SECTION 1: IDENTIFICATION

Identification of the company

MIXOL-PRODUKTE Diebold GmbH
Carl-Zeiss-Str. 17-19
73230 Kirchheim/Teck
Phone: 0049 / 7021 / 950090
Fax: 0049 / 7021 / 56030

Information to substance / preparation
Division: Technics
Phone: +49(0)7021 / 950090
E-mail: Technik@mixol.de

Emergency tel.number
Emergency CONTACT (24-Hour-Number)
GBK/Infotrac ID 107633: (USA DOMESTIC) 1 800 535 5053 or
International (001) 352 323 3500

Trade name

MIXOL® No. 29 Oxyd-Brillant-Schwarz (Oxide Brilliant Black)

Primary product use

Colouring agent

Chemical family

C.I. Pigment Black 26 in aqueous dispersion, containing polyglycole.

SECTION 2: HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR Part 1910.1200)

Not a hazardous substance or mixture.

GHS label elements

Additional advice on labelling

Not a hazardous substance or mixture.

Other hazards

May cause an allergic skin reaction. (1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one, reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1))

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Substance/Mixture: Mixture

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
manganese ferrite black spinel	68186-94-7	70 – 90
Alcohols, C16-18 and C18-unsaturated, ethoxylated	68920-66-1	1 – 5
Cetyltrimethyl ammonium -chloride	112-02-7	0,1 – 1

An Actual concentration is withheld as a trade secret.

SECTION 4: FIRST AID MEASURES

General advice

Get medical advice / attention if you feel unwell.

If inhaled

Move the victim to fresh air.
Give oxygen or artificial respiration if needed.
Get immediate medical advice/ attention.
Never give anything by mouth to an unconscious person.

In case of skin contact

Wash thoroughly with soap and water for 15 minutes. If skin irritation occurs, seek medical attention.

In case of eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Get medical attention immediately if eye irritation develops or persists.

If swallowed

If conscious, give the victim plenty of water to drink.
Consult a physician.
Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

The possible symptoms known are those derived from the labelling (see section 2).
No additional symptoms are known. .

Notes to physician

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

Suitable extinguishing media

Water spray jet
Dry powder
Carbon dioxide (CO_2)
Alcohol-resistant foam

Unsuitable extinguishing media

High volume water jet

Specific hazards during firefighting

In case of fires, hazardous decomposition products may be produced such as:
Carbon oxides
Nitrogen oxides (NO_X)

Further information

Wear suitable protective equipment.

Special protective equipment for firefighters

Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.

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SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear suitable personal protective equipment.

Environment precautions

The product should not be allowed to enter drains, water courses or the soil.

Methods and material for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Treat recovered material as described in the section "Disposal considerations".

SECTION 7: HANDLING AND STORAGE

Advice on protection against fire and explosion

Normal measures for preventive fire protection.

Advice on safe handling

Use personal protective equipment.
Avoid breathing dust.
Avoid contact with skin and eyes.

Wash thoroughly after handling.
Store in a dry place.
Keep away from heat.
Store in original container.
Keep container tightly closed.

Further information on storage conditions

Keep containers tightly closed in a cool, well-ventilated place.
Handle and open container with care.
Keep away from flames and sparks.
- sensitive to frost - In case of the product becoming opaque, thickening or being frozen due to the effects of cold, allow to thaw slowly at room temperature. Stir briefly before use.

Storage stability:
Minimum 36 months.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters/ Permissible concentration	Basis
manganese ferrite black spinel	68186-94-7	C	5 mg/m³ (Manganese)	OSHA-Z1
		TWA (Inhalable particulate matter)	0,1 mg/m³ (Manganese)	ACGIH
		TWA (Respirable particulate matter)	0,02 mg/m³ (Manganese)	ACGIH
		C	5 mg/m³ (Manganese)	OSHA P0
		TWA	1 mg/m³ (Manganese)	NIOSH REL
		ST	3 mg/m³ (Manganese)	NIOSH REL

Engineering measures

A system of local and/or general exhaust is recommended where employee exposures are at or above Occupational Exposure Limits (OEL).

