FABER-CASTELL since 1761

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)

Multimark Permanent Ink Red

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

1.1. Product identifier

Multimark Permanent Ink Red

Further trade names

Included in Multimark permanent 151321, 152321, 152521

UFI: TCXM-86C2-R993-WQCP

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

Use of the substance/mixture

Ink in writing instrument

1.3. Details of the supplier of the safety data sheet

Company name:	Faber-Castell AG Germany		
Street:	Nürnberger Str. 2		
Place:	D-90546 Stein		
Telephone:	+49 911 9965 0	Telefax:	+49 911 9965 5612
E-mail:	info@faber-castell.com		
Contact person:	Dr. Gerhard Lugert	Telephone:	+49 911 9965 5550
E-mail:	Gerhard.Lugert@faber-castell.com		
Internet:	www.faber-castell.com		
Responsible Department:	R & D Chemistry		

1.4. Emergency telephone number:

+49 (0) -911-9965 5550
+49 (0) -911-61 64 26

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008 (CLP)

Flam. Liq. 2; H225
Eye Irrit. 2; H319
Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008 (CLP)

Signal word: Danger

Pictograms:



Hazard statements

Highly flammable liquid and vapour.
Causes serious eye irritation.
Harmful to aquatic life with long lasting effects.

Precautionary statements

If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read carefully and follow all instructions.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Keep container tightly closed.
Ground and bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use non-sparking tools.
Take action to prevent static discharges.
Wash Face, hands and all exposed skin thoroughly after handling.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
In case of fire: Use Water., Carbon dioxide (CO2)., Dry chemical. to extinguish.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container to Dispose of waste according to applicable legislation..

Special labelling of certain mixtures

Contains Hydrogen [3-[(4,5-dihydro-3-methyl-5-oxo-1-phenyl-1H-pyrazol-4-yl)azo]-2-hydroxy-5-nitrobenzenesulphonato(3-)]hydroxychromate(1-), compound with 3-[(2-ethylhexyl)oxy]propylamine (1:1). May produce an allergic reaction.

2.3. Other hazards

No data available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Alcohol-based inks with dyestuff and additives.

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008 (CLP))			
64-17-5	ethanol, ethyl alcohol			50 - < 55 %
	200-578-6	603-002-00-5	01-2119457610-43	
	Flam. Liq. 2, Eye Irrit. 2; H225 H319			
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether			15 - < 20 %
	203-539-1	603-064-00-3	01-2119457435-35	
	Flam. Liq. 3, STOT SE 3; H226 H336			
84962-27-6	C.I. Solvent Red 160			15 - < 20 %
	284-723-9		01-2120764862-45	
	Aquatic Chronic 2; H411			
143-07-7	lauric acid			1 - < 5 %
	205-582-1		01-2119538184-40	
	Eye Dam. 1; H318			
85443-67-0	Hydrogen [3-[(4,5-dihydro-3-methyl-5-oxo-1-phenyl-1H-pyrazol-4-yl)azo]-2-hydroxy-5-nitrobenzenesulphonato(3-)] hydroxychromate(1-), compound with 3-[(2-ethylhexyl)oxy]propylamine (1:1)			< 1 %
	287-257-4		01-2120764859-32	
	Skin Sens. 1B, Aquatic Chronic 2; H317 H411			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
64-17-5	200-578-6	ethanol, ethyl alcohol	50 - < 55 %
	inhalation: LC50 = 95,6 mg/l (vapours); oral: LD50 = 6200 mg/kg		
107-98-2	203-539-1	1-methoxy-2-propanol; monopropylene glycol methyl ether	15 - < 20 %
	dermal: LD50 = 11000 mg/kg; oral: LD50 = > 5000 mg/kg		

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Show this safety data to the medicating physician.

After inhalation

Provide fresh air. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After contact with skin

Wash with warm water and soap. Change contaminated clothing.

After contact with eyes

Wash eyes when eyelid opened with soft and clean water for 15 minutes. Call an oculist, particularly if redness, pain or visual impairment occur.

After ingestion

Rinse mouth immediately and drink plenty of water. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

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

No data available.

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

No data available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water. Carbon dioxide (CO2). Dry chemical. Sand.

Unsuitable extinguishing media

For this substance / preparation no extinguishing agent restriction exist.

5.2. Special hazards arising from the substance or mixture

No specific hazards known.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical resistant suit. Water spray may be used to cool closed containers. Heating causes rise in pressure with risk of bursting. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Avoid contact with skin and clothes. Avoid contact with skin. Change contaminated clothing. Wear personal protection equipment. Keep away unguarded persons. Remove all sources of ignition. Provide adequate ventilation.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Other information

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Information for safe handling, see section 7.
Information for personal protectice equipment, see section 8.
Information for disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid contact with skin and clothes. Avoid contact with skin. Change contaminated clothing. Keep container tightly closed. Secure an adequate ventilation. Emergency eye showers should be directly close-by.

Advice on protection against fire and explosion

Avoid sparks, flames and electrostatic charging. Use non-sparking tools. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Protect skin by using skin protective cream. After work, wash hands and face. When using do not eat or drink.

Further information on handling

Keep away from food, beverages and feeding stuff. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep in a cool, well-ventilated place.
Recommended storage temperatur: 5 - 35 °C

Hints on joint storage

Store separated from oxidizing agents. Keep away from food, beverages and feeding stuff. Do not store together with: Material, rich in oxygen, oxidizing.

Further information on storage conditions

Protect against: heat.

7.3. Specific end use(s)

No data available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
107-98-2	1-Methoxypropan-2-ol	100	375		TWA (8 h)	WEL
		150	560		STEL (15 min)	WEL
64-17-5	Ethanol	1000	1920		TWA (8 h)	WEL

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
64-17-5	ethanol, ethyl alcohol			
Worker DNEL, acute		inhalation	systemic	1900 mg/m³
Worker DNEL, long-term		dermal	systemic	343 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	950 mg/m³
Consumer DNEL, long-term		oral	systemic	87 mg/kg bw/day
Consumer DNEL, long-term		dermal	systemic	206 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	114 mg/m³
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether			
Worker DNEL, long-term		inhalation	systemic	369 mg/m³
Worker DNEL, acute		inhalation	systemic	553,5 mg/m³
Worker DNEL, acute		inhalation	local	553,5 mg/m³
Worker DNEL, long-term		dermal	systemic	183 mg/kg bw/day

PNEC values

CAS No	Substance	
Environmental compartment		Value
64-17-5	ethanol, ethyl alcohol	
Freshwater		0,96 mg/l
Marine water		0,79 mg/l
Freshwater sediment		3,6 mg/l
Micro-organisms in sewage treatment plants (STP)		580 mg/l
Soil		0,63 mg/l
Air		2,75 mg/l
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether	
Freshwater		10 mg/l
Freshwater (intermittent releases)		100 mg/l
Marine water		1 mg/l
Freshwater sediment		52,3 mg/kg
Marine sediment		5,2 mg/kg
Micro-organisms in sewage treatment plants (STP)		100 mg/l
Soil		4,59 mg/kg

Additional advice on limit values

Keep away fire.

8.2. Exposure controls

Appropriate engineering controls

Additional information: TA-Luft: Klasse III
If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear eye/face protection.

Hand protection

Solvent-resistant gloves (PVA/H4).

Skin protection

Body protection must be chosen depending on activity and possible exposure, eg Apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

Respiratory protection

This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.

Environmental exposure controls

Do not allow the product to enter the drains. Do not discharge into the subsoil / soil.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid	
Colour:	red	
Odour:	alcoholic	
Melting point/freezing point:		<-20 °C

Boiling point or initial boiling point and boiling range:	> 80 °C
Flammability:	No data available.
Lower explosion limits:	1,8 vol. %
Upper explosion limits:	15 vol. %
Flash point:	> 21 °C
Auto-ignition temperature:	270 °C
Decomposition temperature:	No data available.
pH-Value:	7
Viscosity / kinematic:	No data available.
Water solubility:	miscible.
Solubility in other solvents	
Miscible with: Ethanol. Water.	
Partition coefficient n-octanol/water:	No data available.
Vapour pressure: (at 20 °C)	58 hPa
Vapour pressure: (at 50 °C)	293 hPa
Density (at 20 °C):	0,8 g/cm³
Bulk density:	No data available.
Relative vapour density:	No data available.
Particle characteristics:	not applicable

9.2. Other information

Information with regard to physical hazard classes

Explosive properties	
Vapours may form explosive mixtures with air.	
Sustaining combustion:	Sustaining combustion
Self-ignition temperature	
Solid:	No data available.
Gas:	No data available.
Oxidizing properties	
Non-oxidizing.	

Other safety characteristics

Evaporation rate:	No data available.
Solvent separation test:	No data available.
Solvent content:	72,69 %
Solid content:	23,70 %
Sublimation point:	No data available.
Softening point:	No data available.
Pour point:	No data available.
	No data available.
Viscosity / dynamic: (at 20 °C)	5,1 mPa·s
Flow time:	No data available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

not document proof

10.3. Possibility of hazardous reactions

No hazardous reactions known.

10.4. Conditions to avoid

Keep away from heat. Ignition hazard.

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

In case of fire may be liberated: Carbon monoxide Carbon dioxide (CO2).

Further information

No data available.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 (CLP)

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

Acute toxicity

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
64-17-5	ethanol, ethyl alcohol				
	oral	LD50 6200 mg/kg	Ratte	IUCLID	
	inhalation (4 h) vapour	LC50 95,6 mg/l	Ratte	RTECS	
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether				
	oral	LD50 > 5000 mg/kg	Ratte	IUCLID	
	dermal	LD50 11000 mg/kg	Kaninchen		

Irritation and corrosivity

Primary irritation:
Irritant effect on the skin: none known
Irritant effect on the eye: Slight irritation possible

11.2. Information on other hazards

Other information

No data available.

SECTION 12: Ecological information

12.1. Toxicity

No data available.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] | [d]	Species	Source	Method
64-17-5	ethanol, ethyl alcohol					
	Acute crustacea toxicity	EC50 9268 - 14221 mg/l	48 h	Daphnia magna	IUCLID	
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether					
	Acute fish toxicity	LC50 4600 - 10000 mg/l	96 h	Leuciscus idus	IUCLID	
	Acute algae toxicity	ErC50 > 1000 mg/l	72 h	Selenastrum capricornutum		
	Acute crustacea toxicity	EC50 > 500 mg/l	48 h	Daphnia magna	IUCLID	

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

No data available.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
64-17-5	ethanol, ethyl alcohol	-0,31
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether	-0,437

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH.
No data available.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Waste disposal according to official state regulations and local regulations.
German Waste Catalogue - Waste code: 80102
Disposal identification: Colours without halogenated solvents. Alcohol-based inks.

Contaminated packaging

Clean with ethanol. Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number: UN 1210
14.2. UN proper shipping name: Printing ink
14.3. Transport hazard class(es): 3
14.4. Packing group: I
Hazard label: 3

Classification code:	F1
Special Provisions:	163 367
Limited quantity:	500 mL
Excepted quantity:	E3
Transport category:	1
Hazard No:	33
Tunnel restriction code:	D/E

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 1210
14.2. UN proper shipping name:	Printing ink
14.3. Transport hazard class(es):	3
14.4. Packing group:	I
Hazard label:	3
Classification code:	F1
Special Provisions:	163 367
Limited quantity:	500 mL
Excepted quantity:	E3

Marine transport (IMDG)

14.1. UN number or ID number:	UN 1210
14.2. UN proper shipping name:	Printing ink
14.3. Transport hazard class(es):	3
14.4. Packing group:	I
Hazard label:	3
Special Provisions:	163, 367
Limited quantity:	500 mL
Excepted quantity:	E3
EmS:	F-E, S-D

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 1210	
14.2. UN proper shipping name:	PRINTING INK	
14.3. Transport hazard class(es):	3	
14.4. Packing group:	I	
Hazard label:	3	
Special Provisions:	A3 A72 A192	
Limited quantity Passenger:	Forbidden	
Passenger LQ:	Forbidden	
Excepted quantity:	E3	
IATA-packing instructions - Passenger:		351
IATA-max. quantity - Passenger:		1 L
IATA-packing instructions - Cargo:		361
IATA-max. quantity - Cargo:		30 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No data available.

14.7. Maritime transport in bulk according to IMO instruments

No data available.

Other applicable information

The transport regulations are cited according to international regulations and in the form applicable in Germany (GGVSE). Possible national deviations in other countries are not considered.

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 40, Entry 75

Directive 2010/75/EU on industrial emissions:	72,725 % (727,25 g/l)
Directive 2004/42/EC on VOC in paints and varnishes:	72,725 % (727,25 g/l)
Information according to Directive 2012/18/EU (SEVESO III):	P5c FLAMMABLE LIQUIDS

National regulatory information

Water hazard class (D):	2 - obviously hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Abbreviations and acronyms

Flam. Liq: Flammable liquids
Eye Dam: Eye damage
Eye Irrit: Eye irritation
Skin Sens: Skin sensitisation
STOT SE: Specific target organ toxicity - single exposure
Aquatic Chronic: Chronic aquatic hazard
EC: European Community
CAS: Chemical Abstracts
TRGS: Technische Regeln für Gefahrstoffe
LD: letal Dose
DIN: Deutsches Institut für Normung
VwVwS: Verwaltungsvorschrift wassergefährdende Stoffe
A.W.: Anton Wolfgang
HZVA: Production, Blending, Sale and Application. Abbreviation of the European waste register.
VOC: Volatile Organice Compounds
EN: Europäische Norm
GHS: Globally Harmonized System

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 (CLP)

Classification	Classification procedure
Flam. Liq. 2; H225	On basis of test data
Eye Irrit. 2; H319	Calculation method
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

Highly flammable liquid and vapour.
Flammable liquid and vapour.
May cause an allergic skin reaction.
Causes serious eye damage.
Causes serious eye irritation.
May cause drowsiness or dizziness.
Toxic to aquatic life with long lasting effects.
Harmful to aquatic life with long lasting effects.
Contains Hydrogen
[3-[(4,5-dihydro-3-methyl-5-oxo-1-phenyl-1H-pyrazol-4-yl)azo]-2-hydroxy-5-nitrobenzenesulphonato(3-)]hydroxychromato(1-), compound with 2-[(2

lamine (1:1). May produce an allergic reaction.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.
The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)

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

1.1. Product identifier

Multimark Permanent Ink Green

Further trade names

Included in Multimark permanent 151363, 152363, 152563

UFI: CGYX-P7E2-Y99S-5WMM

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

Use of the substance/mixture

Ink in writing instrument

1.3. Details of the supplier of the safety data sheet

Company name:	Faber-Castell AG Germany		
Street:	Nürnberger Str. 2		
Place:	D-90546 Stein		
Telephone:	+49 911 9965 0	Telefax:	+49 911 9965 5612
E-mail:	info@faber-castell.com		
Contact person:	Dr. Gerhard Lugert	Telephone:	+49 911 9965 5550
E-mail:	Gerhard.Lugert@faber-castell.com		
Internet:	www.faber-castell.com		
Responsible Department:	R & D Chemistry		

1.4. Emergency telephone number:

+49 (0) -911-9965 5550
+49 (0) -911-61 64 26

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008 (CLP)

Flam. Liq. 2; H225
Eye Irrit. 2; H319
Skin Sens. 1; H317
STOT SE 3; H336
Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008 (CLP)

Hazard components for labelling

1-methoxy-2-propanol; monopropylene glycol methyl ether
butanone; ethyl methyl ketone
C.I. Basic Green 1

Signal word: Danger

Pictograms:



Hazard statements

Highly flammable liquid and vapour.
May cause an allergic skin reaction.
Causes serious eye irritation.

