

SAFETY DATA SHEET

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

1.1 Product identifier

Product name : COOLANT VCS-2 READY MIXED MIX 40/60
Product code : 24383484
Product description : Coolant
Product type : Liquid.

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

Identified uses

Coolant and antifreeze.

Uses advised against

Not applicable.

1.3 Details of the supplier of the safety data sheet

AB Volvo Penta
SE-405 08 Göteborg
Sweden

e-mail address of person : sds@volvo.com
responsible for this SDS

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : Call a POISON CENTER or doctor.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Acute Tox. 4, H302

STOT RE 2, H373 (kidneys) (oral)

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms

:



Signal word

: Warning

Hazard statements

: Harmful if swallowed.

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

Precautionary statements

SECTION 2: Hazards identification

Prevention	: If medical advice is needed, have product container or label at hand. Keep out of reach of children. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.
Response	: IF SWALLOWED: Immediately call a POISON CENTER or doctor.
Storage	: Store locked up.
Disposal	: Not applicable.
Hazardous ingredients	: ethanediol
Supplemental label elements	:
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	: Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII	: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Other hazards which do not result in classification	: Not available.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
ethanediol	REACH #: 01-2119456816-28 EC: 203-473-3 CAS: 107-21-1	30 - 60	Acute Tox. 4, H302 STOT RE 2, H373 (kidneys) (oral)	ATE [Oral] = 500 mg/kg	[1] [2]
BENZOIC ACID, SODIUM SALT	REACH #: 01-2119460683-35 EC: 208-534-8 CAS: 532-32-1	0.1 - <3	Eye Irrit. 2, H319	-	[1]
Aversive agent	-	ppm	Acute Tox. 4, H302 Acute Tox. 4, H332 Aquatic Chronic 3, H412 See Section 16 for the full text of the H statements declared above.	ATE [Oral] = 500 mg/kg ATE [Inhalation (vapours)] = 11 mg/l	[3]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Additional disclosure due to company policy

SECTION 3: Composition/information on ingredients

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

- | | |
|-----------------------------------|---|
| Eye contact | : In case of contact with eyes, rinse immediately with plenty of water. Get medical attention if symptoms occur. Continue to rinse for at least 10 minutes. |
| Inhalation | : If inhaled, remove to fresh air. Get medical attention if symptoms occur. |
| Skin contact | : Wash contaminated skin with soap and water. Get medical attention. |
| Ingestion | : Do not induce vomiting unless directed to do so by medical personnel. If affected person is conscious, give plenty of water to drink. Wash out mouth with water. Get medical attention immediately. (Coolant. Contains ethylene glycol) |
| Protection of first-aiders | : No action shall be taken involving any personal risk or without suitable training. Refer to protective measures listed in sections 7 and 8. |

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

- | | |
|---------------------|--|
| Eye contact | : May cause slight transient irritation. (redness) |
| Inhalation | : May cause slight transient irritation. |
| Skin contact | : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. |
| Ingestion | : Exposure can cause stomach pains, vomiting and diarrhoea. |

4.3 Indication of any immediate medical attention and special treatment needed

- | | |
|----------------------------|---------------------------------|
| Notes to physician | : Treat symptomatically. |
| Specific treatments | : Antidote information: Ethanol |

SECTION 5: Firefighting measures

5.1 Extinguishing media

- | | |
|---------------------------------------|---|
| Suitable extinguishing media | : Recommended:, CO ₂ , powders, alcohol-resistant foam |
| Unsuitable extinguishing media | : Do not use water jet. |

5.2 Special hazards arising from the substance or mixture

- | | |
|--|--|
| Hazards from the substance or mixture | : In a fire or if heated, a pressure increase will occur and the container may burst. |
| Hazardous combustion products | : Decomposition products may include the following materials:
metal oxide/oxides
carbon oxides |

5.3 Advice for firefighters

- | | |
|---|---|
| Special protective actions for fire-fighters | : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| Special protective equipment for fire-fighters | : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents. |

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Refer to protective measures listed in sections 7 and 8.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- 6.2 Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and material for containment and cleaning up

- Small spill** : Stop leak if without risk. 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.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. 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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

- 6.4 Reference to other sections** : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not breathe vapour or mist. Empty containers retain product residue and can be hazardous. Do not reuse container. Avoid contact with eyes, skin and clothing. Do not ingest. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.
- Advice on general occupational hygiene** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Wash contaminated clothing before reuse. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Do not store in unlabelled containers. Keep container tightly closed. Keep container in a cool, well-ventilated area. Store in accordance with local regulations.

7.3 Specific end use(s)

- Recommendations** : Coolant and antifreeze.
- Industrial sector specific solutions** : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
ethanediol	EU OEL (Europe, 10/2019). Absorbed through skin. Notes: list of indicative occupational exposure limit values TWA: 20 ppm 8 hours. TWA: 52 mg/m ³ 8 hours. STEL: 40 ppm 15 minutes. STEL: 104 mg/m ³ 15 minutes.

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
ethanediol BENZOIC ACID, SODIUM SALT	DNEL	Long term Dermal	106 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	7 mg/m ³	General population [Consumers]	Local
	DNEL	Long term Dermal	53 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term Inhalation	35 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	0.06 mg/m ³	General population	Local
	DNEL	Long term Inhalation	0.1 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	1.5 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	3 mg/m ³	Workers	Systemic
	DNEL	Long term Oral	16.6 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	31.25 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	62.5 mg/kg bw/day	Workers	Systemic

PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
ethanediol BENZOIC ACID, SODIUM SALT	Fresh water	10 mg/l	-
	Marine water	1 mg/l	-
	Sewage Treatment Plant	199.5 mg/l	-
	Fresh water sediment	37 mg/kg dwt	-
	Marine water sediment	3.7 mg/kg dwt	-
	Soil	1.53 mg/kg dwt	-
	Fresh water	0.13 mg/l	-
	Marine water	0.013 mg/l	-
	Secondary Poisoning	300 mg/kg	-
	Fresh water sediment	1.76 mg/kg	-

SECTION 8: Exposure controls/personal protection

	Marine water sediment	0.176 mg/kg	-
	Soil	0.276 mg/kg	-
	Sewage Treatment Plant	10 mg/l	-

8.2 Exposure controls

Appropriate engineering controls : Use only with adequate ventilation. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Use eye protection according to EN 166, designed to protect against liquid splashes.

Skin protection

Hand protection : For prolonged or repeated handling, use gloves : > 8 hours (breakthrough time): nitrile rubber, butyl rubber, neoprene rubber, EN374. thickness >0.38mm

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Provide adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. full-face mask

Environmental exposure controls : Do not allow to enter drains or watercourses.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid.

Colour : Orange.

Odour : Mild.

Odour threshold : Not available.

Melting point/freezing point : -25°C

Initial boiling point and boiling range : 177°C (350.6°F)

Flammability (solid, gas) : Not available.

Upper/lower flammability or explosive limits : Not available.

Flash point : Closed cup: Not applicable.

Auto-ignition temperature : 398°C (748.4°F)

Decomposition temperature : Not available.

pH : 8.4

Viscosity : Not available.

Pour point : Not available.

SECTION 9: Physical and chemical properties

Solubility(ies) :

Media	Result
cold water	Soluble
hot water	Soluble

Partition coefficient: n-octanol/ water : Not applicable.

Vapour pressure	Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
		mm Hg	kPa	Method	mm Hg	kPa	Method
	Not available.						

Relative density : Not available.

Density : 1.059 g/cm³ [20°C (68°F)]

Vapour density : Not available.

Explosive properties : Not available.

Oxidising properties : Not available.

Particle characteristics

Median particle size : Not applicable.

9.2.1 Information with regard to physical hazard classes

9.2.2 Other safety characteristics

Miscible with water : Yes.

Evaporation rate : Not available.

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : Stable under recommended storage and handling conditions (see Section 7).

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : No specific data.

10.5 Incompatible materials : Reactive or incompatible with the following materials:
strong acids
oxidising materials
nitrates
peroxides
chlorates

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced. Elevated temperature: Aldehydes, ketones

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
ethanediol	Harmful if swallowed. No applicable toxicity data	-	-	-

SECTION 11: Toxicological information

Conclusion/Summary : Harmful if swallowed.

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
ethanediol	500	N/A	N/A	N/A	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
BENZOIC ACID, SODIUM SALT	Eyes - Irritant	-	-	-	-

Conclusion/Summary

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

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

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

Sensitisation

Conclusion/Summary

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

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

Mutagenicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Carcinogenicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Reproductive toxicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Teratogenicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
ethanediol	Category 2	oral	kidneys

Aspiration hazard

Not available.

Information on likely routes of exposure : Not available.

Potential acute health effects

Eye contact : May cause slight transient irritation.

Inhalation : This product is not likely to volatilise rapidly into the air because of its low vapour pressure.

Skin contact : Defatting to the skin.

Ingestion : Harmful if swallowed. Risk of intoxication.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : May cause slight transient irritation. (redness)

Inhalation : May cause slight transient irritation.

SECTION 11: Toxicological information

- Skin contact** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
- Ingestion** : Exposure can cause stomach pains, vomiting and diarrhoea.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

Not available.

- Conclusion/Summary** : Specific target organ toxicity (single exposure) - Based on available data, the classification criteria are not met.
Specific target organ toxicity (repeated exposure) - May cause damage to organs through prolonged or repeated exposure if swallowed.
Aspiration hazard - Based on available data, the classification criteria are not met.
- General** : May cause damage to organs through prolonged or repeated exposure if swallowed.
- Carcinogenicity** : Not applicable.
- Mutagenicity** : Not applicable
- Reproductive toxicity** : No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not applicable.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

Ecotoxicological data on the substances included in this product show that the product is not classified as harmful to the environment.

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
BENZOIC ACID, SODIUM SALT	Acute LC50 484000 µg/l Fresh water	Fish - Pimephales promelas	96 hours

- Conclusion/Summary** : Based on available data, the classification criteria are not met.

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Not applicable	-	-	-	-

- Conclusion/Summary** : Not applicable

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Not applicable	-	-	-

12.3 Bioaccumulative potential

SECTION 12: Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
Not applicable	-	-	-

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Water-soluble liquid

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties

Not applicable.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Hazardous waste : This product is listed as Hazardous by the EU Directive on hazardous waste. Dispose of according to all national and local applicable regulations.

European waste catalogue (EWC)

Waste code	Waste designation
16 01 14*	antifreeze fluids containing hazardous substances

Packaging

Methods of disposal : Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	Not available.	Not regulated.	Not available.	Not available.
14.2 UN proper shipping name	Not available.	-	-	Not available.
14.3 Transport hazard class(es)	Not available.	-	Not available.	Not available.
14.4 Packing group	-	-	-	-

SECTION 14: Transport information

14.5 Environmental hazards	No.	No.	No.	No.
--------------------------------------	-----	-----	-----	-----

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Maritime transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)**Annex XIV - List of substances subject to authorisation****Annex XIV**

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

No listed substance

Other EU regulations

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

Explosive precursors :
Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

National regulations**International regulations****Chemical Weapon Convention List Schedules I, II & III Chemicals**

List name	Ingredient name	Status
Not applicable	-	-

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

SECTION 15: Regulatory information

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

15.2 Chemical safety assessment : No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms :

- ATE = Acute Toxicity Estimate
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- DMEL = Derived Minimal Effect Level
- DNEL = Derived No Effect Level
- EUH statement = CLP-specific Hazard statement
- N/A = Not available
- PBT = Persistent, Bioaccumulative and Toxic
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number
- SGG = Segregation Group
- vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Acute Tox. 4, H302 STOT RE 2, H373 (kidneys) (oral)	Expert judgment Expert judgment

Full text of abbreviated H statements

H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS]

Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2

Date of issue/ Date of revision : 9/26/2023

Version : 1

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2020/878