

Material Safety Data Sheet according to 91/155/EEC

Prepared: 19. August 1999
Reviewed: 30. September 2003
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1. Substance, preparation and company data

Name of the preparation: **MDC Hydrofluid 2000**
MDC article No.: 136962
Details of the manufacturer and supplier: MDC Max Daetwyler AG, CH-3368 Bleienbach
Information Department: Galvanik, +41 62 919 37 37
Telephone number in case of emergency: Toxicological Information Centre Zurich
Telephone +41 1 251 51 51
Application: Automatic Transmission Fluid (ATF)

2. Composition / data on components

Chemical characterization: Mixture of nitrogen-containing organic acids (salts) and inhibitors.

Hazardous components: Hazardous substances according to the EC Directives 2001/58/EEC and 67/548/EEC:

10 – 50% atty acids, > C₈ -, compounds. with ethanolamine

CAS-No. 93571-92-7 / EINECS-No. 297-420-1

Xi: Irritant. R36/38: Irritating to eyes and skin.

1,0 – 9,9% Phenoxy isopropanol

CAS-No. 770-35-4 / EINECS-No. 212-222-7

Xi: Irritant. R36: Irritating to eyes.

1,0 – 4,9% Diethylene glycol

CAS-No. 111-46-6 / EINECS-No. 203-872-22

Xn: Harmful. R22: Harmful if swallowed.

Further information:

3. Hazard identification

Irritating to eyes and skin.



4. First-aid- measures

The product has a slightly alkaline reaction.

Eye contact: Rinse thoroughly with water (use an eyewash). If the irritation persists, consult a doctor.

Skin contact: Wash off with water and mild soap.

Ingestion: Do not induce vomiting, consult a doctor.

Inhalation: Not applicable, as the concentrate is not volatile.

Further information: Remove clothing that is contaminated with the product.

5. Fire-fighting measures

Suitable extinguishing media: Carbon dioxide, extinguishing powder, foam, water mist.

Extinguishing media to avoid: Direct jet of water.

Further information: None

6. Accidental release measures

Do not allow to get into drainage systems, rivers, lakes or the soil. Take up with oil binders.

7. Handling and storage

Handling: The usual precautions for the handling of chemicals are to be observed.

Industrial hygiene: Observe the usual measures of working hygiene. Wash the hands after using the product. Observe the usual measures of working hygiene.

Storage: In closed, original drums 6 months at 20° C. Storage temperature between –15° C and 40° C. Do not expose to direct sunlight. A thorough mixing is necessary after prolonged storage.

Place of storage:

Fire- and explosion protection: No specific measures necessary if stored and used in accordance with the instructions.



8. Exposure controls / personal protection

Technical equipment: No special measures.

Control of treshold limits: MAK value (D): 10 mg/m³ (metalworking fluid and -aerosols), according TRGS 900.

Personal protective equipment

Respiratory protection: Not required.

Hand protection: Suitable protective gloves. PVC or rubber gloves.

Eye protection: Wear protective goggles. Eye protector with side protection (framed eyeglasses) EN 166.

Other: Working clothes.

9. Physical and chemical properties

Appearance: Liquid
Color: yellow
Odour: characteristic

Change in physical state		Test method
Boiling temperature	107° C	
Pourpoint	- 33° C	
Density	1,10 g/cm ³ (20° C)	
Vapour pressure	< 0,1 mbar (20° C)	
Viscosity	23,4 mm ² /s (20° C)	
Solubility in water	solube	
pH-value	9,4 (at 30 g/l H ₂ O)	
Flash point	n.a. ° C	
Ignition temperature	n.b. ° C	
Explosion limits	Lower: n.b. vol. % (1013 mbar) Upper: n.b. vol. % (1013 mbar)	
Further information	The product does not contain mineral oil.	



10. Stability and reactivity

Thermal decomposition: None when used according to the instructions.

Hazardous decomposition products: With thermal decomposition toxic and irritant gases/vapours can develop.

Hazardous reactions: Avoid contact with strong oxidants.

Further information: None

11. Toxicological information

Acute toxicity: LD₅₀ (oral, rat): 500 – 2000 mg/kg (calculated)

Further information: According to our experience and the available information, if handled correctly and in accordance with the instructions the product is not injurious to health.

12. Ecological information

The product must not be allowed to get into waste water, ground water, surface water or the soil.

Water-endangering Class: WEC concentrate: 1 – Slightly water-endangering.
WEC solution: 1 – Slightly water-endangering.

13. Disposal considerations

Switzerland: in accordance with the OMSW of 12.11.1986.
In accordance with the local authority regulations.

Germany: in accordance with the Law on Waste Disposal (AbfG).

European waste code: 16 10 01

Swiss waste code: 1500



14. Transport information

GGVE/GGVS	Class	Cipher	
RID/ADR	Class	Cipher	
UN-No.			
Kemler No.			
Overland statement			
GGVSee	Class	Cipher	
ADNR	Class	Cipher	Cat.
UN-No.			
IMDG-code page			
EMS			
MFAG			
Packing group			
See transport statement			
ICAO/IATA-DGR			
UN-No.			
Proper Shipping Name			
Subsidiary risk			
Labels			
Packing group			
Passenger aircraft	Packing Instruction	max.	
Cargo aircraft only	Packing Instruction	max.	

Further information: Not a hazardous material according to the above mentioned transport regulations.



15. Regulatory information

The product must be marked/identified according to the EC guidelines.

Switzerland: FOPH T No.: 611484

Swiss toxicity class: 4

EC-No.:

Hazard symbols:



Hazard designation: Xi: Irritant. Contains Fatty acids, > C8 -, compounds. with ethanolamine, Phenoxy isopropanol, Diethylene glycol.

Risk phrases:

R: 36/38

36/38 Irritating to eyes and skin.

Safety phrases:

S: 24/25-13-20/21-36/37/39

24/25 Avoid contact with skin and eyes.

13 Keep away from food, drink and animal feedingstuffs.

20/21 When using do not eat, drink or smoke.

36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

MAK value: see point 8.2

BVD classification: F5 I PN3

VbF:

Further information: None

16. Other information

The product does not contain: nitrite, nitrite releasing agents, formaldehyde, formaldehyde releasing substances, heavy metals, boron acid ester, secondary amines, diethanolamine, NDELA and/or nitrosamines, silicone, polychlorinated biphenyls and terphenylid (PCB, PCT) TCDD, dioxine-containing substances, chlorines or other halogens.

Abbreviations: n.a. = not applicable; n.b. = not determined

The above mentioned data correspond to our present state of knowledge and experience. The safety data sheet serves as description of the products in regard to necessary safety measures. The indications have not the meaning of guarantees on properties.