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

1.1 Product identifier

Trade name

Copper iodide

Substance name	copper-iodide
REACH registration no.	01-2119972019-33

Identification numbers

CAS no.	7681-65-4
EC no.	231-674-6

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

Relevant identified uses of the substance or mixture
Polymer additive

Uses advised against
None known

1.3 Details of the supplier of the safety data sheet

Address
LIQUICHEM Handelsgesellschaft mbH
Kajen 6 – 8
D-20459 Hamburg

Telephone no.	040 89 97 89 0
Fax no.	040 89 97 89 9
e-mail	hamburg@liquichem.de

Advice on Safety Data Sheet
sdb_info@umco.de

1.4 Emergency telephone number

For medical advice (in German and English):
+49 (0)551 192 40 (Giftinformationszentrum Nord)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 (CLP)
Acute Tox. 4; H302
Aquatic Acute 1; H400
Aquatic Chronic 2; H411
Eye Dam. 1; H318
Skin Irrit. 2; H315
Skin Sens. 1A; H317
STOT RE 1; H372

Classification information
This product is assessed and classified using the methods and criteria below referred to in Article 9 of Regulation (EC) n° 1272/2008:
Physical hazards: determined through assessment data based on the methods or standards referred to in part 2 of Annex I to CLP
Health hazards and environmental hazards: determined through toxicological and ecotoxicological assessment data based on the methods or standards referred to in Part 3 and 4 of Annex I to CLP.

2.2 Label elements

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

Product identifier
7681-65-4 (copper-iodide)

Hazard pictograms


GHS05


GHS07


GHS08


GHS09

Signal word
Danger

Hazard statement(s)

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H372	Causes damage to thyroid through prolonged or repeated exposure if swallowed.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P260	Do not breathe dust.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye 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.
P310	Immediately call a POISON CENTER/doctor.
P391	Collect spillage.
P501	Dispose of contents/container to a facility in accordance with local and national regulations.

2.3 Other hazards

PBT assessment
The study does not need to be conducted according to Annex XIII of Regulation (EC) 1907/2006 (REACH).

vPvB assessment
The study does not need to be conducted according to Annex XIII of Regulation (EC) 1907/2006 (REACH).

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical characterization

Substance name	copper-iodide
Formula	Cu-I
Molecular weight	190.45

Identification numbers

CAS no.	7681-65-4
EC no.	231-674-6

Other information

Note	Specific concentration limits	M-factor (acute)	M-factor (chronic)
-	-	M = 10	-

Acute toxicity estimate (ATE) values

oral	dermal	inhalative
301 mg/kg bodyweight		

3.2 Mixtures

Not applicable. The product is not a mixture.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information
In case of persisting adverse effects, consult a physician. Remove contaminated clothing and shoes immediately,

and launder thoroughly before reusing.

After inhalation
Remove affected person from the immediate area. Ensure supply of fresh air.

After skin contact
In case of contact with skin wash off immediately with soap and water.

After eye contact
Remove contact lenses. Rinse eye thoroughly under running water keeping eyelids wide open and protecting the unaffected eye (at least 10 to 15 minutes). Get immediate ophthalmic treatment.

After ingestion
Do not induce vomiting. Call a doctor immediately. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed
No data available.

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
Water spray jet; Dry chemical extinguisher; Carbon dioxide; Foam

Unsuitable extinguishing media
High power water jet

5.2 Special hazards arising from the substance or mixture
In the event of fire, the following can be released: Iodine; Iodine compounds; Fumes of metal oxides; In case of combustion evolution of dangerous gases possible.

5.3 Advice for firefighters
Use self-contained breathing apparatus. Run-off water from fire fighting must not be discharged into drains or enter surface water. Wear protective clothing.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
Refer to protective measures listed in sections 7 and 8. Avoid contact with skin, eyes and clothing. Use personal protective clothing. Ensure adequate ventilation. Avoid dust formation.

For emergency responders
No data available. Personal protective equipment (PPE) - see Section 8.

6.2 Environmental precautions
Do not discharge into the drains/surface waters/groundwater. Do not discharge into the subsoil/soil. In case of entry into waterways, soil or drains, inform the responsible authorities.

6.3 Methods and material for containment and cleaning up
Collect mechanically. When collected, handle material as described under the section heading "Disposal considerations". Avoid raising dust.

6.4 Reference to other sections
Information regarding safe handling, see section 7. Information regarding personal protective measures, see section 8. Information regarding waste disposal, see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling
Provide good ventilation at the work area (local exhaust ventilation, if necessary). Avoid eye, skin and clothing contact. Avoid the formation and deposition of dust. Risks inherent to handling the product must be minimised by

applying the appropriate protective and preventive measures. Working processes should - so far as possible, according to the state of the art - be designed to rule out bodily contact or the release of hazardous substances.

General protective and hygiene measures
Do not eat, drink or smoke during work time. Keep away from foodstuffs and beverages. Avoid contact with eyes and skin. Remove soiled or soaked clothing immediately. Do not inhale dust. Provide eye wash fountain in work area.

