

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Cartridge**

Revision date: 04.12.2018

Product code: 10040, 10046, 10050, 10064, 10074, 10076, 10078

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

Cartridge

**Further trade names**

This MSDS covers the following products in all container sizes:

- Unyvero HPN Cartridge # 10046
- Unyvero ITI Cartridge # 10040
- Unyvero BCU Cartridge # 10050
- Unyvero IAI Cartridge #10064-
- Unyvero HPN Cartridge # 10074
- Unyvero BCU Cartridge # 10076
- Unyvero UTI Cartridge #10078

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

Use as laboratory reagent.

**Uses advised against**

Any non-intended use.

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

Company name:	Curetis GmbH		
Street:	Max-Eyth-Str. 42		
Place:	D 71088 Holzgerlingen		
Telephone:	+49-(0)7031 -49195-55	Telefax:	+49-(0)7031 - 4919519
Responsible Department:	Dr. Gans-Eichler	e-mail:	info@tge-consult.de
	Chemieberatung GmbH	Tel.:	+49(0)251/394868-69
	Raesfeldstr. 22		
	48149 Muenster		

**1.4. Emergency telephone number:**

Poison Information Center Mainz, Germany, Tel: +49(0)6131/19240

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

Hazard categories:

Flammable liquid: Flam. Liq. 2

Acute toxicity: Acute Tox. 4

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Hazard Statements:

Highly flammable liquid and vapour.

Harmful if swallowed.

Causes skin irritation.

Causes serious eye irritation.

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

guanidinium chloride; guanadine hydrochloride

**Signal word:** Danger

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#### Pictograms:



#### Hazard statements

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.

#### Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

#### 2.3. Other hazards

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop. 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	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
64-17-5	ethanol, ethyl alcohol			> 60 %
	200-578-6	603-002-00-5	01-2119457610-43	
	Flam. Liq. 2, Eye Irrit. 2; H225 H319			
50-01-1	guanidinium chloride; guanadine hydrochloride			>50 %
	200-002-3	607-148-00-0		
	Acute Tox. 4, Eye Irrit. 2, Skin Irrit. 2; H302 H319 H315			

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

Remove affected person from the danger area and lay down. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

##### After inhalation

In case of accident by inhalation: remove casualty to fresh air and keep at rest. If unconscious place in recovery position and seek medical advice. In case of allergic symptoms, especially in the breathing area, seek medical advice immediately.

##### After contact with skin

After contact with skin, wash immediately with plenty of water and soap. In case of skin irritation, seek medical

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treatment.

#### **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. If eye irritation persists: Get medical advice/attention.

#### **After ingestion**

Rinse mouth thoroughly with water. Let water be drunken in little sips (dilution effect). 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

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

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

Carbon dioxide (CO<sub>2</sub>). Dry extinguishing powder. alcohol resistant foam. 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: Carbon monoxide Carbon dioxide (CO<sub>2</sub>). Nitrogen oxides (NO<sub>x</sub>). Hydrogen chloride (HCl).

#### **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**

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**

Remove all sources of ignition. Ventilate affected area.

Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes.

Special danger of slipping by leaking/spilling product.

Wear personal protection equipment. (refer to chapter 8)

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

Do not allow to enter into surface water or drains. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches. 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.

Clear contaminated areas thoroughly.

#### **6.4. Reference to other sections**

See protective measures under point 7 and 8.

### SECTION 7: Handling and storage

#### **7.1. Precautions for safe handling**

##### **Advice on safe handling**

Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes.

Wear personal protection equipment. (See section 8.)

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#### 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: refer to chapter 8

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

##### Requirements for storage rooms and vessels

Keep/Store only in original container. Keep container tightly closed in a cool, well-ventilated place. Protect against direct sunlight.

Ensure adequate ventilation of the storage area. Concentrated vapours are heavier than air.

Suitable material for Container: Stainless steel. (1.4301 (V2), 1.4401 (V4)); iron. solvent resistant plastics.

Unsuitable materials for Container: Aluminium. Rubber. various plastics.

##### 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

Protect against: heat. Cold.

Store small packages in a suitable, robust cabinet.

