

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### VA-012 Plus Ready Mix -20°C

Revision date: 04.01.2021

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

##### 1.1. Product identifier

VA-012 Plus Ready Mix -20°C

##### 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:	Vierol AG	
Street:	Karlstrasse 19	
Place:	D-26123 Oldenburg	
Telephone:	+49 (0) 441 – 210 20 – 0	Telefax: +49 (0) 441 – 210 20 –111
e-mail:	info@vierol.de	
Internet:	www.vierol.de	
Responsible Department:	Giftinformationszentrum Nord (Göttingen)	
	+49 (0)551/19240	

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

###### Regulation (EC) No. 1272/2008

Hazard categories:

Acute toxicity: Acute Tox. 4

Serious eye damage/eye irritation: Eye Irrit. 2

Specific target organ toxicity - repeated exposure: STOT RE 2

Hazard Statements:

Harmful if swallowed.

Causes serious eye irritation.

May cause damage to organs through prolonged or repeated exposure.

##### 2.2. Label elements

###### Regulation (EC) No. 1272/2008

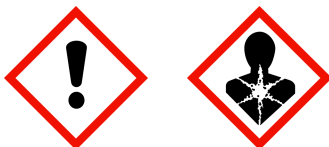
###### Hazard components for labelling

ethanediol, ethylene glycol

2,2'-oxybisethanol; diethylene glycol

Signal word: Warning

Pictograms:



###### Hazard statements

H302

Harmful if swallowed.

H319

Causes serious eye irritation.

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.

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P330 Rinse mouth.  
P501 Dispose of contents/container to Dispose of waste according to applicable legislation..

### 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	ethanediol, ethylene glycol			30 - < 35 %
	203-473-3	603-027-00-1	01-2119456816-28	
	Acute Tox. 4, STOT RE 2; H302 H373			
111-46-6	2,2'-oxybisethanol; diethylene glycol			5 - < 10 %
	203-872-2	603-140-00-6		
	Acute Tox. 4; H302			
3164-85-0	Potassium 2-ethyl hexanoate			1 - < 5 %
	221-625-7			
	Repr. 2, Skin Irrit. 2, Eye Dam. 1; H361d H315 H318			

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

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information

Use personal protection equipment. See section 8.  
When in doubt or if symptoms are observed, get medical advice.

#### After inhalation

Provide fresh air. Medical treatment necessary. Remove person to fresh air and keep comfortable for breathing. When in doubt or if symptoms are observed, get medical advice.

#### After contact with skin

Wash with plenty of water. Immediately remove any contaminated clothing, shoes or stockings. Medical treatment necessary. In all cases of doubt, or when symptoms persist, seek medical advice.

#### 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

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Rinse mouth thoroughly with water. Get medical advice/attention.

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

May cause respiratory irritation. The following symptoms may occur: Cough, Drowsiness, 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

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Treat symptomatically.

**SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

**Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.  
Water spray jet, alcohol resistant foam.  
Dry extinguishing powder. Carbon dioxide (CO<sub>2</sub>)

**Unsuitable extinguishing media**

Full 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.

**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus.  
Use water spray jet to protect personnel and to cool endangered containers.

**Additional information**

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately.  
Do not allow entering drains or surface water.

**SECTION 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

Remove persons to safety. Provide adequate ventilation.  
Use personal protective equipment as required. See section 8.  
Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes.

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

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

Stop leak if safe to do so.  
Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Collect in closed and suitable containers for disposal.  
Treat the recovered material as prescribed in the section on waste disposal.

**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**

Provide adequate ventilation as well as local exhaust at critical locations.  
Use personal protective equipment as required. Personal protection equipment: see section 8  
Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes.

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

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#### Hints on joint storage

No special measures are necessary.

#### 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
111-46-6	2,2'-Oxydiethanol	23	101		TWA (8 h)	WEL
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	Exposure route	Effect	Value
107-21-1	ethanediol, ethylene glycol			
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	
3164-85-0	Potassium 2-ethyl hexanoate			
Worker DNEL, long-term	inhalation	systemic	32 mg/m³	
Worker DNEL, long-term	dermal	systemic	12 mg/kg bw/day	
Consumer DNEL, long-term	inhalation	systemic	8 mg/m³	
Consumer DNEL, long-term	dermal	systemic	6 mg/kg bw/day	
Consumer DNEL, long-term	oral	systemic	2,5 mg/kg bw/day	

