

## Chemical Safety Data Sheet MSDS / SDS

## CDP-STAR

Revision Date:2026-05-30 Revision Number:1

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

## Product identifier

Product name : CDP-STAR  
CBnumber : CB0772200  
CAS : 160081-62-9  
Synonyms : CDP-STAR, Disodium 2-chloro-5-(4-methoxy Spiro[1,2-dioxetane-3,2'-(5-chlorotricyclo[3.3.1.1<sup>3,7</sup>]decan])-4-yl]-1-phenyl phosphate

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

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

## Company Identification

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 010-86108875

## SECTION 2: Hazards identification

## GHS Label elements, including precautionary statements

Symbol(GHS)



Signal word

Warning

## Precautionary statements

P264 Wash skin thoroughly after handling.  
P280 Wear protective gloves/protective clothing/eye protection/face 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.  
P264 Wash skin thoroughly after handling.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P302+P352 IF ON SKIN: wash with plenty of soap and water.  
P321 Specific treatment (see ... on this label).  
P332+P313 IF SKIN irritation occurs: Get medical advice/attention.  
P362 Take off contaminated clothing and wash before reuse.

## Hazard statements

H319 Causes serious eye irritation

H315 Causes skin irritation

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## SECTION 3: Composition/information on ingredients

### Substance

Product name	: CDP-STAR
Synonyms	: CDP-STAR, Disodium 2-chloro-5-(4-methoxy Spiro[1,2-dioxetane-3,2'-(5-chlorotricyclo[3.3.1.1.3.7]decan])-4-yl]-1-phenyl phosphate
CAS	: 160081-62-9
MF	: C <sub>18</sub> H <sub>19</sub> Cl <sub>2</sub> Na <sub>2</sub> O <sub>7</sub> P
MW	: 495.2

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## SECTION 4: First aid measures

### If inhaled

After inhalation: fresh air.

### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

### In case of eye contact

After eye contact: rinse out with plenty of water. Remove contact lenses.

### If swallowed

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

### Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

### Protection of first-aiders

For personal protection see section 8.

### Notes to physician

No data available

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## SECTION 5: Firefighting measures

### Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

## **Hazardous combustion products**

Carbon oxides Oxides of phosphorus Hydrogen chloride gas Sodium oxides

## **Specific extinguishing methods**

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

## **Special protective equipment for fire-fighters**

In the event of fire, wear self-contained breathing apparatus.

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# SECTION 6: Accidental release measures

## **Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: For personal protection see section 8.

## **Environmental precautions**

Do not let product enter drains.

## **Methods and materials for containment and cleaning up**

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemisorb®). Dispose of properly. Clean up affected area.

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# SECTION 7: Handling and storage

## **Handling**

For precautions see section 2.2.

## **Storage**

### **Further information on storage conditions**

Tightly closed.

### **Storage class**

10, Combustible liquids

### **Recommended storage temperature**

2 - 8 °C

### **Further information on storage stability**

Light sensitive. Heat sensitive.

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# SECTION 8: Exposure controls/personal protection

## **Ingredients with workplace control parameters**

We are not aware of any national exposure limit.

## Engineering measures

No data available

## Personal protective equipment

### Respiratory protection

required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

### Recommended Filter type

Filter type ABEK

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

### 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

### Hand protection

#### Material

Nitrile rubber

#### Break through time

480 min

#### Glove thickness

0.11 mm

#### Protective index

Full contact

#### Manufacturer

(KCL 740 / Aldrich Z677272, Size M)

#### Material

Nitrile rubber

#### Break through time

480 min

#### Glove thickness

0.11 mm

#### Protective index

Splash contact

#### Manufacturer

(KCL 740 / Aldrich Z677272, Size M)

#### Manufacturer

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

### Remarks

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it. If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Hygiene measures**

Change contaminated clothing. Wash hands after working with substance.