Recommended storage temperature: 20°C

#### 7.3. Specific end use(s)

Laboratory chemicals

### 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

##### DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
64-17-5	ethanol, ethyl alcohol			
	Worker DNEL, acute	inhalation	local	1900 mg/m <sup>3</sup>
	Worker DNEL, long-term	dermal	systemic	343 mg/kg bw/day
	Worker DNEL, long-term	inhalation	systemic	950 mg/m <sup>3</sup>
	Consumer DNEL, acute	inhalation	local	950 mg/m <sup>3</sup>
	Consumer DNEL, long-term	dermal	systemic	206 mg/kg bw/day
	Consumer DNEL, long-term	inhalation	systemic	114 mg/m <sup>3</sup>
	Consumer DNEL, long-term	oral	systemic	87 mg/kg bw/day

##### PNEC values

CAS No	Substance	Value
64-17-5	ethanol, ethyl alcohol	

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Freshwater	0,96 mg/l
Freshwater (intermittent releases)	2,75 mg/l
Marine water	0,79 mg/l
Marine water (intermittent releases)	2,75 mg/l
Freshwater sediment	3,6 mg/kg
Marine sediment	2,9 mg/kg
Secondary poisoning	0,72 mg/kg
Micro-organisms in sewage treatment plants (STP)	580 mg/l
Soil	0,63 mg/kg

### 8.2. Exposure controls



#### Appropriate engineering controls

Use extractor hood (laboratory).

#### Protective and hygiene measures

Keep away from food, drink and animal feedingstuffs. Remove contaminated, saturated clothing immediately. Wash hands before breaks and after work. Avoid contact with eyes and skin.

#### Eye/face protection

Tightly sealed safety glasses. DIN EN 166

#### Hand protection

In case of prolonged or frequently repeated skin contact:

Wear suitable gloves.

Suitable material:

Breakthrough time > 8 h

Butyl rubber.

FKM (fluororubber).

Breakthrough time >= 2 h):

CR (polychloroprenes, Chloroprene rubber).

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

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

#### Skin protection

Protective clothing. (fire retardant.)

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

#### 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.

Generation/formation of mist

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.

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#### Environmental exposure controls

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

### SECTION 9: Physical and chemical properties

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

Physical state:	liquid (Ethanol.)
Colour:	colourless (Ethanol.)
Odour:	Ethanol.
pH-Value:	not determined

#### Changes in the physical state

Melting point:	-144 (Ethanol.) °C
Initial boiling point and boiling range:	78-80 (Ethanol.) °C
Sublimation point:	not determined
Softening point:	not determined
Pour point:	not determined
Flash point:	>14°C (Ethanol.) °C
Sustaining combustion:	No data available

#### Explosive properties

not determined

Lower explosion limits:	3,3 (Ethanol.) vol. %
Upper explosion limits:	19 (Ethanol.) vol. %
Ignition temperature:	400 (Ethanol.) °C

#### Auto-ignition temperature

Gas:

363 °C (Ethanol.)

Decomposition temperature:	not determined
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#### Oxidizing properties

not determined

Vapour pressure: (at 20 °C)	(Ethanol.) 59,5 hPa
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Vapour pressure: (at 50 °C)	(Ethanol.) 280 hPa
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Density (at 20/25 °C):	0,79 (Ethanol) /1,18 (guanidine hydrochloride) g/cm <sup>3</sup>
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Water solubility: (at 20 °C)	573 (guanidine hydrochloride) g/L
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#### Solubility in other solvents

not determined

Viscosity / dynamic:	not determined
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Viscosity / kinematic:	not determined
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Flow time:	not determined
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Vapour density:	not determined
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Evaporation rate:	not determined
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Solvent separation test:	not determined
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Solvent content:	not determined
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#### 9.2. Other information

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Solid content:

not determined

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No information available.

### 10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

### 10.3. Possibility of hazardous reactions

Explosion risk in contact with: Oxidizing agents, strong. nitric acid. Hydrogenium peroxide.

Exothermic reactions with: Alkali metals. Alkaline earth metals. Reducing agents, strong.

### 10.4. Conditions to avoid

Keep away from heat.

In case of warming: Ignition hazard.

### 10.5. Incompatible materials

Materials to avoid: Substances and mixtures which, in contact with water, emit flammable gases Organic peroxides. Oxidizing substances. Alkali metals.

### 10.6. Hazardous decomposition products

Can be released in case of fire: Carbon monoxide Carbon dioxide (CO<sub>2</sub>). Nitrogen oxides (NO<sub>x</sub>). Hydrogen chloride (HCl).

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Toxicokinetics, metabolism and distribution

No information available.

#### Acute toxicity

Harmful if swallowed.

#### ATEmix calculated

ATE (oral) 950,0 mg/kg

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	124,7 mg/l	Rat	ECHA Dossier
50-01-1	guanidinium chloride; guanadine hydrochloride				
	oral	LD50	475 mg/kg	Rat	
	inhalation (4 h) vapour	LC50	5,3 mg/l	Rat	

#### Irritation and corrosivity

Causes skin irritation.

