Safety Data Sheet

ALPINE C11 Ready Mix -36°C (yellow)

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

1.1. Product identifier

ALPINE C11 Ready Mix -36°C (yellow)

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

Use of the substance/mixture

engine coolant

Uses advised against

No information available.

1.3. Details of the supplier of the safety data sheet

Company name:	Mitan Mineralöl GmbH	
Street:	Industriestraße 8	
Place:	D-49577 Ankum	
Telephone:	+49 (0)5462/7470-50	Telefax: +49 (0)5462/7470-33
e-mail:	info@mitan-oil.de	
Internet:	www.mitan-oil.de	
Responsible Department:	Produktsicherheit / Product Safety sicherheitsdatenblatt@mitan-oil.de	

1.4. Emergency telephone number:

Giftinformationszentrum Nord (Göttingen)
+49 (0)551/19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Acute Tox. 4; H302
STOT RE 2; H373

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Hazard components for labelling

Ethane-1,2-diol

Signal word: Warning

Pictograms:

Hazard statements

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

Precautionary statements

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P330	Rinse mouth.
P501	Dispose of contents / container in accordance with official regulations.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
107-21-1	Ethane-1,2-diol			45 - < 50 %
	203-473-3	603-027-00-1	01-2119456816-28	
	Acute Tox. 4, STOT RE 2; H302 H373			
1332-77-0	Dipotassium tetraborate			< 1 %
	215-575-5		01-2119970730-37	
	Repr. 2; H361d			

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	Ethane-1,2-diol	45 - < 50 %
	dermal: LD50 = > 3500 mg/kg; oral: LD50 = 7712 mg/kg		
1332-77-0	215-575-5	Dipotassium tetraborate	< 1 %
	inhalation: LC50 = > 2,04 mg/l (dusts or mists); dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 2500 mg/kg Repr. 2; H361d: >= 5,2 - 100		

Further Information

This mixture contains no substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Take off contaminated clothing and wash it before reuse.
In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After inhalation

Remove person to fresh air and keep comfortable for breathing.
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.
In case of skin irritation, consult a physician.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an

ophthalmologist immediately.
Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Rinse mouth thoroughly with water.
Let water be drunken in little sips (dilution effect).
Do NOT induce vomiting.
When in doubt or if symptoms are observed, get medical advice.

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

May cause respiratory irritation. The following symptoms may occur: Cough, Dizziness, Headache
May be absorbed through the skin. Repeated exposure may cause skin dryness or cracking.
Causes serious eye irritation. The following symptoms may occur: erythema (redness)
Harmful if swallowed. The following symptoms may occur: Vomiting, Unconsciousness, Nausea

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

Use water spray jet to protect personnel and to cool endangered containers.
Co-ordinate fire-fighting measures to the fire surroundings.

- alcohol resistant foam
- Extinguishing powder
- Carbon dioxide (CO2)
- Water mist

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Non-flammable. Formation of toxic gases is possible during heating or in case of fire.
In case of fire may be liberated:

- Carbon monoxide (CO)
- Carbon dioxide (CO2).
- Pyrolysis products, toxic

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.
Suppress gases/vapours/mists with water spray jet.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.
Dispose of waste according to applicable legislation.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Do not breathe gas/fumes/vapour/spray.
Avoid contact with skin, eyes and clothes.
Use personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.
Do not allow to enter into soil/subsoil.

6.3. Methods and material for containment and cleaning up

For containment

Stop leak if safe to do so.
Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

For cleaning up

Collect in closed and suitable containers for disposal.
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
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Always close containers tightly after the removal of product.
Do not put any product-impregnated cleaning rags into your trouser pockets.
Clear spills immediately.
Use only in well-ventilated areas.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed and in a well-ventilated place.
Keep only in the original container. Store in a cool dry place.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hints on joint storage

Do not store together with:
- Materials capable of ignition under almost all normal temperature conditions
- Explosives

7.3. Specific end use(s)

engine coolant

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
107-21-1	Ethane-1,2-diol, vapour	20	52		TWA (8 h)	WEL
		40	104		STEL (15 min)	WEL

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
107-21-1	Ethane-1,2-diol			
Worker DNEL, long-term		inhalation	local	35 mg/m³
Worker DNEL, long-term		dermal	systemic	106 mg/kg bw/day
Consumer DNEL, long-term		inhalation	local	7 mg/m³
Consumer DNEL, long-term		dermal	systemic	53 mg/kg bw/day
1332-77-0	Dipotassium tetraborate			
Consumer DNEL, long-term		inhalation	systemic	3,9 mg/m³
Worker DNEL, long-term		dermal	systemic	367,7 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	7,8 mg/m³
Worker DNEL, acute		inhalation	systemic	7,8 mg/m³
Worker DNEL, long-term		inhalation	local	13,6 mg/m³
Worker DNEL, acute		inhalation	local	13,6 mg/m³
Consumer DNEL, acute		inhalation	systemic	3,9 mg/m³
Consumer DNEL, long-term		inhalation	local	13,6 mg/m³
Consumer DNEL, acute		inhalation	local	13,6 mg/m³
Consumer DNEL, long-term		dermal	systemic	185,6 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,92 mg/kg bw/day
Consumer DNEL, acute		oral	systemic	0,92 mg/kg bw/day

PNEC values

CAS No	Substance
Environmental compartment	Value
107-21-1	Ethane-1,2-diol
Freshwater	10 mg/l
Freshwater (intermittent releases)	10 mg/l
Marine water	1 mg/l
Freshwater sediment	37 mg/kg
Marine sediment	3,7 mg/kg
Micro-organisms in sewage treatment plants (STP)	199,5 mg/l
Soil	1,53 mg/kg
1332-77-0	Dipotassium tetraborate
Freshwater	2,02 mg/l
Freshwater (intermittent releases)	13,7 mg/l
Marine water	2,02 mg/l
Micro-organisms in sewage treatment plants (STP)	10 mg/l
Soil	5,4 mg/kg

8.2. Exposure controls


Appropriate engineering controls

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

Protective and hygiene measures

Take off contaminated clothing and wash it before reuse.
Wash hands and face before breaks and after work and take a shower if necessary.
When using do not eat, drink, smoke, sniff. Keep away from food, drink and animal feedingstuffs.

Eye/face protection

During filling, metering, mixing and sampling must be used:
Wear eye/face protection. EN 166

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits.The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.
Recommended glove articles: EN ISO 374
Suitable material: NBR (Nitrile rubber)
Thickness of the glove material: 0,4 mm
Breakthrough times and swelling properties of the material must be taken into consideration. Breakthrough time: > 8h
For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Wear suitable protective clothing. EN 14605

Respiratory protection

In case of inadequate ventilation wear respiratory protection.
- Half-face mask (EN 140)
- Filter type: A/P (EN 141)

The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used. (EN 137)

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	yellow
Odour:	characteristic
Odour threshold:	not determined
pH-Value (at 20 °C):	7,5 - 9,0

Changes in the physical state

Melting point/freezing point:	< -36 °C
Boiling point or initial boiling point and boiling range:	not determined
Flash point:	> 111 °C

Flammability

Solid/liquid:	not applicable
Gas:	not applicable

Explosive properties

The product is not: Explosive.

Lower explosion limits:	not determined
Upper explosion limits:	not determined
Auto-ignition temperature:	>400 °C
Decomposition temperature:	not determined

Oxidizing properties

The product is not: oxidising.

Vapour pressure:	not determined
Density (at 20 °C):	1,068 g/cm³
Water solubility:	easily soluble

Solubility in other solvents

not determined

Partition coefficient n-octanol/water:	not determined
Viscosity / dynamic:	not determined
Viscosity / kinematic:	not determined
Relative vapour density:	not determined
Evaporation rate:	not determined

9.2. Other information

Solid content: not determined

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Reacts with : Oxidizing agent, Acids

10.4. Conditions to avoid

Avoid: Thermal decomposition
Keep away from sources of heat (e.g. hot surfaces), sparks and open flames.
Safe handling: see section 7

10.5. Incompatible materials

Materials to avoid:
- Oxidising agent
- Strong acid, alkalines

10.6. Hazardous decomposition products

Hazardous combustion products:
- Carbon monoxide (CO)
- Carbon dioxide (CO2).
- Pyrolysis products, toxic

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

Acute toxicity

Harmful if swallowed.

ATEmix calculated

ATE (oral) 1033,1 mg/kg

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
107-21-1	Ethane-1,2-diol					
	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
1332-77-0	Dipotassium tetraborate					
	oral	LD50 mg/kg	> 2500	Rat	Study report (1996)	OECD Guideline 401
	dermal	LD50 mg/kg	> 2000	Rabbit	Study report (1985)	other: This study was carried out to com
	inhalation (4 h) dust/mist	LC50 mg/l	> 2,04	Rat	Study report (1994)	OECD Guideline 403

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

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

May cause damage to organs through prolonged or repeated exposure. (Ethane-1,2-diol)

Aspiration hazard

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

11.2. Information on other hazards

Endocrine disrupting properties

No information available.

Further information

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

SECTION 12: Ecological information

12.1. Toxicity

The product is not: Ecotoxic.

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
107-21-1	Ethane-1,2-diol						
	Acute fish toxicity	LC50	> 72860 mg/l	96 h	Pimephales promelas	Environ. Toxicology and Chemistry, Vol.	EPA 600/4-90/027. U.S. Environmental Pro
	Acute algae toxicity	ErC50	6500 - 13000 mg/l	96 h	Pseudokirchneriella subcapitata	Study report (1982)	other: EPA 600/9-78-018, 1978
	Acute crustacea toxicity	EC50	> 100 mg/l	48 h	Daphnia magna	Study report (1998)	OECD Guideline 202
	Fish toxicity	NOEC	15380 mg/l	7 d	Pimephales promelas	Environ. Toxicology and Chemistry, Vol.	other: EPA 600/4-89/001. U.S. Environmen
	Algae toxicity	NOEC	> 100 mg/l	8 d	Scenedesmus quadricauda	REACh Registration Dossier	OECD Guideline 201
	Crustacea toxicity	NOEC	7500 - 15000 mg/l	21 d	Daphnia magna	REACh Registration Dossier	other: ASTM
1332-77-0	Dipotassium tetraborate						
	Acute fish toxicity	LC50	74 mg/l	96 h	Limanda limanda	Publication (1985)	The acute toxicity of boron has been stu
	Acute algae toxicity	ErC50	66 mg/l	72 h	Phaeodactylum tricornutum	Study report (2011)	ISO 10253
	Acute crustacea toxicity	EC50	133 mg/l	48 h	Daphnia magna	Environ. Toxicol. Chem., 3, #1, 89-94 (1	other: ASTM Standard E 729-80
	Fish toxicity	NOEC	5,6 mg/l	34 d	Danio rerio	Study report (2000)	OECD Guideline 210
	Algae toxicity	NOEC	>= 100 mg/l	10 d	Agmenellum quadruplicatum	J. Fish. Res. Board Can., 32, #12, 2487-	Axenic cultures of 19 species were chose
	Crustacea toxicity	NOEC	33,1 mg/l	28 d	Americamysis bahia	Study report (2011)	EPA OPPTS 850.1350
	Acute bacteria toxicity	(EC50	> 175 mg/l)	3 h	Activated sludge	Study report (2000)	OECD Guideline 209

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
107-21-1	Ethane-1,2-diol	-1,36

BCF

CAS No	Chemical name	BCF	Species	Source
1332-77-0	Dipotassium tetraborate	0,558	Oncorhynchus nerka	Water Research Vol.

12.4. Mobility in soil

The product has not been tested.

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 information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

Contaminated packaging

This material and its container must be disposed of as hazardous waste. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: No dangerous good in sense of this transport regulation.

14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.

14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.

14.4. Packing group: No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.1. UN number: No dangerous good in sense of this transport regulation.

14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.

14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.

14.4. Packing group: No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number: No dangerous good in sense of this transport regulation.

14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.

14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.

14.4. Packing group: No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: No dangerous good in sense of this transport regulation.

14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.

14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.

14.4. Packing group: No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No dangerous good in sense of this transport regulation.

14.7. Maritime transport in bulk according to IMO instruments

No dangerous good in sense of this transport regulation.

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 75

2010/75/EU (VOC):	48,396 % (516,868 g/l)
2004/42/EC (VOC):	48,396 % (516,868 g/l)
Information according to 2012/18/EU (SEVESO III):	Not subject to 2012/18/EU (SEVESO III)

National regulatory information

Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).
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):
1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16.

Abbreviations and acronyms

CLP: Classification, labelling and Packaging
REACH: Registration, Evaluation and Authorization of Chemicals
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
UN: United Nations
CAS: Chemical Abstracts Service
DNEL: Derived No Effect Level
DMEL: Derived Minimal Effect Level
PNEC: Predicted No Effect Concentration
ATE: Acute toxicity estimate
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
LL50: Lethal loading, 50%
EL50: Effect loading, 50%
EC50: Effective Concentration 50%
ErC50: Effective Concentration 50%, growth rate
NOEC: No Observed Effect Concentration
BCF: Bio-concentration factor

PBT: persistent, bioaccumulative, toxic
vPvB: very persistent, very bioaccumulative
ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Regulations concerning the international carriage of dangerous goods by rail
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
(Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)
IMDG: International Maritime Code for Dangerous Goods
EmS: Emergency Schedules
MFAG: Medical First Aid Guide
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
VOC: Volatile Organic Compounds
SVHC: Substance of Very High Concern
For abbreviations and acronyms, see table at http://abbrev.esdscom.eu
For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

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

Classification	Classification procedure
Acute Tox. 4; H302	Calculation method
STOT RE 2; H373	Calculation method

Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. 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.)