May cause drowsiness or dizziness.
Toxic to aquatic life with long lasting effects.

Precautionary statements

If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read carefully and follow all instructions.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep container tightly closed.
Ground and bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use non-sparking tools.
Take action to prevent static discharges.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash Face, hands and all exposed skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
IF ON SKIN: Wash with plenty of Water and soap.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
If skin irritation or rash occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER/doctor if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
If eye irritation persists: Get medical advice/attention.
In case of fire: Use Water. Carbon dioxide (CO2). Dry chemical. to extinguish.
Collect spillage.
Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container to Dispose of waste according to applicable legislation..

Special labelling of certain mixtures

1 - < 5 per cent of the mixture consists of component(s) of unknown acute toxicity (dermal).
1 - < 5 per cent of the mixture consists of component(s) of unknown acute toxicity (inhalation).

2.3. Other hazards

No data available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Alcohol-based inks with dyestuff and additives.

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008 (CLP))			
64-17-5	ethanol, ethyl alcohol			55 - < 60 %
	200-578-6	603-002-00-5	01-2119457610-43	
	Flam. Liq. 2, Eye Irrit. 2; H225 H319			
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether			15 - < 20 %
	203-539-1	603-064-00-3	01-2119457435-35	
	Flam. Liq. 3, STOT SE 3; H226 H336			
85455-32-9	Solvent Yellow 79			5 - < 10 %
	287-267-9		01-2120739179-45	
	Self-heat. 2, Aquatic Chronic 2; H252 H411			
78-93-3	butanone; ethyl methyl ketone			1 - < 5 %
	201-159-0	606-002-00-3		
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066			
633-03-4	C.I. Basic Green 1			1 - < 5 %
	211-190-1			
	Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, Skin Sens. 1, Aquatic Chronic 1; H302 H315 H318 H317 H410			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
64-17-5	200-578-6	ethanol, ethyl alcohol	55 - < 60 %
	inhalation: LC50 = 95,6 mg/l (vapours); oral: LD50 = 6200 mg/kg		
107-98-2	203-539-1	1-methoxy-2-propanol; monopropylene glycol methyl ether	15 - < 20 %
	dermal: LD50 = 11000 mg/kg; oral: LD50 = > 5000 mg/kg		
85455-32-9	287-267-9	Solvent Yellow 79	5 - < 10 %
	oral: LD50 = >10000 mg/kg		
633-03-4	211-190-1	C.I. Basic Green 1	1 - < 5 %
	oral: ATE = 500 mg/kg		

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Show this safety data to the medicating physician.

After inhalation

Provide fresh air. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After contact with skin

Wash with warm water and soap. Change contaminated clothing.

After contact with eyes

Wash eyes when eyelid opened with soft and clean water for 15 minutes. Call an oculist, particularly if redness, pain or visual impairment occur.

After ingestion

Rinse mouth immediately and drink plenty of water. In case of accident or unwellness, seek medical advice

immediately (show directions for use or safety data sheet if possible).

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

No known symptoms to date.

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

No data available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water. Carbon dioxide (CO2). Dry chemical. Sand.

Unsuitable extinguishing media

For this substance / preparation no extinguishing agent restriction exist.

5.2. Special hazards arising from the substance or mixture

No specific hazards known.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical resistant suit. Water spray may be used to cool closed containers. Heating causes rise in pressure with risk of bursting. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Avoid contact with skin and clothes. Avoid contact with skin. Change contaminated clothing. Wear personal protection equipment. Keep away unguarded persons. Remove all sources of ignition. Provide adequate ventilation.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Other information

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Information for safe handling, see section 7.
Information for personal protectice equipment, see section 8.
Information for disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid contact with skin and clothes. Avoid contact with skin. Change contaminated clothing. Keep container tightly closed. Secure an adequate ventilation. Emergency eye showers should be directly close-by.

Advice on protection against fire and explosion

Avoid sparks, flames and electrostatic charging. Use non-sparking tools. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Protect skin by using skin protective cream. After work, wash hands and face. When using do not eat or drink.

Further information on handling

Keep away from food, beverages and feeding stuff. Do not eat, drink or smoke when using this product. Wash

hands before breaks and after work.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep in a cool, well-ventilated place.
Recommended storage temperatur: 5 - 35 °C

Hints on joint storage

Store separated from oxidizing agents. Keep away from food, beverages and feeding stuff. Do not store together with: Material, rich in oxygen, oxidizing.

Further information on storage conditions

Protect against: heat.

7.3. Specific end use(s)

No data available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
107-98-2	1-Methoxypropan-2-ol	100	375		TWA (8 h)	WEL
		150	560		STEL (15 min)	WEL
78-93-3	Butan-2-one (methyl ethyl ketone)	200	600		TWA (8 h)	WEL
		300	899		STEL (15 min)	WEL
64-17-5	Ethanol	1000	1920		TWA (8 h)	WEL

Biological Monitoring Guidance Values (EH40)

CAS No	Substance	Parameter	Value	Test material	Sampling time
78-93-3	Butan-2-one	butan-2-one	70 µmol/L	urine	Post shift

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
64-17-5	ethanol, ethyl alcohol			
Worker DNEL, acute		inhalation	systemic	1900 mg/m³
Worker DNEL, long-term		dermal	systemic	343 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	950 mg/m³
Consumer DNEL, long-term		oral	systemic	87 mg/kg bw/day
Consumer DNEL, long-term		dermal	systemic	206 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	114 mg/m³
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether			
Worker DNEL, long-term		inhalation	systemic	369 mg/m³
Worker DNEL, acute		inhalation	systemic	553,5 mg/m³
Worker DNEL, acute		inhalation	local	553,5 mg/m³
Worker DNEL, long-term		dermal	systemic	183 mg/kg bw/day

PNEC values

CAS No	Substance
Environmental compartment	Value
64-17-5	ethanol, ethyl alcohol
Freshwater	0,96 mg/l
Marine water	0,79 mg/l
Freshwater sediment	3,6 mg/l
Micro-organisms in sewage treatment plants (STP)	580 mg/l
Soil	0,63 mg/l
Air	2,75 mg/l
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether
Freshwater	10 mg/l
Freshwater (intermittent releases)	100 mg/l
Marine water	1 mg/l
Freshwater sediment	52,3 mg/kg
Marine sediment	5,2 mg/kg
Micro-organisms in sewage treatment plants (STP)	100 mg/l
Soil	4,59 mg/kg

Additional advice on limit values

Keep away fire.

