

WTW Safety Data Sheet
According to EC Directives 91/155/EEC

1. Identification of the substance/preparation and of the company/undertaking

Product name:

ReagenzienKit Freies Chlor/Free Chlorine Reagent Kit

Puffer Freies Chlor/Buffer Free Chlorine

Ord. No.: 860 170

Model: CLDF-KIT 360

Manufacturer:

WTW Wissenschaftlich-Technische Werkstätten GmbH, Dr.-Karl-Slevogt-Straße 1, D-82362 Weilheim, Germany
Tel.: +49(0) 881 183-0 Fax.: +49(0) 881 183-420

Emergency telephone:
(001)-703-527-3887

2. Composition/information on ingredients

Chemical characterization: Aqueous saline solution

Ingredients: Carboxylate salt (confidential) and EDTA.

Hazard symbols: No hazardous products

R-phrases: Not applicable

Content: The concentrations are unknown to us.

CAS-No.: EDTA 6381-92-6

EINECS-No.: EDTA 205-358-3

3. Hazards identification

No hazardous products

4. First aid measures

After inhalation: Fresh air

After skin contact: Wash off with plenty of water.

Remove contaminated clothing.

After eye contact: Rinse out with plenty of water with the eyelid held wide open. Summon eye specialist.

After ingestion: Make injured person drink plenty of water,
Do not induce vomiting, summon doctor.

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Identification of the substance/preparation

ReagenzienKit Freies Chlor/Free Chlorine Reagent Kit

Puffer Freies Chlor/Buffer Free Chlorine

5. Fire-fighting measures

<i>Suitable extinguishing media:</i>	To suit environment
<i>Unsuitable extinguishing media:</i>	Not applicable
<i>Special risks:</i>	Development of hazardous vapours possible in the event of fire. In case of fire use chemical protection clothing and selfcontained breathing apparatus
<i>Other information:</i>	Non-combustible

6. Accidental release measures

<i>Personal-related precautionary measures:</i>	Avoid contact with skin and eyes. Do not inhale vapours and aerosols.
<i>Environmental-protection measures:</i>	Do not allow to enter sewerage system.
<i>Procedures for cleaning/absorption:</i>	Rinse away remainder with water.

7. Handling and storage

<i>Handling:</i>	No further requirements
<i>Storage:</i>	Tightly closed, in well ventilated place, protected from direct sunlight, cool.

8. Exposure control/personal protection

<i>Specific control parameters:</i>	There are no such parameters.
Personal protective equipment	
<i>Respiratory protection:</i>	Usually unnecessary
<i>Eye protection:</i>	Protective glasses
<i>Hand protection:</i>	Gloves
<i>Industrial hygiene:</i>	Wash hands and face after working with this product. Change contaminated clothing.

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Identification of the substance/preparation

ReagenzienKit Freies Chlor/Free Chlorine Reagent Kit

FREE CHLORINE BUFFER DRY POWDER

9. Physical and chemical properties

Form: liquid *Colour:* colourless *Odour:* odourless

<i>pH-value</i>	not determined
<i>Melting temperature:</i>	not determined
<i>Boiling temperature:</i>	not determined
<i>Ignition temperature:</i>	not applicable
<i>Flash point:</i>	not applicable
<i>Explosion limite lower:</i>	not applicable
<i> upper:</i>	not applicable
<i>Density:</i>	about 1.18 g/cm ³
<i>Solubility in water:</i>	miscible

10. Stability and reactivity

<i>Conditions to be avoided:</i>	Strong heating
<i>Substances to be avoided:</i>	Strong acids. Prolonged contact with aluminium, lead or zinc.
<i>Hazardous decomposition products:</i>	Sodium oxides
<i>Further information:</i>	No information available.

11. Toxicological information

<i>Acute toxicity:</i>	LD ₅₀ (oral, rat) > 2000 mg/kg for EDTA dehydrated
<i>Further toxicological information:</i>	After swallowing: slow absorption, disturbed electrolyte balance, damage of kidneys. Experience in man: May cause sensitization

12. Ecological information

<i>Ecotoxic effects:</i>	Quatitative data on the ecological effect of this product are not available. No ecological problems are to be expected when the product is handled and used with due care and attention. Biologically not readily degradable. Do not allow to enter waters, waste water, or soil.
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Identification of the substance/preparation

ReagenzienKit Freies Chlor/Free Chlorine Reagent Kit

FREE CHLORINE BUFFER DRY POWDER

13. Disposal considerations

- Products:* There are no uniform regulations for the disposal of chemicals or residues. The disposal is regulated through corresponding regional laws and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose the special waste.
- Packaging:* Handle contaminated packaging in the same way as the substance itself. If not officially specified differently, noncontaminated packaging may be treated like household waste or recycled.