Personal protective equipment

Respiratory protection:
General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection:
Remarks: Butyl Rubber, PVC or Neoprene.

Eye protection:
Safety glasses or chemical splash goggles.

Skin and body protection:
Wear protective clothing, including long sleeves and gloves, to prevent skin contact.

Protective measures:
Wear suitable protective equipment.

Hygiene measures:

Wash hands before breaks and at the end of workday.
Use protective skin cream before handling the product.
Take off immediately all contaminated clothing and wash it before reuse.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance:	liquid
Colour:	black
Odour:	not significant
Odour threshold:	not required
pH value:	6.5 Method: DIN EN ISO 787-9 (undiluted)
Melting point:	Not applicable
Boiling point:	approximately 212 °F / 100 °C (1,013.25 hPa) Based on water-content.
Flash point:	> 212 °F / > 100 °C
Evaporation rate:	not determined
Flammability (solid, gas)	not determined
Burning number:	not applicable
Upper explosive limit/ upper: flammability limit	not determined
Lower explosive limit/ Lower: flammability limit	not determined
Vapour pressure:	not applicable
Relative vapour density:	not determined
Relative Density:	no data available
Density:	2.42 g/cm3 (68 °F / 20 °C) Method: DIN EN ISO 2811
Solubility(ies)	
Water solubility:	miscible (68 °F / 20 °C)
Partition coefficient: n-octanol/water	not applicable
Auto-ignition temperature:	not tested
Decomposition temperature:	212 °F / 100 °C
Viscosity	
Viscosity (dynamic):	904 mPa.s Method: DIN 53019
Viscosity (kinematic):	no data available
Oxidizing properties:	no data available
Melting point:	Not applicable
Molecular weight:	no data available
Metal corrosion rate:	Not corrosive to metals
Minimum ignition energy:	not determined
Particle size:	Not applicable

SECTION 10: STABILITY AND REACTIVITY

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical Stability

Stable under normal conditions.

Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.
Stable .

Conditions to avoid

None known.

Incompatible materials

No data available.

Hazardous decomposition products

No decomposition if stored and applied as directed.

SECTION 11: TOXICOLOGIC INFORMATION

Information on likely routes of exposure

Skin contact
Eye contact
Ingestion
Skin Absorption

Acute toxicity

Product:

Acute oral toxicity:	Remarks: no data available
Acute inhalation toxicity:	Remarks: no data available
Acute dermal toxicity:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method

Components:

Cetyltrimethyl ammonium chloride:

Acute oral toxicity:	LD50 (Rat, male and female): ca. 699 mg/kg Method: Other GLP: yes
Acute inhalation toxicity:	Remarks: no data available
Acute dermal toxicity:	LD50 (Rabbit, male and female): ca. 528 mg/kg Method: Other GLP: yes Remarks: By analogy with a product of similar composition

Skin corrosion/irritation

Product:

Species: Rabbit
Result: No skin irritation
Remarks: The toxicological data has been taken from products of similar composition.

Components:

Alcohols, C16-18 and C18-unsaturated, ethoxylated:

Result: Irritating to skin.

Cetyltrimethyl ammonium chloride:

Species: Rabbit
Method: OECD Test Guideline 404
Result: Corrosive after 1 to 4 hours of exposure
GLP: yes
Remarks: By analogy with a product of similar composition

Serious eye damage/eye irritation

Product:

Species: Rabbit eye
Result: No eye irritation
Remarks: The toxicological data has been taken from products of similar composition.

Components:

Cetyltrimethyl ammonium chloride:

Species: Rabbit
Result: Risk of serious damage to eyes.
Method: Other

Respiratory or skin sensitisation

Product:

Remarks: no data available

Components:

Cetyltrimethyl ammonium chloride:
Test Type: Buehler Test
Species: Guinea pig
Method: Other
Result: Does not cause skin sensitisation.
GLP: no

Assessment: Harmful if swallowed., Toxic in contact with skin., Causes severe skin burns and eye damage.

