

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Dichloroisocyanuric acid for reagent A for ammonium process Colorimeter ADI

Revision date: 14.10.2022

Product code: 14182

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

### 1.1. Product identifier

Dichloroisocyanuric acid for reagent A for ammonium process Colorimeter ADI

Substance name: sodium dichloroisocyanurate, dihydrate  
REACH Registration Number: 01-2119489371-33-XXXX  
CAS No: 51580-86-0  
Index No: 613-030-01-7  
EC No: 220-767-7

### 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: Fa. Bernd Kraft GmbH  
Street: Stempelstraße 6  
Place: D-47167 Duisburg  
Telephone: 0203/5194-0  
e-mail: info@berndkraft.de  
Contact person: Abteilung Produktsicherheit  
e-mail: produktsicherheit@berndkraft.de  
Internet: www.berndkraft.de  
Responsible Department: Abteilung Produktsicherheit  
Telefax: 0203/5194-290  
Telephone: 0203/5194-107/117

### 1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

### Further Information

No data available

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Regulation (EC) No 1272/2008

Acute Tox. 4; H302  
Eye Irrit. 2; H319  
STOT SE 3; H335  
Aquatic Acute 1; H400  
Aquatic Chronic 1; H410

Full text of hazard statements: see SECTION 16.

### 2.2. Label elements

#### Regulation (EC) No 1272/2008

Signal word: Warning

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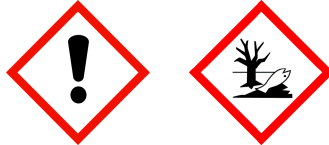
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**Pictograms:**



**Hazard statements**

- H302 Harmful if swallowed.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.
- H410 Very toxic to aquatic life with long lasting effects.

**Precautionary statements**

- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing 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.
- P337+P313 If eye irritation persists: Get medical advice/attention.

**Special labelling of certain mixtures**

- EUH031 Contact with acids liberates toxic gas.

**2.3. Other hazards**

No data available

**SECTION 3: Composition/information on ingredients**

**3.1. Substances**

**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
51580-86-0	sodium dichloroisocyanurate, dihydrate			100 %
	220-767-7	613-030-01-7	01-2119489371-33-XXXX	
	Acute Tox. 4, Eye Irrit. 2, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 1; H302 H319 H335 H400 H410 EUH031			

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		
51580-86-0	220-767-7	sodium dichloroisocyanurate, dihydrate	100 %
	inhalation: LC50 = > 0,27 - < 1,17 mg/l (dusts or mists); dermal: LD50 = > 5000 mg/kg; oral: LD50 = 2094 mg/kg		

**Further Information**

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

**General information**

No data available

**After inhalation**

Provide fresh air.

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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.

**After contact with eyes**

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately. 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**

Dyspnoea

Cough

Irritant

Abdominal pain

**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**

Danger of dust explosion.

Oxidizing

Handle with care - avoid bumps, friction and impact.

Hazardous combustion products

In case of fire may be liberated:

Nitrogen oxides (NO<sub>x</sub>)

Hydrogen chloride (HCl)

**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus.

**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**

**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

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**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.
- Take up carefully when dry. Take up dust-free and set down dust-free.

**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**

- Handle and open container with care.
- Keep container tightly closed.
- Do not breathe dust.
- Handle and open container with care.
- Read label before use.
- Avoid contact with skin, eyes and clothes.

**Advice on protection against fire and explosion**

- Usual measures for fire prevention.
- Danger of dust explosion.
- Keep away from sources of ignition - No smoking.

**Advice on general occupational hygiene**

- Wash contaminated clothing prior to re-use.
- Do not breathe vapour/aerosol.
- Avoid contact with skin, eyes and clothes.

**Further information on handling**

- Wash contaminated clothing before reuse.
- Wash hands before breaks and after work.
- Draw up and observe skin protection programme.

**7.2. Conditions for safe storage, including any incompatibilities**

**Requirements for storage rooms and vessels**

- Keep container tightly closed.
- storage temperature: +15°C - +25°C

**Hints on joint storage**

- Keep away from: Acids

**Further information on storage conditions**

- Store in a dry place.
- Keep cool. Protect from sunlight.

