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

1.1 Product identifier

Trade name: MT8 Copper Toner
UFI: J440-F0W3-900C-K7MC

1.2 Relevant identified uses of the substance or mixture

Bleach for 2nd pass lith development

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Moersch Photochemie
Am Heideberg 48
50354 Hürth
Tel.: + 49(0)2233-943137
Fax: + 49(0)2233-943138
E-Mail: wolfgang@moersch-photochemie.de
www.moersch-photochemie.de

1.4 Emergency telephone number:

Poison Information Centre Berlin (Germany): +49 (0) 30 - 30686 790

SECTION 2: Hazards identification

2.1 Classification of the mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Section	Hazard Class	Category	Hazard Class and category	Hazard statement
3.10	Acute toxicity (oral)	4	Acute Tox. 4	H302
3.2	Skin corrosion/irritation	2	Skin Irrit. 2	H315
3.3	Serious eye damage/eye irritation	2	Eye Irrit. 2	H319
4.1A	Hazardous to the aquatic environment – acute hazard	1	Aquatic Acute 1	H400
4.1C	Hazardous to the aquatic environment – chronic hazard	1	Aquatic Chronic 1	H410

For full text of abbreviations: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

Spillage and fire water can cause pollution of watercourses.

2.2 Label elements

Labelling iaccording to Regulation (EC) No 1272/2008 (CLP)

Signal word Warning

Pictograms

GHS05, GHS07, GHS09

Hazard statements

H302	Harmful if swallowed
H315	Causes skin irritation
H318	Causes serious eye demage
H410	Very toxic to aquatic life with long lasting effects

Precautionary statements – prevention
P273 Avoid release to the environment
P280 Wear protective gloves

Precautionary statements – response

P302+P352	IF ON SKIN: Wash with plenty of water
P305+P351+P338 I	F IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

2.3 Other hazards
Results of PBT and vPvB assessment
According to the results of its assessment, this substance is not a PBT or a vPvB.
Endocrine disrupting properties
Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.

SECTION 3: Composition/information on ingredients

Chemical characterisation: Mixture
Contains:

Identifier	Components	Classification	% w/w

CAS No 7758-99-8 EC No 616-477-9 Index No 029-023-00-4	Copper (II) sulfate pentahydrate	Acute Tox. 4; Eye Dam. 1 Aquatic Acute 1; Aquatic Chronic 1	2,50 %
CAS-No 13746-66-2 EC No 237-323-3	Potassium hexacyanoferrat(III)	Eye Irrit. 2; Aquatic Chronic 2	2,5 %
CAS-No 6100-05-6 EC-No 212-755-5 REACH Reg. No. 01-2119457580-38-xxxx	Tri-Potassium citrate-monohydrate	not classified	30 %

SECTION 4: First aid measures

4.1 Description of first aid measures

General information
Take off contaminated clothing

After skin contact
Immediately rinse with water.

After eye contact
Rinse opened eye for several minutes under running water. If symptoms persist, consult an ophthalmologist.

After swallowing
Rinse mouth with water (only if the person is conscious). Call a doctor.

4.2 Most important symptoms and effects, both acute and delayed
Vomiting, Risk of blindness, Risk of serious damage to eyes

4.3 Indication of any immediate medical attention and special treatment needed
none

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents:
co-ordinate firefighting measures to the fire surroundings!
water, foam, alcohol resistant foam, dry extinguishing powder, ABC-powder

Unsuitable extinguishing media
water jet

5.2 Special hazards arising from the substance or mixture

Non-combustible

Hazardous combustion products

In case of fire may be liberated: Sulphur oxides (SOx)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Do not allow firefighting water to enter drains or water courses. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation

6.2 Environmental precautions:

Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). 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

Measures to protect the environment
Avoid release to the environment.

Advice on general occupational hygiene
Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Incompatible substances or mixtures
Observe hints for combined storage. Incompatible materials: see section 10.

Specific designs for storage rooms or vessels
Recommended storage temperature: 15 – 25 °C

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
National limit values
Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identyfier	TWA mg/m3	Notation	Source
GB	Copper sulfate	7758-99-8	WEL	1	Cu, dm	EH40/2005

Relevant DNELs of components

Name of agent	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Copper sulfate	7758-99-8	DNEL	0,05 mg/m3	human, dermal	worker (industry)	chronic – systemic effects

Relevant PNECs of components

Copper sulfate CAS No 7758-99-8

Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
PNEC	7,8 mg/l	aquatic organisms	freshwater	short-term (single instance)
PNEC	5,2 mg/l	aquatic organisms	marine water	short-term (single instance)
PNEC	230 mg/l	aquatic organisms	sevage treatment plant (STP)	short-term (single instance)
PNEC	87 mgkg	aquatic organisms	freshwater sediment	short-term (single instance)
PNEC	676 mgkg	aquatic organisms	marine sediment	short-term (single instance)

8.2 Exposure controls
Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection

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.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0,11 mm Break through time: 480 min (permeation: level 6)

Body Protection
protective clothing

Control of environmental exposure
Do not let product enter drains.

