

Printing date: 21.12.2022

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Version number 3 (replaces version 2)

Revision: 21.12.2022

SECTION 1: Identification of the substance/mixture and of the company	v/undertaking
· 1.1 Product identifier	
• Trade name: <u>Colour gold conc. FG 300 RT brightgold, 5 g Au/l</u> Farbgoldkonz. FG 300 RT hellgelb, 5 g Au/l	
Article number: 81020717 81020724 = 200 ml	
• 1.2 Relevant identified uses of the substance or mixture and uses advised against Not approved for private consumers.	
Application of the substance / the mixture Galvanic bath	
• 1.3 Details of the supplier of the safety data sheet • Manufacturer/Supplier:	
Heimerle + Meule GmbH Dennigstrasse 16 D-75179 Pforzheim	
Telefon +49 (0) 7231 940-0 Telefax +49 (0) 7231 940-2199 www.heimerle-meule.com	
· Further information obtainable from:	
Abteilung BASU - Bau/Arbeitssicherheit/Umwelt Department BASU - Construction / Occupational Safety / Environment sds@heimerle-meule.com	
IATA - 24h Emergency Contact - IATA - 24h Emergency Contact - (Dangerous goods emergency number) +49 172 739 6970	
· 1.4 Emergency telephone number:	
DEUTSCHLAND - GERMANY: Vergiftungs-Informations-Zentrale Freiburg, ++49 761 19240 (24 h) (Poisoning Information Center) GREAT BRITAIN:	
National Poisons Information Service +44 121 507 4123 Members of the public seeking specific information on poisons should contact: In England and Wales: NHS 111 - dial 111 - In Scotland: NHS 24 - dial 111 IRELAND	
+353 1 809 2166 (7 Days 8 am -10 pm) Healthcare Professionals: +353 1 809 2566 <u>ITALY:</u>	
Istituto Superiore di Sanità (ISS) +3906499906140 Centro Antiveleni Bergamo: +39 800 883300	
Firenze +39 055 794 7819 Milano: +39 055 794 7819 Roma +39 06 68593726	
Roma +39 06 49978000 Roma +39 06 3954343 <u>KROATIA - REPUBLIKA HRVATSKA:</u>	
(+385) 01 2348 342 <u>ESTLAND - ESTONIA:</u> Tervisemeti Mürgistusteabekeskuse	
National (24/7): 16662 (+372) 7943 794	
$\frac{(+5/2)}{4} \frac{945}{94}$ $LETTLAND - LATVIA:$	
	(Contd. on page 2) GB-



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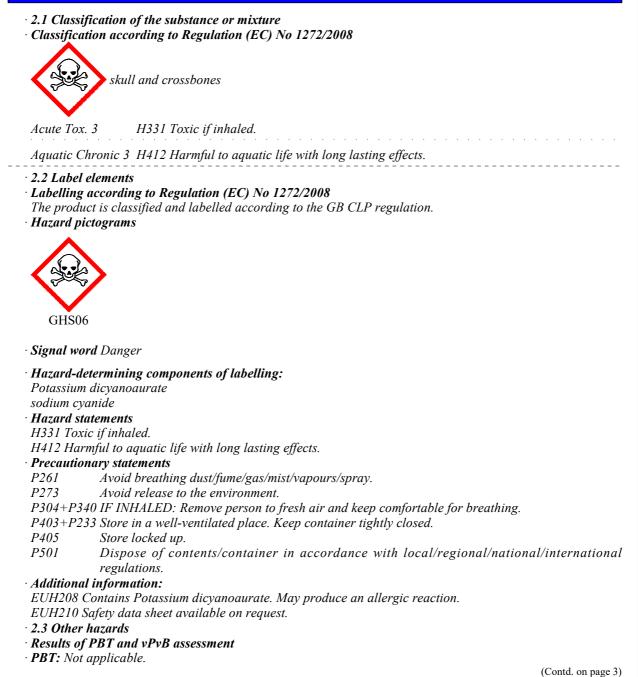
Version number 3 (replaces version 2)

Trade name: Colour gold conc. FG 300 RT brightgold, 5 g Au/l Farbgoldkonz. FG 300 RT hellgelb, 5 g Au/l

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Valsts Toksikoloģijas centrs, Saindēšanās un zāļu informācijas centrs, (24h) 112 (24h) +371 67042473 <u>LITAUEN - LIETUVOS RESPUBLIKA:</u> Poison Information Bureau (24/7), Tel.: +8 5 236 20 52 Apsinuodijimų informacijos biuras

SECTION 2: Hazards identification



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Trade name: Colour gold conc. FG 300 RT brightgold, 5 g Au/l Farbgoldkonz. FG 300 RT hellgelb, 5 g Au/l

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· vPvB: Not applicable.

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SECTION 3: Composition/information on ingredients

· 3.2 Mixtures

 $\cdot \textit{Description: Mixture of substances listed below with nonhazardous additions.}$

CAS: 13967-50-5	Potassium dicyanoaurate	0.733%
EINECS: 237-748-4	Acute Tox. 2, H300; Acute Tox. 2, H330	
Reg.nr.: 01-2120130777-52	left Met. Corr.1, H290; Eye Dam. 1, H318	
	Aquatic Acute 1, H400; Aquatic Chronic 1, H410	
	(1) Skin Irrit. 2, H315; Skin Sens. 1, H317	
CAS: 143-33-9	sodium cyanide; Sodium cyanide 96/98 %	≥0.1-<0.25%
EINECS: 205-599-4 Index number: 006-007-00-5	Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330	
	♦ Eye Dam. 1, H318	
	Aquatic Acute 1, H400; Aquatic Chronic 1, H410	
	(1) Skin Irrit. 2, H315	
	<i>ĚUH032</i>	
CAS: 544-92-3	copper cyanide	<0.1%
EINECS: 208-883-6 RTECS: GL 7150000	Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330	
	Aquatic Acute 1, H400; Aquatic Chronic 1, H410 EUH032	
CAS: 506-61-6	potassium dicyanoargentate	≥0.025-<0.1%
Reg.nr.: 01-2120753799-33-0001	Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330	
	♦ Met. Corr.1, H290; Skin Corr. 1A, H314; Eye Dam. 1, H318	
	Aquatic Acute 1, H400; Aquatic Chronic 1, H410 EUH032	
CAS: 13815-17-3	Tetraamminpalladium(II)-chlorid	≥0.025-<0.1%
	Wet. Corr.1, H290	
	Aquatic Acute 1, H400 ($M=1$); Aquatic Chronic 1,	
	H410 (M=10)	
	♦ Acute Tox. 4, H302; Eye Irrit. 2, H319; Skin Sens. 1, H317	

SECTION 4: First aid measures

• 4.1 Description of first aid measures

• General information:

Immediately remove any clothing soiled by the product.

- Remove breathing equipment only after contaminated clothing have been completely removed.
- In case of irregular breathing or respiratory arrest provide artificial respiration.
- Personal protection for the First Aider.

Take affected persons out of danger area and lay down.

Involve doctor immediately after a accident or unwell

• After inhalation:

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

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• After skin contact:

Immediately wash with water and soap and rinse thoroughly.

- If skin irritation continues, consult a doctor.
- After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- After swallowing:

Drink plenty of water and provide fresh air. Call for a doctor immediately. A person vomiting while laying on their back should be turned onto their side.

- Rinse out mouth and then drink plenty of water.
- 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.

• 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

- 5.1 Extinguishing media
- Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.
- · For safety reasons unsuitable extinguishing agents:



Water with full jet

- 5.2 Special hazards arising from the substance or mixture No further relevant information available.
- 5.3 Advice for firefighters
- · Protective equipment:

Mount respiratory protective device.



Wear self-contained respiratory protective device.

Beware: Filter masks provide protection for a short period of time only. They should only be used in exceptional cases, that is if a small amount of the substance has spilled out or in order to fight spillages and fire

· Additional information

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations. Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

Use respiratory protective device against the effects of fumes/dust/aerosol.

Only handle and refill product in closed systems.

