acc. to Regulation (EC) No. 1907/2006 (REACH)

Caesium chloride ≥99,9 %, extra pure, for biochemistry

article number: 7878 date of compilation: 2015-05-06 Version: **3.0 en** Revision: 2022-05-05

Replaces version of: 2020-03-30

Version: (2)

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

Product identifier 1.1

Identification of the substance **Caesium chloride** ≥99,9 %, extra pure, for bio-

chemistry

Article number 7878

EC number 231-600-2 CAS number 7647-17-8

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

Relevant identified uses: Laboratory chemical

Laboratory and analytical use

Uses advised against: Do not use for products which come into contact

with foodstuffs. Do not use for private purposes

(household).

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG Schoemperlenstr. 3-5 D-76185 Karlsruhe Germany

Telephone: +49 (0) 721 - 56 06 0 **Telefax:** +49 (0) 721 - 56 06 149 e-mail: sicherheit@carlroth.de Website: www.carlroth.de

Competent person responsible for the safety data :Department Health, Safety and Environment

sheet:

e-mail (competent person):

sicherheit@carlroth.de

1.4 **Emergency telephone number**

Name	Street	Postal code/city	Telephone	Website
National Poisons Information Service City Hospital	Dudley Rd	B187QH Birmingham	844 892 0111	

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification acc. to GHS

Section	Hazard class	Cat- egory	Hazard class and category	Hazard statement
3.7	Reproductive toxicity	2	Repr. 2	H361fd

For full text of abbreviations: see SECTION 16

United Kingdom (en) Page 1 / 15



acc. to Regulation (EC) No. 1907/2006 (REACH)



Caesium chloride ≥99,9 %, extra pure, for biochemistry

article number: 7878

2.2 Label elements

Labelling

Signal word Warning

Pictograms

GHS08



Hazard statements

H361fd Suspected of damaging fertility. Suspected of damaging the unborn child (if ex-

posed)

Precautionary statements

Precautionary statements - prevention

P280 Wear protective gloves/protective clothing/eye protection/face protection

Precautionary statements - response

P308+P313 IF exposed or concerned: Get medical advice/attention

For professional users only

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.

SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance Caesium chloride

Molecular formula CsCl

Molar mass 168,4 ^g/_{mol}
CAS No 7647-17-8
EC No 231-600-2

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off contaminated clothing.

United Kingdom (en) Page 2 / 15

acc. to Regulation (EC) No. 1907/2006 (REACH)

Caesium chloride ≥99,9 %, extra pure, for biochemistry

article number: 7878



Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

Rinse skin with water/shower.

Following eye contact

Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice.

Following ingestion

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media



Suitable extinguishing media

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:

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. 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



For non-emergency personnel

Use personal protective equipment as required. Avoid contact with skin, eyes and clothes. Do not breathe dust.

United Kingdom (en) Page 3 / 15

acc. to Regulation (EC) No. 1907/2006 (REACH)

Caesium chloride ≥99,9 %, extra pure, for biochemistry

article number: 7878



6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains. Take up mechanically.

Advice on how to clean up a spill

Take up mechanically. Control of dust.

Other information relating to spills and releases

Place in appropriate containers for disposal.

Reference to other sections

patible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

Avoid exposure. Avoid dust formation.

Measures to prevent fire as well as aerosol and dust generation

Removal of dust deposits.

7.2

Incompatible substances or mixtures

Observe hints for combined storage.

Protect against external exposure, such as

humidity

Consideration of other advice:

Ventilation requirements

Specific designs for storage rooms or vessels

Recommended storage temperature: 15 - 25 °C

7.3

United Kingdom (en) Page 4 / 15



6.2

Keep away from drains, surface and ground water.

6.4

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incom-

Precautions for safe handling 7.1

Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

Conditions for safe storage, including any incompatibilities

Store in a dry place. Hygroscopic solid.

Use local and general ventilation.

Specific end use(s)

No information available.

acc. to Regulation (EC) No. 1907/2006 (REACH)



article number: 7878



SECTION 8: Exposure controls/personal protection

Control parameters 8.1

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

Coun try	Name of agent	CAS No	Identifi- er	TWA [mg/ m³]	STEL [mg/ m³]	Ceil- ing-C [mg/ m³]	Nota- tion	Source
GB	dust		WEL	10			i	EH40/2005
GB	dust		WEL	4			r	EH40/2005

Notation

Ceiling value is a limit value above which exposure should not occur Inhalable fraction Ceiling-C

Respirable fraction

STEL

Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)
Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 **TWA**

hours time-weighted average (unless otherwise specified)

Human health values

Relevant DNELs and other threshold levels **Endpoint Threshold** Protection goal, **Used in Exposure time** level route of exposure DNEL 1,47 mg/m³ human, inhalatory worker (industry) chronic - systemic effects DNFI 4,18 mg/kg bw/ human, dermal worker (industry) chronic - systemic effects day

Environmental values

Relevant PNECs and other threshold levels

End- point	Threshold level	Organism	Environmental compartment	Exposure time
PNEC	1,25 ^{mg} / _l	aquatic organisms	freshwater	short-term (single instance)
PNEC	0,13 ^{mg} / _l	aquatic organisms	marine water	short-term (single instance)
PNEC	100,3 ^{mg} / _l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
PNEC	4,9 ^{mg} / _{kg}	aquatic organisms	freshwater sediment	short-term (single instance)
PNEC	0,49 ^{mg} / _{kg}	aquatic organisms	marine sediment	short-term (single instance)
PNEC	0,25 ^{mg} / _{kg}	terrestrial organisms	soil	short-term (single instance)

8.2 **Exposure controls**

Individual protection measures (personal protective equipment)

United Kingdom (en) Page 5 / 15

acc. to Regulation (EC) No. 1907/2006 (REACH)

Caesium chloride ≥99,9 %, extra pure, for biochemistry

article number: 7878







Use safety goggle with side protection.

Skin protection





hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. 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. The times are approximate values from measurements at 22 °C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

type of material

NBR (Nitrile rubber)

material thickness

>0,11 mm

• breakthrough times of the glove material

>480 minutes (permeation: level 6)

other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Respiratory protection





Respiratory protection necessary at: Dust formation. Particulate filter device (EN 143). P2 (filters at least 94 % of airborne particles, colour code: White).

Environmental exposure controls

Keep away from drains, surface and ground water.

United Kingdom (en) Page 6 / 15



acc. to Regulation (EC) No. 1907/2006 (REACH)

Caesium chloride ≥99,9 %, extra pure, for biochemistry

article number: 7878



SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state solid

Form crystalline Colour white

Odour odourless

Melting point/freezing point 642 °C at 1.013 hPa (ECHA)

Boiling point or initial boiling point and boiling

range

1.303 °C at 1.013 hPa

Flammability non-combustible
Lower and upper explosion limit not determined
Flash point not applicable
Auto-ignition temperature >400 °C (ECHA)

Decomposition temperature not relevant

pH (value) 7 – 9 (in aqueous solution: 50 ^g/_l, 20 °C)

Kinematic viscosity not relevant

Solubility(ies)

Water solubility >1.000 g/l at 20 °C (ECHA)

Partition coefficient

Partition coefficient n-octanol/water (log value): not relevant (inorganic)

Vapour pressure not determined

Density and/or relative density

Density $3,97 \, {}^{9}/{}_{\text{cm}^3}$ at 20 °C (ECHA)

Relative vapour density information on this property is not available

Bulk density ~1.800 ^{kg}/_{m³}

Particle characteristics No data available.

Other safety parameters

Oxidising properties none

9.2 Other information

Information with regard to physical hazard classes acc. to GHS (physical hazards): not relevant

United Kingdom (en) Page 7 / 15

acc. to Regulation (EC) No. 1907/2006 (REACH)

Caesium chloride ≥99,9 %, extra pure, for biochemistry

article number: 7878

Other safety characteristics:

Surface tension $72,8^{\text{mN}}/_{\text{m}}$ (20 °C) (ECHA)

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

Hygroscopic solid.

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Protect from moisture.

10.5 Incompatible materials

There is no additional information.

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification acc. to GHS

Acute toxicity

Shall not be classified as acutely toxic.

Acute toxicity

Exposure route	Endpoint	Value	Species	Method	Source
dermal	LD50	>2.000 ^{mg} / _{kg}	rat		ECHA

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

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

Suspected of damaging the unborn child (if exposed). Suspected of damaging fertility (if exposed).

Specific target organ toxicity - single exposure

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

United Kingdom (en) Page 8 / 15

acc. to Regulation (EC) No. 1907/2006 (REACH)

ROTH

Caesium chloride ≥99,9 %, extra pure, for biochemistry

article number: 7878

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

Data are not available.

• If in eyes

Data are not available.

If inhaled

Data are not available.

• If on skin

Data are not available.

Other information

none

11.2 Endocrine disrupting properties

Not listed.

11.3 Information on other hazards

There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute)					
Endpoint	Value	Species	Source	Exposure time	
LC50	>79 ^{mg} / _l	fish	ECHA	96 h	
EC50	37,4 ^{mg} / _l	aquatic invertebrates	ECHA	48 h	
ErC50	106,1 ^{mg} / _l	algae	ECHA	72 h	

Aquatic toxicity (chronic) Endpoint Value Species Source Exposure time EC50 >12,5 mg/_I aquatic invertebrates ECHA 21 d

Biodegradation

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

12.2 Process of degradability

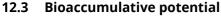
Data are not available.

United Kingdom (en) Page 9 / 15

acc. to Regulation (EC) No. 1907/2006 (REACH)

Caesium chloride ≥99,9 %, extra pure, for biochemistry

article number: 7878



Data are not available.

