according to Regulation (EC) No. 1907/2006 (REACH)

Revision date: 10-May-2016 Print date: 14-Mar-2017 Version: 4 modifiziert

Page 1/11



SIHA Sterilspray

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

1.1. Product identifier

Trade name/designation:

SIHA Sterilspray

Article No.:

78231

Additional information:

The substance does not require registration according to REACH.

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

Use of the substance/mixture:

Flächendesinfektion, Disinfectant

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Eaton Technologies GmbH Langenlonsheim Branch An den Nahewiesen 24 55450 Langenlonsheim Germany Telephone: +49 6704 204-0 (Diese Nummer ist nur zu Bürozeiten besetzt.) Telefax: +49 6704 204-121

E-mail: SDB@Eaton.com

Website: www.eaton.com/filtration

1.4. Emergency telephone number

Notfallauskunft bei Vergiftungen: Giftinformationszentrum Mainz (Deutsch und Englisch). Emergency medical information: Poison information center Mainz (German and English)., 24h: +49 6131 19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification proc edure
flammable liquids (Flam. Liq. 2)	H225: Highly flammable liquid and vapour.	
Serious eye damage/eye irritation (Eye Irrit. 2)	H319: Causes serious eye irritation.	

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP] Hazard pictograms:



according to Regulation (EC) No. 1907/2006 (REACH)

Revision date: 10-May-2016 Print date: 14-Mar-2017 Version: 4 modifiziert



Page 2/11

SIHA Sterilspray

nazard statem	ents for physical hazards
H225	Highly flammable liquid and vapour.
hazard statem	ents for health hazards
H319	Causes serious eye irritation.
Precautionary	statements Prevention
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P241	Use explosion-proof electrical/ventilating/lighting// equipment.
P243	Take action to prevent static discharges.
P280.6	Wear eye protection/face protection.
Precautionary	statements Response
P337 + P313	If eye irritation persists: Get medical advice/attention.

P403 + P235 Store in a well-ventilated place. Keep cool.

2.3. Other hazards

Adverse physicochemical effects:

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop. The components in this formulation do not meet the criteria for classification as PBT or vPvB.

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Description:

Ethyl Alcohol-Water Acetrop , denatured with 1% Methlethlyketon + 5 % Aceton.

Hazardous ingredients / Hazardous impurities / Stabilisers:

product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CL P]	Concen- tration
CAS No.: 64-17-5 EC No.: 200-578-6 REACH No.: 01-2119457610-43	ethanol Flam. Liq. 2 Tanger H225	80 - 100 %
CAS No.: 67-64-1 EC No.: 200-662-2	acetone STOT SE 3, Flam. Liq. 2, Eye Irrit. 2	1 - 10 %
CAS No.: 78-93-3 EC No.: 201-159-0	butanone STOT SE 3, Flam. Liq. 2, Eye Irrit. 2 () Danger H225-H319-H336-EUH066	≈ 1 %

SECTION 4: First aid measures

4.1. Description of first aid measures

Following inhalation:

Move victim out of danger zone. Provide fresh air.

If unconscious place in recovery position and seek medical advice. In case of irregular breathing or respiratory arrest provide artificial respiration.

In case of skin contact:

After contact with skin, wash immediately with plenty of water and soap. In case of skin irritation, consult a physician. Rub greasy ointment into the skin.

IF ON CLOTHING: Take off immediately all contaminated clothing.

according to Regulation (EC) No. 1907/2006 (REACH)

Revision date: 10-May-2016 Print date: 14-Mar-2017 Version: 4 modifiziert



Page 3/11

SIHA Sterilspray

After eye contact:

In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion:

Do NOT induce vomiting. Rinse mouth immediately and drink plenty of water. Call a physician immediately. Aspiration hazard

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

The following symptoms may occur:

Irritating to eyes.

Corneal opacity.

Prolonged/repetitive skin contact may cause skin defattening or dermatitis.

Ingestion causes nausea, weakness and central nervous system effects.

After ingestion: Vomiting, Dizziness, Unconsciousness

May cause damage to liver if swallowed.

Bei Einatmen:

Primäre Schleimhautreizung:

Hazards identification: Respiratory complaints, Dyspnoea, Cardiac arrhythmias

Inhalation causes narcotic effects/intoxication.

