

safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



p-Chloranil ≥98 %, p.a.

article number: **KK33**
Version: **2.0 en**
Replaces version of: 2016-02-15
Version: (1.1)

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Revision: 2017-02-01

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

1.1 Product identifier

Identification of the substance	p-Chloranil
Article number	KK33
Registration number (REACH)	This information is not available.
Index No	602-066-00-1
EC number	204-274-4
CAS number	118-75-2

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

Identified uses: laboratory chemical

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 sheet : Department Health, Safety and Environment

e-mail (competent person) : sicherheit@carlroth.de

1.4 Emergency telephone number

Emergency information service **Poison Centre Munich: +49/(0)89 19240**

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Classification acc. to GHS			
Section	Hazard class	Hazard class and category	Hazard statement
3.2	skin corrosion/irritation	(Skin Irrit. 2)	H315
3.3	serious eye damage/eye irritation	(Eye Irrit. 2)	H319
4.1A	hazardous to the aquatic environment - acute hazard	(Aquatic Acute 1)	H400
4.1C	hazardous to the aquatic environment - chronic hazard	(Aquatic Chronic 1)	H410

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Remarks

For full text of Hazard- and EU Hazard-statements: see SECTION 16.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

Signal word

Warning

Pictograms



Hazard statements

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

Precautionary statements - prevention

P273 Avoid release to the environment.
P280 Wear protective gloves/eye protection.

Precautionary statements - response

P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Labelling of packages where the contents do not exceed 125 ml

Signal word: **Warning**

Symbol(s)



2.3 Other hazards

There is no additional information.

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SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance	p-Chloranil
Index No	602-066-00-1
EC number	204-274-4
CAS number	118-75-2
Molecular formula	$C_6Cl_4O_2$
Molar mass	245,9 g/mol

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off contaminated clothing.

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. In case of skin irritation, consult a physician.

Following eye contact

Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. In case of eye irritation consult an ophthalmologist.

Following ingestion

Rinse mouth. Call a doctor if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Irritation

4.3 Indication of any immediate medical attention and special treatment needed

none

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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings
water spray, foam, dry extinguishing powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Combustible.

Hazardous combustion products

In case of fire may be liberated: carbon monoxide (CO), carbon dioxide (CO₂), hydrogen chloride (HCl)

5.3 Advice for firefighters

Do not allow firefighting water to enter drains or water courses. 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

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. Do not breathe dust. Avoid contact with skin, eyes and clothes.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advices on how to contain a spill

Covering of drains.

Advices 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. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

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SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid dust formation.

• Measures to prevent fire as well as aerosol and dust generation

Removal of dust deposits.

Advice on general occupational hygiene

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

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice

• Ventilation requirements

Use local and general ventilation.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Notation	Identifier	TWA [mg/m ³]	STEL [mg/m ³]	Source
GB	dust		i	WEL	10		EH40/2005
GB	dust		r	WEL	4		EH40/2005

Notation

i Inhalable fraction
r 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

TWA Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average

8.2 Exposure controls

Individual protection measures (personal protective equipment)



Eye/face protection

Use safety goggle with side protection.

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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.

• 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). P1 (filters at least 80 % of airborne particles, colour code: White).

Environmental exposure controls

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	solid (powder, crystalline)
Colour	yellow
Odour	characteristic
Odour threshold	No data available

Other physical and chemical parameters

pH (value)	3,5 - 4,5 (100 g/l, 20 °C)
Melting point/freezing point	290 °C at 1 atm
Initial boiling point and boiling range	This information is not available.
Flash point	not applicable
Evaporation rate	no data available
Flammability (solid, gas)	Non-flammable
<u>Explosive limits</u>	
• lower explosion limit (LEL)	this information is not available
• upper explosion limit (UEL)	this information is not available
Explosion limits of dust clouds	these information are not available
Vapour pressure	1 hPa at 71 °C
Density	This information is not available.
Vapour density	This information is not available.

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Bulk density	800 kg/m ³
Relative density	Information on this property is not available.
<u>Solubility(ies)</u>	
Water solubility	2 mg/l at 20 °C
<u>Partition coefficient</u>	
n-octanol/water (log KOW)	2,3 (20 °C) (ECHA)
Auto-ignition temperature	>400 °C
Decomposition temperature	>450 °C
Viscosity	not relevant (solid matter)
Explosive properties	Shall not be classified as explosive
Oxidising properties	none
9.2 Other information	
Temperature class (EU, acc. to ATEX)	T2 (Maximum permissible surface temperature on the equipment: 300°C)

SECTION 10: Stability and reactivity

10.1 Reactivity

The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Violent reaction with: Alkali (lye), Strong oxidiser

10.4 Conditions to avoid

Decomposition takes place from temperatures above: >450 °C.

10.5 Incompatible materials

There is no additional information.

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Shall not be classified as acutely toxic.

Exposure route	Endpoint	Value	Species	Source
oral	LD50	6.951 mg/kg	rat	ECHA

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Summary of evaluation of the CMR properties

Shall not be classified as germ cell mutagenic, carcinogenic nor as a reproductive toxicant

- **Specific target organ toxicity - single exposure**

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

- **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**

diarrhoea, vomiting, gastrointestinal complaints

- **If in eyes**

data are not available

- **If inhaled**

data are not available

- **If on skin**

causes skin irritation

Other information

None

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SECTION 12: Ecological information

12.1 Toxicity

Very toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute)

Very toxic to aquatic organisms.

Endpoint	Value	Species	Source	Exposure time
LC50	4,6 mg/l	fish	ECHA	96 h

Aquatic toxicity (chronic)

May cause long-term adverse effects in the aquatic environment.

12.2 Process of degradability

Data are not available.

Process	Degradation rate	Time
biotic/abiotic	<1 %	28 d
carbon dioxide generation	20 %	28 d

12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

n-octanol/water (log KOW) 2,3 (20 °C)

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 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. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

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.

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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	3077
14.2	UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
	Hazardous ingredients	p-Chloranil
14.3	Transport hazard class(es)	
	Class	9 (miscellaneous dangerous substances and articles) (environmentally hazardous)
14.4	Packing group	III (substance presenting low danger)
14.5	Environmental hazards	hazardous to the aquatic environment
14.6	Special precautions for user	
	Provisions for dangerous goods (ADR) should be complied within the premises.	
14.7	Transport in bulk according to Annex II of MARPOL and the IBC Code	
	The cargo is not intended to be carried in bulk.	
14.8	Information for each of the UN Model Regulations	
	• Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)	
	UN number	3077
	Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
	Particulars in the transport document	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., (p-Chloranil), 9, III, (-)
	Class	9
	Classification code	M7
	Packing group	III
	Danger label(s)	9 + "fish and tree"
	 	
	Environmental hazards	yes (hazardous to the aquatic environment)
	Special provisions (SP)	274, 335, 375, 601
	Excepted quantities (EQ)	E1
	Limited quantities (LQ)	5 kg
	Transport category (TC)	3
	Tunnel restriction code (TRC)	-
	Hazard identification No	90
	Emergency Action Code	2Z

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• International Maritime Dangerous Goods Code (IMDG)

UN number	3077
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Particulars in the shipper's declaration	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., (p-Chloranil), 9, III
Class	9
Marine pollutant	yes (hazardous to the aquatic environment)
Packing group	III
Danger label(s)	9 + "fish and tree"



Special provisions (SP)	274, 335, 966, 967, 969
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 kg
EmS	F-A, S-F
Stowage category	A

• International Civil Aviation Organization (ICAO-IATA/DGR)

UN number	3077
Proper shipping name	Environmentally hazardous substance, solid, n.o.s.
Particulars in the shipper's declaration	UN3077, Environmentally hazardous substance, solid, n.o.s., (p-Chloranil), 9, III
Class	9
Environmental hazards	yes (hazardous to the aquatic environment)
Packing group	III
Danger label(s)	9 + "fish and tree"



Special provisions (SP)	A97, A158, A179, A197, 274
Excepted quantities (EQ)	E1
Limited quantities (LQ)	30 kg

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SECTION 16: Other information

16.1 Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
2.1		Classification acc. to GHS: change in the listing (table)	yes
2.2	Signal word: Danger	Signal word: Warning	yes
2.2		Pictograms: change in the listing (table)	yes
2.2		Hazard statements: change in the listing (table)	yes
2.2		Precautionary statements - prevention: change in the listing (table)	yes
2.2	Labelling of packages where the contents do not exceed 125 ml: Signal word: Danger	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
4.1	Following eye contact: In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.	Following eye contact: Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. In case of eye irritation consult an ophthalmologist.	no
4.2	Most important symptoms and effects, both acute and delayed: Allergic reactions (such as skin rashes, hives, asthma or anaphylactic shock), Risk of serious damage to eyes, Causes slight to moderate irritation	Most important symptoms and effects, both acute and delayed: Irritation	no
7.2	Conditions for safe storage, including any incompatibilities: Store in a dry place.	Conditions for safe storage, including any incompatibilities: Keep container tightly closed.	no
8.2	Respiratory protection: Respiratory protection necessary at: Dust formation. Particulate filter device (EN 143). P1 (filters at least 80 % of airborne particles, colour code: White). Observe the wear time limits according Gef-StoffV in combination with the rules for using respiratory protection apparatus (BGR 190).	Respiratory protection: Respiratory protection necessary at: Dust formation. Particulate filter device (EN 143). P1 (filters at least 80 % of airborne particles, colour code: White).	no
9.1	Explosive properties: none	Explosive properties: Shall not be classified as explosive	no
9.2		Temperature class (EU, acc. to ATEX): T2 (Maximum permissible surface temperature on the equipment: 300°C)	no
10.1	Reactivity: This material is not reactive under normal ambient conditions.	Reactivity: The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.	no
11.1	Acute toxicity	Acute toxicity: Shall not be classified as acutely toxic.	no
11.1	Serious eye damage/eye irritation: Causes serious eye damage.	Serious eye damage/eye irritation: Causes serious eye irritation.	no

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Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
11.1	Respiratory or skin sensitisation: May cause an allergic skin reaction. May cause sensitization by skin contact.	Respiratory or skin sensitisation: Shall not be classified as a respiratory or skin sensitiser.	no
11.1	• If in eyes: Causes serious eye damage, risk of blindness	• If in eyes: data are not available	no
12.1	Toxicity: Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.	Toxicity: Very toxic to aquatic life with long lasting effects.	no
12.6	Other adverse effects: Hazardous to water.	Other adverse effects: Data are not available.	no
14.8	Particulars in the transport document: UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., (tetrachloro-p-benzoquinone), 9, III, (E)	Particulars in the transport document: UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., (p-Chloranil), 9, III, (-)	yes
14.8	Tunnel restriction code (TRC): E	Tunnel restriction code (TRC): -	yes
14.8		Emergency Action Code: ZZ	yes
14.8	Particulars in the shipper's declaration: UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., (tetrachloro-p-benzoquinone), 9, III	Particulars in the shipper's declaration: UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., (p-Chloranil), 9, III	yes
14.8		• International Civil Aviation Organization (ICAO-IATA/DGR)	yes
14.8		UN number: 3077	yes
14.8		Proper shipping name: Environmentally hazardous substance, solid, n.o.s.	yes
14.8		Particulars in the shipper's declaration: UN3077, Environmentally hazardous substance, solid, n.o.s., (p-Chloranil), 9, III	yes
14.8		Class: 9	yes
14.8		Environmental hazards: yes (hazardous to the aquatic environment)	yes
14.8		Packing group: III9 + "fish and tree"	yes
14.8		Packing group: change in the listing (table)	yes
14.8		Special provisions (SP): A97, A158, A179, A197, 274	yes
14.8		Excepted quantities (EQ): E1	yes
14.8		Limited quantities (LQ): 30 kg	yes
16		Abbreviations and acronyms: change in the listing (table)	no
16		List of relevant phrases (code and full text as stated in chapter 2 and 3): change in the listing (table)	no

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Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
CMR	Carcinogenic, Mutagenic or toxic for Reproduction
DGR	Dangerous Goods Regulations (see IATA/DGR)
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
EmS	Emergency Schedule
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
index No	the Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations 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

- Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)

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

Code	Text
H315	causes skin irritation
H319	causes serious eye irritation
H400	very toxic to aquatic life
H410	very toxic to aquatic life with long lasting effects

Disclaimer

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.