14. Transport information

- ADR/GGVSE:* /
- IMDG/GGVSee:* /
- ICAO/IATA:* /
- Further information:* Not subject to transport regulations

15. Regulatory information

Labelling according to EC directives

- Symbol:* No hazardous product as specified in Directive 67/548/EEC
- R-phrases:* /
- S-phrases:* /

German regulations

Water pollution class; WGK: 2 (polluting substance)

Regulation on combustible liquids; VbF: Non-combustible

Other regulations: None

16. Other information

- Date of issue:* 16.10.2007
- Supersedes edition of* 22.05.2007
- Reason for alteration:* Change in recipe

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.

WTW Safety Data Sheet

According to EC Directives 91/155/EEC

1. Identification of the substance/preparation and of the company/undertaking

Product name:

ReagenzienKit Freies Chlor/Free Chlorinr Reagent Kit

Indikator/Indicator

Ord. No.: 860 170

Model: CLDF-KIT 360

Manufacturer:

WTW Wissenschaftlich-Technische Werkstätten GmbH, Dr.-Karl-Slevogt-Straße 1, D-82362 Weilheim, Germany

Tel.: +49(0) 881 183-0 Fax.: +49(0) 881 183-420

Emergency telephone:
(001)-703-527-3887

2. Composition/information on ingredients

Chemical characterization: Whitish substance

Hazardous ingredients: Arylsulfonic Acid

Hazard symbols: Harmful (Xn)

R-phrases: 22-34

Content: 100 %

UN-Number: 2585

3. Hazards identification

Harmful if swallowed.

Causes burns.

Dangerous for eyes, skin and mucous membrane.

4. First aid measures

After inhalation: Fresh air

After skin contact: Wash off with plenty of water.
Remove contaminated clothing.

After eye contact: Rinse out with plenty of water with the eyelid held wide open. Summon eye specialist.

After ingestion: Make injured person drink plenty of water,
Do not induce vomiting. Danger of perforation
Summon doctor.

WTW Safety Data Sheet

Identification of the substance/preparation

ReagenzienKit Freies Chlor/Free Chlorine Reagent Kit

Indikator/Indicator

5. Fire-fighting measures

<i>Suitable extinguishing media:</i>	To suit environment.
<i>Unsuitable extinguishing media:</i>	Not applicable
<i>Special risks:</i>	Development of hazardous vapours possible in the event of fire. In case of fire use chemical protection clothing and selfcontained breathing apparatus.
<i>Other information:</i>	Not flammable.

6. Accidental release measures

<i>Personal-related precautionary measures:</i>	Avoid inhalation of dusts. Avoid substance contact.
<i>Environmental-protection measures:</i>	Do not allow to enter sewerage system.
<i>Procedures for cleaning/absorption:</i>	Take up dry.Forward for disposal. Rinse away remainder with water.

7. Handling and storage

<i>Handling:</i>	No further requirements.
<i>Storage:</i>	Tightly closed. Dry.

8. Exposure control/personal protection

<i>Specific control parameters:</i>	There are not any parameters
Personal protective equipment	
<i>Respiratory protection:</i>	Required when dusts are generated.
<i>Eye protection:</i>	Protective glasses
<i>Hand protection:</i>	Rubber gloves
<i>Industrial hygiene:</i>	Wash hands and face after working with solution. Change contaminated clothing.

WTW Safety Data Sheet

Identification of the substance/preparation

ReagenzienKit Freies Chlor/Free Chlorine Reagent Kit

Indikator/Indicator

9. Physical and chemical properties

Form: solid *Colour:* whitish *Odour:* odourless

<i>pH-value</i>	not determined
<i>Melting temperature:</i>	not determined
<i>Boiling temperature:</i>	not determined
<i>Ignition temperature:</i>	not applicable
<i>Flash point:</i>	not applicable
<i>Explosion limite lower:</i>	not applicable
<i> upper:</i>	not applicable
<i>Density:</i>	not determined
<i>Solubility in water:</i>	miscible
<i>Thermal decomposition:</i>	Oxides of sulphur, Toxic fumes.