Germ cell mutagenicity

Product:

Genotoxicity in vitro:	Remarks: no data available
Germ cell mutagenicity-Assessment:	No information available.

Components:

Cetyltrimethyl ammonium chloride:

Genotoxicity in vitro:	Test Type: Ames test Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative GLP: yes
	Test Type: In vitro mammalian cell gene mutation test Test system: Chinese hamster fibroblasts Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative GLP: yes
	Test Type: Chromosome aberration test in vitro Test system: Chinese hamster fibroblasts Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: negative GLP: yes
Genotoxicity in vivo:	Remarks: no data available

Germ cell mutagenicity –
Assessment: In vitro tests did not show mutagenic effects

Carcinogenicity

Product:
Carcinogenicity - Assessment: No information available.

Components:

Cetyltrimethyl ammonium chloride:
Remarks: This information is not available.
Carcinogenicity –
Assessment: Not classifiable as a human carcinogen.

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Product:
Reproductive toxicity -
Assessment: No information available.

Components:

Cetyltrimethyl ammonium chloride:
Effects on fertility: Test Type: Two-generation study
Species: Rat, male and female
Strain: Sprague-Dawley
Application Route: oral (feed)
General Toxicity - Parent:
NOAEL: 61 mg/kg body weight
General Toxicity F1:
NOAEL: 96 mg/kg body weight
Method: OECD Test Guideline 416
GLP: yes
Remarks: By analogy with a product of similar composition

Effects on foetal development: Test Type: Pre-natal
Species: Rabbit, female
Strain: NZW
Application Route: Dermal
Dose: 0, 10, 20 and 40 mg/kg bw/day
General Toxicity Maternal:
NOAEL: 40 mg/kg body weight
Developmental Toxicity:
NOAEL: 40 mg/kg body weight
Method: OECD Test Guideline 414
GLP: yes

Reproductive toxicity –
Assessment: No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

STOT - single exposure

Product:
Remarks: no data available

Components:

Cetyltrimethyl ammonium chloride:
Remarks: no data available

STOT - repeated exposure

Product:
Remarks: no data available

Components:

Cetyltrimethyl ammonium chloride:
Remarks: no data available

Repeated dose toxicity

Product:
Remarks: This information is not available.

Components:

Cetyltrimethyl ammonium chloride:

Species:	Rat, male and female
NOAEL:	113 mg/kg
Application Route:	Oral
Exposure time:	90d
Dose:	22, 113 and 273 mg/kg bw/day
Method:	Other
Remarks:	By analogy with a product of similar composition

Species:	Rabbit, male and female
NOAEL:	10 mg/kg
Application Route:	Dermal
Exposure time:	21/28d
Number of exposures:	6,5 to 7 hours
Dose:	0 or 10 mg/kg/day
Method:	OECD Test Guideline 410
GLP:	yes
Symptoms:	Necrosis

Repeated dose toxicity –
Assessment: Harmful if swallowed.,
Toxic in contact with skin.,
Causes severe skin burns and eye damage.

Aspiration toxicity

Product:
no data available

Components:

Cetyltrimethyl ammonium chloride:
Remarks: no data available

Experience with human exposure:

Product:
General Information: The possible symptoms known are those derived from the labelling (see section 2).

Further information

Product:
Remarks: There is no data available for this product.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish:	Remarks: no data available
Toxicity to daphnia and other aquatic invertebrates:	Remarks: no data available
Toxicity to algae/aquatic plants:	Remarks: no data available
Toxicity to fish (Chronic toxicity):	Remarks: no data available
Toxicity to microorganisms:	Remarks: no data available

Components:

Alcohols, C16-18 and C18-unsaturated, ethoxylated:

M-Factor (Acute aquatic toxicity): 1

Ecotoxicology Assessment:

Acute aquatic toxicity:	Toxic to aquatic life.
Chronic aquatic toxicity:	Harmful to aquatic life with long lasting effects.

