

SAFETY DATA SHEET



in acc. with Regulation (EU) No. 453/2010

Revision Date: 24.09.2015 Replace Vers. 06.07.2012

Tradename: MIXOL[®] No. 12 Tannengrün (Fir Green)

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SECTION 1: IDENTIFICATION OF SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1. Product identifier

Tradename: MIXOL[®] No. 12 Tannengrün (Fir Green)

1.2. Relevant identified uses of the substance or mixture and uses advised again

Relevant identified uses of the substance or mixture:

Industry sector: Industrial Performance Chemicals
Paints, lacquers and varnishes industry
Polymers industry
Printing Inks Industry

Type of use: Colourant preparation

1.3. Details of the supplier of the safety data sheet

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 / mixture:

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

1.4. Emergency telephone number

Emergency CONTACT (24 hours-Number) GBK GmbH +49/(0)6132/84463

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance / mixture

Classification according CLP regulation (Regulation (EC) No. 1272/2008, as amended):

Category of danger	Category Hazard Symbol	H-Phrases
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Not a hazardous substance or mixture.

2.2. Label elements

Labelling according CLP regulation (Regulation (EC) No. 1272/2008, as amended):

Not a hazardous substance or mixture.

Additional Labelling:

EUH 208 contains mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one
2-methyl-4-isothiazolin-3-one and
1,2-benzisothiazolin-3-one.

May produce an allergic reaction.

2.3. Other hazards

No hazards to be specially mentioned.

SECTION 3: COMPOSITION / INFORMATION TO INGREDIENTS

3.1. Mixtures

Chemical characterisation:

C.I. Pigment Black 7, Yellow 42, Blue 15, Green 7, Yellow 73, Yellow 74 and Calciumcarbonat
in aqueous dispersion, contenting Polyglykol- and 1,2-Propandiol.

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Hazardous ingredients:

Alcohols, C16-18 and C18-unsaturated, ethoxylated (10-14 EO)

Concentration: $\geq 6,0 - < 12,1$ %

CAS number: 68920-66-1

EG number: 500-236-9

GHS classification EC:

Skin irritation	Category 2	H315
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Amides, coco, N-(3-dimethylamino)propyl), alkylation products with chloroacetic acid, sodium salts

Concentration: $\geq 0,1 - < 0,7$ %

CAS number: 70851-07-9

EC number: 274-923-4

GHS classification EC:

Skin irritation	Category 2	H315
Serious eye damage	Category 1	H318
Chronic aquatic toxicity	Category 3	H412

Cetyltrimethyl ammonium chloride

Concentration: $\geq 0,1 - < 1$ %

CAS number: 112-02-7

EC number: 203-928-6

REACH-Registration no.

acc. to article 20(3): 01-2119970558-23-0000

GHS classification EC:

Acute toxicity	Category 4	H302
Acute toxicity	Category 3	H311
Skin corrosion	Category 1C	H314
Serious eye damage	Category 1	H318
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category 1	H410
M-Factor (Acute aquatic toxicity) :		10
M-Factor (Chronic aquatic toxicity) :		1

n-Dodecanol

Concentration: $\geq 0,1 - < 1$ %

CAS number: 112-53-8

EC number: 203-982-0

REACH-Registration no.

acc. to article 20(3): 01-2119485976-15, 01-2119485976-15-0000,
01-2119485976-15-0006, 01-2119485976-15-0007,
01-2119485976-15-0008, 01-2119485976-15-0009,
01-2119485976-15-0025

GHS classification EC:

Eye irritation	Category 2	H319
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category 2	H411
M-Factor (Acute aquatic toxicity) :		1

The text of H-phrases is shown in section 16.

SECTION 4: FIRST AID MEASURES

4.1. Discription of first aid measures

General information:

Get medical advice / attention if you feel unwell.

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After inhalation:

Move the victim to fresh air.

If you feel unwell, seek medical advice (show the label where possible).

After contact with skin:

In case of contact with skin, clean with plenty of soap and water.

After contact with eyes:

In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

After ingestion:

If swallowed, seek medical advice immediately and show this container or label.

4.2. Most important symptoms and effects, both acute and delayed symptoms

Symptoms:

None known.

Hazards:

None known.