8.2. Exposure controls

Appropriate engineering controls

Additional information: TA-Luft: Klasse III
If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear eye/face protection.

Hand protection

Solvent-resistant gloves (PVA/H4).

Skin protection

Body protection must be chosen depending on activity and possible exposure, eg Apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

Respiratory protection

This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.

Environmental exposure controls

Do not allow the product to enter the drains. Do not discharge into the subsoil / soil.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	green
Odour:	alcoholic
Melting point/freezing point:	<-20 °C

Boiling point or initial boiling point and boiling range:	> 78 °C
Flammability:	No data available.
Lower explosion limits:	1,8 vol. %
Upper explosion limits:	15 vol. %
Flash point:	> 21 °C
Auto-ignition temperature:	270 °C
Decomposition temperature:	No data available.
pH-Value:	7
Viscosity / kinematic:	No data available.
Water solubility:	miscible.
Solubility in other solvents	
Miscible with: Ethanol. Water.	
Partition coefficient n-octanol/water:	No data available.
Vapour pressure: (at 20 °C)	58 hPa
Vapour pressure: (at 50 °C)	293 hPa
Density (at 20 °C):	0,8 g/cm³
Bulk density:	No data available.
Relative vapour density:	No data available.

9.2. Other information

Information with regard to physical hazard classes

Explosive properties	
Vapours may form explosive mixtures with air.	
Sustaining combustion:	Sustaining combustion
Self-ignition temperature	
Solid:	No data available.
Gas:	No data available.
Oxidizing properties	
Non-oxidizing.	

Other safety characteristics

Evaporation rate:	No data available.
Solvent separation test:	No data available.
Solvent content:	77,92 %
Solid content:	18,50 %
Sublimation point:	No data available.
Softening point:	No data available.
Pour point:	No data available.
	No data available.
Viscosity / dynamic: (at 20 °C)	3,8 mPa·s
Flow time:	No data available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

not document proof

10.3. Possibility of hazardous reactions

No hazardous reactions known.

10.4. Conditions to avoid

Avoid sparks, flames and electrostatic charging.

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

In case of fire may be liberated: Carbon monoxide Carbon dioxide (CO2).

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 (CLP)

ATEmix calculated

ATE (oral) 25000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

Acute toxicity

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
64-17-5	ethanol, ethyl alcohol				
	oral	LD50 6200 mg/kg	Rat	IUCLID	
	inhalation (4 h) vapour	LC50 95,6 mg/l	Rat	RTECS	
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether				
	oral	LD50 > 5000 mg/kg	Rat	IUCLID	
	dermal	LD50 11000 mg/kg	Rabbit		
85455-32-9	Solvent Yellow 79				
	oral	LD50 >10000 mg/kg	Rat		
633-03-4	C.I. Basic Green 1				
	oral	ATE 500 mg/kg			

Irritation and corrosivity

Primary irritation:
Irritant effect on the skin: none known
Irritant effect on the eye: Slight irritation possible

11.2. Information on other hazards

Endocrine disrupting properties

No data available.

SECTION 12: Ecological information

12.1. Toxicity

No data available.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] | [d]	Species	Source	Method
64-17-5	ethanol, ethyl alcohol					
	Acute crustacea toxicity	EC50 9268 - 14221 mg/l	48 h	Daphnia magna	IUCLID	
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether					
	Acute fish toxicity	LC50 4600 - 10000 mg/l	96 h	Leuciscus idus	IUCLID	
	Acute algae toxicity	ErC50 > 1000 mg/l	72 h	Selenastrum capricornutum		
	Acute crustacea toxicity	EC50 > 500 mg/l	48 h	Daphnia magna	IUCLID	
85455-32-9	Solvent Yellow 79					
	Acute algae toxicity	ErC50 1,17 mg/l	72 h	Lemna gibba (hunchbacked duckweed)		OECD 221
	Acute crustacea toxicity	EC50 7,72 mg/l	48 h	Daphnia magna (Great Water flea)		OECD 202

12.2. Persistence and degradability

No data available.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
85455-32-9	Solvent Yellow 79			
	OECD 301F	11%	28	
	Not easily bio-degradable (according to OECD-criteria).			

12.3. Bioaccumulative potential

No data available.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
64-17-5	ethanol, ethyl alcohol	-0,31
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether	-0,437
85455-32-9	Solvent Yellow 79	1,6

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REGULATION (EC) NO 1907/2006 (REACH).

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Waste disposal according to official state regulations and local regulations.
German Waste Catalogue - Waste code: 80102
Disposal identification: Colours without halogenated solvents. Alcohol-based inks.

Contaminated packaging

Clean with ethanol. Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	UN 1210
14.2. UN proper shipping name:	Printing ink
14.3. Transport hazard class(es):	3
14.4. Packing group:	I
Hazard label:	3
Classification code:	F1
Special Provisions:	163 367
Limited quantity:	500 mL
Excepted quantity:	E3
Transport category:	1
Hazard No:	33
Tunnel restriction code:	D/E

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 1210
14.2. UN proper shipping name:	Printing ink
14.3. Transport hazard class(es):	3
14.4. Packing group:	I
Hazard label:	3
Classification code:	F1
Special Provisions:	163 367
Limited quantity:	500 mL
Excepted quantity:	E3

Marine transport (IMDG)

14.1. UN number or ID number:	UN 1210
14.2. UN proper shipping name:	Printing ink
14.3. Transport hazard class(es):	3
14.4. Packing group:	I
Hazard label:	3
Special Provisions:	163, 367
Limited quantity:	500 mL
Excepted quantity:	E3
EmS:	F-E, S-D

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 1210
14.2. UN proper shipping name:	PRINTING INK
14.3. Transport hazard class(es):	3
14.4. Packing group:	I
Hazard label:	3
Special Provisions:	A3 A72 A192
Limited quantity Passenger:	Forbidden
Passenger LQ:	Forbidden
Excepted quantity:	E3

IATA-packing instructions - Passenger:	351
IATA-max. quantity - Passenger:	1 L
IATA-packing instructions - Cargo:	361
IATA-max. quantity - Cargo:	30 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: Yes

14.6. Special precautions for user

No data available.

14.7. Maritime transport in bulk according to IMO instruments

No data available.

Other applicable information

The transport regulations are cited according to international regulations and in the form applicable in Germany (GGVSE). Possible national deviations in other countries are not considered.