- · 6.2 Environmental precautions:
- Do not allow product to reach sewage system or any water course.
- Inform respective authorities in case of seepage into water course or sewage system.
- Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

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• 6.3 Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.

6.4 Reference to other sections
 See Section 7 for information on safe handling.
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling Keep receptacles tightly sealed. Ensure good ventilation/exhaustion at the workplace. Open and handle receptacle with care. he usual precautionary measures are to be adhered to when handling chemicals. Prevent formation of aerosols. Wear suitable respiratory protective device when decanting larger quantities without extractor facilities. Do not dry clean dust covered objects and floors. Wash thoroughly with plenty of water.
Information about fire - and explosion protection: Keep respiratory protective device available.

· 7.2 Conditions for safe storage, including any incompatibilities

- · Storage:
- **Requirements to be met by storerooms and receptacles:** Observe official regulations on storing packagings . Observe official regulations on storing packagings . Prevent any seepage into the ground.
- Information about storage in one common storage facility: Do not store together with acids. Store away from foodstuffs.
- Further information about storage conditions: Keep container tightly sealed.



Store under lock and key and with access restricted to technical experts or their assistants only.

Store under lock and key and out of the reach of children. • *Storage class:* 6.1 D

• 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

 • Ingredients with limit values that require monitoring at the workplace:

 CAS: 13967-50-5 Potassium dicyanoaurate

 WEL (Great Britain)
 Long-term value: 5 mg/m³ as CN; Sk

 MAK (Germany)
 Long-term value: 2E mg/m³ als CN

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in case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposu use self-contained respiratory protective device. Beware: Filter masks provide protection for a short period of time only. They should only be used exceptional cases, that is if a small amount of the substance has spilled out or in order to fight spillages ar fire. according EN 14387 according to EN 143 Hand protection Protective gloves	C115. 1+5-55-7 Souran Cy	(Contd. of page
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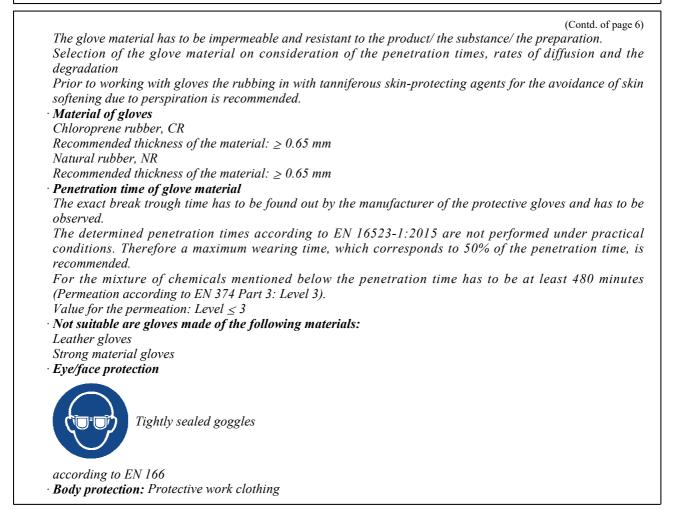


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Version number 3 (replaces version 2)

Trade name: Colour gold conc. FG 300 RT brightgold, 5 g Au/l Farbgoldkonz. FG 300 RT hellgelb, 5 g Au/l



SECTION 9: Physical and chemical properties

• General Information		
· Physical state	Fluid	
· Colour:	Colourless	
Odour:	Odourless	
Odour threshold:	Not determined.	
• Melting point/freezing point:	Undetermined.	
· Boiling point or initial boiling point and	l boiling	
range	100°C (212°F)	
· Flammability	Not applicable.	
Lower and upper explosion limit		
· Lower:	Not determined.	
· Upper:	Not determined.	
Flash point:	Not applicable.	
Decomposition temperature:	Not determined.	
• pH at 20°C (68°F)	9–10	
Viscosity:		
Kinematic viscosity	Not determined.	
Dynamic:	Not determined.	



