

# Safety Data Sheet

according to Regulation (EC) No 1907/2006

## Multi-Star viruzide Händedesinfektion

Revision date: 16.12.2020

Product code:

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

#### 1.1. Product identifier

Multi-Star viruzide Händedesinfektion

#### Further trade names

UFI: T59W-XC23-N202-705J

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

##### Use of the substance/mixture

Disinfectant

##### Uses advised against

Any non-intended use.

#### 1.3. Details of the supplier of the safety data sheet

Company name:	MULTI-STAR	
	Gurol-Etzbach GmbH & Co. KG	
Street:	Illexstr. 7	
Place:	D-26639 Wiesmoor	
Contact person:	Beate Gurol-Etzbach	Telephone: 04944 7808
e-mail:	info@multi-star.com	
Internet:	www.multi-star.com	

#### 1.4. Emergency telephone number:

GIZ Berlin  
 Ansprechpartner/-in: Frau Hahn  
 Telefon: 030/450569703  
 Mail: sds-giftnotruf@charite.de

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Regulation (EC) No. 1272/2008

Hazard categories:

Flammable liquid: Flam. Liq. 2

Hazard Statements:

Highly flammable liquid and vapour.

#### 2.2. Label elements

##### Regulation (EC) No. 1272/2008

Signal word: Danger

Pictograms:



##### Hazard statements

H225 Highly flammable liquid and vapour.

##### Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container in accordance with local/regional/national/international

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regulations.

### Special labelling of certain mixtures

Read attached instructions before use.

### 2.3. Other hazards

In use, may form flammable/explosive vapour-air mixture.

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

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
64-17-5	ethanol; ethyl alcohol			50 - 100 %
	200-578-6	603-002-00-5		
	Flam. Liq. 2; H225			

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

#### Further Information

Product does not contain listed SVHC substances > 0,1 % according to Regulation (EC) No. 1907/2006 Article 59 (REACH)

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Take off immediately all contaminated clothing.

First aider: Pay attention to self-protection!

#### After inhalation

Remove person to fresh air and keep comfortable for breathing. In case of respiratory tract irritation, consult a physician.

#### After contact with skin

Take off immediately all contaminated clothing. Wash with plenty of water. In case of skin irritation, seek medical treatment.

#### After contact with eyes

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

#### After ingestion

Rinse mouth thoroughly with water. Let water be drunken in little sips (dilution effect). Do NOT induce vomiting. Never give anything by mouth to an unconscious person or a person with cramps. In all cases of doubt, or when symptoms persist, seek medical advice.

### 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

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#### **5.1. Extinguishing media**

##### **Suitable extinguishing media**

Carbon dioxide (CO<sub>2</sub>). Dry extinguishing powder. alcohol resistant foam.  
In case of major fire and large quantities: Atomized water.

##### **Unsuitable extinguishing media**

High power water jet.

#### **5.2. Special hazards arising from the substance or mixture**

Can be released in case of fire: Gases/vapours, irritant. Carbon monoxide Carbon dioxide (CO<sub>2</sub>).

#### **5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus. In case of fire and/or explosion do not breathe fumes.

##### **Additional information**

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Use water spray jet to protect personnel and to cool endangered containers.  
In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

### **SECTION 6: Accidental release measures**

#### **6.1. Personal precautions, protective equipment and emergency procedures**

Remove persons to safety. Remove all sources of ignition. Ventilate affected area.  
Do not breathe gas/vapour/aerosol. Avoid contact with skin, eyes and clothes.  
Wear personal protection equipment (refer to section 8).

#### **6.2. Environmental precautions**

Do not allow to enter into surface water or drains. Danger of explosion! Cover drains. Prevent spread over a wide area (e.g. by containment or oil barriers). In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

#### **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). Ventilate affected area.  
Treat the recovered material as prescribed in the section on waste disposal.  
Clean contaminated objects and areas thoroughly observing environmental regulations.

#### **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**

Provide adequate ventilation as well as local exhaust at critical locations.  
Do not breathe gas/vapour/aerosol. Avoid contact with skin, eyes and clothes.  
Wear suitable protective clothing. (See section 8.)

##### **Advice on protection against fire and explosion**

Keep away from sources of ignition. - No smoking. Take precautionary measures against static discharges.  
Flammable vapours can accumulate in head space of closed systems. In use, may form flammable/explosive vapour-air mixture. Heating causes rise in pressure with risk of bursting.

##### **Further information on handling**

General protection and hygiene measures: See section 8.

#### **7.2. Conditions for safe storage, including any incompatibilities**

##### **Requirements for storage rooms and vessels**

Keep container tightly closed in a cool, well-ventilated place. Protect against direct sunlight.  
Ensure adequate ventilation of the storage area.

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Make sure spills can be contained (e.g. sump pallets or kerbed areas).

### Hints on joint storage

Do not store together with: Gas. Explosives. Flammable solids. Pyrophoric liquids and solids. Self-heating substances and mixtures. Substances and mixtures which, in contact with water, emit flammable gases. Oxidizing liquids. Oxidizing solids. ammonium nitrate. Self-reactive substances and mixtures. Organic peroxides. Non-combustible toxic substances. Radioactive substances. Infectious substances.

### Further information on storage conditions

Keep the packing dry and well sealed to prevent contamination and absorption of humidity.  
Protect against: UV-radiation/sunlight. heat. Humidity frost.  
storage temperature: 15-25°C

### 7.3. Specific end use(s)

See section 1.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Exposure limits (EH40)

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
64-17-5	Ethanol	1000	1920		TWA (8 h)	WEL

### 8.2. Exposure controls



#### Appropriate engineering controls

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

Provide adequate ventilation as well as local exhaust at critical locations.

#### Protective and hygiene measures

The usual precautions for handling chemicals should be considered.

Keep away from food, drink and animal feedingstuffs.

Always close containers tightly after the removal of product. When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work. Protect skin by using skin protective cream. Take off contaminated clothing and wash it before reuse.

#### Eye/face protection

Recommended eye protection brand: Tightly sealed safety glasses. (BS/EN 166)

#### Hand protection

In case of prolonged or frequently repeated skin contact: Wear suitable gloves.

Suitable material: Butyl rubber.

Thickness of glove material: 0,5 mm

Breakthrough time  $\geq$  480 min. penetration time (maximum wearing period): ~ 120 min. (estimated)

In the case of wanting to use the gloves again, clean them before taking off and air them well. Before using check leak tightness / impermeability.

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.

The selected protective gloves have to satisfy the specifications of EU Directive EC/2016/425 and the standard EN 374 derived from it.

#### Skin protection

Wear fire/flame resistant/retardant clothing.

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Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500 (D).

### Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required.

Respiratory protection necessary at:

Exceeding exposure limit values

Insufficient ventilation.

Suitable respiratory protective equipment: gas filtering equipment (EN 141). Type: A

The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

### Environmental exposure controls

Do not allow uncontrolled discharge of product into the environment.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state: liquid.  
 Colour: not determined  
 Odour: Alcohols.

pH-Value (at 20 °C): 7

#### Changes in the physical state

Melting point: not applicable

Initial boiling point and boiling range: 80 °C

Flash point: <=21 °C

#### Explosive properties

In use, may form flammable/explosive vapour-air mixture.

Lower explosion limits: 3,5 vol. %

Upper explosion limits: 10 vol. %

Ignition temperature: not determined

#### Auto-ignition temperature

Gas: 425 °C

Decomposition temperature: not determined

#### Oxidizing properties

none.

Vapour pressure: 59 hPa  
 (at 20 °C)

Density (at 20 °C): 0,88 g/cm³

Water solubility: miscible.