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 40, Entry 75

Directive 2010/75/EU on industrial emissions:	78,884 % (631,072 g/l)
Directive 2004/42/EC on VOC in paints and varnishes:	78,908 % (631,264 g/l)
Information according to Directive 2012/18/EU (SEVESO III):	E2 Hazardous to the Aquatic Environment
Additional information:	P5c

National regulatory information

Water hazard class (D): 2 - obviously hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Abbreviations and acronyms

Self-heat: Self-heating substances and mixtures
Flam. Liq: Flammable liquids
Acute Tox: Acute toxicity
Skin Irrit: Skin irritation
Eye Dam: Eye damage
Eye Irrit: Eye irritation
Skin Sens: Skin sensitisation
STOT SE: Specific target organ toxicity - single exposure
Aquatic Chronic: Chronic aquatic hazard
EC: European Community
CAS: Chemical Abstracts
TRGS: Technische Regeln für Gefahrstoffe
LD: letal Dose
DIN: Deutsches Institut für Normung
VwVwS: Verwaltungsvorschrift wassergefährdende Stoffe
A.W.: Anton Wolfgang
HZVA: Production, Blending, Sale and Application. Abbreviation of the European waste register.
VOC: Volatile Organice Compounds
EN: Europäische Norm
GHS: Globally Harmonized System

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 (CLP)

Classification	Classification procedure
Flam. Liq. 2; H225	On basis of test data
Eye Irrit. 2; H319	Calculation method
Skin Sens. 1; H317	Calculation method
STOT SE 3; H336	Calculation method
Aquatic Chronic 2; H411	Calculation method

Relevant H and EUH statements (number and full text)

Highly flammable liquid and vapour.
Flammable liquid and vapour.
Self-heating in large quantities; may catch fire.
Harmful if swallowed.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye damage.
Causes serious eye irritation.
May cause drowsiness or dizziness.
Very toxic to aquatic life with long lasting effects.
Toxic to aquatic life with long lasting effects.
Repeated exposure may cause skin dryness or cracking.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.
The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)

FABER-CASTELL since 1761

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)

Multimark Permanent Ink Blue

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

1.1. Product identifier

Multimark Permanent Ink Blue

Further trade names

Included in :
Bundle 205061
Multimark Permament 151351, 152351, 152551

UFI: 0HAA-1EQK-SD9W-UFF3

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

Use of the substance/mixture

Ink in writing instrument

1.3. Details of the supplier of the safety data sheet

Company name:	Faber-Castell AG Germany		
Street:	Nürnberger Str. 2		
Place:	D-90546 Stein		
Telephone:	+49 911 9965 0	Telefax:	+49 911 9965 5612
E-mail:	info@faber-castell.com		
Contact person:	Dr. Gerhard Lugert	Telephone:	+49 911 9965 5550
E-mail:	Gerhard.Lugert@faber-castell.com		
Internet:	www.faber-castell.com		
Responsible Department:	R & D Chemistry		

1.4. Emergency telephone number:

+49 (0) -911-9965 5550
+49 (0) -911-61 64 26

Further Information

Recipe No.: 12/0363
Lab No.: GMp-Gr-63

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008 (CLP)

Flam. Liq. 2; H225
Eye Irrit. 2; H319
STOT SE 3; H336
Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008 (CLP)

Hazard components for labelling

1-methoxy-2-propanol; monopropylene glycol methyl ether
butanone; ethyl methyl ketone

Signal word: Danger

Pictograms:



Hazard statements

Highly flammable liquid and vapour.
Causes serious eye irritation.
May cause drowsiness or dizziness.
Toxic to aquatic life with long lasting effects.

Precautionary statements

If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read carefully and follow all instructions.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep container tightly closed.
Ground and bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use non-sparking tools.
Take action to prevent static discharges.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash Face, hands and all exposed skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER/doctor if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
In case of fire: Use Water. Carbon dioxide (CO2). Dry chemical. to extinguish.
Collect spillage.
Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.

Special labelling of certain mixtures

1 - < 5 % of the mixture consists of ingredient(s) of unknown acute toxicity (dermal).
1 - < 5 % of the mixture consists of ingredient(s) of unknown acute toxicity (inhalation).

2.3. Other hazards

No data available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Alcohol-based inks with dyestuff and additives.

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008 (CLP))			
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether			40 - < 45 %
	203-539-1	603-064-00-3	01-2119457435-35	
	Flam. Liq. 3, STOT SE 3; H226 H336			
64-17-5	ethanol, ethyl alcohol			30 - < 35 %
	200-578-6	603-002-00-5	01-2119457610-43	
	Flam. Liq. 2, Eye Irrit. 2; H225 H319			
1325-86-6	Solvent Blue 5			5 - < 10 %
	Acute Tox. 4, Eye Dam. 1; H302 H318			
78-93-3	butanone; ethyl methyl ketone			1 - < 5 %
	201-159-0	606-002-00-3		
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
107-98-2	203-539-1	1-methoxy-2-propanol; monopropylene glycol methyl ether	40 - < 45 %
	dermal: LD50 = 11000 mg/kg; oral: LD50 = > 5000 mg/kg		
64-17-5	200-578-6	ethanol, ethyl alcohol	30 - < 35 %
	inhalation: LC50 = 95,6 mg/l (vapours); oral: LD50 = 6200 mg/kg		
1325-86-6		Solvent Blue 5	5 - < 10 %
	oral: ATE = 500 mg/kg		

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Show this safety data to the medicating physician.

After inhalation

Provide fresh air. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After contact with skin

Wash with warm water and soap. Change contaminated clothing.

After contact with eyes

Wash eyes when eyelid opened with soft and clean water for 15 minutes. Call an oculist, particularly if redness, pain or visual impairment occur.

After ingestion

Rinse mouth immediately and drink plenty of water. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

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

No known symptoms to date.

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

No data available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water. Carbon dioxide (CO2). Dry chemical. Sand.

Unsuitable extinguishing media

For this substance / preparation no extinguishing agent restriction exist.

5.2. Special hazards arising from the substance or mixture

This material is combustible and can be ignited by heat, sparks, flames, or other sources of ignition (e.g. static electricity, pilot lights, or mechanical/electrical equipment).

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical resistant suit. Water spray may be used to cool closed containers. Heating causes rise in pressure with risk of bursting. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Avoid contact with skin and clothes. Avoid contact with skin. Change contaminated clothing. Wear personal protection equipment. Keep away unguarded persons. Remove all sources of ignition. Provide adequate ventilation.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Other information

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Information for safe handling, see section 7.
Information for personal protectice equipment, see section 8.
Information for disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid contact with skin and clothes. Avoid contact with skin. Change contaminated clothing. Keep container tightly closed. Secure an adequate ventilation. Emergency eye showers should be directly close-by.

Advice on protection against fire and explosion

Avoid sparks, flames and electrostatic charging. Use non-sparking tools. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Protect skin by using skin protective cream. After work, wash hands and face. When using do not eat or drink.

Further information on handling

Keep away from food, beverages and feeding stuff. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep in a cool, well-ventilated place.
Recommended storage temperatur: 5 - 35 °C

Hints on joint storage

Store separated from oxidizing agents. Keep away from food, beverages and feeding stuff. Do not store together with: Material, rich in oxygen, oxidizing.

Further information on storage conditions

Protect against: heat.