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	(Contd. of page
Solubility	
water:	Fully miscible.
Partition coefficient n-octanol/water (log value)	Not determined.
Vapour pressure:	Not determined.
Density and/or relative density	
Density at 20°C (68°F):	1.12 g/cm ³ (9.35 lbs/gal)
Relative density	Not determined.
Vapour density	Not determined.
9.2 Other information	0.00 %
Appearance:	
Form:	Fluid
Important information on protection of health an	d
environment, and on safety.	
Auto-ignition temperature:	Product is not selfigniting.
Explosive properties:	Product does not present an explosion hazard.
Solvent content:	
Solids content:	<i>ca.</i> 5 %
Change in condition	
Evaporation rate	Not determined.
Information with regard to physical hazard classe	25
Explosives	Void
Flammable gases	Void
Aerosols	Void
Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	Void
Flammable solids	Void
Self-reactive substances and mixtures	Void
Pyrophoric liquids	Void
Pyrophoric solids	Void
Self-heating substances and mixtures	Void
Substances and mixtures, which emit flammable	
gases in contact with water	Void
Oxidising liquids	Void
Oxidising solids	Void
Organic peroxides	Void
Corrosive to metals	Void
Desensitised explosives	Void

SECTION 10: Stability and reactivity

· 10.1 Reactivity No further relevant information available.

· 10.2 Chemical stability

• Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

· 10.3 Possibility of hazardous reactions Reacts with acids, alkalis and oxidising agents.

• 10.4 Conditions to avoid No further relevant information available.

• 10.5 Incompatible materials: No further relevant information available.

• 10.6 Hazardous decomposition products: No dangerous decomposition products known.

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Acute toxi LD/LC50	•	vant for classification:
ATE (Acu	te Toxicity	Estimates)
Oral	LD50	2,312 mg/kg (Rat)
Dermal	LD50	6,696 mg/kg (Kanninchen)
Inhalative	LC50/4 h	5.9 mg/l
CAS: 1396	67-50-5 Po	tassium dicyanoaurate
Oral	LD50	29 mg/kg (Rat)
Inhalative	LC50/4 h	0.05 mg/l /(ATE) (rat)
CAS: 143-	33-9 sodiu	
Oral	LD50	6.4 mg/kg (Rat)
	TD Lo	0.7 mg/kg (Human)
	LD Lo	2.8 mg/kg (Human)
Dermal	LD50	7.7 mg/kg (Kanninchen)
Inhalative	LC50/4 h	0.05 mg/l (ATE)
CAS: 544-	92-3 coppe	er cyanide
Oral	LD50	5 mg/kg (ATE)
Dermal	LD50	5 mg/kg (ATE)
Inhalative	LC50/4 h	0.05 mg/l (ATE)
CAS: 506-	61-6 potas	sium dicyanoargentate
Oral	LD50	5 mg/kg (ATE)
Dermal	LD50	20.9 mg/kg (Rat)
Inhalative	LC50/4 h	0.05 mg/l (ATE)
CAS: 1381	5-17-3 Te	traamminpalladium(II)-chlorid
Oral	LD50	500 mg/kg (ATE)
11.2 Infor	mation on	other hazards

SECTION 12: Ecological information

· 12.1 Toxicity

• Aquatic toxicity: No further relevant information available.

- 12.2 Persistence and degradability No further relevant information available.
- 12.3 Bioaccumulative potential No further relevant information available.
- 12.4 Mobility in soil No further relevant information available.
- 12.5 Results of PBT and vPvB assessment Not applicable.

• *PBT:* Not applicable.

• **vPvB:** Not applicable.

- · 12.6 Endocrine disrupting properties
- The product does not contain substances with endocrine disrupting properties.

• 12.7 Other adverse effects

• Remark: Harmful to fish

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· Additional ecological information:

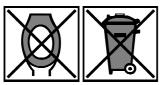
· General notes:

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Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground. Harmful to aquatic organisms

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- · Recommendation



Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Contact manufacturer for recycling information.

• Waste disposal key:

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

· Uncleaned packaging:

· Recommendation:

Disposal must be made according to official regulations.