Cetyltrimethyl ammonium chloride:

Toxicity to fish:	LC50 (Brachydanio rerio (zebrafish)): 0.21 mg/l Exposure time: 96 h Test Type: static test Method: Other GLP: yes
Toxicity to daphnia and other aquatic invertebrates:	EC50 (Daphnia magna (Water flea)): 0.09 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202 GLP: yes Remarks: By analogy with a product of similar composition
Toxicity to algae/aquatic plants:	EC50 (Pseudokirchneriella subcapitata (algae)): 0.08 mg/l End point: Growth rate Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 GLP: yes Remarks: By analogy with a product of similar composition
	EC10 (Selenastrum capricornutum (green algae)):0.104 mg/l End point: Growth rate Exposure time: 96 h Test Type: static test Method: Other GLP: yes Remarks: By analogy with a product of similar composition
M-Factor (Acute aquatic toxicity):	10
Toxicity to fish (Chronic toxicity):	NOEC (Pimephales promelas (fathead minnow)):0.032 mg/l Exposure time: 28 d Method: Other Remarks: By analogy with a product of similar composition
Toxicity to daphnia and other	NOEC (Daphnia magna (Water flea)): 0.0068 mg/l

aquatic invertebrates (Chronic toxicity):	End point: Reproduction rate Exposure time: 21 d Test Type: static test Method: OECD Test Guideline 211 GLP: yes Remarks: By analogy with a product of similar composition
M-Factor (Chronic aquatic toxicity):	1
Toxicity to microorganisms:	EC50: 130 Exposure time: 28 d Test Type: Soil Method: OECD 216 GLP: yes Remarks: By analogy with a product of similar composition
	EC10: 70 Exposure time: 28 d Test Type: Soil Method: OECD 216 GLP: yes Remarks: By analogy with a product of similar composition
	EC50 (Pseudomonas putida): 0.96 mg/l Exposure time: 16 h Test Type: static test Method: Other
Plant toxicity:	EC50: 537 mg/kg End point: Growth Test period: 16 d Species: Sinapis alba Method: OECD Guide-line 208 GLP: yes Remarks: By analogy with a product of similar composition

Ecotoxicology Assessment

Acute aquatic toxicity:	Very toxic to aquatic life.
Chronic aquatic toxicity:	Very toxic to aquatic life with long lasting effects.

Persistence and degradability

Product:

Biodegradability:	Remarks: no data available

Components:

Cetyltrimethyl ammonium chloride:

Biodegradability:	Inoculum: activated sludge, non-adapted Carbon dioxide (CO_2) Result: Readily biodegradable. Biodegradation: ca. 93.5 % Exposure time: 28 d Method: OECD Test Guideline 301B GLP: yes
Photodegradation:	Rate constant: 3E-11 cm^3/s Method: calculated

Bioaccumulative potential

Product:

Bioaccumulation:	Remarks: no data available

Components:

Cetyltrimethyl ammonium chloride:

Bioaccumulation:	Bioconcentration factor (BCF): 70.8 Method: calculated Remarks: Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.
Partition coefficient: n-octanol/water:	log Pow: 3.08 (77 °F / 25 °C) Method: calculated

Mobility in soil

Components:

Cetyltrimethyl ammonium chloride:

Distribution among environmental compartments:	Medium: Soil log Koc: 5.5 - 6.4 Kd: 13,630 ml/g
Stability in soil:	Dissipation time: 70 d Percentage dissipation: 64 % (DT50) Method: Other Remarks: By analogy with a product of similar composition

Other adverse effects

Product:

Environmental fate and pathways: Remarks: no data available

Additional ecological information: no data available

Components:

Cetyltrimethyl ammonium chloride:

Results of PBT and vPvB assessment:	Remarks: The substance does not meet the criteria for PBT or vPvB substance.

