Safety Data Sheet

according to Regulation (EC) No 1907/2006

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

1.1. Product identifier

Flux For Hydro-Unit

Further trade names

Article No.: 097-001-00

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

Use of the substance/mixture

Health services

1.3. Details of the supplier of the safety data sheet

Company name:	Dentaurum GmbH & Co. KG	
Street:	Turnstr. 31	
Place:	D-75228 Ispringen	
Telephone:	+49 7231 803 0	Telefax: +49 7231 803 295
e-mail:	info@dentaurum.de	
Internet:	www.dentaurum.com	
Responsible Department:	Chemie	

1.4. Emergency telephone number:

+497231803184 7:00-16:15 (Mo-Do) 7:00-13:15 (Fr)
+4972318030 16:15-18:00 (Mo-Do) 13:15-18:00 (Fr)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:
Flammable liquid: Flam. Liq. 2
Acute toxicity: Acute Tox. 3
Acute toxicity: Acute Tox. 3
Acute toxicity: Acute Tox. 3
Specific target organ toxicity - single exposure: STOT SE 1
Hazard Statements:
Highly flammable liquid and vapour.
Toxic if swallowed, in contact with skin or if inhaled.
Causes damage to organs.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

methanol

Signal word: Danger

Pictograms:

Hazard statements

H225	Highly flammable liquid and vapour.
H301+H311+H331	Toxic if swallowed, in contact with skin or if inhaled.
H370	Causes damage to organs.

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
67-56-1	methanol			75 - < 100 %
	200-659-6	603-001-00-X	01-2119433307-44	
	Flam. Liq. 2, Acute Tox. 3, Acute Tox. 3, Acute Tox. 3, STOT SE 1; H225 H331 H311 H301 H370			
10043-35-3	boric acid			0,1 - < 1%
	233-139-2	005-007-00-2		
	Repr. 1B; H360FD			

Full text of H and EUH statements: see section 16.

Further Information

This mixture contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH: Borsäure

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down.

After inhalation

Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. No mouth-to-mouth or mouth-to-nose resuscitation. Use Ambu bag or ventilator. Call a physician immediately.

After contact with skin

After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Take off immediately all contaminated clothing and wash it before reuse. Call a physician immediately.

After contact with eyes

After eye contact: Rinse immediately carefully and thoroughly with eye-bath or water. Consult an ophthalmologist.

After ingestion

Induce vomiting when the affected person is not unconscious.
Call a physician immediately.
If swallowed, immediately drink: Ethanol (glass Alcohol 40 %)
Notes for the doctor:
systemic Effects: Blood pressure drop, Agitation, Spasms, Anaesthetic state
Most important symptoms and effects, both acute and delayed
If swallowed there is a risk of blindness.

4.2. Most important symptoms and effects, both acute and delayed

No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water spray jet, Carbon dioxide (CO2), Foam, Extinguishing powder.

5.2. Special hazards arising from the substance or mixture

Highly flammable, Vapours can form explosive mixtures with air.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Danger of explosion

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Vapours can form explosive mixtures with air.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hints on joint storage

Do not store together with: Oxidising agent. Pyrophoric or self-heating substances.

7.3. Specific end use(s)

Health services

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
67-56-1	Methanol	200	266		TWA (8 h)	WEL
		250	333		STEL (15 min)	WEL

8.2. Exposure controls



Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary . When using do not eat or drink.

Eye/face protection

Wear eye protection/face protection.

Hand protection

Recommendation:

Vollkontakt z. B.: Butoject 898 (Fa. KCL)
Suitable material: Butyl caoutchouc (butyl rubber)
Thickness of glove material: 0,7 mm
penetration time (maximum wearing period): > 480 min

Spritzkontakt z. B.: Vitoject 890 (Fa. KCL)
Suitable material: Viton (R)
Thickness of glove material: 0,7 mm
penetration time (maximum wearing period): > 120 min

like: DIN EN 374

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Flame-retardant protective clothing. Wear anti-static footwear and clothing

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Filter type: AX (for group 2 low boilers). In case of a maximum contaminant concentration in inhaled air of 1000 mL/m3 (0.1 % by vol.), group 2 may be used for a maximum of 60 min. In case of a maximum contaminant

concentration in inhaled air of 5000 mL/m3 (0.5 % by vol.), group 2 may be used for a maximum of 20 min.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	colourless
Odour:	like: Alcohol

		Test method
pH-Value:	not determined	
Changes in the physical state		
Melting point:	not determined	
Initial boiling point and boiling range:	65 °C	
Flash point:	11 °C	DIN 51755
Flammability		
Solid:	not applicable	
Gas:	not applicable	
Lower explosion limits:	5,5 vol. %	
Upper explosion limits:	36,5 vol. %	
Ignition temperature:	455 °C	DIN 51794
Auto-ignition temperature		
Solid:	not applicable	
Gas:	not applicable	
Decomposition temperature:	not determined	
Oxidizing properties		
Not oxidising.		
Vapour pressure:	not determined	
Density:	0,81 g/cm³	
Water solubility:	Yes.	
Solubility in other solvents		
not determined		
Partition coefficient:	not determined	
Viscosity / dynamic: (at 20 °C)	< 10 mPa·s	
Vapour density:	not determined	
Evaporation rate:	not determined	

9.2. Other information

Solid content:	not determined

SECTION 10: Stability and reactivity

10.1. Reactivity

Highly flammable, Ignition hazard.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Danger of explosion (Reacts with :) Oxidizing agents. halogenes. Hydrogenium peroxide. Nitric acid

Exothermic reaction with: Acid halides. Reducing agents. acid.
Reacts with : Alkaline earth metals. Alkali metals.

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Toxic if swallowed, in contact with skin or if inhaled.

ATEmix tested

	Dose	Species	Source
LD50, oral	mg/kg	Rat	5628
LD50, dermal	mg/kg	Rabbit	15800
LC50, inhalation (vapour) (4 h)	mg/l	Rat	83,8

ATEmix calculated

ATE (oral) 101,0 mg/kg; ATE (dermal) 303,0 mg/kg; ATE (inhalation vapour) 3,03 mg/l; ATE (inhalation aerosol) 0,505 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
67-56-1	methanol				
	oral	ATE 100 mg/kg			
	dermal	ATE 300 mg/kg			
	inhalation vapour	ATE 3 mg/l			
	inhalation aerosol	ATE 0,5 mg/l			
10043-35-3	boric acid				
	oral	LD50 > 2600 mg/kg	Rat	OECD 401	
	dermal	LD50 > 2000 mg/kg	Rabbit	FIFRA (40 CFR 163)	

Irritation and corrosivity

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

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

Causes damage to organs. (Methanol (vgl. Methylalkohol))

STOT-repeated exposure

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

Aspiration hazard

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

Additional information on tests

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].
Special hazards arising from the substance or mixture!

SECTION 12: Ecological information

12.1. Toxicity

The product is not: Ecotoxic.

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
10043-35-3	boric acid						
	Acute fish toxicity	LC50	79,7 mg/l	96 h	Pimephales promelas (fathead minnow)	EPA OPPTS 850.1075	
	Acute crustacea toxicity	EC50	93 mg/l	48 h	Daphnia magna (Big water flea)	OECD Guideline 202	
	Fish toxicity	NOEC	6,4 mg/l	34 d	Brachydanio rerio (zebra-fish)	OECD Guideline 210	
	Crustacea toxicity	NOEC	31,6 mg/l	21 d	Lampsilis siliquoidea	ASTM E 2455-6	

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
10043-35-3	boric acid	-1,09

BCF

CAS No	Chemical name	BCF	Species	Source
10043-35-3	boric acid	< 0.1	Oncorhynchus tschawytscha	

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The product has not been tested.

12.6. Other adverse effects

No information available.

Further information

Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

Waste disposal number of waste from residues/unused products

070704 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fine chemicals and chemical products not otherwise specified; other organic solvents, washing liquids and mother liquors; hazardous waste

Waste disposal number of contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

Contaminated packaging

This material and its container must be disposed of as hazardous waste. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number:	UN 1230
14.2. UN proper shipping name:	METHANOL
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3+6.1

Classification code:	FT1
Special Provisions:	279
Limited quantity:	1 L
Excepted quantity:	E2
Transport category:	2
Hazard No:	336
Tunnel restriction code:	D/E

Inland waterways transport (ADN)

14.1. UN number:	UN 1230
14.2. UN proper shipping name:	METHANOL
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3+6.1

Classification code:	FT1
Special Provisions:	279 802
Limited quantity:	1 L

Other applicable information (inland waterways transport)

Excepted quantity: E2

Marine transport (IMDG)

14.1. UN number:	UN 1230
14.2. UN proper shipping name:	METHANOL
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3+6.1

Special Provisions:	279
Limited quantity:	1 L
Excepted quantity:	E2
EmS:	F-E, S-D

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:	UN 1230
14.2. UN proper shipping name:	METHANOL
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3+6.1

Special Provisions:	A113
Limited quantity Passenger:	1 L
Passenger LQ:	Y341
Excepted quantity:	E2
IATA-packing instructions - Passenger:	352
IATA-max. quantity - Passenger:	1 L
IATA-packing instructions - Cargo:	364
IATA-max. quantity - Cargo:	60 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

Warning: Combustible liquid. Toxic.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

Authorisations (REACH, annex XIV):

Substances of very high concern, SVHC (REACH, article 59):
boric acid

Restrictions on use (REACH, annex XVII):

Entry 30: boric acid
Entry 69: methanol

2004/42/EC (VOC): > 98 %

National regulatory information

Employment restrictions:	Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.
Water contaminating class (D):	1 - slightly water contaminating
Skin resorption/Sensitization:	Permeates easily through outer skin and causes poisoning.

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:
methanol

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 4,11.

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%

Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H301+H311+H331	Toxic if swallowed, in contact with skin or if inhaled.
H311	Toxic in contact with skin.
H331	Toxic if inhaled.
H360FD	May damage fertility. May damage the unborn child.
H370	Causes damage to organs.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)