

Tiutol KF

Revision date: 06.07.2020

Product code: 00056-0001

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Tiutol KF

UFI: CJ5V-P7U9-800E-89MC

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

Disinfectant for haemodialysismonitors

1.3. Details of the supplier of the safety data sheet**Manufacturer**

Company name: B. Braun Medical AG
Street: Seesatz 17
Place: CH-6204 Sempach
Responsible Department: Zentrale
Telephone: +41 (0) 58 / 258 50 00
E-Mail: info.bbmch@bbraun.com
Responsible for the safety data sheet: sds@gbk-ingelheim.de

Supplier

Company name: B. Braun Melsungen AG
Street: Carl-Braun-Straße 1
Place: D-34212 Melsungen
Responsible Department: Zentrale Service-Bereiche / Logistik und Supply Chain
Telephone: +49 (0) 5661 / 71-4422
E-Mail: logistics.service@bbraun.com

1.4. Emergency telephone number:

INTERNATIONAL: +49 - (0) 6132 - 84463, GBK GmbH (24h - 7d/w - 365d/a)
In England and Wales: NHS 111 In Scotland: NHS 24 - dial 111

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Substance or mixture corrosive to metals: Met. Corr. 1

Skin corrosion/irritation: Skin Corr. 1

Serious eye damage/eye irritation: Eye Dam. 1

Hazardous to the aquatic environment: Aquatic Acute 1

Hazardous to the aquatic environment: Aquatic Chronic 2

Hazard Statements:

May be corrosive to metals.

Causes severe skin burns and eye damage.

Causes serious eye damage.

Very toxic to aquatic life.

Toxic to aquatic life with long lasting effects.

2.2. Label elements**Regulation (EC) No. 1272/2008****Hazard components for labelling**

Sodium hydroxide

Sodium hypochlorite 3,9% Cl active

Signal word: Danger**Pictograms:**

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Hazard statements

- H290 May be corrosive to metals.
 H314 Causes severe skin burns and eye damage.
 H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

- P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 Immediately call a POISON CENTER/doctor.
 P273 Avoid release to the environment.
 P234 Keep only in original packaging.
 P501 Dispose of contents/container to an approved waste disposal plant. .

Labelling of packages where the contents do not exceed 125 ml**Signal word:** Danger**Pictograms:****Hazard statements**

H314

Precautionary statements

P280-P301+P330+P331-P303+P361+P353-P305+P351+P338-P310-P501

2.3. Other hazards

According to Regulation (EC) No 1907/2006 (REACH) none of the substances, contained in this product are a PBT / vPvB substance.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Chemical characterization**

Alkaline concentrate with sodium hypochlorite and sodium hydroxide

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
1310-73-2	Sodium hydroxide			< 5 %
	215-185-5	011-002-00-6	01-2119457892-27	
	Met. Corr. 1, Skin Corr. 1A, Eye Dam. 1; H290 H314 H318			
7681-52-9	Sodium hypochlorite 3,9% Cl active			< 10 %
	231-668-3	017-011-00-1	01-2119488154-34	
	Skin Corr. 1B, Eye Dam. 1, Aquatic Acute 1 (M-Factor = 10), Aquatic Chronic 1 (M-Factor = 1); H314 H318 H400 H410 EUH031			

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

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

Data of item 4 do partly not refer to the use and the regular employing of the product (in this sense consult package leaflet and expert information), but to liberation of major amounts in case of accidents and

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irregularities.
Remove contaminated soaked clothing immediately.
Show this safety data sheet to the doctor in attendance.
Call a physician immediately.

After inhalation

Move victim to fresh air.
Seek medical treatment immediately.

After contact with skin

Wash off immediately with soap and plenty of water.
If symptoms persist, call a physician.

After contact with eyes

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Seek medical treatment by eye specialist.

After ingestion

Do not induce vomiting.
Rinse out mouth and give plenty of water to drink.
Never give anything by mouth to an unconscious person.
Summon a doctor immediately.
Induce vomiting only upon the advice of a physician.

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

Causes severe skin burns and eye damage.
Hazard of gastric perforation.

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

Treat symptoms.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Product does not burn, fire-extinguishing activities according to surrounding.

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

Fire may produce:
Nitrogen oxides (NO_x).
sulfur oxides
Chlorine (Cl₂).

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.

Additional information

Cool containers at risk with water spray jet.
Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

In case of vapour formation use respirator.
Ensure adequate ventilation.
Use personal protective clothing.
Contact with acids liberates toxic gas.

6.2. Environmental precautions

Clean contaminated surface thoroughly.
Do not discharge into the drains/surface waters/ground water.

6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder).

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Shovel into suitable container for disposal.

6.4. Reference to other sections

Observe protective instructions (see Sections 7 and 8).
Information for disposal see section 13.

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Keep container tightly closed.
Handle and open container with care.
Use only in thoroughly ventilated areas.