4.3. Indication of any immediate medical attention and special treatment needed

Treatment:

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media:

Water spray jet

Dry powder

Carbon dioxide (CO₂)

Alcohol resistant foam

Extinguishing media that must not be used for safety reasons:

High volume water jet

5.2. Special hazards arising from the substance or mixture

In case of fires, hazardous combustion gases are formed:

Carbon oxides

Nitrogen oxides (NO_x))

Hydrogen chloride

5.3. Advice for firefighters

Special protective equipment for firefighting:

Use self-contained breathing apparatus.

Further information:

Wear suitable protective equipment.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear suitable personal protective equipment.

6.2. Environment precautions

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

6.3. 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".

6.4. Reference to other sections

Additional information:

Information regarding safe handling, see chapter 7.

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SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling:

When used and handled appropriately no special measures are needed.

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.

Advice on protection against fire and explosion:

Normal measures for preventive fire protection.

7.2. Conditions for safe storage, including any incompatibilities

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.

Storage stability:

Minimum 36 months.

7.3. Specific end use(s)

No further recommendations.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

Exposure limit values:

Exposure limit values are not available.

DNEL / DMEL-values:

C.I. Pigment Green 7

EC number: 215-524-7

CAS number: 1328-53-6

Route of exposure	Personnel	Exposure time / Effect	Value	Remarks
Dermal	Workers	Long-term systemic effects	450 mg/kg bw/day	DNEL
Inhalation	Workers	Long-term systemic effects	4 mg/m ³	DNEL
Dermal	General Population	Long-term systemic effects	225 mg/kg bw/day	DNEL
Oral	General Population	Long-term systemic effects	45 mg/kg bw/day	DNEL

C.I. Pigment Yellow 42

EC number: 257-098-5

CAS number: 51274-00-1

Route of exposure	Personnel	Exposure time / Effect	Value	Remarks
Inhalation	Workers	Long-term local effects	10 mg/m ³	DNEL, inhalable dust
Inhalation	Workers	Long-term local effects	3 mg/m ³	DNEL, inhalable fraction
Inhalation	Workers	Long-term systemic effects	10 mg/m ³	

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Cetyltrimethyl ammonium chloride

EC number: 203-928-6

CAS number: 112-02-7

Route of exposure	Personnel	Exposure time / Effect	Value	Remarks
Inhalation	Workers	Long-term systemic effects	3,32 mg/m ³	DNEL
Dermal	Workers	Long-term systemic effects	4,7 mg/kg bw/day	DNEL
Inhalation	General population	Long-term systemic effects	0,98 mg/m ³	DNEL
Dermal	General population	Long-term systemic effects	2,83 mg/kg bw/day	DNEL
Oral	General population	Long-term systemic effects	2,83 mg/kg bw/day	DNEL

n-Dodecanol

EC number: 203-982-0

CAS number: 112-53-8

Route of exposure	Personnel	Exposure time / Effect	Value	Remarks
Dermal	Workers	Long-term systemic effects	125 mg/kg bw/day	DNEL
Inhalation	Workers	Long-term systemic effects	220 mg/m ³	DNEL
Dermal	Consumers	Acute systemic effects	75 mg/kg bw/day	DNEL
Inhalation	Consumers	Acute systemic effects	65 mg/m ³	DNEL
Oral	Consumers	Acute systemic effects	75 mg/kg bw/day	DNEL
Dermal	Consumers	Long-term systemic effects	75 mg/kg bw/day	DNEL
Inhalation	Consumers	Long-term systemic effects	65 mg/m ³	DNEL
Oral	Consumers	Long-term systemic effects	75 mg/kg bw/day	DNEL

PNEC-values:

C.I. Pigment Green 7

EC number: 215-524-7

CAS number: 1328-53-6

Environmental compartment	Personnel / Exposure time / Effect	Value
Sewage treatment plant		7,5 mg/l

n-Dodecanol

EC number: 203-982-0

CAS number: 112-53-8

Environmental compartment	Personnel / Exposure time / Effect	Value
Fresh water		0,0028 mg/l
Salt water		0,00038 mg/l
Sewage treatment plant		0,021 mg/l
Fresh water sediment		1,1 mg/kg dry weight (d.w.)
Marine sediment		0,11 mg/kg dry weight (d.w.)
Soil		0,888 mg/kg dry weight (d.w.)