Ethanol has been shown to produce fetotoxicity in the embry or fetus of laboratory animals. Prenatal exposure to ethanol is associated with a distinkt pattern of congential malformations that hace collecetively been termed the "fetal alcohol syndrome".

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:

Carbon dioxide (CO2), Water mist, alcohol resistant foam, Extinguishing powder Suppress gases/vapours/mists with water spray jet.

Unsuitable extinguishing media:

High power water jet

5.2. Special hazards arising from the substance or mixture

Carbon monoxide, Carbon dioxide (CO2), Pyrolysis products, toxic. Vapours can form explosive mixtures with air. Vapours are heavier than air, spread along floors and form explosive mixtures with air. Beware of reignition.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus. Do not inhale explosion and combustion gases. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. In case of major fire and large quantities: Full protection suit

5.4. Additional information

In use, may form flammable/explosive vapour-air mixture. Heating causes rise in pressure with risk of bursting. Danger of bursting container.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Avoid contact with eyes and skin. Provide adequate ventilation. Do not breathe gas/vapour/aerosol. Keep away from sources of ignition - No smoking. Special danger of slipping by leaking/spilling product.

according to Regulation (EC) No. 1907/2006 (REACH)

Revision date: 10-May-2016 Print date: 14-Mar-2017 Version: 4 modifiziert



Page 4/11

SIHA Sterilspray

6.1.2. For emergency responders

No data available

6.2. Environmental precautions

Stop leak if safe to do so. Prevent spread over a wide area (e.g. by containment or oil barriers). Do not allow to enter into soil/subsoil.

Do not allow to enter into surface water or drains.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities. Explosive

6.3. Methods and material for containment and cleaning up

For cleaning up:

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Take up mechanically, placing in appropriate containers for disposal. Keep away from combustible material. Wash with plenty of water.

6.4. Reference to other sections

No data available

6.5. Additional information

Vapor may travel considerably distance to source of ignition and flsh back. Remove all sources of ignition. Use a spark-proof tool.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advices on safe handling:

Provide adequate ventilation. Do not breathe gas/vapour/aerosol. Avoid contact with skin, eyes and clothes. When using do not eat, drink or smoke. Keep away from food, drink and animal feedingstuffs. Notice the directions for use on the label. The product should be handled with the care usual when dealing with chemicals. Wash hands before breaks and after work. Observe instructions for use.

Fire prevent measures:

Take precautionary measures against static discharges. Keep away from sources of ignition - No smoking. Use explosion-proof electrical equipment.

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Temperature class: T2 $\,$

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels:

Store locked up. Keep container tightly closed. Keep only in the original container in a cool, well-ventilated place. Protect against: UV-radiation/sunlight Unsuitable material for Container: Aluminium, Alloy, contains light metal, Plastic articles, Rubber articles

Hints on storage assembly:

Do not store together with: P8 Oxidising liquids and solids P7 Pyrophoric liquids and solids Substances: Oxidizing

Storage class: 3 – Flammable liquids

Further information on storage conditions:

Provide earthing of containers, equipment, pumps and ventilation facilities.

according to Regulation (EC) No. 1907/2006 (REACH)

Revision date: 10-May-2016 Print date: 14-Mar-2017 Version: 4 modifiziert

Page 5/11

SIHA Sterilspray

7.3. Specific end use(s)

No data available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Occupational exposure limit values

Limit value ty pe (country of origin)	Substance name	 long-term occupational exposure limit value short-term occupational exposure limit value Instantaneous value Monitoring and observation processes Remark 	
TRGS 900 (DE)	ethanol CAS No.: 64-17-5	 500 ppm (960 mg/m³) 1,000 ppm (1,920 mg/m³) 	
IOELV (EU)	acetone CAS No.: 67-64-1	① 500 ppm (1,210 mg/m ³)	
TRGS 900 (DE)	acetone CAS No.: 67-64-1	 500 ppm (1,200 mg/m³) 1,000 ppm (2,400 mg/m³) 	
IOELV (EU)	butanone CAS No.: 78-93-3	 200 ppm (600 mg/m³) 300 ppm (900 mg/m³) 	
TRGS 900 (DE)	butanone CAS No.: 78-93-3	 200 ppm (600 mg/m³) 200 ppm (600 mg/m³) 	

