

Color reference set GG contains color reference solutions GG1 - GG7, 100 ml each for coloring liquid Revision date: 26.01.2024 Product code: 26250 Page 1 of 12

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

1.1. Product identifier

Color reference set GG contains color reference solutions GG1 - GG7, 100 ml each for coloring liquid

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

Use of the substance/mixture

Laboratory chemicals

Industrial uses: Uses of substances as such or in preparations at industrial sites

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

Company name:	AnalytiChem GmbH	
	ACD	
Street:	Stempelstraße 6	
Place:	D-47167 Duisburg	
Telephone:	0203/5194-0	Telefax: 0203/5194-290
E-mail:	info@analytichem.de	
Contact person:	Abteilung Produktsicherheit	Telephone: 0203/5194-107/117
E-mail:	produktsicherheit@analytichem.de	
Internet:	www.analytichem.de	
Responsible Department:	Abteilung Produktsicherheit	
<u>1.4. Emergency telephone</u> number:	For Hazardous Materials [or Dangerous Exposure, or Accident Call CHEMTREC 1-800-424-9300 Outside USA and Cana accepted)	C Day or Night Within USA and Canada:

Further Information

This product is a mixture. REACH Registration Number see section 3.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Met. Corr. 1; H290 Eye Irrit. 2; H319 Skin Sens. 1; H317 Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard components for labelling

Iron(III) chloride hexahydrate

Signal word:







Color reference set GG contains color reference solutions GG1 - GG7, 100 ml each for

according to Regulation (EC) No 1907/2006

coloring liquid

Revision date: 26.01.2024	Product code: 26250	Page 2 of 12				
Hazard statements						
H290	May be corrosive to metals.					
H317	May cause an allergic skin reaction.					
H319	Causes serious eye irritation.					
H412	Harmful to aquatic life with long lasting effects.					
Precautionary stateme	nts					
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.					
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.					
P302+P352	IF ON SKIN: Wash with plenty of water.					

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P362+P364 Take off contaminated clothing and wash it before reuse.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Mixtures in aqueous solution

Relevant ingredients

CAS No	Chemical name	Quantity			
	EC No	Index No	REACH No		
	Classification (Regulati				
7647-01-0	Hydrochloric acid	1 - < 5 %			
	231-595-7	017-002-01-X	01-2119484862-27		
	Skin Corr. 1B, STOT S	•			
10025-77-1	Iron(III) chloride hexah	1 - < 5 %			
	231-729-4		01-2119497998-05		
	Acute Tox. 4, Skin Irrit.	2, Eye Dam. 1, Skin Sens. 1; H302 H	315 H318 H317		
7758-99-8	copper sulphate pental	hydrate		< 0.1 %	
	231-847-6	029-023-00-4	01-2119520566-40		
	Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 1; H302 H315 H318 H400 H410				

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

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity	
	Specific Conc. Limits, M-factors and ATE			
7647-01-0	231-595-7	Hydrochloric acid	1 - < 5 %	
	· · · · · ·	H314: >= 25 - 100 Skin Irrit. 2; H315: >= 10 - < 25 Eye Irrit. 2; H319: >= 10 - < 3; H335: >= 10 - 100		
10025-77-1	231-729-4	Iron(III) chloride hexahydrate	1 - < 5 %	
	dermal: LD50 :	= > 2000 mg/kg; oral: LD50 = 500 mg/kg		
7758-99-8	231-847-6	copper sulphate pentahydrate	< 0.1 %	
	dermal: LD50 = Aquatic Chronic	= > 2000 mg/kg; oral: ATE 481 mg/kg Aquatic Acute 1; H400: M=10 c 1; H410: M=1		

Further Information

No data available



Color reference set GG contains color reference solutions GG1 - GG7, 100 ml each for

coloring liquid

Revision date: 26.01.2024

Product code: 26250

Page 3 of 12

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

No data available

After inhalation

Provide fresh air.

Call a doctor if you feel unwell.

After contact with skin

Wash immediately with: Water Take off immediately all contaminated clothing and wash it before reuse. In case of skin irritation, consult a physician.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Rinse mouth immediately and drink plenty of water. Call a physician immediately.

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

Irritant

Allergic reactions

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

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Non-combustible liquids Hazardous combustion products In case of fire may be liberated: Metal oxide smoke, toxic Hydrogen chloride (HCI)

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus. Avoid contact with skin, eyes and clothes.

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

General advice

Corrosive to metals.



Safety Data Sheet

according to Regulation (EC) No 1907/2006

Color reference set GG contains color reference solutions GG1 - GG7, 100 ml each for

coloring liquid

Revision date: 26.01.2024

Product code: 26250

Page 4 of 12

For non-emergency personnel

Provide adequate ventilation. Use personal protection equipment. Avoid contact with skin, eyes and clothes. Remove persons to safety. Emergency procedures Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For containment

Cover drains.

Prevent spread over a wide area (e.g. by containment or oil barriers). Collect in closed and suitable containers for disposal. Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Provide adequate ventilation. Do not breathe dust/fume/gas/mist/vapours/spray. Wear breathing apparatus if exposed to vapours/dusts/aerosols.

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

Read label before use. Handle and open container with care. When using do not eat, drink, smoke, sniff. Use personal protection equipment. Provide adequate ventilation. Avoid contact with skin, eyes and clothes. Do not breathe vapour/aerosol.

Advice on protection against fire and explosion

Usual measures for fire prevention.

Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs. Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink. Avoid: aerosol or mist formation Do not breathe vapour/aerosol.

Further information on handling

Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. Take off immediately all contaminated clothing and wash it before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed.



Color reference set GG contains color reference solutions GG1 - GG7, 100 ml each for

coloring liquid

Revision date: 26.01.2024

Product code: 26250

Page 5 of 12

Further information on storage conditions

Store in a dry place.

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

CAS No	Substance	ppm	mg/m³	fib/cm³	Category	Origin
7647-01-0	Hydrogen chloride	5	8		TWA (8 h)	
		10	15		STEL (15 min)	

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
7647-01-0	Hydrochloric acid			
Worker DNEL,	long-term	inhalation	local	8 mg/m³
Worker DNEL,	acute	inhalation	local	15 mg/m³
Consumer DN	EL, long-term	inhalation	local	8 mg/m³
Consumer DNEL, acute inhalation local 15 mg/m ³				15 mg/m³
10025-77-1	Iron(III) chloride hexahydrate			
Worker DNEL,	long-term	dermal	systemic	2,8 mg/kg bw/day
Consumer DN	EL, long-term	dermal	systemic	1,4 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,28 mg/kg bw/day
Consumer DN	EL, acute	oral	systemic	20 mg/kg bw/day

PNEC values

CAS No	Substance					
Environmental compartment Value						
7758-99-8	0-8 copper sulphate pentahydrate					
Freshwater	0,0078 mg/l					
Marine water	0,0052 mg/l					
Freshwater sediment 87 mg/kg						
Marine sedime	676 mg/kg					
Micro-organisms in sewage treatment plants (STP) 0,2						
Soil	Soil					

8.2. Exposure controls

Appropriate engineering controls

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

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Individual protection measures, such as personal protective equipment



Color reference set GG contains color reference solutions GG1 - GG7, 100 ml each for

Revision date: 26.01.2024

coloring liquid

Page 6 of 12

Product code: 26250

Eve/face protection

goggles Wear eye/face protection.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. 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.

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

By long-term hand contact

Trade name/designation:KCL 741 Dermatril® LRecommended material:NBR (Nitrile rubber) 0,11 mmWearing time with permanent contact:> 480 min

By short-term hand contact Trade name/designation: KCL 741 Dermatril® L Recommended material: NBR (Nitrile rubber) 0,11 mm Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet<(>,<)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin protection

Wear suitable protective clothing. Take off immediately all contaminated clothing.

Wash hands before breaks and after work.

Respiratory protection

Respiratory protection necessary at: aerosol or mist formation

Environmental exposure controls

Do not empty into drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid	
Colour:	clear	
Odour:	odourless	
Odour threshold:	No data available	
Melting point/freezing point:		No data available
Boiling point or initial boiling point and		No data available
boiling range:		
Flammability:		No data available
Lower explosion limits:		No data available
Upper explosion limits:		No data available
Flash point:		No data available
Auto-ignition temperature:		No data available



Color reference set GG contains color reference solutions GG1 - GG7, 100 ml each for						
	coloring liquid					
Revision date: 26.01.2024	Product code: 26250	Page 7 of 12				
Decomposition temperature:	No data available					
pH-Value:	acidic					
Viscosity / kinematic:	No data available					
Water solubility:	completely miscible					
Solubility in other solvents						
No data available						
Dissolution rate:	No data available					
Partition coefficient n-octanol/water:	No data available					
Dispersion stability:	No data available					
Vapour pressure:	No data available					
Vapour pressure:	No data available					
Density:	No data available					
Relative density:	No data available					
Bulk density:	No data available					
Relative vapour density:	No data available					
Particle characteristics:	No data available					
9.2. Other information						
Information with regard to physical hazard classes	8					
Explosive properties						
No data available						
Sustaining combustion:	No data available					
Self-ignition temperature						
Solid:	No data available					
Gas:	No data available					
Oxidizing properties						
No data available						
Other safety characteristics						
Evaporation rate:	No data available					
Solvent separation test:	No data available					
Solvent content:	0					
Solid content:	0					
Sublimation point:	No data available					
Softening point:	No data available					
Pour point:	No data available					
No data available:						
Viscosity / dynamic:	No data available					
Flow time:	No data available					
Further Information						
Corrosive to metals						

SECTION 10: Stability and reactivity

10.1. Reactivity

Corrosive to metals

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No data available

10.4. Conditions to avoid No data available



Color reference set GG contains color reference solutions GG1 - GG7, 100 ml each for

according to Regulation (EC) No 1907/2006

coloring liquid

Revision date: 26.01.2024

Product code: 26250

Page 8 of 12

10.5. Incompatible materials

Metal

10.6. Hazardous decomposition products

In case of fire may be liberated: SECTION 5: Firefighting measures

Further information

No data available

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicocinetics, metabolism and distribution

There are no data available on the preparation/mixture itself.

Acute toxicity

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

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name					
	Exposure route	Dose	Species	Source	Method	
10025-77-1	Iron(III) chloride hexahydrate					
	oral	LD50 500 mg/kg	Rat	Study report (2004)	OECD Guideline 423	
	dermal	LD50 > 2000 mg/kg	Rat	Study report (2004)	OECD Guideline 402	
7758-99-8	copper sulphate pentahyo	Irate				
	oral	ATE 481 mg/kg				
	dermal	LD50 > 2000 mg/kg	Rat	Study report (1993)	OECD Guideline 402	

Irritation and corrosivity

Causes serious eye irritation.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

May cause an allergic skin reaction. (Iron(III) chloride hexahydrate)

Carcinogenic/mutagenic/toxic effects for reproduction

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

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.

Aspiration hazard

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

Information on likely routes of exposure

There are no data available on the preparation/mixture itself.

Specific effects in experiment on an animal

There are no data available on the preparation/mixture itself.



Color reference set GG contains color reference solutions GG1 - GG7, 100 ml each for coloring liquid							
Revision dat	te: 26.01.2024			-	de: 26250		Page 9 of ⁻
	al information on tests e are no data available on	the prepa	ration/mixtu	re itself.			
Practical	l experience e are no data available on						
	ation on other hazards						
	ne disrupting properties e are no data available on	the prepa	ration/mixtu	ra itealf			
Other inf	formation e are no data available on						
There	e are no data available on 12: Ecological information		ration/mixtu	re itself.			
12.1. Toxicit Harm CAS No	ty nful to aquatic life with long Chemical name	g lasting ef	fects.				
OAO NO	Aquatic toxicity	Dose		[h] [d]	Species	Source	Method
7647-01-0	Hydrochloric acid	•		1.111.1	1 '		
	Acute fish toxicity	LC50	862 mg/l	96 h	Leuciscus idus		
7758-99-8	copper sulphate pentahyo					•	
	Acute fish toxicity	LC50 mg/l	0,193	96 h	Pimephales promelas	Study report (1996)	measurements were conducted by standard
	Acute algae toxicity	ErC50 mg/l	0,152	72 h	Pseudokirchneriella subcapitata	Publication (2005)	OECD Guideline 201
	Acute crustacea toxicity	EC50 mg/l	0,007	48 h	Daphnia magna	Study report (1978)	- Test were conducted on Daphnia magna t
	Fish toxicity	NOEC mg/l	0,123	12 c	Atherinops affinis	Mar. Environ. Res. 31: 17-35 (1991)	Three tests are reported, designed to de
	Algae toxicity	NOEC mg/l	0,0102	19 c	other aquatic plant: giant kelp Macrocystis pyrife	Mar. Ecol. Prog. Ser. 68: 147 - 156 (199	Tests were conducted to determine the ef
	Crustacea toxicity	NOEC	0,033	14 c	Penaeus mergulensis	Bull. Environ.	The effects of

12.2. Persistence and degradability

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

12.3. Bioaccumulative potential

There are no data available on the mixture itself.

mg/l

BCF

CAS No	Chemical name	BCF	Species	Source
10025-77-1	Iron(III) chloride hexahydrate	-	Fish, Oreochromis mossambicus	Indian Journal of En
7758-99-8	copper sulphate pentahydrate	0,02 - 20	Crangon crangon	Symp. Biologica. Hun

and Penaeus

monodon

12.4. Mobility in soil

There are no data available on the mixture itself.

dissolved copper

on the g

Contain. Toxicol.

(1995)



Color reference set GG contains color reference solutions GG1 - GG7, 100 ml each for

coloring liquid

Revision date: 26.01.2024

Product code: 26250

Page 10 of 12

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. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

Discharge into the environment must be avoided.

Further information

Do not empty into drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste. Send to a physico-chemical treatment facility under observation of official regulations. Do not empty into drains.

Contaminated packaging

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

SECTION 14: Transport information

Land transport (ADR/RID)	
14.1. UN number or ID number:	UN 1789
14.2. UN proper shipping name:	HYDROCHLORIC ACID
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8
Classification code:	C1
Special Provisions:	520
Limited quantity:	5 L
Excepted quantity:	E1
Transport category:	3
Hazard No:	80
Tunnel restriction code:	E
Inland waterways transport (ADN)	
14.1. UN number or ID number:	UN 1789
14.2. UN proper shipping name:	HYDROCHLORIC ACID
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8
Classification code:	C1
Special Provisions:	520
Limited quantity:	5 L
Excepted quantity:	E1
Marine transport (IMDG)	
14.1. UN number or ID number:	UN 1789
14.2. UN proper shipping name:	HYDROCHLORIC ACID
14.3. Transport hazard class(es):	8
14.4. Packing group:	111



CC7 400

Safety Data Sheet

according to Regulation (EC) No 1907/2006

color reference colutions CC1

Devision data: 26.01.2024	coloring liquid	Dave 11 of 1
Revision date: 26.01.2024	Product code: 26250	Page 11 of 1
Hazard label:	8	
Special Provisions:	223	
Limited quantity:	5 L	
Excepted quantity:	E1	
EmS:	F-A, S-B	
Air transport (ICAO-TI/IATA-DGR)		
14.1. UN number or ID number:		
14.2. UN proper shipping name:	HYDROCHLORIC ACID	
14.3. Transport hazard class(es):	8	
14.4. Packing group:		
Hazard label:	8	
Special Provisions:	A3 A803	
Limited quantity Passenger:	1 L	
Passenger LQ:	Y841	
Excepted quantity:	E1	
IATA-packing instructions - Passenger:	852	
IATA-max. quantity - Passenger:	5 L	
IATA-packing instructions - Cargo:	856 60 L	
IATA-max. quantity - Cargo:	80 L	
14.5. Environmental hazards		
ENVIRONMENTALLY HAZARDOUS:	No	
SECTION 15: Regulatory information		
45.4. Sefety, health and anyiranmental regul	ations/legislation encoding for the substance or minture	
	ations/legislation specific for the substance or mixture	
EU regulatory information		
Restrictions on use (REACH, annex XVII):		
Entry 3, Entry 75		
Information consuling to Directive	Not subject to 2012/18/EU (SEVESO III)	
Information according to Directive		
2012/18/EU (SEVESO III):		
2012/18/EU (SEVESO III):		
•	2 - obviously hazardous to water	
2012/18/EU (SEVESO III): National regulatory information Water hazard class (D):	2 - obviously hazardous to water	
2012/18/EU (SEVESO III): National regulatory information	2 - obviously hazardous to water	

Abbreviations and acronyms

Met. Corr: Substance or mixture corrosive to metals Acute Tox: Acute toxicity Skin Corr: Skin corrosion Skin Irrit: Skin irritation Eye Dam: Eye damage Eye Irrit: Eye irritation Skin Sens: Skin sensitisation STOT SE: Specific target organ toxicity - single exposure Aquatic Acute: Acute aquatic hazard Aquatic Chronic: Chronic aquatic hazard



Color reference set GG contains color reference solutions GG1 - GG7, 100 ml each for

coloring liquid

Revision date: 26.01.2024

Product code: 26250

Page 12 of 12

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

Classification	Classification procedure
Met. Corr. 1; H290	On basis of test data
Eye Irrit. 2; H319	Calculation method
Skin Sens. 1; H317	Calculation method
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H290	May be corrosive to metals.
H302	Harmful if swallowed.
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.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Further 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. The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.

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