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Cetyltrimethyl ammonium chloride

EC number: 203-928-6

CAS number: 112-02-7

Environmental compartment	Personnel / Exposure time / Effect	Value
Fresh water		0,00068 mg/l
Salt water		0,000068 mg/l
Water (intermittente release)		0,0008 mg/l
Sewage treatment plant		0,4 mg/l
Fresh water sediment		9,27 mg/kg dry weight (d.w.)
Marine sediment		0,927 mg/kg dry weight (d.w.)
Soil		7 mg/kg dry weight (d.w.)

8.2. Exposure controls

Appropriate engineering controls:

Handle only in a place equipped with local exhaust (or other appropriate exhaust).

General protective measures:

Wear suitable protective equipment.

Respiratory protection:

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hand protection:

Nitrile rubber

Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

Eye protection:

Safety glasses

Body protection:

Wear suitable protective equipment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Form:	liquid
Colour:	green
Odour:	not significant
Odour threshold:	not required
pH value:	not measured
Melting point:	not applicable
Boiling point:	approx. 100 °C
Flash point:	> 100 °C
Evaporation rate:	not determined
Flammability:	not determined
Lower explosion limit:	not determined
Upper explosive limit:	not determined
Combustion number:	not applicable
Minimum ignition energy:	not determined
Vapour pressure:	not determined
Vapour density relative to air:	not determined
Relative Density:	no data available
Solubility in water:	miscible
Octanol/ water partition coefficient (log Pow):	not determined

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Ignition temperature:	not determined
Thermal decomposition:	> 100 °C
Viscosity (dynamic):	not tested
Oxidizing properties:	no data available

9.2. Other information

Density:	1,47 g/cm ³ (20 °C)
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SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical Stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

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

10.4. Conditions to avoid

None known.

10.5. Incompatible Materials

No data available.

10.6. Hazardous decomposition products

No decomposition if stored and applied as directed.

SECTION 11: TOXICOLOGIC INFORMATION

11.1. Information on toxicological effects

Acute oral toxicity:	no data available
Acute dermal toxicity:	no data available
Acute inhalation toxicity:	no data available
Irritant effect on skin:	No skin irritation Method: OECD Test Guideline 404 The toxicological data has been taken from products of similar composition.
Irritant effect on eyes:	No eye irritation Method: OECD Test Guideline 405 The toxicological data has been taken from products of similar composition.
Sensitization:	no data available
Repeated dose toxicity:	This information is not available.
Genetic toxicity in vitro:	no data available
Assessment of mutagenicity:	no information available
Assessment of carcinogenicity:	no information available
Assessment of toxicity to reproduction:	no information available
Specific target organ toxicity (STOT) - single exposure:	no data available
Specific target organ toxicity (STOT) - repeated exposure:	no data available
Aspiration hazard:	no data available
<u>Information related to the component:</u> n-Dodecanol:	
Acute oral toxicity:	LD50 > 2.000 mg/kg (Rat) Method: OECD Test Guideline 401
Acute dermal toxicity:	LD50 8.000 - 12.000 mg/kg (Rabbit) Method: OECD Test Guideline 402