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8.1.2. Biological limit values

Limit value ty pe (country of origin)	Substance name	Limit value	 parameter Test material Sample time Remark
TRGS 903 (DE)	acetone CAS No.: 67-64-1	80 mg/L	 Aceton Urin Expositionsende bzw. Schichtende
TRGS 903 (DE)	butanone CAS No.: 78-93-3	2 mg/L	 2-Butanon Urin Expositionsende bzw. Schichtende

8.1.3. DNEL-/PNEC-values

No data available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Provide adequate ventilation as well as local exhaustion at critical locations. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

Use explosion-proof ventilation equipment.

8.2.2. Personal protection equipment

Eye/face protection:

Tightly sealed safety glasses.

according to Regulation (EC) No. 1907/2006 (REACH)

Revision date: 10-May-2016 Print date: 14-Mar-2017 Version: 4 modifiziert



Page 6/11

SIHA Sterilspray

Skin protection:

Thorough skin-cleansing after handling the product. After cleaning apply high-fat content skin care cream.

Hand protection: Protect skin by using skin protective cream.

Suitable material: Recommendation

By short-term hand contact: CR (polychloroprene, chloroprene rubber)

In case of prolonged or frequently repeated skin contact: Butyl caoutchouc (butyl rubber), FKM (fluoro rubber)

The selsection of suitable gloves not only depends on the material, but also on other quality characteristics. These may vary from manufacturer to manufacturer. Since the product is a preparation from several substances, the resistance of glove materials cannot be determined in advance and must therefore be checked prior to the application.

Thickness of the glove material:

CR (polychloroprene, chloroprene rubber) : 0,5 mm Butyl caoutchouc (butyl rubber): 0,5 mm FKM (fluoro rubber): 0,4 mm Breakthrough time (maximum wearing time): CR (polychloroprene, chloroprene rubber) : >= 120 min Butyl caoutchouc (butyl rubber): >= 480 min FKM (fluoro rubber): >= 480 min

The exact break through time has to be found out by the manufacturer of the protective gloves nad has to be observed.

Respiratory protection:

Respiratory protection necessary at: exceeding exposure limit values

Suitable respiratory protection apparatus: Filtering device (full mask or mouthpiece) with filter: A DIN-/ EN-Norms: 14387

Colour : brown

Other protection measures:

Protective clothing: lab coat Chemical resistant safety shoes Wear antistatic work clothing. General health and safety measures: The usual precautionary measures are to be adhered to when handling chemicals.

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs. Contaminated work clothing should not be allowed out of the workplace.

8.2.3. Environmental exposure controls

No data available

8.3. Additional information

No data available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: liquid **Odour:** characteristic

Colour: colourless

Safety relevant basis data

parameter		at °C	Method	Remark
рH	≈ 7	20 °C	Gehalt an gelö ster Substanz: 1%	Ethanol
Melting point	not determined			
Freezing point	-114.5 °C			Ethanol
Initial boiling point and boiling range	78.3 °C			Ethanol
Decomposition temperature (°C):	not determined			
Flash point	12 °C			closed up, Ethanol
Evaporation rate	not determined			

according to Regulation (EC) No. 1907/2006 (REACH)

Revision date: 10-May-2016 Print date: 14-Mar-2017 Version: 4 modifiziert



Page 7/11

SIHA Sterilspray

parameter		at °C	Method	Remark	
Ignition temperature in °C	425 °C			Ethanol	
Upper/lower flammability or explosive limits	3.5 - 15 Vol-%			Ethanol	
Vapour pressure	59 hPa	20 °C		Ethanol	
Vapour density	≈ 1.6	20 °C		Ethanol	
Relative density	≈ 0.8 g/cm ³	20 °C			
Bulk density	not determined				
Water solubility (g/L)	not determined				
Partition coefficient: n-octanol/ water	-0.31			für: Ethanol	
Dynamic viscosity	1.2 mPa*s	20 °C		Ethanol	
Kinematic viscosity	not determined				

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Preparation not tested.

10.2. Chemical stability

Substance is, under normal conditions, chemically stable.