**7.3. Specific end use(s)**

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Laboratory chemicals

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**DNEL/DMEL values**

CAS No	Substance	Exposure route	Effect	Value
51580-86-0	sodium dichloroisocyanurate, dihydrate			
Worker DNEL, long-term		inhalation	systemic	8,11 mg/m <sup>3</sup>
Worker DNEL, long-term		dermal	systemic	2,3 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	1,99 mg/m <sup>3</sup>
Consumer DNEL, long-term		dermal	systemic	1,15 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	1,15 mg/kg bw/day

**PNEC values**

CAS No	Substance	Value
51580-86-0	sodium dichloroisocyanurate, dihydrate	
Freshwater		0 mg/l
Freshwater (intermittent releases)		0,002 mg/l
Marine water		1,52 mg/l
Freshwater sediment		7,56 mg/kg
Micro-organisms in sewage treatment plants (STP)		0,59 mg/l
Soil		0,756 mg/kg

**8.2. Exposure controls**

**Appropriate engineering controls**

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

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

goggles

**Hand protection**

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

By long-term hand contact

Recommended glove articles: KCL 741 Dermatril® L  
Recommended material: NBR (Nitrile rubber) 0,11mm  
Wearing time with permanent contact: >480min

By short-term hand contact

Recommended glove articles: KCL 741 Dermatril® L  
Recommended material: NBR (Nitrile rubber) 0,11mm  
Wearing time with occasional contact (splashes): >480min

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

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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.  
Wash hands before breaks and after work.

**Respiratory protection**

Respiratory protection necessary at: dust formation

**Environmental exposure controls**

Do not allow to enter into surface water or drains.

**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

Physical state:	solid	
Colour:	white	
Odour:	like: Chlorine	
Odour threshold:	No data available	
Melting point/freezing point:		250 °C
Boiling point or initial boiling point and boiling range:		No data available
Flammability		
Solid/liquid:		No data available
Gas:		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
Decomposition temperature:		No data available
pH-Value (at 20 °C):		6-7 (10 g/l)
Viscosity / kinematic:		No data available
Water solubility: (at 20 °C)		250 g/L
Solubility in other solvents		
No data available		
Partition coefficient n-octanol/water:		No data available
Vapour pressure:		No data available
Vapour pressure:		No data available
Density:		No data available
Bulk density:		~980 kg/m <sup>3</sup>
Relative vapour density:		No data available

**9.2. Other information**

**Information with regard to physical hazard classes**

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**

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Evaporation rate:	No data available
Solvent separation test:	No data available
Solvent content:	No data available
Solid content:	100%
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**

No data available

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

Danger of dust explosion.  
oxidising  
Handle with care - avoid bumps, friction and impact.

**10.2. Chemical stability**

No data available

**10.3. Possibility of hazardous reactions**

Acids  
Combustible substance  
Ammonia  
Base  
urea

**10.4. Conditions to avoid**

Handle with care - avoid bumps, friction and impact.  
Heat

**10.5. Incompatible materials**

No data available

**10.6. Hazardous decomposition products**

In case of fire may be liberated:  
Nitrogen oxides (NO<sub>x</sub>)  
Hydrogen chloride (HCl)

**Further information**

No data available

**SECTION 11: Toxicological information**

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

**Toxicokinetics, metabolism and distribution**

No data available

**Acute toxicity**

Harmful if swallowed.

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
51580-86-0	sodium dichloroisocyanurate, dihydrate				
	oral	LD50 2094 mg/kg	Rat	Study report (1985)	EPA OPP 81-1
	dermal	LD50 > 5000 mg/kg	Rat	Study report (1984)	EPA OPP 81-2
	inhalation (4 h) dust/mist	LC50 > 0,27 - < 1,17 mg/l	Rat	Study report (1985)	OECD Guideline 403

**Irritation and corrosivity**

Causes serious eye irritation.

