



PORSCHE

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product Name: Antifreeze

Article number: 000 043 301 12, 000 043 301 13; 000 043 301 47, 000 043 301 48, 000 043 301 49

Product use: Antifreeze

Manufacturer: Dr. Ing. H.c. F. Porsche AG Porsche Str. 15-19 D 71634 Ludwigsburg Germany Contact: (8:00am to 4:00 pm Central European Time Michael Weinmann Tel: 011 49 711 78445 FAX: 011 49 711 911 78558	Importer: Porsche Cars North America, Inc. 980 Hammond Drive, Suite 1000 Atlanta, Georgia 30328 For general (non-emergency) parts information, call: Tel: 800 255 5713 Fax: 770 290 3532
---	--

EMERGENCY Tel. No. for US and Canada: 1-800 535 5053 (INFOTRAC)

2. Hazards Identification

POTENTIAL HEALTH EFFECTS: (Also see section 11)

EMERGENCY OVERVIEW: WARNING:

HARMFUL OR FATAL IF SWALLOWED.

CAN BE ABSORBED THROUGH THE SKIN.

OVEREXPOSURE MAY CAUSE CENTRAL NERVOUS SYSTEM AND KIDNEY EFFECTS.

Appearance/odor: Violet liquid with a specific odor.

Routes of Entry: Skin and eye contact and inhalation.

Carcinogenicity: NTP-No, IARC-No, OSHA-No

This material is considered hazardous by the OSHA Hazard Communication Standard. (29CFR1910.10000



WHMIS classification: Class D2A and D2B

NFPA ratings	Health: 1	Fire: 1	Reactivity: 0
--------------	-----------	---------	---------------

HMIS ratings	Health: 1*	Fire: 1	Reactivity: 0
--------------	------------	---------	---------------

3. Composition/Information on Ingredients

Component	CAS#	% By Wt.
Ethylene glycol	107-21-1	> 90

4. First Aid Measures:

SKIN: Remove contaminated clothing and shoes Wash with soap or mild detergent and water. Do not use solvents or thinners. If irritation occurs, get medical attention.

EYES: Hold eyes open and flush for at least 15 minutes with large amounts of water. Get immediate medical attention.

INGESTION: Do not induce vomiting. Give two glasses of water to dilute stomach contents. Never give anything by mouth to an unconscious person. Get immediate medical attention.

INHALATION: Remove to fresh air. If breathing is difficult administer oxygen. Get immediate medical attention if irritation occurs.

Note to physician: Treat victim symptomatically. Antidote for ingestion is ethanol; give 50 ml of ethanol in drinkable concentrations.

5. Fire Fighting Measures

EXTINGUISHING MEDIA: Alcohol foam, carbon dioxide, dry chemical. Use water spray to cool containers in fire area. Do not use full water jet.

FIRE FIGHTING: May emit toxic fumes. Use self-contained breathing apparatus and full protective clothing. Contaminated water should be contained and removed according to the government guidelines.

6. Accidental Release Measures:

SPILL AND LEAK PROCEDURES: Wear appropriate personal protective equipment. Do not breathe vapor. Collect spill onto inert absorbent and place in suitable containers. Do not release into sewers, surface waters or ground water.

7. Handling and Storage:

HANDLING: Observe the usual precautions against electrostatic charges. Avoid contact with skin, eyes or clothing. Do not breathe vapors or mist. Remove contaminated clothing and wash before re-use.

STORAGE: Store in tightly closed containers. Store in a cool dry area.

8. Exposure Controls/Personal Protection:

EXPOSURE LIMITS:

Component	CAS#	Exposure Limits
Ethylene glycol	107-21-1	c 100 mg/m ³ ACGIH (aerosol)

ENGINEERING CONTROLS: Use in a well ventilated area.

RESPIRATORY PROTECTION: Not required under normal conditions of use. Use NIOSH approved respirator for exposures exceeding the TLV.

SKIN PROTECTION: Use clothing and shoes suitable to avoid skin contact.
Use butyl rubber gloves 0.7 mm or nitrile gloves with a minimum thickness of 0.4 mm. Check suitability recommendations by protective equipment manufacturers.

EYE PROTECTION: Safety glasses with side shields.

General Hygiene: Wash thoroughly after handling. Immediately remove soiled and contaminated clothing. Wash before re-use.
Do not eat or drink in area.

9. Physical and Chemical Properties:

PHYSICAL FORM:	Liquid
COLOR:	violet
ODOR:.....	specific
FLASH POINT:.....	>124(320°F) (255°F) ISO 2719
LOWER EXPLOSION LIMIT:.....	3.4 Vol%
UPPER EXPLOSION LIMIT:.....	15.1 Vol%
SELF-IGNITION:	Not self igniting
IGNITION TEMPERATURE:	420°C (780°F)
BOILING POINT:.....	>160°C (320°F) ASTM D1120
VAPOR PRESSURE: (20°C)(68°F)	0.2 hPa
pH:.....	~8 ASTM D1287
SOLUBILITY IN WATER:.....	Completely miscible
DENSITY: (20°C)(68°F)	1.122-1.125 g/cm ³

10. Stability and Reactivity:

CHEMICAL STABILITY: Stable under normal conditions of storage and use.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition produces carbon monoxide and carbon dioxide.

000 043 301 12+13 Antifreeze

INCOMPATIBILITIES/CONDITIONS TO AVOID: Strong oxidizing agents.

11. Toxicological Information:

Acute oral LD50: >2000 mg/kg

Skin irritation: non irritant (rabbit)

Eye irritation : non irritant (rabbit)

Harmful if swallowed. Overexposure to ethylene glycol may cause central nervous system and kidney effects. Ethylene glycol caused reproductive/fertility effects when tested on laboratory animals. Risk of skin absorption.

12. Ecological Information

Fish toxicity LC50: >100 mg/l, *Leuciscus idus* (96 h)

Aquatic invertebrate: EC50 >100 g/l, *Daphnia magna* (48 h)

Algae EC50: >100 mg/l (72 h)

Avoid contamination of ground water or waterways.

No adverse environmental effects are known or expected.

Biodegradation: >70% (OECD 301 A) moderately biodegradable

13. Disposal Considerations:

Dispose of or incinerate in accordance with Federal, Provincial or Local regulations.

14. Transport Information:

TDG/DOT SHIPPING NAME: Not regulated.

15. Regulatory Information:

All components of this product are on the TSCA Inventory.

SARA Title III:

This product contains ethylene glycol (> 90%) that is a toxic chemical subject to the supplier notification requirements of Section 313 of the Superfund Amendments and Reauthorization Act (SARA/EPCRA) and the requirements of 40 CFR Part 372.

Note: Entries under this section cover only those regulations typically addressed in the MSDS generating process, such as, TSCA, and EPCRA/SARA Title III.

16. Other Information:

HAZCOM / WHMIS LABEL:

WARNING!

HARMFUL OR FATAL IF SWALLOWED.

CAN BE ABSORBED THROUGH THE SKIN.

OVEREXPOSURE MAY CAUSE CENTRAL NERVOUS SYSTEM AND KIDNEY EFFECTS.

This MSDS conforms to the American National Standard, ANSI Z400.1-2004

000 043 301 12+13 Antifreeze

To the best of our knowledge, the information contained in this MSDS is accurate. It is intended to assist the user in his evaluation of the product's hazards, and safety precautions to be taken in its use. The data on this MSDS relate only to the specific material designated herein. We do not assume any liability for the use of, or reliance on this information, nor do we guarantee its accuracy or completeness.

000 043 301 12+13 Antifreeze_CanVersion1.1.doc