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Trade name: MZB

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Trade name: MZB

UFI: VY00-R0CD-Y001-3M1Y

1.2 Application of the mixture: Film developer**1.3 Details of the supplier of the safety data sheet**

Manufacturer/Supplier:

Moersch Photochemie
Am Heideberg 48
50354 Hürth
Tel.: + 49(0)2233-943137
Fax: + 49(0)2233-943138
E-Mail: wolfgang@moersch-photochemie.de
www.moersch-photochemie.de

1.4 Emergency telephone number:

Poison Information Centre Berlin (Germany): +49 (0) 30 - 30686 790

SECTION 2: Hazards identification**2.1 Classification of the mixture**

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

Acute Tox. 4 H302; Skin Sens.1 H317;

STOT RE 2 H373

Aquatic Acute 1 H400

Aquatic Chronic 1 H410

Skin Irrit. 2, H315; Eye Irrit. 2, H319

For full text of abbreviations: see SECTION 16

2.2 Label elements

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

Labelling of packaging with a content of no more than 125 ml

Signal word Warning

Pictograms

GHS07, GHS08



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Hazard statements

H302	Harmful if swallowed
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects

Precautionary statements – prevention

P260	Do not breathe dusts or mists
P273	Avoid release to the environment
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements – response

P302+P352	IF ON SKIN: Wash with plenty of water
P314	Get medical advice/attention if you feel unwell

2.3 Other hazards**Results of PBT and vPvB assessment**

According to the results of its assessment, this substance is not a PBT or a vPvB.

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$.

SECTION 3: Composition/information on ingredients

Chemical characterisation: Mixture

Contains:

Identifier	Substance	Classification	% w/w
CAS No 55-55-0 EC No 200-237-1 Index No (GB CLP) 650-031-00-4	Metol 4-(Methylamino)-phenolsulfate	Acute Tox. 4 H302; Skin Sens.1 H317; STOT RE 2 H373 Aquatic Acute 1 H400 Aquatic Chronic 1 H410	<2%

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CAS No 21799-87-1 EC No 244-584-7	2,5-Dihydroxybenzolsulfonic acid, potassium salt	Skin Irrit. 2, H315; Eye Irrit. 2, H319	4-5 %
CAS No 7757-83-7 EC No 231-821-4 REACH: 01-2119537420- 49- XXXX	Sodium sulfite	not classified	85,00 %
CAS No 7647-14-5 EC No 231-598-3	Sodium chloride		8,00 %

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: Take off contaminated clothing

After skin contact: Immediately rinse with water.

After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing: If symptoms persist consult doctor.

4.2 Most important symptoms and effects, both acute and delayed

Irritation, Vomiting, Allergic reactions

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents:

co-ordinate firefighting measures to the fire surroundings!

water, foam, alcohol resistant foam, dry extinguishing powder, ABC-powder

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Combustible.

Hazardous combustion products

In case of fire may be liberated: Nitrogen oxides (NO_x), Carbon monoxide (CO), Carbon dioxide (CO₂), Sulphur oxides (SO_x)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Do not allow firefighting water to enter

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drains or water courses. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.
Do not breathe dust. Ensure adequate ventilation

6.2 Environmental precautions:

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up:

Advice on how to contain a spill

Covering of drains. Take up mechanically.

Advice on how to clean up a spill

Take up mechanically. Control of dust.

Other information relating to spills and releases

Place in appropriate containers for disposal.

6.4 Reference to other sections

Hazardous combustion products: see section 5.

Personal protective equipment: see section 8.

Incompatible materials: see section 10.

Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Provision of sufficient ventilation. Avoid dust formation.

Measures to prevent fire as well as aerosol and dust generation

Removal of dust deposits.

Measures to protect the environment

Avoid release to the environment.

Advice on general occupational hygiene

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

7.2 Conditions for safe storage, including any incompatibilities

Store in a dry place. Protect from sunlight.

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Incompatible substances or mixtures

Observe hints for combined storage. Incompatible materials: see section 10.

Consideration of other advice:**Ventilation requirements**

Use local and general ventilation.

Specific designs for storage rooms or vessels

Recommended storage temperature: 15 – 25 °C

7.3 Specific end use:

Low contrast film developer

SECTION 8: Exposure controls/personal protection**8.1 Control parameters****National limit values****Occupational exposure limit values (Workplace Exposure Limits)**

Country	Name of agent	Identifier	TWA mg/m ³	Notation	Source
GB	Metol dust	WEL	10	i	EH40/2005
GB	Metol dust	WEL	4	r	EH40/2005

Notation

Ceiling-C	Ceiling value is a limit value above which exposure should not occur
i	Inhalable fraction
r	Respirable fraction
STEL	Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15- minute period (unless otherwise specified)
TWA	Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

8.2 Exposure controls**Individual protection measures (personal protective equipment)****Eye/face protection**

Use safety goggle with side protection.

Skin protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374.

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Type of material

NBR (nitrile rubber)

Material thickness

>0,11 mm

Breakthrough times of the glove material

>480 minutes (permeation: level 6)

Environmental exposure controls

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

General information	
Form:	powder
Colour:	white
Odour:	odourless
Change in condition	
Melting point/freezing point	260°C (ECHA)
Boiling point/boiling range	300°C at 971,2 hPa (ECHA)
Flash point	257 °C at 971,2 hPa (ECHA)
Flammability	this material is combustible, but will not ignite readily
Lower and upper explosion limit	not relevant (solid)
Vapour pressure at 20° C	not determined
Density at 20° C	not determined
Solubility in/Miscibility with water	fully miscible
pH-Value at 20° C	9,9

SECTION 10: Stability and reactivity**10.1 Reactivity**

This mixture is not reactive under normal ambient conditions.

10.2 Chemical stability

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

10.3 Possibility of hazardous reactions

Violent reaction with: Strong oxidisers

10.4 Conditions to avoid

UV-radiation/sunlight. Keep away from heat and cold.

10.5 Incompatible materials

There is no additional information.

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10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity

Harmful if swallowed.

Exposure route	Endpoint	Value	Species	Source
oral	LD50	565 mg/kg	mouse	ECHA

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

May cause an allergic reaction.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

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

Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics**• If swallowed**

central nervous system

• If in eyes

slightly irritant but not relevant for classification

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• If on skin

May produce an allergic reaction, pruritis, localised redness

• Other information

irritant effects

11.2 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$.

11.3 Information on other hazards

There is no additional information.

SECTION 12: Ecological information**12.1 Toxicity**

Very toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute)

Endpoint	Value	Species	Source	Exposure time
EC50	0,019 mg/l	daphnia magna	ECHA	96 h
LC50	0,019 mg/l	aquatic invertebrates	ECHA	96 h

12.2 Persistence and degradability:

Theoretical Oxygen Demand (without nitrification): 1,487 mg/mg

Theoretical Oxygen Demand (with nitrification): 1,684 mg/mg

Theoretical Carbon Dioxide: 1,789 mg/mg

12.3 Bioaccumulative potential: Does not significantly accumulate in organisms.

12.4 Mobility in soil: Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$.

12.7 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations**13.1 Waste treatment methods**

This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

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Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Handle contaminated packages in the same way as the substance itself. Completely emptied packages can be recycled.

13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Properties of waste which render it hazardous

HP 5	specific target organ toxicity (STOT)/aspiration toxicity
HP 6	acute toxicity
HP 13	sensitising
HP 14	ecotoxic

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions. Non-contaminated packages may be recycled

SECTION 14: Transport information**14.1 UN-number**

ADR/RID/ADN	UN 3077
IMDG-Code	UN 3077
ICAO-TI	UN 3077

14.2 UN proper shipping name

ADR/RID/ADN	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
IMDG-Code	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
ICAO-TI	Environmentally hazardous substance, solid, n.o.s.

Technical name 4-(Methylamino)-phenol sulphate, Metol

14.3 Transport hazard class

ADR/RID/ADN	9
IMDG-Code	9
ICAO-TI	9

14.4 Packing group

ADR/RID/ADN	III
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Trade name: MZB

IMDG-Code	III
ICAO-TI	III
14.5 Environmental hazards	hazardous to the aquatic environment
14.6 Special precautions for user	Provisions for dangerous goods (ADR) should be complied within the premises.

14.7 Maritime transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) Additional information

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, FLUID, N.O.S.
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Particulars in the transport document	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., (4-(Methylamino)-phenol sulphate, Metol), 9, III, (-)
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Classification code	M7
Danger labels	9, "Fish and tree"



Environmental hazards	yes (hazardous to the aquatic environment)
Special provisions (SP)	274, 335, 375, 601
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 kg
Transport category (TC)	3
Tunnel restriction code (TRC)	-
Hazard identification No	90
Emergency Action Code	2Z

Agreement concerning the International Carriage of Dangerous Goods by Rail (RID) Additional information

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, FLUID, N.O.S.
Particulars in the transport document	UN3077, ENVIRONMENTALLY HAZARDOUS SUB-

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Trade name: MZB

STANCE, FLUID, N.O.S., ((4-(Methylamino)-
phenol sulphate, Metol), 9, III, (-)

Classification code



M7

9, "Fish and tree"

Environmental hazards	yes (hazardous to the aquatic environment)
Special provisions (SP)	274, 335, 375, 601
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 kg
Transport category (TC)	3
Hazard identification No	90

International Maritime Dangerous Goods Code (IMDG) - Additional information

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Particulars in the transport document	UN3077, ENVIRONMENTALLY HAZARDOUS SUB- STANCE, SOLID, N.O.S., (4-(Methylamino)-phenol sulphate, Metol), 9, III, (-)

Marine pollutant yes (hazardous to the aquatic environment), (Metol)

Danger label 9, "Fish and tree"



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

International Civil Aviation Organization (ICAO-IATA/DGR) – Additional information

Proper shipping name	Environmentally hazardous substance, solid, n.o.s.
Particulars in the transport document	UN3077, Environmentally hazardous substance, solid,

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Environmental hazards

n.o.s., (4-(Methylamino)-phenol sulphate, Metol), 9, III

yes (hazardous to the aquatic environment)

Danger label

9, "Fish and tree"



Special provisions (SP)

A97, A158, A179, A197, A215

Excepted quantities (EQ)

E1

Limited quantities (LQ)

30 kg

SECTION 15: Regulatory information

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

Relevant provisions of th European Union (EU)

Seveso Directive

2012/18/EU (Seveso III)			
Nr.	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the application of lower and upper-tier requirements	
E1	environmental hazards (hazardous to the aquatic environment, cat. 1)	100	200 56)

Notation

56) Hazardous to the Aquatic Environment in category Acute 1 or Chronic 1

Deco-Paint Directive

VOC-content 0 %

Industrial Emissions Directive (IED)

VOC-content 0 %

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

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not listed

Water Framework Directive (WFD)

not listed

Regulation on the marketing and use of explosives precursors

not listed

Regulation on drug precursors

not listed

Regulation on substances that deplete the ozone layer (ODS)

not listed

Regulation concerning the export and import of hazardous chemicals (PIC)

not listed

Regulation on persistent organic pollutants (POP)

not listed

National regulations(GB)**List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list**

not listed

Restrictions according to GB REACH, Annex 17

not listed

Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

15.2 Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

H-Phrases

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H302	Harmful if swallowed
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

DNEL: Derived No-Effect Level (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative