

**Methylene blue hydrate (C.I. 52015) pure EP, USP (pharma grade)**

Version number: GHS 2.1  
Replaces version of: 2024-02-08 (GHS 1)

Revision: 2026-02-11

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

**1.1 Product identifier**

**Identification of the substance** Methylene blue hydrate (C.I. 52015) pure EP, USP (pharma grade)  
**CAS number** 122965-43-9  
**Article number** LC-8718

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

**Relevant identified uses** General use

**1.3 Details of the supplier of the safety data sheet**

NeoFroxx GmbH  
Marie-Curie-Str. 3  
D-64683 Einhausen  
Germany

Telephone: +49 (6251) 989 24 - 0  
e-mail: info@neofroxx.com  
Website: neofroxx.com

**e-mail (competent person)** info@neofroxx.com (neoFroxx GmbH)

**1.4 Emergency telephone number**

Poison centre			
Country	Name	Postal code/city	Telephone
United Kingdom	National Poisons Information Service		111

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

**Classification acc. to GHS**

Section	Hazard class	Category	Hazard class and category	Hazard statement
3.10	acute toxicity (oral)	4	Acute Tox. 4	H302

For full text of abbreviations: see SECTION 16.

**2.2 Label elements**

**Labelling**

- Signal word warning

- Pictograms

GHS07



- Hazard statements  
H302 Harmful if swallowed.

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- Precautionary statements
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.
- P501 Dispose of contents/container to industrial combustion plant.

### 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

### 3.1 Substances

**Name of substance** Methylene blue hydrate (C.I. 52015) pure EP, USP (pharma grade)

#### Identifiers

CAS No 122965-43-9  
EC No 602-909-3

Specific Conc. Limits	M-Factors	ATE	Exposure route
-	-	500 mg/kg	oral

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

#### Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

#### Following skin contact

Brush off loose particles from skin. Rinse skin with water/shower.

#### Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

#### Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

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

Symptoms and effects are not known to date.

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

none

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

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### Suitable extinguishing media

Water, Foam, ABC-powder

### Unsuitable extinguishing media

Water jet

### 5.2 Special hazards arising from the substance or mixture

Deposited combustible dust has considerable explosion potential.

### Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>)

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

#### For non-emergency personnel

Remove persons to safety.

#### For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

### 6.2 Environmental precautions

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

### 6.3 Methods and material for containment and cleaning up

#### Advice on how to contain a spill

Covering of drains, Take up mechanically

#### Advice on how to clean up a spill

Take up mechanically.

#### Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

### 6.4 Reference to other sections

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

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Recommendations

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

Use local and general ventilation. Take precautionary measures against static discharge. Use only in well-ventilated areas. Ground/bond container and receiving equipment.

- Specific notes/details

Dust deposits may accumulate on all deposition surfaces in a technical room. The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

#### Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

### 7.2 Conditions for safe storage, including any incompatibilities

#### Managing of associated risks

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- Explosive atmospheres  
Removal of dust deposits.
- Ventilation requirements  
Use local and general ventilation.

### 7.3 Specific end use(s)

See section 16 for a general overview.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)											
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m <sup>3</sup> ]	STEL [ppm]	STEL [mg/m <sup>3</sup> ]	Ceiling-C [ppm]	Ceiling-C [mg/m <sup>3</sup> ]	Notation	Source
GB	dust		WEL		10					i	EH40/2005
GB	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

#### Appropriate engineering controls

General ventilation.

#### Individual protection measures (personal protective equipment)

##### Eye/face protection

Wear eye/face protection.

##### Skin protection

- Hand protection  
In the case of wanting to use the gloves again, clean them before taking off and air them well.
- Type of material  
NBR: acrylonitrile-butadiene rubber
- Material thickness  
min. 0,11 mm
- Breakthrough times of the glove material  
>480 minutes (permeation: level 6)
- Other protection measures  
Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

##### Respiratory protection

Particulate filter device (EN 143). P2 (filters at least 94 % of airborne particles, colour code: White).

##### Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

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**SECTION 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

<b>Physical state</b>	solid (powder, crystalline)
<b>Colour</b>	dark blue
<b>Odour</b>	characteristic
<b>Melting point/freezing point</b>	not determined
<b>Boiling point or initial boiling point and boiling range</b>	not determined
<b>Flammability</b>	this material is combustible, but will not ignite readily
<b>Lower and upper explosion limit</b>	not relevant (solid)
<b>Flash point</b>	not applicable
<b>Auto-ignition temperature</b>	not determined
<b>Decomposition temperature</b>	not relevant
<b>pH (value)</b>	not applicable
<b>Kinematic viscosity</b>	not relevant
<b>Solubility(ies)</b>	not determined

**Partition coefficient**

Partition coefficient n-octanol/water (log value)	this information is not available
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Vapour pressure	not determined
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**Density and/or relative density**

Density	not determined
Relative vapour density	not relevant (solid)

Particle characteristics	no data available
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**9.2 Other information**

<b>Information with regard to physical hazard classes</b>	hazard classes acc. to GHS (physical hazards): not relevant
<b>Other safety characteristics</b>	there is no additional information

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### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

#### 10.2 Chemical stability

See below "Conditions to avoid".

#### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

#### 10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

#### Hints to prevent fire or explosion

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

#### 10.5 Incompatible materials

Oxidisers

#### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

##### Classification acc. to GHS

##### Acute toxicity

Harmful if swallowed.

##### - Acute toxicity estimate (ATE)

Oral 500 mg/kg

##### 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

Shall not be classified as a respiratory or skin sensitiser.

##### 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

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

##### Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

#### 11.2 Information on other hazards

There is no additional information.

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### SECTION 12: Ecological information

#### 12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

#### 12.2 Persistence and degradability

Data are not available.

#### 12.3 Bioaccumulative potential

Data are not available.

#### 12.4 Mobility in soil

Data are not available.

#### 12.5 Results of PBT and vPvB assessment

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

#### 12.6 Endocrine disrupting properties

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

#### 12.7 Other adverse effects

Data are not available.

### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

##### Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

##### Waste treatment of containers/packagings

Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

##### Remarks

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

### SECTION 14: Transport information

- |  |   |
|--|---|
| 14.1 UN number or ID number                                  | not subject to transport regulations                                  |
| 14.2 UN proper shipping name                                 | not relevant  |
| 14.3 Transport hazard class(es)                              | none  |
| 14.4 Packing group   | not assigned  |
| 14.5 Environmental hazards                                   | non-environmentally hazardous acc. to the dangerous goods regulations |
| 14.6 Special precautions for user                            | There is no additional information.                                   |
| 14.7 Maritime transport in bulk according to IMO instruments | The cargo is not intended to be carried in bulk.                      |

#### Information for each of the UN Model Regulations

##### International Maritime Dangerous Goods Code (IMDG) - Additional information

Not subject to IMDG.

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

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Not subject to ICAO-IATA.

**SECTION 15: Regulatory information**

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

**Relevant provisions of the European Union (EU)**

**Deco-Paint Directive**

VOC content	0 %
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**Industrial Emissions Directive (IED)**

VOC content	0 %
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**Water Framework Directive (WFD)**

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

**Storage of hazardous substances in non-stationary containers (TRGS 510) (Germany)**

Storage class (LGK) 11 (combustible solids)

**15.2 Chemical safety assessment**

No Chemical Safety Assessment has been carried out for this substance.

**SECTION 16: Other information**

**Indication of changes (revised safety data sheet)**

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
1.1	Identification of the substance: Methylene blue (C.I. 52015) pure USP (pharma grade)	Identification of the substance: Methylene blue hydrate (C.I. 52015) pure EP, USP (pharma grade)	yes
2.3	Endocrine disrupting properties: Does not contain an endocrine disruptor (ED) in a concentration of $\geq 0,1\%$ .	Endocrine disrupting properties: Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$ .	yes
3.1	Name of substance: Methylene blue (C.I. 52015) pure USP (pharma grade)	Name of substance: Methylene blue hydrate (C.I. 52015) pure EP, USP (pharma grade)	yes
4.1	Following skin contact: Wash with plenty of soap and water.	Following skin contact: Brush off loose particles from skin. Rinse skin with water/shower.	yes
5.1	Suitable extinguishing media: Water spray, BC-powder, Carbon dioxide (CO <sub>2</sub> )	Suitable extinguishing media: Water, Foam, ABC-powder	yes
5.2	Special hazards arising from the substance or mixture	Special hazards arising from the substance or mixture: Deposited combustible dust has considerable explosion potential.	yes
6.3	Advice on how to contain a spill:	Advice on how to contain a spill:	yes

