SAFETY DATA SHEET
In conformity with Regulation (EC) 1907/2006 annex II

Trade name: SpiroPlus AntiFreeze
Revision dated: 11-02-2010 Version: 2

1. IDENTIFICATION OF THE PRODUCT AND THE COMPANY

Product name:	**SpiroPlus AntiFreeze**
Application:	For preventing freezing of water in water-carrying systems.
Manufacturer:	Spirotech B.V. - Churchilllaan 52 - 5705 BK Helmond, tel. +31 (0)492 - 57 89 89 during office hours 08:00 - 17:00 h
E-mail:	w.vandenberg@spirotech.nl

Telephone number for emergencies	In case of emergencies contact the National Poisons Information Centre, tel. no.: +31 (0)30-2748888 (only to be reached in emergencies for treatment by a physician in case of suspicion of poisoning).

2. IDENTIFICATION OF THE RISKS

Physical and chemical risks	The product is flammable; above 90°C vapour is explosive with air.
Health risks	Contact with skin and eyes may cause minor irritation.
Environmental risks	According to the present knowledge about this product, no harmful effects are to be expected.

3. COMPOSITION AND INFORMATION ABOUT THE COMPONENTS

This product is a preparation. The main ingredient is monopropylene glycol.

4. MEASURES FOR FIRST AID

General	Ask for medical advice in all cases of doubt or in case of persistent symptoms. If the victim is unconscious, do not give him something to drink and do not arouse vomiting.
Inhale	Bring into fresh air in a sitting position. Loosen clothing.
Skin contact	Thoroughly rinse with running water.
Contact with the eyes	Rinse the eyes with ample water (at least 15 minutes). Remove contact lenses after having rinsed for some time. Consult a physician in case of persistent irritation.
Swallow	Rinse the mouth with water. Consult a physician.

5. FIRE-FIGHTING AGENTS

The product is flammable. There is an increased risk of fire/explosion at temperatures exceeding the flash point (103°C).	
Fire-extinguishing agents	Water vapour or thin spray jet. Carbon dioxide. Foam. Extinguishing powder.
Special measures	Do not direct the water jet directly onto the seat of the fire to prevent the fire from spreading. Use (atomised) water for cooling nearby packaging and structures. Prevent extinguishing water from ending up in the environment.
Harmful combustion products	Incomplete combustion may lead to the development of carbon monoxide and aldehyde.
Protection for fire fighters	Wear respiratory protection using mobile compressed air (type: overpressure) and protective fireman's clothing, including helmet, boots and gloves.

6. MEASURES IN CASE OF ACCIDENTAL RELEASE OF THE SUBSTANCE OR THE PREPARATION

Personal precautions	See section 8 for personal protection.
Environmental precautions	Major discharges: pump into appropriate vessels provided with proper labels. Re-use if possible. Minor discharges: wipe up with suitable absorbing material. Collect in suitable vessels provided with the proper labels or remove in accordance with the valid governmental regulations, also see section 13.
Cleaning methods	Immediately remove spilled product and put in into fluid-tight packaging material. Wash away the residues with ample water.

7. HANDLING AND STORAGE

Handling	Observe the normal precautions for handling chemical substances. Avoid contact with skin and eyes.
Prevention of fire and explosion	Remove ignition sources (open fire, sparks, etc.).
Storage requirements	Keep in properly closed plastic packaging in a cool and ventilated room, separated from strong oxidants and strong acids.

8. MEASURES FOR CONTROL OF EXPOSURE/PERSONAL PROTECTION

Technical control measures	Good general ventilation.
Respiration	A concentration harmful to health will not or only very slowly be reached by evaporation at ca. 20°C. In exceptional situations an organic vapour/aerosol filter (A/P2) is needed.
Hand/skin	Wear impenetrable gloves, in particular in case of continuous regular contact with this fluid (latex, PVC, nitrile and rubber gloves will suffice).
Eyes and face	Wear safety goggles or acid goggles.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Liquid
Colour	Light blue
Odour	Mild
Boiling point/range	188ºC
Yield point/range	-28 ºC (50% dosage)
Specific density	1.04 (20ºC)
Vapour pressure	0.3 mbar (25ºC)
Rel. vapour density (air = 1)	2.62
pH	About 11
Solubility in water	Fully miscible
LogP (octanol/water)	-0.92
Flash point	103ºC (PMCC)
Spontaneous ignition temperature	371ºC
Lower explosion limit	2.6% v/v
Upper explosion limit	12.5% v/v

10. STABILITY AND REACTIVITY

Stability	Chemical stability: stable under normal handling and storage conditions.
Conditions to be avoided	High temperatures
Substances to be avoided	Oxidants and strong acids

11. TOXICOLOGICAL INFORMATION

Acute toxicity	The oral toxicity of a single dose is low. Small amounts, incidentally swallowed at normal handling, will probably not cause any harm.
Short-term effects: Skin	Long-lasting exposure will probably not result in absorption of harmful quantities of the liquid by the skin. Long-lasting contact may cause some redness. Repetitive exposure may cause scaling, softening and dryness of the skin.
Short-term effects: Inhale	Single long-lasting exposure by inhaling will probably not cause any harmful effects.
Short-term effects: Eyes	May cause minor irritation of the eyes.
Long-term effects	No long-term effects are known.
	Repetitive excessive swallowing may affect the central nervous system.

12. ECOLOGICAL INFORMATION

Mobility	The product is completely soluble in water.
Persistence and degradability	Easily biologically degradable.
Bioaccumulation	No bioaccumulation expected.
pH	When pure, the pH of this product is too high for discharge.
Ecotoxicity	LC50 (Vis, 96 h): 51,400 mg/l (Pimephales promelas). EC50 (Daphnia magna, 48 h): 43,500 mg/l. EC50 (Alga, 72 h): 24,200 mg/l.
WGK	(The Netherlands): 11
Sanitation efforts	(The Netherlands): B

13. INSTRUCTIONS FOR DISPOSAL

Product disposal	Destroy the product in accordance with the national and local legal stipulations.
Waste disposal	The producer of the waste must evaluate his process himself and assign the appropriate waste code.

14. INFORMATION WITH RESPECT TO TRANSPORT

The product has not been classified for any type of transport.

15. LEGALLY MANDATORY INFORMATION

This product does not need classification according to the EU criteria ('Dangerous Substances Directive' 67/548 EEC and 'Dangerous Preparation Directive' 1999/45/EC).

16. OTHER INFORMATION

This version replaces version 1:
*no changes in content, adjustment to format in conformity with EC 1907/2006.

This information is based on the currently available data (manufacturers, chemical safety cards).

The information provided here is to our knowledge correct and complete on the date of issue of this Safety Data Sheet. The information only concerns the product mentioned and does not guarantee the quality and the completeness of the properties of the product nor if the product is used in combination with other products or in any other process. The user remains responsible for ensuring that the information is applicable and complete with respect to the specific use of the product.

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