Advice on protection against fire and explosion

No special protective measures against fire required.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed in a dry, cool and well-ventilated place.
Do not use aluminium or light metal containers for warehousing.

Hints on joint storage

Corroses base metals.
Do not store with acids.
Contact with acids liberates toxic gas.

Further information on storage conditions

Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

Disinfectant for haemodialysismonitors

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
1310-73-2	Sodium hydroxide	-	2		STEL (15 min)	WEL

8.2. Exposure controls**Appropriate engineering controls**

Ensure adequate ventilation, especially in confined areas.

Protective and hygiene measures

Data of item 8 do partly not refer to the use and the regular employing of the product (in this sense consult package leaflet and expert information), but to liberation of major amounts in case of accidents and irregularities.

Wash hands before breaks and immediately after handling the product.

When using do not eat, drink or smoke.

Treat subsequently with skin cream.

Avoid contact with skin, eyes and clothing.

Remove and wash contaminated clothes before re-use.

Eye/face protection

Tightly fitting goggles (EN 166).

Eye wash bottle with pure water (EN 15154).

Hand protection

Protective gloves resistant to chemicals made off natural-rubber latex, minimum coat thickness 0.6 mm, permeation resistance (wear duration) approx. 480 minutes, i.e. protective glove <Lapren 706> made by www.kcl.de.

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This recommendation refers exclusively to the chemical compatibility and the lab test conforming to EN 374 carried out under lab conditions.

Requirements can vary as a function of the use. Therefore it is necessary to adhere additionally to the recommendations given by the manufacturer of protective gloves.

Skin protection

Boots.

Rubber apron (EN 467)..

Respiratory protection

In case of insufficient ventilation wear suitable respiratory equipment (gas filter type B) (EN 14387).

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	Liquid
Colour:	Light yellow
Odour:	Chlorine

pH-Value:	approx. 13,5	Test method Concentrate
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Changes in the physical state

Melting point:	n.d.
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Initial boiling point and boiling range:	n.d.
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Sublimation point:	n.a.
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Softening point:	n.d.
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Flash point:	n.a.
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Sustaining combustion:	Not sustaining combustion
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Flammability

Solid:	n.a.
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Gas:	n.a.
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Explosive properties

The product is not explosive.

Lower explosion limits:	n.a.
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Upper explosion limits:	n.a.
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Ignition temperature:	n.a.
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Auto-ignition temperature

Solid:	n.a.
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Gas:	n.a.
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Decomposition temperature:	n.d.
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Oxidizing properties

Not oxidising.

Vapour pressure:	n.d.
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Density (at 20 °C):	1,15 - 1,25 g/cm ³
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Bulk density:	n.a.
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Water solubility: (at 20 °C)	Miscible
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Solubility in other solvents

n.d.

Partition coefficient:	n.d.
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Viscosity / dynamic:	n.d.
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Viscosity / kinematic:	n.d.
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Flow time:	n.d.
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Vapour density:	n.d.
Evaporation rate:	n.d.
Solvent separation test:	n.d.
Solvent content:	0 %

9.2. Other information

No data available

SECTION 10: Stability and reactivity**10.1. Reactivity**

No decomposition if stored and applied as directed.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

May develop chlorine if mixed with acidic solutions.
Reactions with metals, with evolution of hydrogen.

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

Metals.

10.6. Hazardous decomposition products

May develop chlorine if mixed with acidic solutions.
Fire may produce:
nitrous oxides (NO_x)
Sulphurous oxides (SO_x)

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Acute toxicity**

Based on available data, the classification criteria are not met.
No toxicological data available.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
1310-73-2	Sodium hydroxide				
	oral	LD50 > 2000 mg/kg	Rat		

Irritation and corrosivity

Causes severe skin burns and eye damage.
Causes serious eye damage.

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

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.

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Additional information on tests

Classification in compliance with the assessment procedure specified in the EC guidelines 1999/45/EC.

Practical experience**Observations relevant to classification**

Product causes burns to eyes, skin and mucous membranes.

Other observations

Classification in compliance with the assessment procedure specified in the Regulation (EC) no 1272/2008.

Further information

Hazard of gastric perforation.

Liquid product causes severe burns, irritation of digestive system and bad healing sores.

Inhalation of mist causes irritation of respiratory system.

Risk of strong eye injuries..

SECTION 12: Ecological information**12.1. Toxicity**

Ecological data are not available.

Very toxic to aquatic organisms.

Toxic to aquatic life with long lasting effects.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
1310-73-2	Sodium hydroxide					
	Acute fish toxicity	LC50	189 mg/l	96 h	Leuciscus idus melanotus	

12.2. Persistence and degradability

Biodegradable (OECD): > 80%.

Biologically degradable after neutralization.

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

According to Regulation (EC) No 1907/2006 (REACH) none of the substances, contained in this product are a PBT / vPvB substance.

12.6. Other adverse effects

Hazardous water pollutant.

A pH-change becomes possible in water.

Further information

Do not flush into surface water or sanitary sewer system.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

Can be disposed of as a solid waste or burned in a suitable installation subject to local regulations.

List of Wastes Code - residues/unused products

070601 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics; aqueous washing liquids and mother liquors; hazardous waste

Contaminated packaging

Empty containers should be taken for local recycling, recovery or waste disposal.

Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

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Contaminated packagings are to be treated like the product itself.


SECTION 14: Transport information**Land transport (ADR/RID)**

14.1. UN number:	UN 3266
14.2. UN proper shipping name:	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Sodium hydroxide, Sodium hypochlorite)
14.3. Transport hazard class(es):	8
14.4. Packing group:	II
Hazard label:	8
	
Classification code:	C5
Limited quantity:	1 L / 30 kg
Excepted quantity:	E2
Transport category:	2
Hazard No:	80
Tunnel restriction code:	E

Inland waterways transport (ADN)

14.1. UN number:	UN 3266
14.2. UN proper shipping name:	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Sodium hydroxide, Sodium hypochlorite)
14.3. Transport hazard class(es):	8
14.4. Packing group:	II
Hazard label:	8
	
Classification code:	C5
Limited quantity:	1 L / 30 kg
Excepted quantity:	E2

Marine transport (IMDG)

14.1. UN number:	UN 3266
14.2. UN proper shipping name:	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Sodium hydroxide, Sodium hypochlorite)
14.3. Transport hazard class(es):	8
14.4. Packing group:	II
Hazard label:	8
	
Marine pollutant:	Yes
Limited quantity:	1 L / 30 kg
Excepted quantity:	E2
EmS:	F-A, S-B

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:	UN 3266
14.2. UN proper shipping name:	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Sodium hydroxide, Sodium hypochlorite, solution)
14.3. Transport hazard class(es):	8

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14.4. Packing group:

II

Hazard label:

8



Limited quantity Passenger:

0.5 L

Passenger LQ:

Y840

Excepted quantity:

E2

IATA-packing instructions - Passenger:

851

IATA-max. quantity - Passenger:

1 L

IATA-packing instructions - Cargo:

855

IATA-max. quantity - Cargo:

30 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: yes

**14.6. Special precautions for user**

Handle in accordance with good industrial hygiene and safety practice.

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

The transport takes place only in approved and appropriate packaging.

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

2004/42/EC (VOC):

0%

Information according to 2012/18/EU (SEVESO III):

Not subject to 2012/18/EU (SEVESO III)

Additional information

Regulation (EC) No 648/2004 (Regulation on detergents):

Polycarboxylates < 5%

Ingredients subject to the labelling obligation according to SCCP: -

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.

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information**Abbreviations and acronyms**

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route

RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses

ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieur

IMDG = International Maritime Code for Dangerous Goods

IATA/ICAO = International Air Transport Association / International Civil Aviation Organization

MARPOL = International Convention for the Prevention of Pollution from Ships

IBC-Code = International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk

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GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 REACH = Registration, Evaluation, Authorization and Restriction of Chemicals
 CAS = Chemical Abstract Service
 EN = European norm
 ISO = International Organization for Standardization
 DIN = Deutsche Industrie Norm
 PBT = Persistent Bioaccumulative and Toxic
 vPvB = Very Persistent and very Bio-accumulative

LD = Lethal dose
 LC = Lethal concentration
 EC = Effect concentration
 IC = Median immobilisation concentration or median inhibitory concentration

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

Classification	Classification procedure
Met. Corr. 1; H290	On basis of test data
Skin Corr. 1; H314	On basis of test data
Eye Dam. 1; H318	On basis of test data
Aquatic Acute 1; H400	Calculation method
Aquatic Chronic 2; H411	Calculation method

Relevant H and EUH statements (number and full text)

H290 May be corrosive to metals.
 H314 Causes severe skin burns and eye damage.
 H318 Causes serious eye damage.
 H400 Very toxic to aquatic life.
 H410 Very toxic to aquatic life with long lasting effects.
 H411 Toxic to aquatic life with long lasting effects.
 EUH031 Contact with acids liberates toxic gas.

Further Information

Data of items 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities.

The information describes exclusively the safety requirements for the product(s) and is based on the present level of our knowledge.

The delivery specifications are contained in the corresponding product sheet.

This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.

(n.a. = not applicable; n.d. = not determined)

For the identified uses, see also A.I.S.E. (www.aise.eu). There you will find further information under the keyword SUMI (safe use mixtures information).

Identified uses

No	Short title	LCS	SU	PC	PROC	ERC	AC	TF	Specification
1	Instrument disinfectant	-	-	-	8a, 8b, 9, 19	-	-	-	SUMI VIII

LCS: Life cycle stages

PC: Product categories

ERC: Environmental release categories

TF: Technical functions

SU: Sectors of use

PROC: Process categories

AC: Article categories

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