#### Solubility in other solvents

not determined

Partition coefficient: not determined

Viscosity / dynamic: not determined  
 (at 40 °C)

Viscosity / kinematic: not determined  
 (at 20 °C)

Flow time: not determined

Vapour density: not determined

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Evaporation rate: not determined  
 Solvent separation test: not determined  
 Solvent content: 74,00 %

### 9.2. Other information

Solid content: not determined  
 26% Water.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No information available.

### 10.2. Chemical stability

The mixture is chemically stable under recommended conditions of storage, use and temperature.

### 10.3. Possibility of hazardous reactions

Refer to chapter 10.5.

### 10.4. Conditions to avoid

Keep away from heat. Ignition hazard!  
 In use may form flammable/explosive vapour-air mixture.  
 Heating causes rise in pressure with risk of bursting.

### 10.5. Incompatible materials

Materials to avoid: Oxidizing agents, strong. Reducing agents, strong. Strong acid. strong alkalis.

### 10.6. Hazardous decomposition products

Can be released in case of fire: Gas/vapours, irritant. Carbon monoxide Carbon dioxide (CO<sub>2</sub>).

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Toxicokinetics, metabolism and distribution

No data available.

#### Acute toxicity

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
64-17-5	ethanol; ethyl alcohol				
	oral	LD50 mg/kg	>5000	Rat	ECHA Dossier
	inhalation (4 h) vapour	LC50 mg/l	124,7	Rat	ECHA Dossier

#### 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.

Ethanol. (CAS-No.: 64-17-5):

In-vitro mutagenicity: No experimental indications of mutagenicity in-vitro exist.

Reproductive toxicity:

Exposure time: 18 weeks

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Species: CD-1 Mouse.  
 Method: OECD Guideline 416  
 Result: NOAEL = 20700 mg/kg/day  
 Developmental toxicity/teratogenicity:  
 Exposure time: 19d  
 Species: Sprague-Dawley Rat.  
 Method: OECD Guideline 414  
 Result: NOAEL = 16000 ppm (maternal toxicity)  
 Result: NOAEL >= 20000 ppm (teratogenicity)  
 Literature information: ECHA Dossier

**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.

Ethanol. (CAS-No.: 64-17-5):

Subchronic oral toxicity

Exposure time: 90d

Species: Sprague-Dawley Rat.

Method: OECD Guideline 408

Result: NOAEL = 1280 mg/kg

Literature information: ECHA Dossier

**Aspiration hazard**

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

**Specific effects in experiment on an animal**

No data available.

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

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
64-17-5	ethanol; ethyl alcohol					
	Acute fish toxicity	LC50 mg/l	14200	96 h	Pimephales promelas	ECHA Dossier
	Acute algae toxicity	ErC50	275 mg/l	72 h	Chlorella vulgaris	ECHA Dossier
	Acute crustacea toxicity	EC50 mg/l	5012	48 h	Ceriodaphnia dubia	ECHA Dossier
	Crustacea toxicity	NOEC mg/l	(9,6)	9 d	Daphnia magna	ECHA Dossier

**12.2. Persistence and degradability**

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
64-17-5	ethanol; ethyl alcohol			
	other guideline	84%	20	ECHA Dossier
	Biodegradable.			

**12.3. Bioaccumulative potential****Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
64-17-5	ethanol; ethyl alcohol	-0,31

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**12.4. Mobility in soil**

No data available.

**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. Other adverse effects**

No data available.

**Further information**

Do not allow to enter into surface water or drains.

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

Dispose of waste according to applicable legislation. Consult the local waste disposal expert about waste disposal. Non-contaminated packages may be recycled. According to (EWC) European Waste Catalogue, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.

Control report for waste code/ waste marking according to (EWC) European Waste Catalogue:

**List of Wastes Code - residues/unused products**

070604 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics; other organic solvents, washing liquids and mother liquors; hazardous waste

**List of Wastes Code - used product**

070604 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics; other organic solvents, washing liquids and mother liquors; hazardous waste

**List of Wastes Code - 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**

Handle contaminated packages in the same way as the substance itself.

**SECTION 14: Transport information****Land transport (ADR/RID)****14.1. UN number:**

UN 1170

**14.2. UN proper shipping name:**

ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

**14.3. Transport hazard class(es):**

3

**14.4. Packing group:**

II

Hazard label:

3



Classification code:

F1

Special Provisions:

144 601

Limited quantity:

1 L

Excepted quantity:

E2

Transport category:

2

Hazard No:

33



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Tunnel restriction code:

D/E

## Inland waterways transport (ADN)

**14.1. UN number:**

UN 1170

**14.2. UN proper shipping name:**

ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

**14.3. Transport hazard class(es):**

3

**14.4. Packing group:**

II

Hazard label:

3



Classification code:

F1

Special Provisions:

144 601

Limited quantity:

1 L

Excepted quantity:

E2

## Marine transport (IMDG)

**14.1. UN number:**

UN 1170

**14.2. UN proper shipping name:**

ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

**14.3. Transport hazard class(es):**

3

**14.4. Packing group:**

II

Hazard label:

3



Marine pollutant:

NO

Special Provisions:

144

Limited quantity:

1 L

Excepted quantity:

E2

EmS:

F-E, S-D

## Air transport (ICAO-TI/IATA-DGR)

**14.1. UN number:**

UN 1170

**14.2. UN proper shipping name:**

ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

**14.3. Transport hazard class(es):**

3

**14.4. Packing group:**

II

Hazard label:

3



Special Provisions:

A3 A58 A180

Limited quantity Passenger:

1 L

Passenger LQ:

Y341

Excepted quantity:

E2

IATA-packing instructions - Passenger:

353

IATA-max. quantity - Passenger:

5 L

IATA-packing instructions - Cargo:

364

IATA-max. quantity - Cargo:

60 L

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS:

No

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### 14.6. Special precautions for user

See section 8.

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

not relevant.

## SECTION 15: Regulatory information

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

#### EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3

2010/75/EU (VOC): <75 % (calculated)

2004/42/EC (VOC): <660 g/l (calculated)

Information according to 2012/18/EU (SEVESO III): P5c FLAMMABLE LIQUIDS

#### Additional information

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (amended by Regulation (EU) No 2020/878)

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

REACH 1907/2006 Appendix XVII, No (mixture): 3, 40

Regulation (EU) No. 528/2012 on biocides

#### National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D): 1 - slightly hazardous to water

Biocide registry number: N-58459

### 15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

## SECTION 16: Other information

### Changes

Rev. 1.00;16.12.2020, Initial release

### 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)

CAS Chemical Abstracts Service

CLP: Classification, Labelling and Packaging of substances and mixtures

DNEL: Derived No Effect Level

d: day(s)

EINECS: European INventory of Existing Commercial chemical Substances

ELINCS: European List of Notified Chemical Substances

ECHA: European Chemicals Agency

EWG: European Waste Catalogue

IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)

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h: hour

LOAEL: Lowest observed adverse effect level

LOAEC: Lowest observed adverse effect concentration

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

NOAEL: No observed adverse effect level

NOAEC: No observed adverse effect concentration

NLP: No-Longer Polymers

N/A: not applicable

OECD: Organisation for Economic Co-operation and Development

PNEC: predicted no effect concentration

PBT: Persistent bioaccumulative toxic

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail )

REACH: Registration, Evaluation, Authorisation of Chemicals

SVHC: substance of very high concern

TRGS: Technische Regeln für Gefahrstoffe

UN: United Nations

VOC: Volatile Organic Compounds

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

Classification	Classification procedure
Flam. Liq. 2; H225	On basis of test data

### Relevant H and EUH statements (number and full text)

H225 Highly flammable liquid and vapour.

### Further Information

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

Health hazards: Calculation method.

Environmental hazards: Calculation method.

Physical hazards: On basis of test data and / or calculated and / or estimated.

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.)*