

W. C. Heraeus	Safety Data Sheet	revised: 05.11.2004
trade name: Diammine (cyclobutane-1,1-dicarboxylato) platinum(II); „Carboplatin“		Rev. Nr.: 3
		Ident.- Nr.: 89730036

4. First-aid measures

General information

In case of accident or if you feel unwell, seek medical advice immediately.

After inhalation:	Call a physician immediately.
After contact with skin:	Wash off with soap and plenty of water. Remove immediately contaminated clothing and shoes.
After contact with eyes:	Rinse thoroughly with plenty of water, also under the eyelids. Consult an eye specialist.
After ingestion:	If conscious rinse mouth with water and seek medical advise.
Medical advice:	Area of application: cytostatics .

5. Fire-fighting measures

Suitable extinguishing media:

Use extinguishing media that are appropriate to the environment.
Water spray, dry chemical, carbon dioxide or foam.

Not suitable extinguishing media:

Full water jet.

Specific danger by the substance, its burning products or developing gases:

Additional hazardous vapours caused by fire: NO_x .

Special protective equipment for fire-fighting:

Firefighters should use suitable chemical protective clothing and self-contained breathing equipment.

6. Accidental release measures

Personal precautions:

The usual precautionary measures for the handling of chemicals have to be observed.
Eye protection, protective clothing and respiratory protection.
Do not breathe dust and aerosols.

Environmental precautions:

Do not allow to enter surface and ground water, the sewage system or soil.

Methods for cleaning up/taking up:

Take up mechanically. Clean up affected area. Avoid generation of dust.

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Further information:

Residues and solutions, which can not be recycled, transfer to an approved waste disposal company.

7. Handling and storage

7.1 Handling

Advice on safe handling:

Use only in a chemical fume hood or glove box.
 The usual precautionary measures for the handling of chemicals have to be observed.
 Do not eat, drink and smoke at working place.
 Only accessible to qualified persons.
 Wear personal protective equipment.
 Avoid formation of respiratory particles.

Precautionary measures against fire and explosion:

Heating may cause decomposition; hazardous gases may be generated (refer to section 5).

7.2 Storage

Requirements for storage rooms and vessels:

Store in tightly closed container in dry and cool area.
 Protect against light.

Further information for storage

Do not store together with highly flammable substances.
 Keep away from food and drink.

Storage class

8. Exposure controls / Personal protection

8.1 Additional advice on system design

Provide good ventilation/exhaustion at the working place; handle only in a chemical fume hood or glove box . Do not lead back the exhausted air into the working area.

8.2 Advice on limits

We recommend the reference point of 0,001 mg/m³ (calculated as Pt). This value participates to the cytostatica "Cisplatinum".

8.3 Personal protection equipment

Respiratory protection:

Absolutely necessary.
 Use P3 respiratory protection filter
 (push on filter EN 143 or screwed filter EN 149).

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Hand protection:	For the handling of the product impermeable protective gloves for example out of latex have to be used.
Eye protection:	Use tightly fitting safety glasses / goggles.
Body protection:	Use protective clothing. Wear fresh clothing daily. Use high-necked lab coat with long sleeves. Remove immediately contaminated clothing. Wash clothes before reuse. Avoid contact with skin, eyes and clothes.
Protective and hygiene measure:	Use only in a chemical fume hood or glove box . The usual precautionary measures for the handling of chemicals have to be observed. Don't eat and drink at working place. Don't smoke. Wash hands before breaks and at the end of workday. Take a shower after handling the product. Contaminated working clothes should not be worn outside the work place. Keep away from food and drinks. Do not breathe dust.

9. Physical and chemical properties

9.1 Appearance

Form:	Solid
Colour:	White
Odour:	Odourless

9.2 Aspects relevant for security

	Test method
pH-value	not determined
Melting point:	not determined
Boiling point:	not applicable
Flash point:	not applicable
Ignition (solid):	not determined
Self ignition:	no
Explosions hazard:	not explosive
Explosion limits lower:	not applicable
upper:	not applicable
Bulk density:	not determined
Solubility in water (20 °C):	18 g/l

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Thermal decomposition: > 200 °C

9.3 Further information

10. Stability and reactivity

Conditions to avoid

Decomposition by light and temperatures > 200 °C.

