analytichem

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Indicator solution pH 5.0 - 5.1 boric acid 10 g/l with 10 mg/l methyl red and 7 mg/l bromocresol gr

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

1.1. Product identifier

Indicator solution pH 5.0 - 5.1 boric acid 10 g/l with 10 mg/l methyl red and 7 mg/l bromocresol gr

UFI: KD2A-C2VC-F00C-2GY7

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

Use of the substance/mixture

Reagents and laboratory chemicals
Only for laboratory and analysis purposes.

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

Company name:	AnalytiChem GmbH ACD		
Street:	Stempelstraße 6		
Place:	D-47167 Duisburg		
Telephone:	0203/5194-0	Telefax:	0203/5194-290
E-mail:	info@analytichem.de		
Contact person:	Abteilung Produktsicherheit	Telephone:	0203/5194-107/117
E-mail:	produktsicherheit@analytichem.de		
Internet:	www.analytichem.de		
Responsible Department:	Abteilung Produktsicherheit		

1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

Further Information

This product is a mixture. REACH Registration Number see section 3.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Repr. 1B; H360FD

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard components for labelling

boric acid

Signal word: Danger

Pictograms:

Hazard statements

H360FD May damage fertility. May damage the unborn child.

Precautionary statements

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P405	Store locked up.
P501	Dispose of contents/container to Dispose of contents/container in accordance with local/regional/national/international regulations..

Special labelling of certain mixtures

Restricted to professional users.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Mixtures in aqueous solution

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
67-56-1	methanol			1 - < 3 %
	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			1 - < 5 %
	233-139-2	005-007-00-2	01-2119486683-25	
	Repr. 1B; H360FD			

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

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
67-56-1	200-659-6	methanol	1 - < 3 %
	inhalation: LC50 = 128,2 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); dermal: ATE = 300 mg/kg; oral: LD50 = 6000 mg/kg STOT SE 1; H370: >= 10 - 100 STOT SE 2; H371: >= 3 - < 10		
10043-35-3	233-139-2	boric acid	1 - < 5 %
	inhalation: LC50 = > 2,12 mg/l (dusts or mists); dermal: LD50 = > 2000 mg/kg; oral: LD50 = 3450 mg/kg		

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: boric acid

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

No data available

After inhalation

Provide fresh air.

Call a doctor if you feel unwell.

After contact with skin

Wash immediately with: Water

Take off immediately all contaminated clothing and wash it before reuse.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water.

Remove contact lenses, if present and easy to do. Continue rinsing.

In case of eye irritation consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink plenty of water.

Call a physician immediately.

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

No data available

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

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Non-combustible liquids

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Use water spray jet to protect personnel and to cool endangered containers.

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

General advice

Do not breathe vapour/aerosol.

For non-emergency personnel

Provide adequate ventilation.

Use personal protection equipment.

Avoid contact with skin, eyes and clothes.

Remove persons to safety.

Emergency procedures

Consult an expert

Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For containment

Cover drains.
Prevent spread over a wide area (e.g. by containment or oil barriers).
Collect in closed and suitable containers for disposal.
Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Provide adequate ventilation.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wear breathing apparatus if exposed to vapours/dusts/aerosols.

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

Handle and open container with care. Keep container tightly closed.
Provide adequate ventilation.
Avoid contact with skin, eyes and clothes.

Advice on protection against fire and explosion

Usual measures for fire prevention.

Advice on general occupational hygiene

Wash contaminated clothing prior to re-use.
Do not breathe vapour/aerosol. Avoid contact with skin, eyes and clothes.
The type of personal protection equipment has to be chosen based on the concentration and amount of the dangerous substance at the workplace.

Further information on handling

Wash contaminated clothing before reuse.
Wash hands before breaks and after work.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Store in a well-ventilated place. Keep container tightly closed.
Store in a place accessible by authorized persons only.

Hints on joint storage

national regulations

Further information on storage conditions

Store in a dry place.

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

CAS No	Substance	ppm	mg/m³	fib/cm³	Category	Origin
10043-35-3	Borate compounds inorganic: boric acid	-	2		TWA (8 h)	
67-56-1	Methyl alcohol	200	260		TWA (8 h)	

Biological limit values

CAS No	Substance	Parameter	Value	Test material	Sampling time
67-56-1	Methanol	Methanol	15 mg/L	Urine	End of shift

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
67-56-1	methanol			
Consumer DNEL, acute		inhalation	systemic	50 mg/m³
Worker DNEL, long-term		inhalation	systemic	260 mg/m³
Worker DNEL, acute		inhalation	systemic	260 mg/m³
Worker DNEL, long-term		inhalation	local	260 mg/m³
Worker DNEL, acute		inhalation	local	260 mg/m³
Worker DNEL, long-term		dermal	systemic	40 mg/kg bw/day
Worker DNEL, acute		dermal	systemic	40 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	50 mg/m³
Consumer DNEL, long-term		inhalation	local	50 mg/m³
Consumer DNEL, acute		inhalation	local	50 mg/m³
Consumer DNEL, long-term		dermal	systemic	8 mg/kg bw/day
Consumer DNEL, acute		dermal	systemic	8 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	8 mg/kg bw/day
Consumer DNEL, acute		oral	systemic	8 mg/kg bw/day
10043-35-3	boric acid			
Worker DNEL, long-term		inhalation	systemic	8,3 mg/m³
Worker DNEL, long-term		dermal	systemic	392 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	4,15 mg/m³
Consumer DNEL, long-term		dermal	systemic	196 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,98 mg/kg bw/day
Consumer DNEL, acute		oral	systemic	0,98 mg/kg bw/day

PNEC values

CAS No	Substance	
Environmental compartment		Value
67-56-1	methanol	
Freshwater		20,8 mg/l
Freshwater (intermittent releases)		1540 mg/l
Marine water		2,08 mg/l
Freshwater sediment		77 mg/kg
Marine sediment		7,7 mg/kg
Micro-organisms in sewage treatment plants (STP)		100 mg/l
Soil		100 mg/kg
10043-35-3	boric acid	
Freshwater		2,9 mg/l
Freshwater (intermittent releases)		13,7 mg/l
Marine water		2,9 mg/l
Micro-organisms in sewage treatment plants (STP)		10 mg/l
Soil		5,7 mg/kg

8.2. Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

Individual protection measures, such as personal protective equipment

Eye/face protection

goggles

Hand protection

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

By long-term hand contact
Trade name/designation KCL 897 Butoject®
Suitable material: Butyl caoutchouc (butyl rubber) 0,3 mm
Wearing time with permanent contact: > 480 min

By short-term hand contact
Trade name/designation KCL 890 Vitoject®
Suitable material: FKM (fluoro rubber) 0,7 mm
Wearing time with occasional contact (splashes): > 120 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet<(>,<)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin protection

Wear suitable protective clothing.
Take off immediately all contaminated clothing.

Wash hands before breaks and after work.

The choice of body protection depends on the concentration and quantity of hazardous substances. The chemical resistance of protective agents must be clarified with their suppliers.

Respiratory protection

Respiratory protection necessary at: aerosol or mist formation

The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Thermal hazards

No data available

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	colourless
Odour:	odourless
Odour threshold:	No data available
Melting point/freezing point:	No data available
Boiling point or initial boiling point and boiling range:	No data available
Flammability:	No data available
Lower explosion limits:	No data available
Upper explosion limits:	No data available
Flash point:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
pH-Value:	5,0-5,1
Viscosity / kinematic:	No data available
Water solubility:	No data available

Solubility in other solvents

No data available

Dissolution rate:	No data available
Partition coefficient n-octanol/water:	No data available
Dispersion stability:	No data available
Vapour pressure:	No data available
Vapour pressure:	No data available
Density:	0,99937 g/cm³
Relative density:	No data available
Bulk density:	No data available
Relative vapour density:	No data available
Particle characteristics:	No data available

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

No data available

Sustained combustibility:	No data available

Self-ignition temperature

Solid:	No data available

Gas:	No data available

Oxidizing properties

No data available

Other safety characteristics

Evaporation rate:	No data available
Solvent separation test:	No data available
Solvent content:	No data available
Solid content:	No data available
Sublimation point:	No data available
Softening point:	No data available
Pour point:	No data available

No data available:

Viscosity / dynamic:	No data available
Flow time:	No data available

Further Information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

No data available

10.3. Possibility of hazardous reactions

No data available

10.4. Conditions to avoid

No data available

10.5. Incompatible materials

No data available

10.6. Hazardous decomposition products

No data available

Further information

No data available

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicocinetics, metabolism and distribution

There are no data available on the mixture itself.

Acute toxicity

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

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
67-56-1	methanol				
	oral	LD50 6000 mg/kg	Monkey	Amer J Ophthalmol 40: 76-83 (cited in DG	Determination of the acute toxicity of t
	dermal	ATE 300 mg/kg			
	inhalation (4 h) vapour	LC50 128,2 mg/l	Rat	Study report (1980)	Study performed according to internal co
	inhalation dust/mist	ATE 0,5 mg/l			
10043-35-3	boric acid				
	oral	LD50 3450 mg/kg	Rat	Toxicology and Applied Pharmacology 23:	other: No data
	dermal	LD50 > 2000 mg/kg	Rabbit	Study report (1982)	other: FIFRA
	inhalation (4 h) dust/mist	LC50 > 2,12 mg/l	Rat	Study report (1997)	OECD Guideline 403

Irritation and corrosivity

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation: 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

May damage fertility. May damage the unborn child. (boric acid)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

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

STOT-single exposure

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

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.

Information on likely routes of exposure

There are no data available on the mixture itself.

Specific effects in experiment on an animal

There are no data available on the mixture itself.

Additional information on tests

There are no data available on the mixture itself.

Practical experience

There are no data available on the mixture itself.

11.2. Information on other hazards

Endocrine disrupting properties

There are no data available on the mixture itself.

Other information

There are no data available on the mixture itself.

Further information

There are no data available on the mixture itself.

SECTION 12: Ecological information

12.1. Toxicity

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

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
67-56-1	methanol						
	Acute fish toxicity	LC50	15400 mg/l	96 h	Lepomis macrochirus	Bulletin of Environmental Contamination	other: EPA-660/3-75-009, 1975
	Acute algae toxicity	ErC50	ca. 22000 mg/l	96 h	Pseudokirchneriella subcapitata	Ecotoxicology and Environmental Safety 7	OECD Guideline 201
	Acute crustacea toxicity	EC50	> 10000 mg/l	48 h	Daphnia magna	Water Research 23(4): 495-499 (1989)	other: DIN 38412 Teil 11
	Fish toxicity	NOEC	446,7 mg/l	28 d	Pimephales promelas	SAR and QSAR in Environmental Research,	Calculation performed with ECOSAR
	Crustacea toxicity	NOEC	208 mg/l	21 d	Daphnia magna	OECD QSAR Toolbox Report (2013)	Toxicity of the target chemical is predi
10043-35-3	boric acid						
	Acute fish toxicity	LC50	79,7 mg/l	96 h	Pimephales promelas	Study report (2010)	other: ASTM E729-95 Standard Guide for C
	Acute algae toxicity	ErC50	66 mg/l	72 h	Phaeodactylum tricornutum	Study report (2011)	ISO 10253
	Acute crustacea toxicity	EC50	109 mg/l	48 h	Ceriodaphnia dubia	Study report (2010)	other: ASTM E729-95 Standard Guide for C
	Fish toxicity	NOEC	11,2 mg/l	32 d	Pimephales promelas	Study report (2010)	other: ASTM E1241-05 Standard Guide for
	Algae toxicity	NOEC	17,5 mg/l	3 d	Pseudokirchneriella subcapitata	Study report (2000)	OECD Guideline 201
	Crustacea toxicity	NOEC	25,9 mg/l	42 d	other aquatic crustacea: Hyalella azteca	Study report (2010)	other: US EPA 2000 Methods for assessing
	Acute bacteria toxicity	EC50	> 10000 mg/l ( )	3 h	activated sludge of a predominantly domestic sewag	Study report (2001)	OECD Guideline 209

12.2. Persistence and degradability

There are no data available on the mixture itself.

12.3. Bioaccumulative potential

There are no data available on the mixture itself.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
67-56-1	methanol	-0,77
10043-35-3	boric acid	-1,09

BCF

CAS No	Chemical name	BCF	Species	Source
67-56-1	methanol	1	Cyprinus carpio	Comparative Biochemi
10043-35-3	boric acid	0,558	Oncorhynchus nerka	Water Research Vol.

12.4. Mobility in soil

There are no data available on the mixture itself.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

Discharge into the environment must be avoided.

Further information

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.
Send to a physico-chemical treatment facility under observation of official regulations.
Do not empty into drains.

Contaminated packaging

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.1. UN number or ID number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No dangerous good in sense of this transport regulation.

14.7. Maritime transport in bulk according to IMO instruments

No dangerous good in sense of this transport regulation.

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 3, Entry 30, Entry 40, Entry 69, Entry 75

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles 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. Observe employment restrictions for women of child-bearing age.

Water hazard class (D): - - non-hazardous to water

Additional information

No data available

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 9,12.

Abbreviations and acronyms

Flam. Liq. 2: Flammable liquids, hazard category 2

Acute Tox. 3: Acute toxicity, hazard category 3

Repr. 1B: Reproductive toxicity, hazard category 1B

STOT SE 1: Specific target organ toxicity - single exposure, hazard category 1

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
Repr. 1B; H360FD	Calculation method

Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H331	Toxic if inhaled.
H360FD	May damage fertility. May damage the unborn child.
H370	Causes damage to organs (eyes, central nervous system).

Further Information

Provide appropriate information, instructions and training to users

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 information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.

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