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## **SECTION 9: Physical and chemical properties**

### **Information on basic physicochemical properties**

liquid

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#### **Color**

Colorless to light yellow

#### **Odor**

No data available

#### **Odor Threshold**

No data available

#### **pH**

No data available

#### **Melting point/ range**

No data available

#### **Boiling point/boiling range**

No data available

#### **Flash point**

No data available

#### **Evaporation rate**

No data available

#### **Flammability (solid, gas)**

No data available

#### **Flammability (liquids)**

No data available

#### **Burning rate**

No data available

**Upper explosion limit / Upper flammability limit**

No data available

**Lower explosion limit / Lower flammability limit**

No data available

**Vapor pressure**

No data available

**Relative vapor density**

No data available

**Relative density**

No data available

**Density**

No data available

**Water solubility**

No data available

**Partition coefficient: n-octanol/water**

No data available

**Autoignition temperature**

No data available

**Decomposition temperature**

No data available

**Viscosity, dynamic**

No data available

**Viscosity, kinematic**

No data available

**Flow time**

No data available

**Explosive properties**

Not classified as explosive.

**Oxidizing properties**

none

**Molecular weight**

495.20 g/mol

#### **Particle characteristics Particle size**

No data available

#### **Physical state**

solution

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## SECTION 10: Stability and reactivity

#### **Reactivity**

No data available

#### **Chemical stability**

The product is chemically stable under standard ambient conditions (room temperature) .

#### **Possibility of hazardous reactions**

Violent reactions possible with: The generally known reaction partners of water.

#### **Conditions to avoid**

no information available

#### **Incompatible materials**

No data available

#### **Hazardous decomposition products**

In the event of fire: see section 5

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## SECTION 11: Toxicological information

### **11.1 Information on toxicological effects**

#### **Mixture Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

#### **Skin corrosion/irritation**

Classified based on available data. For more details, see section 2

#### **Serious eye damage/eye irritation**

Classified based on available data. For more details, see section 2

#### **Respiratory or skin sensitization**

Classified based on available data. For more details, see section 2

#### **Germ cell mutagenicity**

Classified based on available data. For more details, see section 2

**Carcinogenicity**

Classified based on available data. For more details, see section 2

**Reproductive toxicity**

Classified based on available data. For more details, see section 2

**Specific target organ toxicity - single exposure**

Classified based on available data. For more details, see section 2

**Specific target organ toxicity - repeated exposure**

Classified based on available data. For more details, see section 2

**Aspiration hazard**

Classified based on available data. For more details, see section 2

**11.2 Additional Information**

Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

**Components 2-Chloro-5-(4-methoxyspiro{1,2-dioxetane-3,2'-(5'-chloro)- tricyclo[3.3.1.1]decan}-4-yl)-1-phenyl phosphate disodium salt (cdp-star)****Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

**Skin corrosion/irritation**

Classified based on available data. For more details, see section 2

**Serious eye damage/eye irritation**

Classified based on available data. For more details, see section 2

**Respiratory or skin sensitization**

Classified based on available data. For more details, see section 2

**Germ cell mutagenicity**

Classified based on available data. For more details, see section 2

**Carcinogenicity**

Classified based on available data. For more details, see section 2

**Reproductive toxicity**

Classified based on available data. For more details, see section 2

**Specific target organ toxicity - single exposure**

Classified based on available data. For more details, see section 2

**Specific target organ toxicity - repeated exposure**

Classified based on available data. For more details, see section 2

**Aspiration hazard**

Classified based on available data. For more details, see section 2

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**SECTION 12: Ecological information****Ecotoxicity**

No data available

### **Persistence and degradability**

No data available

### **Bioaccumulative potential**

No data available

### **Mobility in soil**

No data available

### **Other adverse effects**

No data available

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## SECTION 13: Disposal considerations

### **Disposal methods**

#### **Waste from residues**

Offer surplus and non-recyclable solutions to a licensed disposal company.

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## SECTION 14: Transport information

### **International Regulations**

#### **IATA-DGR**

UN/ID No. : Not applicable

Proper shipping name : Not applicable

Class : Not applicable

Subsidiary risk : Not applicable

Packing group : Not applicable

Labels : Not applicable

Packing instruction (cargo aircraft) : Not applicable

Packing instruction (passenger aircraft) : Not applicable

#### **IMDG-Code**

UN number : Not applicable

Proper shipping name : Not applicable

Class : Not applicable

Subsidiary risk : Not applicable

Packing group : Not applicable

Labels : Not applicable

EmS Code : Not applicable

Marine pollutant : no

### **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

## **National Regulations**

### **JT/T 617**

UN number : Not applicable

Proper shipping name : Not applicable

Class : Not applicable

Subsidiary risk : Not applicable

Packing group : Not applicable

Labels : Not applicable

Environmentally hazardous : no

## **Special precautions for user**

Remarks : Not classified as dangerous in the meaning of transport regulations.

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## **SECTION 15: Regulatory information**

Catalogue of Hazardous Chemicals : This product is not listed in the catalogue of hazardous chemicals and it does not meet the definition of hazardous chemicals and its principles of determination.

Downstream users need to comply with the conditions of safe use of the chemical, understand the environmental and health hazard and risk management measures identified on the SDS as well as the local/national regulations concerning the chemical.

### **National regulatory information**

#### **Regulations on Safety Management of Hazardous Chemicals**

#### **Identification of Major Hazard Installations for Hazardous Chemicals (GB 18218)**

Not listed

#### **Hazardous Chemicals for Priority Management**

Not listed under SAWS

#### **Regulations on Labour Protection in Workplaces where Toxic Substances are Used**

#### **Catalogue of Highly Toxic Chemicals**

Not listed

#### **Regulation of Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals**

#### **China Severely Restricted Toxic Chemicals for Import and Export**

Not listed

#### **Measures on the Environmental Administration of New Chemical Substances Registration**

## Registration/Notification number

B1A222211774 B1A222250130

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## SECTION 16: Other information

### Full text of other abbreviations

AIIIC - Australian Inventory of Industrial Chemicals

ANTT - National Agency for Transport by Land of Brazil

ASTM - American Society for the Testing of Materials

bw - Body weight

CMR - Carcinogen, Mutagen or Reproductive Toxicant

DIN - Standard of the German Institute for Standardisation

DSL - Domestic Substances List (Canada)

EC<sub>x</sub> - Concentration associated with x% response

EL<sub>x</sub> - Loading rate associated with x% response

EmS - Emergency Schedule

ENCS - Existing and New Chemical Substances (Japan)

ErC<sub>x</sub> - Concentration associated with x% growth rate response

ERG - Emergency Response Guide

GHS - Globally Harmonised System

GLP - Good Laboratory Practice

IARC - International Agency for Research on Cancer

IATA - International Air Transport Association

IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk

IC<sub>50</sub> - Half maximal inhibitory concentration

ICAO - International Civil Aviation Organization

IECSC - Inventory of Existing Chemical Substances in China

IMDG - International Maritime Dangerous Goods

IMO - International Maritime Organisation

ISHL - Industrial Safety and Health Law (Japan)

ISO - International Organisation for Standardisation

KECI - Korea Existing Chemicals Inventory

LC<sub>50</sub> - Lethal Concentration to 50 % of a test population

LD<sub>50</sub> - Lethal Dose to 50% of a test population (Median Lethal Dose)

MARPOL - International Convention for the Prevention of Pollution from Ships

MERCOSUR - The Agreement for the Facilitation of the Transport of Dangerous Goods

n.o.s. - Not Otherwise Specified

Nch - Chilean Norm

NO(A)EC - No Observed (Adverse) Effect Concentration

NO(A)EL - No Observed (Adverse) Effect Level

NOELR - No Observable Effect Loading Rate

NOM - Official Mexican Norm

NTP - National Toxicology Program

NZIoC - New Zealand Inventory of Chemicals

OECD - Organisation for Economic Co-operation and Development

OPPTS - Office of Chemical Safety and Pollution Prevention

PBT - Persistent, Bioaccumulative and Toxic substance

PICCS - Philippines Inventory of Chemicals and Chemical Substances

(Q)SAR - (Quantitative) Structure Activity Relationship

REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals

SADT - Self-Accelerating Decomposition Temperature

SDS - Safety Data Sheet

TCSI - Taiwan Chemical Substance Inventory

TDG - Transportation of Dangerous Goods

TECI - Thailand Existing Chemicals Inventory

TSCA - Toxic Substances Control Act (United States)

UN - United Nations

UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods

vPvB - Very Persistent and Very Bioaccumulative

WHMIS - Workplace Hazardous Materials Information System

**Disclaimer:**

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.