Materials to avoid

Dangerous compounds of decomposition

See above.

Further information

11. Toxicological information

Acute toxicity

LD₅₀ (oral, rat): 343 mg/Kg

LD₅₀ (subcutaneous, rat): 72 mg/Kg

LD₅₀ (intravenous, rat): 60,9 mg/Kg (all values: RTECS-No: TP2300000, Feb. 2004)

The substance is classified as harmful if swallowed (R 22).

Further information

Carboplatin is active as a cytostatica and effects in a gen toxic way. Therefore it is carcinogenic, mutagenic and reproductive toxic.

Under the German jurisdiction (TRGS 905) cytostatica are classified in category 1 or 2 concerning the carcinogenic potential. This means the substance is known to be carcinogenic or there are many hints for this.

12. Ecological information

Information on elimination, persistence and decomposition

No data available.

Effects on environmental compartments

No data available.

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Ecotoxic effects

No data available.

Further informations:

Do not allow to enter surface and ground water, the sewage system or soil.

13. Advice on disposal

Disposal

Product or residue of product are classified as hazardous waste. The following classification is valid:

EAK-No: 180108 Cytotoxic and cytostatic medicines.
Special waste that must be kept under surveillance.

Disposal of uncleaned packing / recommended detergents

Uncleaned or with product residues contaminated packing should be treated like the product itself.

Packages, which do not contain product residues, should be recycled; if there does not exist a collecting system, packages can be treated as rubbish.

Further information:

Transport container for waste label additionally with "Attention Cytostatica".

14. Transport information

14.1 Land transport (ADR/RID/GGVS/GGVE)

UN-No.: UN 2811
Proper Shipping Name : TOXIC SOLID, ORGANIC, N.O.S.
 (DIAMMINE (CYCLOBUTANE-1,1-DICARBOXYLATO) PLATINUM(II))
Main risk/ Class: 6.1
Subsidiary risk: ---
Packing group: III
Label: 6.1

14.2 Inland water ways transport

Not classified.

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14.3 Marine transport (IMDG/GGVSee)

UN-No.: UN 2811
Proper Shipping Name : TOXIC SOLID, ORGANIC, N.O.S.
 (DIAMMINE (CYCLOBUTANE-1,1-DICARBOXYLATO)
 PLATINUM(II))

Class: 6.1
Subsidiary risk: ---
Packing group: III
Marine pollutant: no
Label: 6.1

14.4 Air transport(IATA/ICAO)

UN-No.: UN 2811
Proper Shipping Name : TOXIC SOLID, ORGANIC, N.O.S.
 (DIAMMINE (CYCLOBUTANE-1,1-DICARBOXYLATO)
 PLATINUM(II))

Class: 6.1
Subsidiary risk: ---
Packing group: III
Label: 6.1

14.5 Further information

15. Regulatory information

15.1 Labelling

T Toxic.

R-Phrases:

22 Harmful if swallowed.
 36/37/38 Irritating to eyes, respiratory system and skin.
 45 May cause cancer.
 46 May cause heritable genetic damage.
 63 Possible risk of harm to the unborn child.

S-Phrases:

20/21 When using do not eat, drink or smoke.
 22 Do not breathe dust.
 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
 53 Avoid exposure – obtain special instruction before use.
 60 This material and its container must disposed of as hazardous waste.

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15.2 National regulations

Germany:

Prohibition to employ: teenager under 18 years (Jugendarbeitsschutzgesetz),
 pregnant and nursing mothers (Mutterschutzverordnung)

Water Endangerment WGK-class: 3 strong water pollutant
 (regulation VwVwS, Annex 3)

16. Other information

The data given here is based on today`s stand of our knowledge and experience. The purpose of this Safety Data Sheet is to describe the product in terms of their safety requirements. The data does not signify any warranty with regard to the products` properties.

Sector making out data sheet: HH-SUS