Causes serious eye irritation.

Ethanol.:

Irritant effect on the eye: Specific concentration limit (SCL): Eye Irrit. 2 > 50%

guanidine hydrochloride (50-01-1):

Irritant effect on the skin: Irritant.

Irritant effect on the eye: Irritant.

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#### Sensitising effects

Based on available data, the classification criteria are not met.  
 guanidine hydrochloride (50-01-1):  
 No evidence for: Respiratory or skin sensitisation (Buehler-Test)

#### Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.  
 guanidine hydrochloride (50-01-1):  
 No evidence for: Carcinogenicity  
 No evidence for: In-vitro mutagenicity (Ames-Test)

Ethanol:

In-vitro mutagenicity: No experimental indications of mutagenicity in-vitro exist. Reproductive toxicity: Exposure time: 18 weeks 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:  
 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

#### Practical experience

#### Other observations

Depending on the ingested quantity the following symptoms can be induced: a reduction of inhibitions, euphoria but also dysphoria, aggressiveness, impaired motoric skills, impaired responsiveness, blurred vision and fatigue.

## 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	(9,6) mg/l	9 d	Daphnia magna	ECHA Dossier
50-01-1	guanidinium chloride; guanidine hydrochloride					
	Acute fish toxicity	LC50 mg/l	1758	96 h	Leuciscus idus	

### 12.2. Persistence and degradability



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CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
64-17-5	ethanol, ethyl alcohol			
	other guideline	84%	20	ECHA Dossier
	Biodegradable.			
50-01-1	guanidinium chloride; guanadine hydrochloride			
	OECD 301C / ISO 9408 / EEC 92/69 annex V, C.4-F	0	56	ECHA Dossier
	Not easily bio-degradable (according to OECD-criteria).			

### 12.3. Bioaccumulative potential

#### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
64-17-5	ethanol, ethyl alcohol	-0,31
50-01-1	guanidinium chloride; guanadine hydrochloride	-1,7

### 12.4. Mobility in soil

No information 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

#### Advice on disposal

Dispose of waste according to applicable legislation. Consult the local waste disposal expert about waste disposal. Non-contaminated packages may be recycled. According to EAKV, 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 EAKV:

#### Waste disposal number of waste from residues/unused products

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

#### Waste disposal number of used product

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

#### Waste disposal number of 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)

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**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  
 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  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** II  
 Hazard label: 3

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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

#### 14.6. Special precautions for user

Refer to section 6-8

#### 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

2010/75/EU (VOC):	Ethanol.: 100%
2004/42/EC (VOC):	Ethanol.: 790 g/L
Information according to 2012/18/EU (SEVESO III):	P5c FLAMMABLE LIQUIDS

##### Additional information

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].  
REACH 1907/2006 Appendix XVII, No (mixture): 3

##### National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils 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.

Water contaminating class (D): 1 - slightly water contaminating

#### 15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:  
ethanol, ethyl alcohol

### SECTION 16: Other information

#### Changes

Rev. 1,00 Neuerstellung: 24.03.2014  
Rev. 5,00 Änderungen in Kapitel: 2, 3,7,8,9,10,11,12,13,15,16: 18.01.2016  
Rev. 6,00; 10.04.2017  
Rev. 7,00; 11.04.2018  
Rev. 8,00 Änderungen in Kapitel: 1-16, 19.11.2018

#### Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route  
AwSV: Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen

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CAS Chemical Abstracts Service  
 DNEL: Derived No Effect Level  
 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)  
 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 level  
 NTP: National Toxicology Program  
 N/A: not applicable  
 OSHA: Occupational Safety and Health Administration  
 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 )  
 SARA: Superfund Amendments and Reauthorization Act  
 SVHC: substance of very high concern  
 TRGS Technische Regeln fuerGefahrstoffe  
 TSCA: Toxic Substances Control Act  
 VOC: Volatile Organic Compounds  
 VwVwS: Verwaltungsvorschrift wassergefaehrdender Stoffe  
 WGK: Wassergefaehrungsklasse

#### 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 and / or calculated and / or estimated.
Acute Tox. 4; H302	Calculation method
Skin Irrit. 2; H315	Calculation method
Eye Irrit. 2; H319	Calculation method

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

H225 Highly flammable liquid and vapour.  
 H302 Harmful if swallowed.  
 H315 Causes skin irritation.  
 H319 Causes serious eye irritation.

#### Further Information

Classification according EC regulation 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.

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**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Cartridge**

Revision date: 04.12.2018

Product code: 10040, 10046, 10050, 10064, 10074, 10076, 10078

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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.

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