard classes**

Explosive properties
not determined

Self-ignition temperature

Solid:

Gas:

not determined

not determined

Oxidizing properties
not determined

Other safety characteristics

Freezing point:

-25 °C

SECTION 10: Stability and reactivity

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10.1. Reactivity

The product is stable under storage at normal ambient temperatures.

10.2. Chemical stability

The mixture is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

Refer to chapter 7 No further action is necessary.

Do not overheat to avoid decomposition by heat.

10.5. Incompatible materials

Reacts with: Oxidising agent, strong. Strong acid. Nitrates. Peroxides. Chlorates.

10.6. Hazardous decomposition productsIn case of fire may be liberated: Carbon monoxide Carbon dioxide (CO₂). ketone. aldehydes.**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in GB CLP Regulation****Acute toxicity**

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

ATEmix tested

	Dose	Species	Source
LD50, oral	3987 mg/kg		

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
107-21-1	ethanediol; ethylene glycol				
	oral	LD50 mg/kg 7712	Rat	Study report (1968)	according to BASF-internal standards
	dermal	LD50 mg/kg > 3500	Mouse	Fundamental and Applied Toxicology 27: 1	LD50 derived from developmental toxicity
	inhalation (4 h) vapour	LC50 >2,5 mg/l	Rat		
19766-89-3	Sodium 2-ethylhexanoate				
	oral	LD50 mg/kg 2043	Rat	Study report (1987)	OECD Guideline 401
	dermal	LD50 mg/kg > 2000	Rat	Study report (1986)	OECD Guideline 402

Irritation and corrosivity

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

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

May damage the unborn child. (Sodium 2-ethylhexanoate)

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

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

STOT-single exposure

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

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STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure. (ethanediol; ethylene glycol)

Aspiration hazard

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

11.2. Information on other hazards

Endocrine disrupting properties

not applicable

Other information

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.

SECTION 12: Ecological information

12.1. Toxicity

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

Mixture not tested.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
107-21-1	ethanediol; ethylene glycol					
	Acute fish toxicity	LC50 mg/l	53000	96 h	Pimephales promelas	Publication (1983) other: ASTM Subcommittee on Safety to Aq
	Acute algae toxicity	ErC50 mg/l	6500 - 13000	96 h	Raphidocelis subcapitata	Study report (1982) other: EPA 600/9-78-018, 1978
	Acute crustacea toxicity	EC50 mg/l	> 100	48 h	Daphnia magna	Study report (1998) OECD Guideline 202
	Fish toxicity	NOEC mg/l	> 40	28 d	Menidia peninsulae	Publication (1985) other: ASTM E-47.01
	Crustacea toxicity	NOEC mg/l	8590	7 d	Ceriodaphnia dubia	Environ. Toxicology and Chemistry, Vol. other: EPA 600/4-89/001. U.S. Environmen
	Acute bacteria toxicity	(EC50 mg/l)	> 1000	3 h	activated sludge, domestic	Chemosphere 14(9), 1239-1251 (1985) OECD Guideline 209
19766-89-3	Sodium 2-ethylhexanoate					
	Acute fish toxicity	LC50 mg/l	> 100	96 h	Oryzias latipes	NITE (National Institute of Technology a) OECD Guideline 203
	Acute algae toxicity	ErC50 mg/l	49,3	72 h	Desmodesmus subspicatus	Study report (1988) other: Method: other: German Industrial
	Acute crustacea toxicity	EC50 mg/l	85,4	48 h	Daphnia magna	Study report (1988) other: Directive 79/831/EEC, Annex V, Pa
	Crustacea toxicity	NOEC	25 mg/l	21 d	Daphnia magna	Study report (1997) OECD Guideline 211

12.2. Persistence and degradability

Product is partially biodegradable.

12.3. Bioaccumulative potential

No data available

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
107-21-1	ethanediol; ethylene glycol	-1,36
19766-89-3	Sodium 2-ethylhexanoate	1,3

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No data available

Further information

Do not allow to enter into surface water or drains.

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SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

Must not be disposed of with domestic refuse. Do not allow to enter into surface water or drains.

List of Wastes Code - residues/unused products

160114 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08); antifreeze fluids containing hazardous substances; hazardous waste

Contaminated packaging

Contaminated packages must be completely emptied and can be re-used following proper cleaning. Dispose of waste according to applicable legislation. Packing which cannot be properly cleaned must be thrown away.

SECTION 14: Transport information**Land transport (ADR/RID)**

14.1. UN number or ID number: -
14.2. UN proper shipping name: -
14.3. Transport hazard class(es): -
14.4. Packing group: -

Inland waterways transport (ADN)

14.1. UN number or ID number: -
14.2. UN proper shipping name: -
14.3. Transport hazard class(es): -
14.4. Packing group: -

Marine transport (IMDG)

14.1. UN number or ID number: -
14.2. UN proper shipping name: -
14.3. Transport hazard class(es): -
14.4. Packing group: -

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: -
14.2. UN proper shipping name: -
14.3. Transport hazard class(es): -
14.4. Packing group: -

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Unless specified otherwise, general measures for safe transport must be followed.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

Other applicable information

No dangerous good in sense of these transport regulations.

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

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Restrictions on use (REACH, annex XVII):

Entry 3

National regulatory information

Water hazard class (D): 1 - slightly hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information**Changes**

This data sheet contains changes from the previous version in section(s): 2,4,5,6,7,9,10.

Abbreviations and acronyms

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ASTM - American Society for the Testing of Materials; ATE - Acute Toxicity Estimates; bw - Body weight; CAO - Cargo Aircraft Only; CAS - Chemical Abstracts Service; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DNEL - Derived No-Effect Level; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); EG - European Union; EN - European standards; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n;o;s; - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; OECD - Organization for Economic Co-operation and Development; PBT - Persistent, Bioaccumulative and Toxic substance; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulation concerning the International Carriage of Dangerous Goods by Rail; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Repr. 1B; H360D	Calculation method
STOT RE 2; H373	Calculation method

Relevant H and EUH statements (number and full text)

H302 Harmful if swallowed.
H360D May damage the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.

Further Information

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of

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processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)