Data are not available.

Not listed.

12.7 Other adverse effects

Data are not available.

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.

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. Waste catalogue ordinance (Germany).

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.

SECTION 14: Transport information

14.1 UN number or ID number not subject to transport regulations

14.2 UN proper shipping name not assigned

14.3 Transport hazard class(es) none

14.4 Packing group not assigned

14.5 Environmental hazards non-environmentally hazardous acc. to the dan-

gerous goods regulations

14.6 Special precautions for user

There is no additional information.

14.7 Maritime transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

United Kingdom (en) Page 10 / 15



12.4 Mobility in soil

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Endocrine disrupting properties

acc. to Regulation (EC) No. 1907/2006 (REACH)

Caesium chloride ≥99,9 %, extra pure, for biochemistry

article number: 7878



14.8 Information for each of the UN Model Regulations

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

Not subject to ADR, RID and ADN.

International Maritime Dangerous Goods Code (IMDG) - Additional information Not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information Not subject to ICAO-IATA.

SECTION 15: Regulatory information

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

Seveso Directive

2012/	2012/18/EU (Seveso III)					
No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the application of lower and upper-tier requirements	Notes			
	not assigned					

Deco-Paint Directive

VOC content	0 % 0 ⁹ / _I
	·

Industrial Emissions Directive (IED)

VOC content	0 %
VOC content	0 g/I

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

not listed

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

not listed

Water Framework Directive (WFD)

List of pollutants (WFD)

•				
Name of substance	Name acc. to inventory	CAS No	Listed in	Remarks
Caesium chloride	Substances and preparations, or the breakdown products of such, which have been proved to pos- sess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine- related functions in or via the		a)	

United Kingdom (en) Page 11 / 15

acc. to Regulation (EC) No. 1907/2006 (REACH)



Caesium chloride ≥99,9 %, extra pure, for biochemistry

article number: 7878

List of pollutants (WFD)

Name of substance	Name acc. to inventory	CAS No	Listed in	Remarks
	aquatic environment			
Caesium chloride	Metals and their compounds		a)	

Legend

A)

Indicative list of the main pollutants

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

National regulations(GB)

List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list

not listed

Restrictions according to GB REACH, Annex 17

not listed

Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

National inventories

Country	Inventory	Status
AU	AIIC	substance is listed
CA	DSL	substance is listed
CN	IECSC	substance is listed
EU	ECSI	substance is listed
EU	REACH Reg.	substance is listed
JP	CSCL-ENCS	substance is listed
KR	KECI	substance is listed
NZ	NZIoC	substance is listed
PH	PICCS	substance is listed
TW	TCSI	substance is listed
US	TSCA	substance is listed

United Kingdom (en) Page 12 / 15

acc. to Regulation (EC) No. 1907/2006 (REACH)



Caesium chloride ≥99,9 %, extra pure, for biochemistry

article number: 7878

Legend

Australian Inventory of Industrial Chemicals List of Existing and New Chemical Substances (CSCL-ENCS)

Domestic Substances List (DSL)

AIIC CSCL-ENCS DSL ECSI IECSC

ECSI EC Substances LIST (IJSL)
ECSI EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC Inventory of Existing Chemical Substances Produced or Imported in China KECI Korea Existing Chemicals Inventory
NZIOC New Zealand Inventory of Chemicals
PICCS Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Reg. REACH registered substances

Taiwan Chemical Substance Inventory

TSCA **Toxic Substance Control Act**

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Alignment to regulation:

Restructuring: section 9, section 14

Section	Former entry (text/value)	Actual entry (text/value)	Safety- relev- ant
2.1		Classification acc. to GHS: change in the listing (table)	yes
2.2		Precautionary statements - response: change in the listing (table)	yes
2.2	Labelling of packages where the contents do not exceed 125 ml: Signal word: Warning		yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.3	Other hazards: There is no additional information.	Other hazards	yes
2.3		Results of PBT and vPvB assessment: According to the results of its assessment, this substance is not a PBT or a vPvB.	yes

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations	
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de naviga- tion intérieures (European Agreement concerning the International Carriage of Dangerous Goods by In- land Waterways)	
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)	
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)	
Ceiling-C	Ceiling value	

United Kingdom (en) Page 13 / 15

acc. to Regulation (EC) No. 1907/2006 (REACH)

Caesium chloride ≥99,9 %, extra pure, for biochemistry

article number: 7878



Abbr.	Descriptions of used abbreviations
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
GB REACH	The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regula- tions concerning the International carriage of Dangerous goods by Rail)
STEL	Short-term exposure limit
TWA	Time-weighted average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

Key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

United Kingdom (en) Page 14 / 15

acc. to Regulation (EC) No. 1907/2006 (REACH)



Caesium chloride ≥99,9 %, extra pure, for biochemistry

article number: 7878

List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child (if exposed).

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

United Kingdom (en) Page 15 / 15