SECTION 9: Physical and chemical properties

General information Form: Colour: Odour:	 fluid blue odourless
Change in condition Melting point: Melting range:	 not determined not determined
Flash point	not applicable
Flammability	not applicable
Danger of explosion	not applicable
Vapour pressure at 20° C	not determined
Density at 20° C	1.07 g/cm³
Solubility in/Miscibility with water	Fully miscible
pH-Value at 20° C	6-7
Solvent content Organic solvents: Water: VOC (EU):	 0 % 65 % 0 %

SECTION 10: Stability and reactivity

10.1 Reactivity
This material is not reactive under normal ambient conditions.

10.2 Chemical stability
The material is stable under normal ambient conditions and under the temperature and pressure conditions expected during storage and handling.
10.3 Possibility of hazardous reactions
Violent reaction with: Acetylene and strong alkalis.
10.4 Conditions to avoid
Protect from heat.
10.5 Compatible materials
No additional information available.
10.6 Hazardous decomposition products
Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

Classification acc. to GHS of the United Nations (1272/2008/EC, CLP)

Acute toxicity

Harnful if swallowed

Acute toxicity				
Exposure route	Endpoint	Value	Species	Source
oral	LD50	842 mg/kg	rat	ECHA
dermal	LD50	>2000 mg/kg	rat	ECHA

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Causes serious eye irritation

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

• If swallowed
diarrhoea, vomiting, nausea, gastrointestinal complaints

• If in eyes
Causes serious eye damage, risk of blindness

• If inhaled
Data are not available

• If on skin
Frequently or prolonged contact with skin may cause dermal irritation

• Other information
none

SECTION 12: Ecological information

12.1 Toxicity
Very toxic to aquatic life with long lasting effects.
Aquatic toxicity
LC50 96h: >193mg/l mg/l (fish) ECHA

12.2 Persistence and degradability: No further relevant information available.
12.3 Bioaccumulative potential: Data are not available
12.4 Mobility in soil: Data are not available.
12.5 Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
12.6 Endocrine disrupting properties
Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.
Sewage disposal-relevant information
Do not empty into drains.
Waste treatment of containers/packagings
It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be

used. Handle contaminated packages in the same way as the substance itself. Completely emptied packages can be recycled.

13.2 Relevant provisions relating to waste

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

Properties of waste which render it hazardous

HP4	irritant - skin irritation and eye damage
HP6	acute toxicity
HP14	ecotoxic

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions. Non-contaminated packages may be recycled

SECTION 14: Transport information

14.1 UN-Number ADR, ADN, IMDG, IATA	is not subject to transport regulations
14.2 UN proper shipping name ADR, IMDG, IATA	no dangerous good
14.3 Transport hazard classes ADR, ADN, IMDG, IATA	none
14.4 Packing group ADR, ADN, IMDG, IATA	not assigned
14.5 Envirolmental hazards Marine pollutant:	not hazardous to the environment according to dangerous goods regulations
14.6 Special precautions for user	no additional information is available

14.7 Transport in bulk according to annex II

of Marpol and the IBC code	not transported in bulk

14.8 Information according to the individual UN model regulations

Transport of dangerous goods by road, rail or inland waterway (ADR/RID/ADN) - Additional information

Not subject to ADR, RID and ADN regulations.

International Maritime Dangerous Goods Code (IMDG) - Additional information

Not subject to IMDG regulations.

International Civil Aviation Organisation (ICAO-IATA/DGR) - Additional information

Not subject to ICAO-IATA regulations.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Relevant provisions of th European Union (EU)

Restrictions according to REACH, Annex XVII
not listed

List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list
not listed

Seveso Directive
Hazardous to the Aquatic Environment in category Acute 1 or Chronic 1

Deco-Paint Directive
VOC-content 0 %

Industrial Emissions Directive (IED)
VOC-content 0 %

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)
not listed

Water Framework Directive (WFD)

List of pollutants
not listed

Regulation on the marketing and use of explosives precursors
not listed

Regulation on drug precursors
not listed

Regulation on substances that deplete the ozone layer (ODS)
not listed

Regulation concerning the export and import of hazardous chemicals (PIC)
not listed

Regulation on persistent organic pollutants (POP)
not listed

15.2 Chemical safety assessment
No Chemical Safety Assessment has been carried out for this mixture.

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.

Hazard statements

H302	Harmful if swallowed
H315	Causes skin irritation
H318	Causes serious eye demage
H410	Very toxic to aquatic life with long lasting effects

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)
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
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
DNEL: Derived No-Effect Level (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative