

Safety Data Sheet

according to Regulation (EC) No 1907/2006

UV-Plus Purifier

Revision date: 06.02.2017

Product code: 75160018, 75160211

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

1.1. Product identifier

UV-Plus Purifier

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

Use of the substance/mixture

professional use.

The UV Plus Purifier is a gas cleaning system for exclusive use in OES SPECTRO products.

Uses advised against

any non-intended use.

1.3. Details of the supplier of the safety data sheet

Company name: SPECTRO Analytical Instruments GmbH
Street: Boschstr. 10
Place: D-47533 Kleve
Responsible Department: info@tge-consult.de

1.4. Emergency telephone number:

International: +44 1865407333 Spectro 29003-NCEC

Further Information

The product is classified as a device. Providing the Safety Data Sheet takes place on a voluntary basis for information purposes.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:

Self-heating substance or mixture: Self-heat. 1

Hazardous to the aquatic environment: Aquatic Acute 1

Hazardous to the aquatic environment: Aquatic Chronic 1

2.2. Label elements

Regulation (EC) No. 1272/2008

Precautionary statements

P273 Avoid release to the environment.

Additional advice on labelling

Not required because hazardous substances are incorporated in the material/article and there is no risk in case of skin contact, inhalation or ingestion as long as the material is properly handled and stored. (EC 1272/2008 I 1.3.4.1)
There is no requirement for the product to be specially labelled according to EC directives or the corresponding national laws.

2.3. Other hazards

This article doesn't contain dangerous substances or preparations intended to be released under normal or reasonably foreseeable conditions of use. Under normal conditions, the product is hermetically sealed.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Catalyst.

The UV Plus Purifier is a gas cleaning system for exclusive use in OES SPECTRO products. Dispose of only deactivated catalyst residues.

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Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
-	activated Copper Oxide			< 50 %
	-			
	Self-heat. 1; H251			
1317-38-0	Copper oxide			< 50 %
	215-269-1		01-2119502447-44	
	Aquatic Acute 1, Aquatic Chronic 1; H400 H410			
1304-28-5	Bariumoxide			< 3 %
	215-127-9	056-002-00-7		
	Acute Tox. 4, Acute Tox. 4; H302 H332			
1314-13-2	zinc oxide			< 1 %
	215-222-5	030-013-00-7		
	Aquatic Acute 1, Aquatic Chronic 1; H400 H410			

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).

After inhalation

In case of accident by inhalation: remove casualty to fresh air and keep at rest. In all cases of doubt, or when symptoms persist, seek medical advice.

After contact with skin

In the event of a damaged container. If material escapes:
After contact with skin, wash immediately with: Water. In all cases of doubt, or when symptoms persist, seek medical advice.

After contact with eyes

In the event of a damaged container. If material escapes:
Rinse immediately carefully and thoroughly with eye-bath or water. In case of troubles or persistent symptoms, consult an ophthalmologist.

After ingestion

In the event of a damaged container. If material escapes:
Rinse mouth thoroughly with water. Let water be drunk in little sips (dilution effect). 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

The product itself does not burn.
In the event of a damaged container. If material escapes:
D powder. Dry sand.

Unsuitable extinguishing media

Water.

5.2. Special hazards arising from the substance or mixture

Can be released in case of fire: Gas/vapours, harmful.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.
Co-ordinate fire-fighting measures to the fire surroundings.
Use water spray jet to protect personnel and to cool endangered containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.
Warning: May cause fire.
In case of fire, use fire extinguisher class D.

6.2. Environmental precautions

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.

6.3. Methods and material for containment and cleaning up

Dispose of only deactivated catalyst residues.
Take up carefully when dry. Avoid contact with water.
Treat the recovered material as prescribed in the section on waste disposal.
Clean contaminated articles and floor according to the environmental legislation.

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

Protect containers against damage.
Under normal conditions, the product is hermetically sealed.

Advice on protection against fire and explosion

Protect containers against damage.
Under normal conditions, the product is hermetically sealed.
Usual measures for fire prevention.

Further information on handling

Advices on general occupational hygiene: refer to chapter 8

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

not relevant

Advice on storage compatibility

not relevant

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Further information on storage conditions

not relevant

7.3. Specific end use(s)

refer to chapter 1.

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

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
7440-50-8	Copper, dusts and mists (as Cu)	-	1		TWA (8 h)	WEL
		-	2		STEL (15 min)	WEL

Additional advice on limit values

Under normal conditions, the product is hermetically sealed.

8.2. Exposure controls**Appropriate engineering controls**

No special measures are necessary.

Protective and hygiene measures

No special measures are necessary.

Eye/face protection

Eye protection: not required.

Under normal conditions, the product is hermetically sealed.

Hand protection

Hand protection: not required.

Under normal conditions, the product is hermetically sealed.

Respiratory protection

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

Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.

Environmental exposure controls

No special precautionary measures are necessary.

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

Physical state: solid
 Colour: not applicable
 Odour: not applicable

Test method

pH-Value: not applicable

Changes in the physical state

Initial boiling point and boiling range: not applicable not applicable

Flash point: not applicable

Explosive properties

not applicable

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Lower explosion limits: not applicable
Upper explosion limits: not applicable
Ignition temperature: not applicable

Oxidizing properties

In the event of a damaged container. If material escapes: Self-heating substances and mixtures May cause fire.

Vapour pressure: not applicable
Water solubility: not applicable
Viscosity / dynamic: not applicable
Solvent content: 0%

9.2. Other information

Solid content: not applicable

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

No information available.

10.4. Conditions to avoid

Protect against: UV-radiation/sunlight. heat.

10.5. Incompatible materials

Substances and mixtures which, in contact with water, emit flammable gases. Combustible substance. Oxidizing agents. Emission of air/oxygen.

10.6. Hazardous decomposition products

Can be released in case of fire: Gas/vapours, harmful.

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.

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CAS No	Chemical name			
	Exposure route	Dose	Species	Source
1317-38-0	Copper oxide			
	oral	LD50 >2500 mg/kg	Rat	ECHA dossier
	dermal	LD50 >2000 mg/kg	Rat	ECHA dossier
1304-28-5	Bariumoxide			
	oral	ATE 500 mg/kg		
	inhalative vapour	ATE 11 mg/l		
	inhalative aerosol	ATE 1,5 mg/l		
1314-13-2	zinc oxide			
	oral	LD50 >5000 mg/kg	Rat	ECHA Dossier
	dermal	LD50 >2000 mg/kg	Rat	ECHA Dossier
	inhalative (4 h) aerosol	LC50 >5,7 mg/l	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.

Copper oxide: no danger of sensitization. literature information: ECHA Dossier

Carcinogenic/mutagenic/toxic effects for reproduction

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

Copper oxide: Ames test negative. 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.

No information available.

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**

No data available.

12.2. Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

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

12.6. Other adverse effects

No data available.

Further information

Do not allow to enter into surface water or drains.

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SECTION 13: Disposal considerations**13.1. Waste treatment methods****Advice on disposal**

Must not be disposed with household waste.
Refer to manufacturer/supplier for information on recovery/recycling.

Contaminated packaging

not relevant

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

<u>14.1. UN number:</u>	UN 3190
<u>14.2. UN proper shipping name:</u>	SELF-HEATING SOLID, INORGANIC, N.O.S. (Activated copper oxide)
<u>14.3. Transport hazard class(es):</u>	4.2
<u>14.4. Packing group:</u>	II
Hazard label:	4.2



Classification code:	S4
Special Provisions:	274
Limited quantity:	0
Excepted quantity:	E2
Transport category:	2
Hazard No:	40
Tunnel restriction code:	D/E

Inland waterways transport (ADN)

<u>14.1. UN number:</u>	UN 3190
<u>14.2. UN proper shipping name:</u>	SELF-HEATING SOLID, INORGANIC, N.O.S. (Activated copper oxide)
<u>14.3. Transport hazard class(es):</u>	4.2
<u>14.4. Packing group:</u>	II
Hazard label:	4.2



Classification code:	S4
Special Provisions:	274
Limited quantity:	0
Excepted quantity:	E2

Marine transport (IMDG)

<u>14.1. UN number:</u>	UN 3190
<u>14.2. UN proper shipping name:</u>	SELF-HEATING SOLID, INORGANIC, N.O.S. (Activated copper oxide)
<u>14.3. Transport hazard class(es):</u>	4.2
<u>14.4. Packing group:</u>	II
Hazard label:	4.2

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Marine pollutant:	No
Special Provisions:	274
Limited quantity:	0
Excepted quantity:	E2
EmS:	F-A, S-J

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:	UN 3190
14.2. UN proper shipping name:	SELF-HEATING SOLID, INORGANIC, N.O.S. (Activated copper oxide)
14.3. Transport hazard class(es):	4.2
14.4. Packing group:	II
Hazard label:	4.2



Special Provisions:	A3 A803
Limited quantity Passenger:	Forbidden
Passenger LQ:	Forbidden
Excepted quantity:	E2
IATA-packing instructions - Passenger:	467
IATA-max. quantity - Passenger:	15 kg
IATA-packing instructions - Cargo:	470
IATA-max. quantity - Cargo:	50 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: yes



Danger releasing substance: Copper oxide

14.6. Special precautions for user

refer to chapter 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):	0%
2004/42/EC (VOC):	0 g / L
Information according to 2012/18/EU (SEVESO III):	Not subject to 2012/18/EU (SEVESO III)

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

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

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15.2. Chemical safety assessment

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

SECTION 16: Other information**Changes**

Rev. 1,0 Initial release 23.04.2014

Rev. 1,1 Changes in chapter: 2, 7, 9, 10, 14, 15,16

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route

CAS Chemical Abstracts Service

DNEL: Derived No Effect Level

IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

International Carriage of Dangerous Goods by Road)

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: Concerning the International Transport of Dangerous Goods by Rail)

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 für Gefahrstoffe

TSCA: Toxic Substances Control Act

VOC: Volatile Organic Compounds

VwVwS: Verwaltungsvorschrift wassergefährdender Stoffe

WGK: Wassergefährdungsklasse

Relevant H and EUH statements (number and full text)

H251 Self-heating: may catch fire.

H302 Harmful if swallowed.

H332 Harmful if inhaled.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

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.

The above information describes exclusively the safety requirements of the product and is based on our

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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.)