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Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
	Covering of drains	Covering of drains, Take up mechanically	
6.3	Advice on how to clean up a spill: Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder	Advice on how to clean up a spill: Take up mechanically.	yes
6.3	Appropriate containment techniques: Use of adsorbent materials.		yes
7.1	- Measures to prevent fire as well as aerosol and dust generation: Use local and general ventilation. Use only in well-ventilated areas.	- Measures to prevent fire as well as aerosol and dust generation: Use local and general ventilation. Take precautionary measures against static discharge. Use only in well-ventilated areas. Ground/bond container and receiving equipment.	yes
7.1		Specific notes/details: Dust deposits may accumulate on all deposition surfaces in a technical room. The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.	yes
7.2	Conditions for safe storage, including any incompatibilities: There is no additional information. Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials" (Section 10).	Conditions for safe storage, including any incompatibilities	yes
7.2		Managing of associated risks	yes
7.2		- Explosive atmospheres: Removal of dust deposits.	yes
7.2		- Ventilation requirements: Use local and general ventilation.	yes
8.1	Control parameters: Occupational exposure limit values (Workplace Exposure Limits) this information is not available	Control parameters	yes
8.1		Occupational exposure limit values (Workplace Exposure Limits): change in the listing (table)	yes
8.2	Hand protection: Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.	Hand protection: In the case of wanting to use the gloves again, clean them before taking off and air them well.	yes
8.2	Respiratory protection: P2 (filters at least 94 % of airborne particles, colour code: White).	Respiratory protection: Particulate filter device (EN 143). P2 (filters at least 94 % of airborne particles, colour code: White).	yes
9.1	Physical state: liquid	Physical state: solid (powder, crystalline)	yes
9.1	Colour: not determined	Colour: dark blue	yes
9.1	Lower and upper explosion limit: not determined	Lower and upper explosion limit: not relevant (solid)	yes

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Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
9.1	Flash point: not determined	Flash point: not applicable	yes
9.1	pH (value): not determined	pH (value): not applicable	yes
9.1	Kinematic viscosity: not determined	Kinematic viscosity: not relevant	yes
9.1	Relative vapour density: information on this property is not available	Relative vapour density: not relevant (solid)	yes
9.1	Particle characteristics: not relevant (liquid)	Particle characteristics: no data available	yes
10.4		Hints to prevent fire or explosion: The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.	yes
12.6	Endocrine disrupting properties: Does not contain an endocrine disruptor (ED) in a concentration of $\geq 0,1\%$ .	Endocrine disrupting properties: Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$ .	yes
15.1	VOC content: 100 %	VOC content: 0 %	yes
15.1	VOC content: 100 %	VOC content: 0 %	yes
15.1	Restrictions according to GB REACH, Annex 17	Restrictions according to GB REACH, Annex 17: not listed	yes
15.1		Dangerous substances with restrictions (GB REACH, Annex 17): change in the listing (table)	yes
15.1		Storage of hazardous substances in non-stationary containers (TRGS 510) (Germany)	yes
15.1		Storage class (LGK): 11 (combustible solids)	yes
16		Abbreviations and acronyms: change in the listing (table)	yes

**Abbreviations and acronyms**

Abbr.	Descriptions of used abbreviations
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
DGR	Dangerous Goods Regulations (see IATA/DGR)
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
ED	Endocrine disruptor
EH40/2005	EH40/2005 Workplace exposure limits ( <a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/">http://www.nationalarchives.gov.uk/doc/open-government-licence/</a> )
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances

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Abbr.	Descriptions of used abbreviations
GB REACH	The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
LGK	Lagerklasse (storage class according to TRGS 510, Germany)
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
STEL	Short-term exposure limit
TRGS	Technische Regeln für Gefahrstoffe (technical rules for hazardous substances, Germany)
TWA	Time-weighted average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

**Key literature references and sources for data**

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

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

Code	Text
H302	Harmful if swallowed.

**Disclaimer**

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product. The information is intended to give you guidelines for the safe handling of the product mentioned in this safety data sheet during storage, processing, transport and disposal. The information is not transferable to other products. Insofar as the product is mixed, blended or processed with other materials or is subjected to processing, the information in this safety data sheet cannot be transferred to the new material produced in this way, unless expressly stated otherwise.