10.3. Possibility of hazardous reactions

No data available

10.4. Conditions to avoid

Keep away from heat. Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Take precautionary measures against static discharges.

10.5. Incompatible materials

Alkaline earth metals. Nitric acid, Alkali metals, Sulfuric acid. Oxidising agent. Peroxides, Phosphorus oxides , Nitrogen oxides (NOx), Hydrogen peroxide, Acid chlorides, inorganic

10.6. Hazardous decomposition products

Carbon dioxide. Carbon monoxide

SECTION 11: Toxicological information

11.1. Information on toxicological effects

CAS No.	Substance name	Toxicological information
64-17-5	ethanol	LD ₅₀ oral: 6,200 mg/kg (Ratte) IUCLID
		LC ₅₀ inhalative: 95.6 mg/l 4 h (Ratte) RTECS
		LD ₅₀ dermal: 20,000 mg/kg (Kaninchen)
78-93-3	butanone	LD ₅₀ oral: 2,737 mg/kg (Rat) OECD 401
		LD ₅₀ dermal: 20,000 mg/kg (Rabbit)
		LC₅₀ inhalative: 39,000 mg/m ³ 4 h (Mouse) OE CD 403
67-64-1	acetone	LD ₅₀ oral: 5,800 mg/kg (Ratte)
		LD ₅₀ dermal: 15,688 mg/kg (Kaninchen)
		LC ₅₀ inhalative: 76 mg/l (Ratte)

Acute oral toxicity:

Rat: LD50: 10.470 mg/kg OECD 401

Acute dermal toxicity:

Rabbit: LD50: > 2000 mg/kg OECD 402

according to Regulation (EC) No. 1907/2006 (REACH)

Revision date: 10-May-2016 Print date: 14-Mar-2017 Version: 4 modifiziert



Page 8/11

SIHA Sterilspray

Acute inhalation toxicity: Rat: 117-125 mg/l / 4h OECD 403

Skin corrosion/irritation:

Ethanol

Irritant effect on the skin: Rabbit: Not an irritant. OECD 404

Eye damage/irritation:

Ethanol Reizwirkung am Auge: Kaninchen: schwach reizend. OECD 405

Respiratory or skin sensitisation:

Ethanol Respiratory or skin sensitisation : Mouse: not sensitising.

Germ cell mutagenicity:

Ethanol

Salmonella typhimurium. OECD 471 (Ames Test) negativ. OECD 475 negativ. Maus OECD 476 negativ. OECD 473 negativ.

OECD 473 negativ. OECD 471 (Ames Test) negativ.

Carcinogenicity:

Ethanol NOAEL: > 3000 mg/kg Ratte 24mon OECD 451

Reproductive toxicity:

Ethanol

NOAEL: 5200 mg/kg bw/day Ratte

STOT-repeated exposure:

Ethanol NOAEL: > 20 mg/L Ratte OECD 403 männlich

NOAEL: 1730 mg/kg bw/day Ratte OECD TG 408 female

Additional information:

Other information: Aspiration hazard

Human experience: none

Symptoms :

Dyspnoea, Drowsiness, Unconsciousness, Blood pressure drop, Vomiting, Cough. Headache, Inebriation, May cause drowsiness or dizziness. Dizziness, Nausea

Observations relevant to classification:

Ethanol has been shown to produce fetotoxicity in the embry or fetus of laboratory animals. Prenatal exposure to ethanol is associated with a distinkt pattern of congential malformations that hace collecetively been termed the "fetal alcohol syndrome".

SECTION 12: Ecological information

12.1. Toxicity

Aquatic toxicity:

There are no data available on the preparation/mixture itself. Data apply to the main component. Ethanol Acute fish toxicity: LC50: 96h; 13.000 mg/l Oncorhynchus mykiss (Rainbow trout) OECD 203 Acute Daphnia toxicity: LC50: 48h; 12.340 mg/l Daphnia magna Algae toxicity: EC50 48h; 12.900 mg/l Selenastrum capricornutum OECD 201 Algae toxicity: EC50 72h; 275 mg/l Chlorella vulgaris OECD 201

according to Regulation (EC) No. 1907/2006 (REACH)