Packaging which is uncleaned or soiled with product remains is to be treated like the product itself Packaging free of product remains is to be supplied refuse for recycling. Only if no adequate collecting system is available, they may be disposed of through the domestic rubbish

• Recommended cleansing agents: Water, if necessary together with cleansing agents.

14.1 UN number or ID number ADR, IMDG, IATA	UN1935
14.2 UN proper shipping name ADR	UN1935 CYANIDE SOLUTION, N.O.S. (Potassiun dicyanoaurate, SODIUM CYANIDE)
IMDG, IATA	CÝANIDE SOLUTION, N.O.S. (Potassiun dicyanoaurate, SODIUM CYANIDE)
14.3 Transport hazard class(es)	
ADR, IMDG, IATA	
6	
Class	6.1 Toxic substances.
Label	6.1
14.4 Packing group	
ADR, IMDĞ, IATA	III



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	(Contd. of page 2
14.5 Environmental hazards:	Not applicable.
14.6 Special precautions for user	Warning: Toxic substances.
Hazard identification number (Kemler code):	60
EMS Number:	F-A,S-A
Segregation groups	(SGG6) Cyanides
Stowage Category	A
Stowage Code	SW2 Clear of living quarters.
Segregation Code	SG35 Stow "separated from" SGG1-acids
14.7 Maritime transport in bulk according to IM	10
instruments	Not applicable.
Transport/Additional information:	
ADR	
Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: E1
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 1000 ml
Transport category	2
IMDG	
Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: E1
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 1000 ml
ΙΑΤΑ	
Remarks:	
	24h emergency contact -
	(Dangerous goods emergency number)
	+49 172 739 6970
UN "Model Regulation":	UN 1935 CYANIDE SOLUTION, N.O.S. (POTASSIU
5	DICYANOAURATE, SODIUM CYANIDE), 6.1, III

SECTION 15: Regulatory information

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

COUNCIL DIRECTIVE 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work (fourteenth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC)

DIRECTIVE 2012/18/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC

· GADSL - Global Automotive Declarable Substance List		
CAS: 13815-17-3	Tetraamminpalladium(II)-chlorid	

D(FI)

· Directive 2012/18/EU

· Named dangerous substances - ANNEX I None of the ingredients is listed.

· Seveso category H2 ACUTE TOXIC

• Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t

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· National regulations:

• Technical instructions (air):

Class	Share in %
III	0.2

· Waterhazard class: .

· Other regulations, limitations and prohibitive regulations -

· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

• Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Reasons for revise

If necessary, this saftey data sheet can revised according to legal guidelines.

Our current version for your reference is available on our website www.heimerle-meule.com

· Relevant phrases

- H290 May be corrosive to metals.
- H300 Fatal if swallowed.
- H302 Harmful if swallowed.
- H310 Fatal in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H330 Fatal if inhaled.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.

EUH032 Contact with acids liberates very toxic gas.

· Department issuing SDS:

Abteilung BASU - Bau/Arbeitssicherheit/Umwelt Department BASU - Construction / Occupational Safety / Environment

sds@heimerle-meule.com

· Contact:

Herr Thomas Knuth thomas.knuth@heimerle-meule.com sds@heimerle-meule.com

 Abbreviations and acronyms: AwSV: Ordinance on facilities for handling water-polluting substances (German regulation). TRGS: Technical rules for hazardous substances (German regulation) ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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(Contd. of page 12) CAS: Chemical Abstracts Service (division of the American Chemical Society) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative Met. Corr.1: Corrosive to metals - Category 1 Acute Tox. 2: Acute toxicity - Category 2 Acute Tox. 4: Acute toxicity - Category 4 Acute Tox. 1: Acute toxicity - Category 1 Acute Tox. 3: Acute toxicity - Category 3 Skin Corr. 1A: Skin corrosion/irritation - Category 1A Skin Irrit. 2: Skin corrosion/irritation – Category 2 Eye Dam. 1: Serious eye damage/eye irritation - Category 1 Eye Irrit. 2: Serious eye damage/eye irritation - Category 2 Skin Sens. 1: Skin sensitisation – Category 1 Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard - Category 1 Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard - Category 1 Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard - Category 3 • * Data compared to the previous version altered.

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