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Acute inhalation toxicity:	LC50 > 71 mg/l (1 h, Rat) Method: internal test By analogy with a product of similar composition
Irritant effect on skin:	No skin irritation (4 h, Humans) Method: OECD Test Guideline 404 Source: European Chemicals Agency (ECHA)
Irritant effect on eyes:	Eye irritation (24 h, rabbit eye) Method: OECD Test Guideline 405 Source: European Chemicals Agency (ECHA)
Sensitization:	non-sensitizing (Guinea pig) Method: OECD Test Guideline 406 Source: European Chemicals Agency (ECHA)
Repeated dose toxicity:	Route of application: oral (feed) NOAEL: 2.000 mg/kg (Exposure time: 41-45 d (m), 54 d (f), Frequency of treatment: continuous in the diet, Dose: 100 - 500 - 2000 mg/kg, Rat, male and female) Method: OECD Test Guideline 422 Source: European Chemicals Agency (ECHA)
Genetic toxicity in vivo:	Micronucleus test Mouse (male and female) oral (gavage) single administration 5000 mg/kg Bone marrow cells Method: OECD Test Guideline 474 Source: European Chemicals Agency (ECHA) negative
Genetic toxicity in vitro:	Test type: Ames test Test system: Salmonella typhimurium Concentration: 0,5 - 500 µg/plate Metabolic activation: with and without Result: negative Method: OECD Test Guideline 471 Source: European Chemicals Agency (ECHA) Test type: Chromosome aberration test in vitro Test system: Chinese hamster ovary cells Concentration: 0,1 - 500 µg/ml Metabolic activation: with and without Result: negative Method: OECD Test Guideline 473 Source: European Chemicals Agency (ECHA) By analogy with a product of similar composition
Assessment of mutagenicity:	It is concluded that the product is not mutagenic based on evaluation of several mutagenicity tests.
Assessment of carcinogenicity:	Not classifiable as a human carcinogen.
Developmental toxicity/teratogenicity:	Route of application: oral (feed) NOAEL: 2.000 mg/kg (Frequency of treatment: continuous in diet, Dose: 100 - 500 - 2000 mg/kg, Rat, male and female) NOAEL (maternal): 2.000 mg/kg (Frequency of treatment: continuous in diet, Dose: 100 - 500 - 2000 mg/kg, Rat, male and female) Method: OECD Test Guideline 422 Source: literature
Toxicity to reproduction/fertility:	One generation study Route of application: oral (feed) NOAEL parent: 2.000 mg/kg (Exposure time: 41-44 d (m), 54 d (f), Frequency of treatment: continuous in diet, Dose: 100 - 500 - 2000 mg/kg, Rat, male and female) NOAEL F1: 2.000 mg/kg

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	(Exposure time: 41-44 d (m), 54 d (f), Frequency of treatment: continuous in diet, Dose: 100 - 500 - 2000 mg/kg, Rat, male and female) Method: OECD Test Guideline 422 Source: literature
Assessment of toxicity to reproduction:	No reproductive toxicity to be expected.
Assessment of teratogenicity:	No teratogenic effects to be expected.
Specific target organ toxicity (STOT) - single exposure:	Assessment :The substance or mixture is not classified as specific target organ toxicant, single exposure.
Specific target organ toxicity (STOT) - repeated exposure:	Assessment :The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Aspiration hazard:	No aspiration toxicity classification.
<u>Information related to the component:</u>	<u>Cetyltrimethyl ammonium chloride:</u>
Acute dermal toxicity:	LD50 ca. 528 mg/kg (Rabbit) Method: OECD Test Guideline 402 By analogy with a product of similar composition.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity:

Information related to the product itself:

Fish toxicity:	no data available
Fish toxicity (chronic):	no data available
Daphnia toxicity:	no data available
Algae toxicity:	no data available
Bacteria toxicity:	no data available

Information related to the component: n-Dodecanol:

Fish toxicity:	LC50 1,01 mg/l (96 h, Pimephales promelas (fathead minnow)) Method: EPA Source: literature
Fish toxicity (chronic):	not required
Daphnia toxicity:	EC50 0,765 mg/l (48 h, Daphnia magna (Water flea)) Method: OECD Test Guideline 202 Source: European Chemicals Agency (ECHA)
Daphnia toxicity (chronic):	NOEC 0,014 mg/l (21 d, Daphnia magna (Water flea)) Analytical monitoring: yes Method: OECD Test Guideline 211 Source: European Chemicals Agency (ECHA)
Algae toxicity:	EC50 (Growth rate) 0,66 mg/l (72 h, Desmodesmus subspicatus (green algae)) Method: OECD Test Guideline 201 Source: European Chemicals Agency (ECHA) The details of the toxic effect relate to the nominal concentration.
Bacteria toxicity:	EC0 > 10.000 mg/l (0,5 h, Pseudomonas putida) Method: DIN 38412 T.27 Source: European Chemicals Agency (ECHA) The details of the toxic effect relate to the nominal concentration.
Toxicity to soil-dwelling organisms:	The study is not necessary from a scientific perspective.
Toxicity to terrestrial plants:	The study is not necessary from a scientific perspective.

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Toxicity to other environmentally relevant organisms: The study is not necessary from a scientific perspective.
Sediment toxicity: The study is not necessary from a scientific perspective.

12.2. Persistence and degradability

Information related to the product itself:

Biodegradability: no data available

Information related to the component: n-Dodecanol:

Biodegradability: 79 % (28 d, DOC decrease)
Readily biodegradable
Method: OECD Test Guideline 301D
Source: European Chemicals Agency (ECHA)

Information related to the component:

Amides, coco, N-(3-dimethylamino)propyl), alkylation products with chloroacetic acid, sodium salts:

Biodegradability: Readily biodegradable

12.3. Bioaccumulative potential

Information related to the product itself:

Bioaccumulation: no data available

Information related to the component: n-Dodecanol:

Bioaccumulation: Bioconcentration factor (BCF): 3.801
Method: calculated
Source: literature

12.4. Mobility in soil

Information related to the product itself:

Behaviour in environmental compartments: no data available

Information related to the component: n-Dodecanol:

Transport and distribution between environmental compartments: Adsorption/Soil (water - soil)
log Koc: ca. 4,25
Method: other
Source: literature

12.5. Results of PBT and vPvB assessment

Information related to the product itself:

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0,1 % or higher.

Information related to the component: n-Dodecanol:

The substance is not identified as a PBT or as a vPvB substance.

12.6. Other adverse effects

Information related to the product itself:

Additional ecotoxicological remarks: no data available

Information related to the component: n-Dodecanol:

Additional ecotoxicological remarks: Do not allow to enter ground water, waterways or waste water.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product:

Dispose of in accordance with the European Directives on waste and hazardous waste.

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Uncleaned packaging:

This material and its container must be disposed of in a safe way.

SECTION 14: TRANSPORT INFORMATION

14.1. to 14.5.

ADR: not restricted
ADN: not restricted
RID: not restricted
IATA: not restricted
IMDG: not restricted

14.6. Special precautions for users

See sections 6 to 8 of this Safety Data Sheet.

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

No transport as bulk according IBC-Code.

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Other regulations:

Apart from the data/regulations specified in this chapter, no further information is available concerning safety, health and environmental protection.

15.2. Chemical safety assessment

No Chemical Safety Assessment (CSA) is yet available for the substance, or for the component substances, contained in this product.

SECTION 16: OTHER INFORMATION

Observe the legal requirements nationally and locally.

List of the text of the hazard statements mentioned section 3 (H-phrases) :

H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

Change compared to the previous version:

Change in the composition

Legend

ADN European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR European Agreement concerning the International Carriage of Dangerous Goods by Road
AOX Adsorbable organic bound halogens
CAS Chemical Abstracts Service
DMEL Derived Minimal Effect Level (genotoxic substances)
DNEL Derived No Effect Level
EC50 Half maximal effective concentration
GHS Globally Harmonized System
IATA International Air Transport Association
IMDG International Maritime Dangerous Goods

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LC50	Lethal Concentration 50 %
LD50	Lethal Dose 50 %
MARPOL	International Convention for the Prevention of Pollution From Ships
NOAEC	No Observed Adverse Effect Concentration
NOAEL	No Observed Adverse Effect Level
NOEC	Non Observed Effect Concentration
OEL	Occupational Exposure Limit
PBT	Persistent, Bioaccumulative, Toxic
PEC	Predicted Environmental Concentration
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	International Rule for Transport of Dangerous Substances by Railway
SVHC	Substances of Very High Concern
vPvB	very Persistent and very Bioaccumulative

Decimal notation: "thousands" places are identified with a dot (for example, "2.000 mg/kg" means "two thousand mg/kg"). Decimal places are identified with a comma (for example, "1,35 g/cm³" means "one point three five g/cm³").

This information corresponds to the present state of our knowledge and is intended as a general description of our products and their possible applications. MIXOL-PRODUKTE Diebold GmbH makes no warranties, express or implied, as to the information accuracy, adequacy, sufficiency or freedom from defect and assumes no liability in connection with any use of this information. Any user of this product is responsible for determining the suitability of MIXOL products for its particular application. Nothing included in this information waives any of MIXOL's General Terms and Conditions of Sale, which control unless it agrees otherwise in writing.

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Material Safety Data Sheets providing safety precautions, that should be observed when handling or storing MIXOL products, are available upon request and are provided in compliance with applicable law. You should obtain and review the applicable Material Safety Data Sheet information before handling any of these products.

For additional information, please contact MIXOL-PRODUKTE Diebold GmbH.