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

**Sensitising effects**

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

**Carcinogenic/mutagenic/toxic effects for reproduction**

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

**STOT-single exposure**

May cause respiratory irritation. (sodium dichloroisocyanurate, dihydrate)

**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.

**Specific effects in experiment on an animal**

No data available

**Additional information on tests**

No data available

**Practical experience**

No data available

**11.2. Information on other hazards**

**Other information**

No data available

**Further information**

No data available

**SECTION 12: Ecological information**

**12.1. Toxicity**



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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
51580-86-0	sodium dichloroisocyanurate, dihydrate					
	Acute fish toxicity	LC50 mg/l	0,24	96 h	Oncorhynchus mykiss	Study report (1987) EPA OTS 797.1400
	Acute algae toxicity	ErC50 mg/l	> 100	72 h	Skeletonema costatum	Study report (2009) ISO 10253
	Acute crustacea toxicity	EC50 mg/l	0,196	48 h	Daphnia magna	Study report (1978) other: Methods for acute toxicity tests
	Fish toxicity	NOEC mg/l	1000	28 d	Oncorhynchus mykiss	Study report (2007) OECD Guideline 215
	Crustacea toxicity	NOEC	160 mg/l	21 d	Daphnia magna	Study report (2007) OECD Guideline 211
	Acute bacteria toxicity	(EC50	51 mg/l)	3 h	activated sludge of a predominantly domestic sewage	Study report (2002) OECD Guideline 209

**12.2. Persistence and degradability**

No data available

**12.3. Bioaccumulative potential**

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
51580-86-0	sodium dichloroisocyanurate, dihydrate	-0,056

**12.4. Mobility in soil**

No data available

**12.5. Results of PBT and vPvB assessment**

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

No data available

**12.6. Endocrine disrupting properties**

This substance does not have endocrine disrupting properties with respect to non-target organisms.

**12.7. Other adverse effects**

No data available

**Further information**

Do not allow to enter into surface water or 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 allow to enter into surface water or 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 3077

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**14.2. UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(sodium dichloroisocyanurate, dihydrate)

**14.3. Transport hazard class(es):** 9

**14.4. Packing group:** III

Hazard label: 9

Classification code: M7

Special Provisions: 274 335 375 601

Limited quantity: 5 kg

Excepted quantity: E1

Transport category: 3

Hazard No: 90

Tunnel restriction code: -

**Inland waterways transport (ADN)**

**14.1. UN number or ID number:** UN 3077

**14.2. UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(sodium dichloroisocyanurate, dihydrate)

**14.3. Transport hazard class(es):** 9

**14.4. Packing group:** III

Hazard label: 9

Classification code: M7

Special Provisions: 274 335 375 601

Limited quantity: 5 kg

Excepted quantity: E1

**Marine transport (IMDG)**

**14.1. UN number or ID number:** UN 3077

**14.2. UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(sodium dichloroisocyanurate, dihydrate)

**14.3. Transport hazard class(es):** 9

**14.4. Packing group:** III

Hazard label: 9

Special Provisions: 274, 335, 966, 967, 969

Limited quantity: 5 kg

Excepted quantity: E1

EmS: F-A, S-F

**Air transport (ICAO-TI/IATA-DGR)**

**14.1. UN number or ID number:** UN 3077

**14.2. UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(sodium dichloroisocyanurate, dihydrate)

**14.3. Transport hazard class(es):** 9

**14.4. Packing group:** III

Hazard label: 9

Special Provisions: A97 A158 A179 A197

Limited quantity Passenger: 30 kg G

Passenger LQ: Y956

Excepted quantity: E1

IATA-packing instructions - Passenger: 956

IATA-max. quantity - Passenger: 400 kg

IATA-packing instructions - Cargo: 956

IATA-max. quantity - Cargo: 400 kg

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: Yes

Danger releasing substance: sodium dichloroisocyanurate, dihydrate

**14.6. Special precautions for user**

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No dangerous good in sense of this transport regulation.

#### **14.7. Maritime transport in bulk according to IMO instruments**

No dangerous good in sense of this transport regulation.

### SECTION 15: Regulatory information

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

##### **National regulatory information**

Water hazard class (D): 3 - highly hazardous to water

##### **Additional information**

No data available

### SECTION 16: Other information

#### **Changes**

This data sheet contains changes from the previous version in section(s): 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15.

#### **Relevant H and EUH statements (number and full text)**

H302	Harmful if swallowed.
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.
EUH031	Contact with acids liberates toxic gas.

#### **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.