



Product: ANTIFREEZE G12

MATERIAL SAFETY DATA SHEET

1. PREPARATION AND COMPANY IDENTIFICATION

PRODUCT TRADE NAME:

ANTIFREEZE G12

PRODUCT CODE: 4S31

USE OR DESCRIPTION:

Concentrate coolant.

COMPANY IDENTIFICATION:

PETRONAS LUBRICANTS BELGIUM NV

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COMPETENT PERSON FOR SAFETY DATA OF PRODUCT:

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2. HAZARDS IDENTIFICATION

This product is harmful if swallowed according to EEC Directives.

The product is biodegradable, but avoid accidental spills of large quantity of product.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Ethylene glycol, inhibitor additives.

HAZARDOUS COMPONENTS	EINECS n°	CAS n°	QUANTITY	SYMBOL	R-PHRASES
Ethylene glycol	203-473-3	107-21-1	91-96 %	Xn	22



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R-phrases and list of abbreviations: see heading 16.

4. FIRST AID MEASURES

INGESTION:

Obtain IMMEDIATE MEDICAL ATTENTION if the product has been swallowed and show label or package. Do not induce absolutely vomiting to avoid aspiration into the respiratory tracts.

EYE CONTACT:

Rinse thoroughly with plenty of water for at least 10 minutes keeping eyelids open. Obtain medical attention if any pain or redness develops or persists.

SKIN CONTACT:

Remove contaminated clothes and shoes and rinse thoroughly with plenty of water and soap.

INHALATION:

Expose affected person to fresh air and obtain medical attention.

5. FIRE-FIGHTING MEASURES

FLASH POINT: 120°C (ASTM D 92)

EXTINGUISHING MEDIA:

This product has no special fire risk. In case of fire use foam, carbon dioxide, dry chemical powder and water mist.

Avoid high pressure water jet. Use water jet only to cool down surfaces exposed to fire.

EXPOSURE SPECIAL RISKS:

Don't breathe combustion fumes: fire can form harmful compounds.

PROTECTIVE EQUIPMENT FOR FIREFIGHTERS:

Protective clothing complete with autobreathing feature.

COMBUSTION PRODUCTS:

Oxides of carbon, compounds of nitrogen and products of incomplete combustion.

6. ACCIDENTAL RELEASE MEASURES

ENVIRONMENTAL PRECAUTION:

Prevent the material from entering soil, sewers and water courses. Contact the appropriate authorities if necessary.

SPILLAGES:

In case of large spills dike and pump into suitable containers for disposal. Contain small spills with absorbent material. Put dirty material in suitable container. Dispose of dirty material in accordance with



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local or national regulations.

PERSONAL PRECAUTIONS:

Avoid ingestion of product. Avoid contact with skin and eyes by wearing appropriate protective clothing.

7. HANDLING AND STORAGE

HANDLING:

Avoid ingestion. Avoid frequent and prolonged skin contact and contact with eyes. Provide adequate ventilation to avoid mist or aerosol. Practice reasonable personal cleanliness. Don't eat, drink or smoke during use.

STORAGE:

Store under cover in the original container securely closed away from heat and sources of ignition. Do not store in the open air. Assure a correct ventilation of premises and the control of possible leak. Keep out of reach of children and away from food and drink.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS:

The recommended exposure limits (CE, skin) are:

CHEMICAL AGENT	LIMIT		
ethylene glycol	TLV/TWA (8 h)	52	mg/m ³
ethylen glycol	TLV/STEL	104	mg/m ³

TECHNICAL PRECAUTIONS:

Avoid production and diffusion of mist and aerosol with utilization of localized ventilation/aspiration or other required precautions. If necessary, adopt all required precaution to avoid product immission in environment (e.g., blasting systems, catch basins, ...).

RESPIRATORY PROTECTION:

None required under normal conditions of use. Use approved full face respirator with organic vapour filter cartridge if the recommended exposure limits are exceeded.

HAND AND SKIN PROTECTION:

Wear suitable gloves in organic substance-proof material (i.e. neoprene, nitrile). Gloves should be changed when they show wear. The kind of gloves and the term of use must be decided from employer with regard to processing and to allow for legislation on personal protection equipment and glove producer's indications. Wear gloves only with clean hands.

Wear suitable protective clothing (for further information, refer to CEN-EN 14605); change it immediately in case of large contamination and wash it before subsequent use.

Practice reasonable personal cleanliness.

EYE PROTECTION:



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Chemical goggles and face shield in case of oil splashes.