7.3. Specific end use(s)

No data available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
107-98-2	1-Methoxypropan-2-ol	100	375		TWA (8 h)	WEL
		150	560		STEL (15 min)	WEL
78-93-3	Butan-2-one (methyl ethyl ketone)	200	600		TWA (8 h)	WEL
		300	899		STEL (15 min)	WEL
64-17-5	Ethanol	1000	1920		TWA (8 h)	WEL

Biological Monitoring Guidance Values (EH40)

CAS No	Substance	Parameter	Value	Test material	Sampling time
78-93-3	Butan-2-one	butan-2-one	70 µmol/L	urine	Post shift

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether			
Worker DNEL, long-term		inhalation	systemic	369 mg/m³
Worker DNEL, acute		inhalation	systemic	553,5 mg/m³
Worker DNEL, acute		inhalation	local	553,5 mg/m³
Worker DNEL, long-term		dermal	systemic	183 mg/kg bw/day
64-17-5	ethanol, ethyl alcohol			
Worker DNEL, acute		inhalation	systemic	1900 mg/m³
Worker DNEL, long-term		dermal	systemic	343 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	950 mg/m³
Consumer DNEL, long-term		oral	systemic	87 mg/kg bw/day
Consumer DNEL, long-term		dermal	systemic	206 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	114 mg/m³

PNEC values

CAS No	Substance
Environmental compartment	Value
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether
Freshwater	10 mg/l
Freshwater (intermittent releases)	100 mg/l
Marine water	1 mg/l
Freshwater sediment	52,3 mg/kg
Marine sediment	5,2 mg/kg
Micro-organisms in sewage treatment plants (STP)	100 mg/l
Soil	4,59 mg/kg
64-17-5	ethanol, ethyl alcohol
Freshwater	0,96 mg/l
Marine water	0,79 mg/l
Freshwater sediment	3,6 mg/l
Micro-organisms in sewage treatment plants (STP)	580 mg/l
Soil	0,63 mg/l
Air	2,75 mg/l

Additional advice on limit values

Keep away fire.

8.2. Exposure controls

Appropriate engineering controls

Additional information: TA-Luft: Klasse III
If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear eye/face protection.

Hand protection

Solvent-resistant gloves (PVA/H4).

Skin protection

Body protection must be chosen depending on activity and possible exposure, eg Apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

Respiratory protection

This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.

Environmental exposure controls

Do not allow the product to enter the drains. Do not discharge into the subsoil / soil.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	blue
Odour:	alcoholic
Melting point/freezing point:	<-20 °C

Boiling point or initial boiling point and boiling range:	> 80 °C
Flammability:	No data available.
Lower explosion limits:	1,8 vol. %
Upper explosion limits:	15 vol. %
Flash point:	> 21 °C
Auto-ignition temperature:	270 °C
Decomposition temperature:	No data available.
pH-Value:	6
Viscosity / kinematic:	No data available.
Water solubility:	miscible.
Solubility in other solvents	
Miscible with: Ethanol. Water.	
Partition coefficient n-octanol/water:	No data available.
Vapour pressure: (at 20 °C)	58 hPa
Vapour pressure: (at 50 °C)	293 hPa
Density (at 20 °C):	0,8 g/cm³
Bulk density:	No data available.
Relative vapour density:	No data available.

9.2. Other information

Information with regard to physical hazard classes

Explosive properties	
Vapours may form explosive mixtures with air.	
Sustaining combustion:	Sustaining combustion
Self-ignition temperature	
Solid:	No data available.
Gas:	No data available.
Oxidizing properties	
Non-oxidizing.	

Other safety characteristics

Evaporation rate:	No data available.
Solvent separation test:	No data available.
Solvent content:	78,63 %
Solid content:	18,35 %
Sublimation point:	No data available.
Softening point:	No data available.
Pour point:	No data available.
	No data available.
Viscosity / dynamic: (at 20 °C)	3,3 mPa·s
Flow time:	No data available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

No decomposition, if the regulations/references for storage and handling are respected.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Avoid sparks, flames and electrostatic charging.

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

In case of fire may be liberated: Carbon monoxide Carbon dioxide (CO2).

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 (CLP)

ATEmix calculated

ATE (oral) 8401 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

Acute toxicity

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether				
	oral	LD50 > 5000 mg/kg	Rat	IUCLID	
	dermal	LD50 11000 mg/kg	Rabbit		
64-17-5	ethanol, ethyl alcohol				
	oral	LD50 6200 mg/kg	Rat	IUCLID	
	inhalation (4 h) vapour	LC50 95,6 mg/l	Rat	RTECS	
1325-86-6	Solvent Blue 5				
	oral	ATE 500 mg/kg			

Irritation and corrosivity

Primary irritation:
Irritant effect on the skin: none known

SECTION 12: Ecological information

12.1. Toxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] | [d]	Species	Source	Method
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether					
	Acute fish toxicity	LC50 4600 - 10000 mg/l	96 h	Leuciscus idus	IUCLID	
	Acute algae toxicity	ErC50 > 1000 mg/l	72 h	Selenastrum capricornutum		
	Acute crustacea toxicity	EC50 > 500 mg/l	48 h	Daphnia magna	IUCLID	
64-17-5	ethanol, ethyl alcohol					
	Acute crustacea toxicity	EC50 9268 - 14221 mg/l	48 h	Daphnia magna	IUCLID	

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

No data available.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether	-0,437
64-17-5	ethanol, ethyl alcohol	-0,31

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REGULATION (EC) NO 1907/2006 (REACH).

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Waste disposal according to official state regulations and local regulations.
German Waste Catalogue - Waste code: 80102
Disposal identification: Colours without halogenated solvents. Alcohol-based inks.

Contaminated packaging

Clean with ethanol. Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	UN 1210
14.2. UN proper shipping name:	Printing ink
14.3. Transport hazard class(es):	3
14.4. Packing group:	I
Hazard label:	3
Classification code:	F1
Special Provisions:	163 367
Limited quantity:	500 mL
Excepted quantity:	E3
Transport category:	1
Hazard No:	33
Tunnel restriction code:	D/E

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 1210
14.2. UN proper shipping name:	Printing ink
14.3. Transport hazard class(es):	3
14.4. Packing group:	I
Hazard label:	3
Classification code:	F1

Special Provisions:	163 367
Limited quantity:	500 mL
Excepted quantity:	E3

Marine transport (IMDG)

14.1. UN number or ID number:	UN 1210
14.2. UN proper shipping name:	Printing ink
14.3. Transport hazard class(es):	3
14.4. Packing group:	I
Hazard label:	3
Special Provisions:	163, 367
Limited quantity:	500 mL
Excepted quantity:	E3
EmS:	F-E, S-D

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 1210
14.2. UN proper shipping name:	PRINTING INK
14.3. Transport hazard class(es):	3
14.4. Packing group:	I
Hazard label:	3
Special Provisions:	A3 A72 A192
Limited quantity Passenger:	Forbidden
Passenger LQ:	Forbidden
Excepted quantity:	E3
IATA-packing instructions - Passenger:	351
IATA-max. quantity - Passenger:	1 L
IATA-packing instructions - Cargo:	361
IATA-max. quantity - Cargo:	30 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: Yes

14.6. Special precautions for user

No data available.

14.7. Maritime transport in bulk according to IMO instruments

No data available.

Other applicable information

The transport regulations are cited according to international regulations and in the form applicable in Germany (GGVSE). Possible national deviations in other countries are not considered.