##### PNEC values

CAS No	Substance	Value
107-21-1	ethanediol, ethylene glycol	
Freshwater		10 mg/l
Marine water		1 mg/l
Freshwater sediment		37 mg/kg
Marine sediment		3,7 mg/kg
Soil		1,53 mg/kg
3164-85-0	Potassium 2-ethyl hexanoate	
Freshwater		0,36 mg/l
Freshwater sediment		6,37 mg/l
Marine sediment		0,637 mg/l
Soil		1,06 mg/l

#### 8.2. Exposure controls



## Appropriate engineering controls

Provide adequate ventilation as well as local exhaust at critical locations.  
If handled uncovered, arrangements with local exhaust ventilation have to be used.  
Safe handling: see section 7

## Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.  
Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

## Eye/face protection

Wear eye protection/face protection.

## 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. 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.  
DIN EN 374

## Skin protection

Wear suitable protective clothing.

## Respiratory protection

Usually no personal respirative protection necessary.  
In case of inadequate ventilation wear respiratory protection.

## Environmental exposure controls

Do not allow to enter into surface water or drains.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	violet
Odour:	characteristic
pH-Value (at 20 °C):	7,5 - 9

### Changes in the physical state

Melting point:	not determined
Initial boiling point and boiling range:	not determined
Flash point:	> 111 °C

### Flammability

Solid:	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

Solid:	not applicable
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Gas: not applicable

Decomposition temperature: not determined

**Oxidizing properties**

Not oxidising.

Vapour pressure: not determined

Density (at 20 °C): 1,044 g/cm<sup>3</sup>

Water solubility: easily soluble

**Solubility in other solvents**

not determined

Partition coefficient: not determined

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**

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

**10.5. Incompatible materials**

Oxidising agent, strong

Strong acid

**10.6. Hazardous decomposition products**

Formation of toxic gases is possible during heating or in case of fire.

**SECTION 11: Toxicological information****11.1. Information on toxicological effects****Acute toxicity**

Harmful if swallowed.

**ATEmix calculated**

ATE (oral) 1325,0 mg/kg

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
107-21-1	ethanediol, ethylene glycol				
	oral	ATE 500 mg/kg			
	dermal	LD50 10600 mg/kg	Rabbit	GESTIS	
111-46-6	2,2'-oxybisethanol; diethylene glycol				
	oral	ATE 500 mg/kg			
	dermal	LD50 11890 mg/kg	Rabbit		

#### Irritation and corrosivity

Causes serious eye irritation.

Skin corrosion/irritation: 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. (ethanediol, ethylene glycol)

#### Aspiration hazard

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

#### Additional information on tests

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	ethanediol, ethylene glycol					
	Acute fish toxicity	LC50 72860 mg/l	96 h	Pimephales promelas (fathead minnow)	Experimental data	
111-46-6	2,2'-oxybisethanol; diethylene glycol					
	Acute fish toxicity	LC50 > 32000 mg/l	96 h	Gambusia affinis		

### 12.2. Persistence and degradability

The product has not been tested.

### 12.3. Bioaccumulative potential

The product has not been tested.

#### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
107-21-1	ethanediol, ethylene glycol	-1,36
111-46-6	2,2'-oxybisethanol; diethylene glycol	-1,98 (25°C)

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**12.4. Mobility in soil**

No information available.

**12.5. Results of PBT and vPvB assessment**

The product has not been tested.

**12.6. Other adverse effects**

No information available.

**Further information**

Avoid release to the environment.

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

Do not allow to enter into surface water or drains. 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.



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

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**

2004/42/EC (VOC):	37,736 % (393,967 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 juvenils 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): 1,2,3,4,5,6,7,8,9,10,11,12,13,15,16.

**Abbreviations and acronyms**

ADR: Accord européen sur le transport des marchandises dangereuses par Route  
(European Agreement concerning the International Carriage of Dangerous Goods by Road )  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service  
LC50: Lethal concentration, 50%  
LD50: Lethal dose, 50%  
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  
DNEL: Derived No Effect Level  
DMEL: Derived Minimal Effect Level  
PNEC: Predicted No Effect Concentration  
ATE: Acute toxicity estimate  
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  
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)  
EmS: Emergency Schedules

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MFAG: Medical First Aid Guide

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>**Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]**

Classification	Classification procedure
Acute Tox. 4; H302	Calculation method
Eye Irrit. 2; H319	Calculation method
STOT RE 2; H373	Calculation method

**Relevant H and EUH statements (number and full text)**

H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
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.)*