9. PHYSICAL AND CHEMICAL PROPERTIES

PROPERTY	VALUE	METHOD
APPEARANCE	Rouge	--
pH (dil. 50%)	7.9	ASTM D 1287
FREEZING POINT (dil. 50%)	-38°C	ASTM D 1177
WATER SOLUBILITY	Complètement soluble	
FLASH POINT	120°C	ASTM D 92
BOILING POINT (dil. 50%)	109°C	ASTM D 1120

10. STABILITY AND REACTIVITY

STABILITY:

The product is stable under normal conditions of use.

CONDITIONS TO AVOID:

This product must be kept far from heat sources. In any case, avoid exposing product to temperatures above the flash point.

MATERIALS TO AVOID:

Strong oxidizing agents, hard acids and bases.

HAZARDOUS DECOMPOSITION PRODUCTS:

Oxides of carbon and nitrogen.

11. TOXICOLOGICAL INFORMATION

INGESTION:

Harmful if swallowed. Excessive exposure may cause central nervous system effects and kidney damage.

INHALATION:

Inhalation of mists and vapours generated at elevated temperatures may cause respiratory irritation.

EYE CONTACT:

Contact may cause slight irritations.

SKIN CONTACT:

Contact may cause slight irritations.



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12. ECOLOGICAL INFORMATION

The main component of product is ethylene glycol, readily biodegradable (>90% after 21 days, modified Sturm test).

Given its physical and chemical characteristics, the product is soluble in water, penetrates easily into soil and shows weak tendency to evaporation. Anyway, avoid large spills of product to prevent soil, watercourse and groundwater pollution.

13. DISPOSAL CONSIDERATIONS

Prevent contamination of soil, drains and surface waters.

Do not discharge in sewers, tunnels or water courses. Dispose in accordance with local or national regulations via authorised person/licensed waste disposal contractor.

The used product is to be considered a special waste to be classified in accordance to Directives 75/442/EC (on wastes) and 91/689/EC (on hazardous waste) and related legislation.

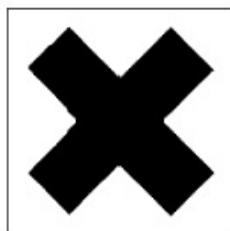
14. TRANSPORT INFORMATION

Not classified as hazardous for transport (ADR/RID, ICAO/IATA, IMDG).

15. REGULATORY INFORMATION

Classification and labelling according to EC regulations:

SYMBOL:



INDICATIONS OF DANGER:

HARMFUL

CONTAINS:

Ethylene glycol.



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RISK PHRASES:

R 22 Harmful if swallowed.

SAFETY PHRASES:

- S 2 Keep out of the reach of children.
- S 46 If swallowed, seek medical advice immediately and show this container or label.
- S 13 Keep away from food, drink and animal feedingstuffs.
- S 24/25 Avoid contact with skin and eyes.

OTHER INDICATIONS:

None.

OTHER ENFORCEABLE LEGISLATION:

Regulation (EC) No 1907/2006, with all National and European related legislations - concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

Directives 89/391/EC, 89/654/EC, 89/655/EC, 89/656/EC, 90/269/EC, 90/270/EC, 90/394/EC, 90/679/EC and all following updates, together with its national realization, about improvement of worker safety and health

Directives 98/24/EC and all following updates, together with its national realization, about protection of worker safety and health against chemical agent risks

Directive 1999/45/EC and all following updates, together with its national realization, about classification, packaging and labelling of dangerous preparations

Directive 2001/59/EC and all following updates, together with its national realization, about classification, packaging and labelling of dangerous substances

Directive 2001/58/EC and all following updates, together with its national realization, about safety data sheets

Directive 2004/73/EC (29th adjustment) and all following updates, together with its national realization, about classification, packaging and labelling of dangerous substances

Directive 1991/156/EC and all following updates, together with national waste legislation

EC directives and national environment protection legislation (air, water and soil)

Danish legislation - PR n° 1063987

16. OTHER INFORMATION

Sheet complies with the criteria of EC/91/155, EC/99/45, EC/2001/58, EC/2002/59 and EC/2004/73 Directives and following, as well as with Annex II of REACH.

This product must not be used in applications other than recommended without first seeking the advice of the Technical Department.

As regard as the previous version this sheet hasn't been changed.



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Caption about heading 3, R-phrases:

R 22 Harmful if swallowed.

List of abbreviations used:

N.A. Not applicable

N.D. Not available

This product must be stored, handled and used according to correct industrial hygienic practices and in compliance with laws in force.

The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be considered as any guarantee of specific properties.