Advice on protection against fire and explosion
Keep away from sources of ignition - refrain from smoking. Take precautionary measures against static charges. Dust can form an explosive mixture with air.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions
Keep container tightly closed in a cool, well-ventilated place.

Requirements for storage rooms and vessels
Always keep in containers of same material as the original.

Incompatible products
Do not store together with: oxidizing agents; Acids; Alkalis

7.3 Specific end use(s)
No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

No	Substance name	CAS no.	EC no.
1	**copper-iodide**	**7681-65-4**	**231-674-6**
	List of approved workplace exposure limits (WELs) / EH40		
	Copper and compounds (as Cu) dusts and mists		
	WEL short-term (15 min reference period)	2	mg/m³
	WEL long-term (8-hr TWA reference period)	1	mg/m³

DNEL, DMEL and PNEC values

DNEL values (worker)

No	Substance name			CAS / EC no	
	Route of exposure	Exposure time	Effect	Value	
1	**copper-iodide**			**7681-65-4 231-674-6**	
	dermal	Long term (chronic)	systemic	137	mg/kg/day
	inhalative	Long term (chronic)	systemic	1	mg/m³
	inhalative	Long term (chronic)	local	1	mg/m³

DNEL value (consumer)

No	Substance name			CAS / EC no	
	Route of exposure	Exposure time	Effect	Value	
1	**copper-iodide**			**7681-65-4 231-674-6**	
	oral	Long term (chronic)	systemic	0.041	mg/kg/day
	oral	Short term (acut)	systemic	0.082	mg/kg/day

PNEC values

No	Substance name		CAS / EC no	
	ecological compartment	Type	Value	
1	**copper-iodide**		**7681-65-4 231-674-6**	
	water	fresh water	7.8	µg/L
	water	marine water	5.2	µg/L
	water	fresh water sediment	87	mg/kg moist mass

	water	marine water sediment	676	mg/kg dry weight
	soil	-	65	mg/kg dry weight
	sewage treatment plant	-	230	µg/L

8.2 Exposure controls

Appropriate engineering controls
Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL (=Occupational Exposure Limit), suitable respiratory protection must be worn.

Personal protective equipment

Respiratory protection
If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of dust formation, take appropriate measures for breathing protection in the event that workplace threshold values are not specified.

Eye / face protection
Tightly fitting safety glasses (EN 166).

Hand protection
Sufficient protection is given wearing suitable protective gloves checked according to i.e. EN 374, in the event of risk of skin contact with the product. Before use, the protective gloves should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves.

Other
Chemical-resistant work clothes.

Environmental exposure controls
No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

State of aggregation
solid

Form/Colour
Powder
greyish; yellow

Odour
weak

pH value				
Value	6.0	-	9.0	
Reference temperature			20	°C

Boiling point / boiling range		
Value	1336	°C
Reference pressure	1013	hPa

Melting point/freezing point		
Value	588	°C

Decomposition temperature
No data available

Flash point
No data available

Ignition temperature
No data available

Flammability
No data available

Lower explosion limit
No data available

Upper explosion limit
No data available

Vapour pressure
No data available

Relative vapour density
No data available

Relative density
No data available

Density			
Value		5.620	g/cm³
Reference temperature		20	°C

Bulk density			
Value	appr.	1000	kg/m³

Solubility in water	
Comments	insoluble

Solubility
No data available

Partition coefficient n-octanol/water (log value)
No data available

Viscosity
No data available

Particle characteristics
No data available

9.2 Other information

Other information
No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity
No data available.

10.2 Chemical stability
Stable under recommended storage and handling conditions (See section 7).

10.3 Possibility of hazardous reactions
Dangerous reactions are not to be expected when handling product according to its intended use.

10.4 Conditions to avoid
Heat; Moisture.

10.5 Incompatible materials
Oxidizing agents; Alkalis; Acids

10.6 Hazardous decomposition products
Iodine; Iodine compounds; Toxic metal oxide fumes; Irritant gases/vapours

SECTION 11: Toxicological information

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

Acute oral toxicity			
No	**Substance name**	**CAS no.**	**EC no.**
1	**copper-iodide**	**7681-65-4**	**231-674-6**

LD50	300	-	2000	mg/kg bodyweight
Species	rat (female)			
Method	OECD 420			
Source	ECHA			
Evaluation/classification	Based on available data, the classification criteria are met.			

Acute dermal toxicity			
No	**Substance name**	**CAS no.**	**EC no.**
1	**copper-iodide**	**7681-65-4**	**231-674-6**

LD50	>	2000	mg/kg bodyweight
Species	rat		
Method	OECD 402		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		

Acute inhalational toxicity
No data available

Skin corrosion/irritation			
No	**Substance name**	**CAS no.**	**EC no.**
1	**copper-iodide**	**7681-65-4**	**231-674-6**

Method	OECD 439
Source	ECHA
Evaluation	irritant
Evaluation/classification	Based on available data, the classification criteria are met.

Serious eye damage/irritation			
No	**Substance name**	**CAS no.**	**EC no.**
1	**copper-iodide**	**7681-65-4**	**231-674-6**

Species	rabbit
Method	OECD 405
Source	ECHA
Evaluation	Irreversible effects on the eye
Evaluation/classification	Based on available data, the classification criteria are met.

Respiratory or skin sensitisation			
No	**Substance name**	**CAS no.**	**EC no.**
1	**copper-iodide**	**7681-65-4**	**231-674-6**

Route of exposure	Skin
Species	Guinea pig
Method	OECD 406
Source	ECHA
Evaluation	sensitizing
Evaluation/classification	Based on available data, the classification criteria are met.

Germ cell mutagenicity
No data available

Reproduction toxicity
No data available

Carcinogenicity
No data available

STOT - single exposure
No data available

STOT - repeated exposure
No data available

Aspiration hazard
No data available

11.2 Information on other hazards

Endocrine disrupting properties
No data available.

Other information
No data available.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish (acute)			
No	**Substance name**	**CAS no.**	**EC no.**
1	**copper-iodide**	**7681-65-4**	**231-674-6**

LC50		1.67	mg/l
Duration of exposure		96	h
Species	Oncorhynchus mykiss		
Method	OECD 203		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are met.		

Toxicity to fish (chronic)
No data available

Toxicity to Daphnia (acute)			
No	**Substance name**	**CAS no.**	**EC no.**
1	**copper-iodide**	**7681-65-4**	**231-674-6**

EC50		0.55	mg/l
Duration of exposure		48	h
Species	Daphnia magna		
Method	OECD 202		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are met.		

Toxicity to Daphnia (chronic)
No data available

Toxicity to algae (acute)
No data available

Toxicity to algae (chronic)
No data available

Bacteria toxicity			
No	**Substance name**	**CAS no.**	**EC no.**
1	**copper-iodide**	**7681-65-4**	**231-674-6**

EC50		280	mg/l
Duration of exposure		3	h
Species	activated sludge		
Method	OECD 209		
Source	ECHA		

12.2 Persistence and degradability
No data available.

12.3 Bioaccumulative potential
No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	
PBT assessment	The study does not need to be conducted according to Annex XIII of Regulation (EC) 1907/2006 (REACH).
vPvB assessment	The study does not need to be conducted according to Annex XIII of Regulation (EC) 1907/2006 (REACH).

12.6 Endocrine disrupting properties

No data available.

12.7 Other adverse effects

No data available.

12.8 Other information

Other information
Do not discharge into drains or waters and do not dispose of in public landfills.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Disposal of the product should be carried out in accordance with all applicable regulations following consultation with the responsible local authority and the disposal company in an authorised and suitable disposal facility.
Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

Packaging

Residues must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer.

SECTION 14: Transport information

14.1 Transport ADR/RID/ADN

Class	9
Classification code	M7
Packing group	III
Hazard identification no.	90
UN number	UN3077
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Tunnel restriction code	-
Label	9
Environmentally hazardous substance mark	Symbol "fish and tree"

14.2 Transport IMDG

Class	9
Packing group	III
UN number	UN3077
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
EmS	F-A, S-F
Label	9
Marine pollutant mark	Symbol "fish and tree"

14.3 Transport ICAO-TI / IATA

Class	9
Packing group	III
UN number	UN3077
Proper shipping name	Environmentally hazardous substance, solid, n.o.s.
Label	9
Environmentally hazardous	Symbol "fish and tree"

substance mark

14.4 Other information
No data available.

14.5 Environmental hazards
Information on environmental hazards, if relevant, please see 14.1 - 14.3.

14.6 Special precautions for user
No data available.

14.7 Maritime transport in bulk according to IMO instruments
Not relevant

SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)
In accordance with the REACH regulation (EC) 1907/2006, the product does not contain any substances that are considered as subject to listing in annex XIV, inventory of substances requiring authorisation.

REACH candidate list of substances of very high concern (SVHC) for authorisation
In accordance with article 57 and article 59 of the Reach regulation (EC) 1907/2006, this substance is not considered as subject to listing in annex XIV, inventory of substances requiring authorisation ("Authorization list").

Regulation (EC) No 1907/2006 (REACH) Annex XVII: RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES
The substance is not subject to the provisions of annex XVII (restriction entries) of the Reach regulation (EC) 1907/2006.

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances	
This product is subject to Part I of Annex I, risk category:	E1

Other regulations
Adhere to the national sanitary and occupational safety regulations when using this product.

15.2 Chemical safety assessment
A chemical safety assessment has been carried out for this substance.

SECTION 16: Other information

Sources of key data used to compile the data sheet:
Regulation (EC) No 1907/2006 (REACH), 1272/2008 (CLP) as amended in each case.
Directives 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164.
National Threshold Limit Values of the corresponding countries as amended in each case.
Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.
The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding section.

Full text of the H- and EUH- phrases drawn up in sections 2 and 3 (provided not already drawn up in these sections)

H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

Creation of the safety data sheet
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This information is based on our present knowledge and experience.
The safety data sheet describes products with a view to safety requirements.
It does not however, constitute a guarantee for any specific product properties and shall not establish a legally valid

contractual relationship.

Prod-ID 622035