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal methods

RCRA – Resource Conservation and Recovery Authorization Act:	This product, if discarded as sold, is not a Federal RCRA hazardous waste.
Waste Code:	NONE
Waste from residues:	In accordance with current regulations may be taken to waste disposal site or incineration plant, after consultation with site operator and/or with the responsible authority. Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse. Packaging that cannot be cleaned should be disposed of as product waste.
Contaminated packaging:	This material and its container must be disposed of in a safe way.

SECTION 14: TRANSPORT INFORMATION

DOT: not restricted

IATA: not restricted

IMDG: not restricted

SECTION 15: REGULATORY INFORMATION

CERCLA Reportable Quantity:

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Sodium hydroxide	1310-73-2	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity:
This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity:
This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards:
No SARA Hazards

SARA 313:
The following components are subject to reporting levels established by SARA Title III, Section 313:

manganes ferrite: 68186-94-7 70 - 90 %
black spinell

Clean Water Act:
This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

The components of this product are reported in the following inventories

TSCA: One or more of the components of this product is not listed on the Toxic Substances Control Act (TSCA) Inventory.
The product is thus sold under the restriction that it is only for use in research and development. This product must be used under the supervision of a technically qualified individual capable of understanding its potential hazards.

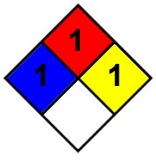
SECTION 16: OTHER INFORMATION

Hazardous Materials Information Label (HMIS)

Health 1
Flammability: 1
Physical Hazard 0

NFPA Hazard Ratings

Health 1
Flammability: 1
Reactivity: 0
Physical Hazard:



Full text of other abbreviations

ACGIH:	USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL:	USA. NIOSH Recommended Exposure Limits
OSHA P0:	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
OSHA Z-1:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
ACGIH / TWA:	8-hour, time-weighted average
NIOSH REL / TWA:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL / ST:	STEL – 15-inute TWA exposure that should not be exceeded at

	any time during a workday
OSHA P0 / C:	Ceiling limit
OSHA Z-1 / C:	Ceiling limit
AICS	Australian Inventory of Chemical Substances
ASTM	American Society for the Testing of Materials
bw	Body weight
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act;
CMR	Carcinogen, Mutagen or Reproductive Toxicant
DIN	Standard of the German Institute for Standardisation
DOT	Department of Transportation
DSL	Domestic Substances List (Canada)
ECx	Concentration associated with x% response
EHS	Extremely Hazardous Substance
ELx	Loading rate associated with x% response
EmS	Emergency Schedule
ENCS	Existing and New Chemical Substances (Japan)
ErCx	Concentration associated with x% growth rate response
ERG	Emergency Response Guide
GHS	Globally Harmonized System
GLP	Good Laboratory Practice
HMIS	Hazardous Materials Identification System
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
IC50	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 Organization
ISHL	Industrial Safety and Health Law (Japan)
ISO	International Organisation for Standardization
KECI	Korea Existing Chemicals Inventory
LC50	Lethal Concentration to 50 % of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
MARPOL	International Convention for the Prevention of Pollution from Ships
MSHA	Mine Safety and Health Administration
n.o.s.	Not Otherwise Specified
NFPA	National Fire Protection Association
NO(A)EC	No Observed (Adverse) Effect Concentration
NO(A)EL	No Observed (Adverse) Effect Level
NOELR	No Observable Effect Loading Rate
NTP	National Toxicology Program
NZIoC	New Zealand Inventory of Chemicals
OECD	Organization 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
RCRA	Resource Conservation and Recovery Act
REACH	Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
RQ	Reportable Quantity
SADT	Self-Accelerating Decomposition Temperature
SARA	Superfund Amendments and Reauthorization Act
SDS	Safety Data Sheet
TCSI	Taiwan Chemical Substance 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