10. Stability and reactivity

<i>Conditions to be avoided:</i>	None found
<i>Substances to be avoided:</i>	Strong alkalies, alcohols, aldehydes, reducing agents. Prolonged contact with aluminium, lead or zinc may liberate flammable hydrogen.
<i>Hazardous decomposition products:</i>	Oxides of sulphur, Toxic fumes.
<i>Further information:</i>	Under normal circumstances: stable

11. Toxicological information

<i>Acute toxicity:</i>	Quantitative data on the toxicity of this product are not available.
<i>Further toxicological information:</i>	No toxic effects are to be expected when the product is handled approximately.

12. Ecological information

<i>Ecotoxic effects:</i>	Quantitative data on the ecological effects of this product are not available.
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WTW Safety Data Sheet

Identification of the substance/preparation

13. Disposal considerations

Products: There are no uniform regulations for the disposal of chemicals or residues. The disposal is regulated through corresponding regional laws and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose the special waste.

Packaging: Handle contaminated packaging in the same way as the substance itself. If not officially specified differently, noncontaminated packaging may be treated like household waste or recycled.

14. Transport information

ADR/GGVSE: UN 2585 ARYLSULFONSÄUREN;FEST; 8, III
Arylsulfonsäuren, fest
IMDG/GGVSee: UN 2585 ARYLSULPHONIC ACIDS, SOLID, 8, III
EmS: F-A S-B
ICAO/IATA: ARYLSULPHONIC ACIDS; SOLID,8, UN 2585, III
Further information: None

15. Regulatory information

Labelling according to EC directives

Symbol: Harmful (Xn)
R-phrases: 22-34 Harmful if swallowed
Causes burns
S-phrases: 26-36/37/39-45 In case of contact with eyes, rinse immediately with plenty of water. and seek medical advice. Wear suitable protective clothing, gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

German regulations

Water pollution class; WGK: 1 slightly polluting substance

Regulation on combustible liquids; VbF: Solid

Other regulations: None

16. Other information

Date of issue: 16.10.2007
Supersedes edition of 22.05.2007
Reason for alteration: Change in recipe

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WTW Safety Data Sheet
According to EC Directives 91/155/EEC

1. Identification of the substance/preparation and of the company/undertaking

Product name:

ReagenzienKit Freies Chlor/Free Chlorine Reagent Kit

DPD-Pulver/DPD Powder

Ord. No.: 860 170

Model: CLDF-KIT 360

Manufacturer:

WTW Wissenschaftlich-Technische Werkstätten GmbH, Dr.-Karl-Slevogt-Straße 1, D-82362 Weilheim, Germany

Tel.: +49(0) 881 183-0 Fax.: +49(0) 881 183-420

Emergency telephone:

(001)-703-527-3887

2. Composition/information on ingredients

Chemical characterization: White to pale pink powder.

Hazardous ingredients: Salt of N,N-Diethyl-1,4-phenylenediamine
The correct composition is unknown.

For N,N-Diethyl-1,4-phenylenediamine is valid:

Hazard symbols: Toxic (T), Corrosive (C)

R-phrases: 25-34

Content: 100 %

CAS-No.: 93-05-0

EINECS-No.: 202-214-1

3. Hazards identification

Toxic if swallowed. Causes burns.

4. First aid measures

After inhalation: Fresh air. Immediately call the doctor.

After skin contact: Wash off with plenty of water.
Immediately remove contaminated clothing.

After eye contact: Rinse out with plenty of water with the eyelid held wide open. Summon eye specialist.

After ingestion: Make injured person drink plenty of water, Summon doctor.

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Identification of the substance/preparation

ReagenzienKit Freies Chlor/Free Chlorine Reagent Kit

DPD-Pulver/DPD Powder

5. Fire-fighting measures

<i>Suitable extinguishing media:</i>	Water, CO ₂ , foam, powder.
<i>Unsuitable extinguishing media:</i>	To suit environment.
<i>Special risks:</i>	Development of hazardous vapours possible in the event of fire. In case of fire use chemical protection clothing and selfcontained breathing apparatus.
<i>Other information:</i>	Non-combustible

6. Accidental release measures

<i>Personal-related precautionary measures:</i>	Do not inhale vapours/aerosols. Avoid substance contact. Ensure supply of fresh air in enclosed rooms.
<i>Environmental-protection measures:</i>	Do not allow to enter sewerage system.
<i>Procedures for cleaning/absorption:</i>	Carefully take up dry. Rinse away remainder with water.