Revision date: 10-May-2016 Print date: 14-Mar-2017 Version: 4 modifiziert



Page 9/11

SIHA Sterilspray

12.2. Persistence and degradability

CAS No.	Substance name	Biodegradation	Remark
64-17-5	ethanol	not determined	Bioaccumulative potential: Wasser - Boden: k.D.v. Akkumulationspotential: Wasser - Luft t1/2 = 6,1d (1m tiefe, 1m/s Fließgeschw., 3m/ s Wind) Boden - Luft: Rasches Verdampfen in die Atmosphäre infolge relativ hoher Flüchtigkeit
67-64-1	acetone	not determined	Bioaccumulative potential: 0,24

12.3. Bioaccumulative potential

Bioconcentration factor (BCF):

0,66-3,2

Partition coefficient: n-octanol/water:

-0.31; Remark: für: Ethanol

12.4. Mobility in soil

Henry's Law Constant 0,000138

12.5. Results of PBT and vPvB assessment

CAS No.	Substance name	Results of PBT and vPvB assessment
64-17-5	ethanol	_
78-93-3	butanone	-
67-64-1	acetone	_

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

12.6. Other adverse effects

Further ecological information: Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste requires monitoring.

The waste code numbers according to the German Waste Catalogue are substance-related, while the Waste code numbers according to the European Waste Catalogue (EWC code) are source-related. The exact assignment to a waste code according to the EWC code can only be undertaken by the user who generates waste products from them requiring disposal.

Waste treatment options

Appropriate disposal / Package:

Non-contaminated packages may be recycled.

13.2. Additional information

No data available

SECTION 14: Transport information

Land transport RID)	(ADR/ Inland waterwa t (ADN)	ay craf Sea transport (IMDG) Air transport (ICAO- TI / IATA-DGR)
14.1. UN-No.			
1170	1170	1170	1170
14.2. UN prop	per shipping name		
Ethanol	Ethanol	Ethanol	Ethanol

according to Regulation (EC) No. 1907/2006 (REACH)

Revision date: 10-May-2016 Print date: 14-Mar-2017 Version: 4 modifiziert



Page 10/11

SIHA Sterilspray Air transport (ICAO-Land transport (ADR/ Inland waterway craf Sea transport (IMDG) TI / IATA-DGR) RID) t (ADN) 14.3. Transport hazard class(es) 3 З 3 З 14.4. Packing group ш Ш Ш 14.5. Environmental hazards No No No No 14.6. Special precautions for user Special provisions: KI Special provisions: Special provisions: Special provisions: assifizierungscode: F 1 Limited guantity Limited quantity Limited quantity Limited quantity (LQ): (LQ): (LQ): (LQ): 1 L Classification code: -**Remark:** EmS-No.: F-E; S-D Hazard identificati **Remark: Remark:** on number (Kemler No.): **Classification code:** not determined tunnel restriction cod e: D/E

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No data available

Additional information:

Remark:

Special precautions for user

SECTION 15: Regulatory information

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

15.1.1. EU legislation

Other regulations (EU):

Directive 2010/75/EU on industrial emissions: 94,5%; 759,05 g/L

15.1.2. National regulations

[DE] National regulations

Restrictions of occupation

Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

Störfallverordnung

Remark:

To follow: Störfallverordnung

Water hazard class (WGK)

WGK:

1 - schwach wassergefährdend

according to Regulation (EC) No. 1907/2006 (REACH)

Revision date: 10-May-2016 Print date: 14-Mar-2017 Version: 4 modifiziert

Page 11/11

SIHA Sterilspray

Source:

S Selbsteinstufung

Other regulations, restrictions and prohibition regulations To follow: Berufsgenossenschaftliche Vorschriften (BGV)

15.2. Chemical Safety Assessment

No data available

15.3. Additional information

No data available

SECTION 16: Other information

16.1. Indication of changes

No data available

16.2. Abbreviations and acronyms

No data available

16.3. Key literature references and sources for data No data available

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

Classification according to Regulation (EC) No 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification proc edure
flammable liquids (Flam. Liq. 2)	H225: Highly flammable liquid and vapour.	
Serious eye damage/eye irritation (Eye Irrit. 2)	H319: Causes serious eye irritation.	

16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements	
H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

16.6. Training advice

No data available

16.7. Additional 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.