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 40, Entry 75

Directive 2010/75/EU on industrial emissions:	78,7 % (787 g/l)
Directive 2004/42/EC on VOC in paints and varnishes:	78,7 % (787 g/l)
Information according to Directive 2012/18/EU (SEVESO III):	E2 Hazardous to the Aquatic Environment
Additional information:	P5c

National regulatory information

Water hazard class (D): 3 - highly hazardous to water

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

Abbreviations and acronyms

Flam. Liq: Flammable liquids
Acute Tox: Acute toxicity
Eye Dam: Eye damage
Eye Irrit: Eye irritation
STOT SE: Specific target organ toxicity - single exposure
Aquatic Chronic: Chronic aquatic hazard
EC: European Community
CAS: Chemical Abstracts
TRGS: Technische Regeln für Gefahrstoffe
LD: letal Dose
DIN: Deutsches Institut für Normung
VwVwS: Verwaltungsvorschrift wassergefährdende Stoffe
A.W.: Anton Wolfgang
HZVA: Production, Blending, Sale and Application. Abbreviation of the European waste register.
VOC: Volatile Organice Compounds
EN: Europäische Norm
GHS: Globally Harmonized System

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 (CLP)

Classification	Classification procedure
Flam. Liq. 2; H225	On basis of test data
Eye Irrit. 2; H319	Calculation method
STOT SE 3; H336	Calculation method
Aquatic Chronic 2; H411	Calculation method

Relevant H and EUH statements (number and full text)

Highly flammable liquid and vapour.
Flammable liquid and vapour.
Harmful if swallowed.
Causes serious eye damage.
Causes serious eye irritation.
May cause drowsiness or dizziness.
Toxic to aquatic life with long lasting effects.
Repeated exposure may cause skin dryness or cracking.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.
The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)

FABER-CASTELL since 1761

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)

Multimark Permanent Ink Black

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

1.1. Product identifier

Multimark Permanent Ink Black

Further trade names

Included in
- Permanent Marker 150399 / 150499
- Permanent Marker Refill 150599
- Multimark permanent 151399, 152399, 152599

UFI: C5UY-8HC0-J997-7HQ1

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

Use of the substance/mixture

Ink in writing instrument

1.3. Details of the supplier of the safety data sheet

Company name: Faber-Castell AG
Germany
Street: Nürnberger Str. 2
Place: D-90546 Stein
Telephone: +49 911 9965 0 Telefax: +49 911 9965 5612
E-mail: info@faber-castell.com
Contact person: Dr. Gerhard Lugert Telephone: +49 911 9965 5550
E-mail: Gerhard.Lugert@faber-castell.com
Internet: www.faber-castell.com
Responsible Department: R & D Chemistry

1.4. Emergency telephone number:

+49 (0) -911-9965 5550
+49 (0) -911-61 64 26

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008 (CLP)

Flam. Liq. 2; H225
Eye Irrit. 2; H319
STOT SE 3; H336

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008 (CLP)

Hazard components for labelling

1-methoxy-2-propanol; monopropylene glycol methyl ether
butanone; ethyl methyl ketone

Signal word: Danger

Pictograms:



Hazard statements

Highly flammable liquid and vapour.
Causes serious eye irritation.
May cause drowsiness or dizziness.

Precautionary statements

If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read carefully and follow all instructions.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep container tightly closed.
Ground and bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use non-sparking tools.
Take action to prevent static discharges.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash Face, hands and all exposed skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER/doctor if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
In case of fire: Use Water., Carbon dioxide (CO2)., Dry chemical. to extinguish.
Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container to Dispose of waste according to applicable legislation..

Special labelling of certain mixtures

1 - < 5 per cent of the mixture consists of component(s) of unknown acute toxicity (dermal).
1 - < 5 per cent of the mixture consists of component(s) of unknown acute toxicity (inhalation).

2.3. Other hazards

No data available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Alcohol-based inks with dyestuff and additives.

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008 (CLP))			
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether			40 - < 45 %
	203-539-1	603-064-00-3	01-2119457435-35	
	Flam. Liq. 3, STOT SE 3; H226 H336			
64-17-5	ethanol, ethyl alcohol			30 - < 35 %
	200-578-6	603-002-00-5	01-2119457610-43	
	Flam. Liq. 2, Eye Irrit. 2; H225 H319			
78-93-3	butanone; ethyl methyl ketone			1 - < 5 %
	201-159-0	606-002-00-3		
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066			
143-07-7	lauric acid			1 - < 5 %
	205-582-1		01-2119538184-40	
	Eye Dam. 1; H318			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
107-98-2	203-539-1	1-methoxy-2-propanol; monopropylene glycol methyl ether	40 - < 45 %
	dermal: LD50 = 11000 mg/kg; oral: LD50 = > 5000 mg/kg		
64-17-5	200-578-6	ethanol, ethyl alcohol	30 - < 35 %
	inhalation: LC50 = 95,6 mg/l (vapours); oral: LD50 = 6200 mg/kg		

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Show this safety data to the medicating physician.

After inhalation

Provide fresh air. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After contact with skin

Wash with warm water and soap. Change contaminated clothing.

After contact with eyes

Wash eyes when eyelid opened with soft and clean water for 15 minutes. Call an oculist, particularly if redness, pain or visual impairment occur.

After ingestion

Rinse mouth immediately and drink plenty of water. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

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

No known symptoms to date.

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

No data available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water. Carbon dioxide (CO2). Dry chemical. Sand.

Unsuitable extinguishing media

For this substance / preparation no extinguishing agent restriction exist.

5.2. Special hazards arising from the substance or mixture

This material is combustible and can be ignited by heat, sparks, flames, or other sources of ignition (e.g. static electricity, pilot lights, or mechanical/electrical equipment).

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical resistant suit. Water spray may be used to cool closed containers. Heating causes rise in pressure with risk of bursting. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Avoid contact with skin and clothes. Avoid contact with skin. Change contaminated clothing. Wear personal protection equipment. Keep away unguarded persons. Remove all sources of ignition. Provide adequate ventilation.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Other information

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Information for safe handling, see section 7.
Information for personal protectice equipment, see section 8.
Information for disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid contact with skin and clothes. Avoid contact with skin. Change contaminated clothing. Keep container tightly closed. Secure an adequate ventilation. Emergency eye showers should be directly close-by.

Advice on protection against fire and explosion

Avoid sparks, flames and electrostatic charging. Use non-sparking tools. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Protect skin by using skin protective cream. After work, wash hands and face. When using do not eat or drink.

Further information on handling

Keep away from food, beverages and feeding stuff. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep in a cool, well-ventilated place.
Recommended storage temperatur: 5 - 35 °C

Hints on joint storage

Store separated from oxidizing agents. Keep away from food, beverages and feeding stuff. Do not store together with: Material, rich in oxygen, oxidizing.

Further information on storage conditions

Protect against: heat.

7.3. Specific end use(s)

No data available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
107-98-2	1-Methoxypropan-2-ol	100	375		TWA (8 h)	WEL
		150	560		STEL (15 min)	WEL
78-93-3	Butan-2-one (methyl ethyl ketone)	200	600		TWA (8 h)	WEL
		300	899		STEL (15 min)	WEL
64-17-5	Ethanol	1000	1920		TWA (8 h)	WEL

Biological Monitoring Guidance Values (EH40)

CAS No	Substance	Parameter	Value	Test material	Sampling time
78-93-3	Butan-2-one	butan-2-one	70 µmol/L	urine	Post shift

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether			
Worker DNEL, long-term		inhalation	systemic	369 mg/m³
Worker DNEL, acute		inhalation	systemic	553,5 mg/m³
Worker DNEL, acute		inhalation	local	553,5 mg/m³
Worker DNEL, long-term		dermal	systemic	183 mg/kg bw/day
64-17-5	ethanol, ethyl alcohol			
Worker DNEL, acute		inhalation	systemic	1900 mg/m³
Worker DNEL, long-term		dermal	systemic	343 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	950 mg/m³
Consumer DNEL, long-term		oral	systemic	87 mg/kg bw/day
Consumer DNEL, long-term		dermal	systemic	206 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	114 mg/m³

PNEC values

CAS No	Substance
Environmental compartment	Value
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether
Freshwater	10 mg/l
Freshwater (intermittent releases)	100 mg/l
Marine water	1 mg/l
Freshwater sediment	52,3 mg/kg
Marine sediment	5,2 mg/kg
Micro-organisms in sewage treatment plants (STP)	100 mg/l
Soil	4,59 mg/kg
64-17-5	ethanol, ethyl alcohol
Freshwater	0,96 mg/l
Marine water	0,79 mg/l
Freshwater sediment	3,6 mg/l
Micro-organisms in sewage treatment plants (STP)	580 mg/l
Soil	0,63 mg/l
Air	2,75 mg/l

Additional advice on limit values

Keep away fire.