7. Handling and storage

<i>Handling:</i>	No further requirements
<i>Storage:</i>	Tightly closed in a well-ventilated place at +15°C to +25°C. Accessible only for authorised persons. Dry. Protected from light.

8. Exposure control/personal protection

<i>Specific control parameters:</i>	There are no such parameters.
Personal protective equipment	
<i>Respiratory protection:</i>	Required when vapours/aerosol are generated.
<i>Eye protection:</i>	Protective glasses
<i>Hand protection:</i>	Gloves (rubber)
<i>Industrial hygiene:</i>	Wash hands and face after working with this product: Change contaminated clothing. Use a hood.

WTW Safety Data Sheet

Identification of the substance/preparation

ReagenzienKit Freies Chlor/Free Chlorine Reagent Kit

DPD-Pulver/DPD Powder

9. Physical and chemical properties

<i>Form:</i> Powder	<i>Colour:</i> white to pale pink	<i>Odour:</i> odourless
<i>pH-value</i>	not available	
<i>Melting temperature:</i>	not available	
<i>Boiling temperature:</i>	not available	
<i>Ignition temperature:</i>	not available	
<i>Flash point:</i>	not available	
<i>Explosion limite lower:</i>	not available	
<i>upper:</i>	not available	
<i>Density:</i>	1.00 g/l	
<i>Solubility in water:</i>	soluble	

10. Stability and reactivity

<i>Conditions to be avoided:</i>	Heating, light and air
<i>Substances to be avoided:</i>	Strong oxidizing agents, strong acids
<i>Hazardous decomposition products:</i>	The following may develop in the event of fire: Hydrogen cyanide, nitrogen oxides, nitrosamines.
<i>Further information:</i>	Heat-sensitive, light-sensitive, sensitive to air.

11. Toxicological information

<i>Acute toxicity:</i>	LD ₅₀ (oral, rat) > 200 mg/kg for N,N-diethyl-1,4-phenylene-diamine.
<i>Further toxicological information:</i>	The following applies to aromatic amines in general: methaemoglobinaemia with headache, cardiac dysrhythmia, drop in blood pressure, dyspnoea, and spasms, principal symptom: cyanosis (blue discoloration of the blood). May be absorbed through skin and may be sensitizing to skin. No toxic effects are to be expected when the product is handled appropriately.

12. Ecological information

<i>Ecotoxic effects:</i>	Biologically not readily degradable. No appreciable bioaccumulation potential is to be expected. Do not allow to enter waters, waste water, or soil.
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ReagenzienKit Freies Chlor/Free Chlorine Reagent Kit

DPD-Pulver/DPD Powder

13. Disposal considerations

Products: There are no uniform regulations for the disposal of chemicals or residues. The disposal is regulated through corresponding regional laws and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose the special waste.

Packaging: Handle contaminated packaging in the same way as the substance itself. If not officially specified differently, noncontaminated packaging may be treated like household waste or recycled.

14. Transport information

ADR/GGVSE: UN 2923 Ätzender fester Stoff, giftig, N:A:G:, 8 (6,1), III
(N,N-Diethyl-p-phenylendiaminsalz)
IMDG/GGVSee: UN 2923 Corrosive solid, toxic, N.O.S., 8 (6,1), III
(N,N-Diethyl-p-phenylenediamine salt), EMS-Number: F-A, S-B
ICAO/IATA: Corrosive solid, toxic, n.o.s., (N,N-Diethyl-p-phenylenediamine salt)
8 (6,1), UN 2923, III
Further information: None

15. Regulatory information

Labelling according to EC directives

Symbol: Toxic (T)
R-phrases: 25-34 Toxic if swallowed, Causes burns
S-phrases: 26-26-45 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

German regulations

Water pollution class: WGK: 3 (highly polluting substance)
Regulation on combustible liquids: VbF: Not available, powder.
Other regulations: None

16. Other information

Date of issue: 16.10.2007
Supersedes edition of 22.05.2007
Reason for alteration: Change in recipe

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