

Safety Data Sheet according to Regulation (EU) No. 1907/2006

B. Braun Avitum AG

Revision date : 14.05.2008

Revision no. : 1,20

CITRIC ACID SOLUTION 50%

00047-0213

1. Identification of the substance/preparation and of the company/undertaking

Identification of the substance or preparation

CITRIC ACID SOLUTION 50%

Use of the substance/preparation

Liquid Concentrate for the cleaning, decalcification and heatdesinfection of haemodialysis machines

Company/undertaking identification

B. Braun Avitum AG

Schwarzenberger Weg 73 - 79

D-34212 Melsungen

Inquiry office

Zentrale Service-Bereiche/Logistik und Supply Chain

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Responsible for the safety data sheet: sds@gbk-ingelheim.de

2. Hazards identification

Classification

Indications of danger : Irritant

R-phrases :

Irritating to eyes.

3. Composition/information on ingredients

Chemical characterization

(preparation)

Aqueous solution with citric acid

Hazardous components

EC-No.	CAS-No.	Chemical name	Quantity	Classification
201-069-1	77-92-9	Citric acid	50 %	Xi R36

Full text of each relevant R phrase can be found in heading 16.

4. First aid measures

General information

Remove contaminated soaked clothing immediately.

After inhalation

Move to fresh air in case of accidental inhalation of vapours or decomposition products.

In the event of symptoms refer for medical treatment.

After contact with skin

Wash hands with water as a precaution.

Consult a doctor if skin irritation persists.

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

Induce vomiting only upon the advice of a physician.

Rinse out mouth and give plenty of water to drink.

Summon a doctor immediately.

5. Fire-fighting measures

Suitable extinguishing media

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

Extinguishing media which must not be used for safety reasons

Full water jet

Special exposure hazards arising from substance or preparation itself, combustion products, resulting gases

Fire may produce:

Carbon monoxide and carbon dioxide.

Special protective equipment for fire-fighters

Use breathing apparatus with independent air supply.

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.

6. Accidental release measures

Personal precautions

Avoid contact with skin, eyes and clothing.

Ensure adequate ventilation.

Use personal protective clothing.

Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

Methods for cleaning up/taking up

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

Shovel into suitable container for disposal.

7. Handling and storage

Handling

Advice on safe handling

Keep container tightly closed.

Use only in thoroughly ventilated areas.

Avoid contact with skin, eyes and clothing.

Advice on protection against fire and explosion

No special protective measures against fire required.

Storage

Requirements for storage rooms and vessels

Keep container tightly closed in a dry, cool and well-ventilated place.

Advice on storage compatibility

Incompatible with strong bases and oxidizing agents.

Further information on storage conditions

Keep away from food, drink and animal feeding stuffs.

Storageclass (VCI)

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8. Exposure controls/personal protection

Exposure limit values

Exposure controls

Occupational exposure controls

Ensure adequate ventilation, especially in confined areas.

Protective and hygiene measures

Avoid contact with eyes and skin.

Wash hands before breaks and immediately after handling the product.

When using, do not eat, drink or smoke.

Remove and wash contaminated clothing before re-use.

Respiratory protection

No personal respiratory protective equipment normally required.

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.

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.

Eye protection

Safety goggles with side protection

Eye wash bottle with pure water.

Skin protection

Long sleeved clothing.

9. Physical and chemical properties

General information

Physical state	Liquid
Colour	Colourless
Odour	Odourless

Important health, safety and environmental information

pH-Value :	1 - 2	Test method Concentrate
Changes in the physical state		
Boiling point	> 100 °C	
Flash point	n.a.	
Flammability		
Lower explosion limits	n.d.	
Ignition temperature	n.d.	
Density (at 20 °C) :	1,19 g/cm³	
Water solubility : at (20 °C)	Completely miscible	

10. Stability and reactivity

Conditions to avoid

To avoid thermal decomposition, do not overheat.

Materials to avoid

Bases, Oxidizing agents.

Hazardous decomposition products

Carbon monoxide and carbon dioxide.

Additional information

No decomposition if stored and applied as directed.

11. Toxicological information

Empirical data on effects on humans

Irritating to eyes.

Inhalation of vapours may cause irritation of the respiratory system with very susceptible persons.

Prolonged contact may cause skin irritation.

Ingestion causes irritation of upper respiratory system and gastrointestinal disturbance.

12. Ecological information

Further information

Do not discharge into surface waters/groundwater.

Slightly water hazardous.

A pH-change becomes possible in waters.

13. Disposal considerations

Advice on disposal

Can be incinerated, when in compliance with local regulations.

Can be landfilled after chemical and physical treatment, when in compliance with local regulations.

Where possible recycling is preferred to disposal.

Waste disposal number of waste from residues/unused products

070699 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics; wastes not otherwise specified

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.

Packaging that cannot be cleaned should be disposed of like the product.

14. Transport information

Land transport (ADR/RID)

Inland waterways transport

Marine transport

Air transport

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Further InformationNo hazardous material as defined by the transport regulations.

-----**15. Regulatory information****Labelling**

Indication of danger

Xi - Irritant

Additional advice on labelling

According to EC-regulations the product is to be labelled as follows:

R phrases

36 Irritating to eyes.

S phrases

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

35 This material and its container must be disposed of in a safe way.

National regulatory information

Employment restrictions

Observe employment restrictions for young people. Observe employment restrictions for child bearing mothers and nursing.

Water contaminating class (D)

1 - slightly water contaminating

1999/13/EC (VOC)

0 %

-----**16. Other information****Full text of R-phrases referred to under sections 2 and 3**

36 Irritating to eyes.

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)"

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