8.2. Exposure controls

Appropriate engineering controls

Additional information: TA-Luft: Klasse III
If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear eye/face protection.

Hand protection

Solvent-resistant gloves (PVA/H4).

Skin protection

Body protection must be chosen depending on activity and possible exposure, eg Apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

Respiratory protection

This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.

Environmental exposure controls

Do not allow the product to enter the drains. Do not discharge into the subsoil / soil.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	black
Odour:	alcoholic

	Test method
Melting point/freezing point:	<-20 °C

Boiling point or initial boiling point and boiling range:	> 80 °C	
Flammability:	No data available.	
Lower explosion limits:	1,8 vol. %	
Upper explosion limits:	15 vol. %	
Flash point:	> 21 °C	
Auto-ignition temperature:	270 °C	
Decomposition temperature:	No data available.	
pH-Value:	7	
Viscosity / kinematic:	No data available.	
Water solubility:	miscible.	

Solubility in other solvents

Miscible with: Ethanol. Water.

Partition coefficient n-octanol/water:	No data available.	
Vapour pressure: (at 20 °C)	58 hPa	
Vapour pressure: (at 50 °C)	293 hPa	
Density (at 20 °C):	1 g/cm³	
Bulk density:	No data available.	
Relative vapour density:	No data available.	

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

Vapours may form explosive mixtures with air.

Sustaining combustion:	Sustaining combustion	UN Test L.2

Self-ignition temperature

Solid:	No data available.	
Gas:	No data available.	

Oxidizing properties

Non-oxidizing.

Other safety characteristics

Evaporation rate:	No data available.	
Solvent separation test:	No data available.	
Solvent content:	76,74 %	
Solid content:	20,50 %	
Sublimation point:	No data available.	
Softening point:	No data available.	
Pour point:	No data available.	
	No data available.	
Viscosity / dynamic: (at 20 °C)	5,1 mPa·s	ASTM D 2196
Flow time:	No data available.	

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

No decomposition, if the regulations/references for storage and handling are respected.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Avoid sparks, flames and electrostatic charging.

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

In case of fire may be liberated: Carbon monoxide Carbon dioxide (CO2).

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 (CLP)

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

Acute toxicity

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether					
	oral	LD50	> 5000 mg/kg	Rat	IUCLID	
	dermal	LD50	11000 mg/kg	Rabbit		
64-17-5	ethanol, ethyl alcohol					
	oral	LD50	6200 mg/kg	Rat	IUCLID	
	inhalation (4 h) vapour	LC50	95,6 mg/l	Rat	RTECS	

Irritation and corrosivity

Primary irritation:
Irritant effect on the skin: none known
Irritant effect on the eye: Slight irritation possible

SECTION 12: Ecological information

12.1. Toxicity

No data available.

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether						
	Acute fish toxicity	LC50	4600 - 10000 mg/l	96 h	Leuciscus idus	IUCLID	
	Acute algae toxicity	ErC50	> 1000 mg/l	72 h	Selenastrum capricornutum		
	Acute crustacea toxicity	EC50	> 500 mg/l	48 h	Daphnia magna	IUCLID	
64-17-5	ethanol, ethyl alcohol						
	Acute crustacea toxicity	EC50	9268 - 14221 mg/l	48 h	Daphnia magna	IUCLID	

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

No data available.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether	-0,437
64-17-5	ethanol, ethyl alcohol	-0,31

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REGULATION (EC) NO 1907/2006 (REACH).

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Waste disposal according to official state regulations and local regulations.
German Waste Catalogue - Waste code: 80102
Disposal identification: Colours without halogenated solvents. Alcohol-based inks.

Contaminated packaging

Clean with ethanol. Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	UN 1210
14.2. UN proper shipping name:	Printing ink
14.3. Transport hazard class(es):	3
14.4. Packing group:	I
Hazard label:	3
Classification code:	F1
Special Provisions:	163 367
Limited quantity:	500 mL
Excepted quantity:	E3
Transport category:	1
Hazard No:	33
Tunnel restriction code:	D/E

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 1210
14.2. UN proper shipping name:	Printing ink
14.3. Transport hazard class(es):	3
14.4. Packing group:	I
Hazard label:	3
Classification code:	F1
Special Provisions:	163 367
Limited quantity:	500 mL
Excepted quantity:	E3

Marine transport (IMDG)

14.1. UN number or ID number:	UN 1210
14.2. UN proper shipping name:	Printing ink
14.3. Transport hazard class(es):	3
14.4. Packing group:	I
Hazard label:	3
Special Provisions:	163, 367
Limited quantity:	500 mL
Excepted quantity:	E3
EmS:	F-E, S-D

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 1210
14.2. UN proper shipping name:	PRINTING INK
14.3. Transport hazard class(es):	3
14.4. Packing group:	I
Hazard label:	3
Special Provisions:	A3 A72 A192
Limited quantity Passenger:	Forbidden
Passenger LQ:	Forbidden
Excepted quantity:	E3
IATA-packing instructions - Passenger:	351
IATA-max. quantity - Passenger:	1 L
IATA-packing instructions - Cargo:	361
IATA-max. quantity - Cargo:	30 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No data available.

14.7. Maritime transport in bulk according to IMO instruments

No data available.

Other applicable information

The transport regulations are cited according to international regulations and in the form applicable in Germany (GGVSE). Possible national deviations in other countries are not considered.

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 40, Entry 75

Directive 2010/75/EU on industrial emissions:	76,825 % (768,25 g/l)
Directive 2004/42/EC on VOC in paints and varnishes:	76,825 % (768,25 g/l)
Information according to Directive 2012/18/EU (SEVESO III):	P5c FLAMMABLE LIQUIDS

National regulatory information

Water hazard class (D): 1 - slightly hazardous to water

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

Abbreviations and acronyms

Flam. Liq: Flammable liquids
Eye Dam: Eye damage
Eye Irrit: Eye irritation
STOT SE: Specific target organ toxicity - single exposure
EC: European Community
CAS: Chemical Abstracts
TRGS: Technische Regeln für Gefahrstoffe
LD: letal Dose
DIN: Deutsches Institut für Normung
VwVwS: Verwaltungsvorschrift wassergefährdende Stoffe
A.W.: Anton Wolfgang
HZVA: Production, Blending, Sale and Application. Abbreviation of the European waste register.
VOC: Volatile Organice Compounds
EN: Europäische Norm
GHS: Globally Harmonized System

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 (CLP)

Classification	Classification procedure
Flam. Liq. 2; H225	On basis of test data
Eye Irrit. 2; H319	Calculation method
STOT SE 3; H336	Calculation method

Relevant H and EUH statements (number and full text)

Highly flammable liquid and vapour.
Flammable liquid and vapour.
Causes serious eye damage.
Causes serious eye irritation.
May cause drowsiness or dizziness.
Repeated exposure may cause skin dryness or cracking.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.
The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)