

## Tissue Marking Dye - Red

Version number: GHS 1.0

Date of compilation: 2021-11-03

### SECTION 1: Identification

#### 1.1 Product identifier

Trade name

**Tissue Marking Dye - Red**

Alternative number(s)

BG110-60, BG110-250, 01.670.062

#### 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

Mopec  
800 Tech Row  
Madison Heights Michigan  
United States

Telephone: (800) 362-8491  
e-mail: info@mopec.com  
Website: www.mopec.com

#### 1.4 Emergency telephone number

Emergency information service

This number is only available during the following  
office hours: Mon-Fri 09:00 AM - 05:00 PM

### SECTION 2: Hazard(s) identification

#### 2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

This mixture does not meet the criteria for classification.

#### 2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

- Signal word not required

- Pictograms not required

#### 2.3 Other hazards

There is no additional information.

Hazards not otherwise classified

Contains ophthalmine, 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.

Safety data sheet available on request.

May be harmful if inhaled (GHS category 5: acutely toxic - inhalation).

Toxic to aquatic life (GHS category 2: aquatic toxicity - acute).

## Tissue Marking Dye - Red

Version number: GHS 1.0

Date of compilation: 2021-11-03







### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

Not relevant (mixture)

#### 3.2 Mixtures

Description of the mixture

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms
METHYLISOTHIAZOLINONE	CAS No 2682-20-4	1 – < 5	Acute Tox. 3 / H301 Acute Tox. 3 / H311 Acute Tox. 2 / H330	
octhilinone	CAS No 26530-20-1	< 1	Acute Tox. 4 / H302 Acute Tox. 3 / H311 Acute Tox. 3 / H331 Skin Corr. 1B / H314 Skin Sens. 1 / H317	  
1,2-benzisothiazol-3(2H)-one	CAS No 2634-33-5	< 1	Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Eye Dam. 1 / H318 Skin Sens. 1 / H317	 

For full text of abbreviations: see SECTION 16.

### 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

## Tissue Marking Dye - Red

Version number: GHS 1.0

Date of compilation: 2021-11-03

### SECTION 5: Fire-fighting measures

#### 5.1 Extinguishing media

Suitable extinguishing media

Water, Foam, ABC-powder

Unsuitable extinguishing media

Water jet

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

Hazardous combustion products

Nitrogen oxides (NO<sub>x</sub>)

#### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Coordinate 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 vapors/dust/aerosols/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.

## Tissue Marking Dye - Red

Version number: GHS 1.0

Date of compilation: 2021-11-03

### 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

- 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/m³]	STEL [ppm]	STEL [mg/m³]	Ceiling-C [ppm]	Ceiling-C [mg/m³]	Notation	Source
US	particulates not otherwise classified		REL							appx-D	NIOSH REL
US	particulates not otherwise classified (PNOC)		PEL	1,766	15					i, dust	29 CFR 1910.1000
US	particulates not otherwise classified (PNOC)		PEL	529.5	5					partml, r, dust	29 CFR 1910.1000
US	Particulates not otherwise regulated		PEL (CA)		10					dust	Cal/ OSHA PEL
US	Particulates not otherwise regulated		PEL (CA)		5					r	Cal/ OSHA PEL

## Tissue Marking Dye - Red

Version number: GHS 1.0

Date of compilation: 2021-11-03

### Notation

appx-D	see Appendix D - Substances with No Established RELs
Ceiling-C	ceiling value is a limit value above which exposure should not occur
dust	as dust
i	inhalable fraction
part/ml	particles/ml
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)

### Relevant DNELs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
METHYLISO-THIAZOLINONE	2682-20-4	DNEL	0.021 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - local effects
METHYLISO-THIAZOLINONE	2682-20-4	DNEL	0.043 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	acute - local effects
1,2-benzisothiazol-3(2H)-one	2634-33-5	DNEL	6.81 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
1,2-benzisothiazol-3(2H)-one	2634-33-5	DNEL	0.966 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

### Relevant PNECs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
METHYLISO-THIAZOLINONE	2682-20-4	PNEC	3.39 µg/l	aquatic organisms	freshwater	short-term (single instance)
METHYLISO-THIAZOLINONE	2682-20-4	PNEC	3.39 µg/l	aquatic organisms	marine water	short-term (single instance)
METHYLISO-THIAZOLINONE	2682-20-4	PNEC	0.23 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
METHYLISO-THIAZOLINONE	2682-20-4	PNEC	0.047 mg/kg	terrestrial organisms	soil	short-term (single instance)
1,2-benzisothiazol-3(2H)-one	2634-33-5	PNEC	4.03 µg/l	aquatic organisms	freshwater	short-term (single instance)
1,2-benzisothiazol-3(2H)-one	2634-33-5	PNEC	0.403 µg/l	aquatic organisms	marine water	short-term (single instance)
1,2-benzisothiazol-3(2H)-one	2634-33-5	PNEC	1.03 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
1,2-benzisothiazol-3(2H)-one	2634-33-5	PNEC	49.9 µg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
1,2-benzisothiazol-3(2H)-one	2634-33-5	PNEC	4.99 µg/kg	aquatic organisms	marine sediment	short-term (single instance)
1,2-benzisothiazol-3(2H)-one	2634-33-5	PNEC	3 mg/kg	terrestrial organisms	soil	short-term (single instance)

## Tissue Marking Dye - Red

Version number: GHS 1.0

Date of compilation: 2021-11-03

### 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

Wear protective gloves.

- 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).

Environmental exposure controls

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

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

Physical state	solid
Color	not determined
Odor	characteristic

#### Other safety parameters

pH (value)	not applicable
Melting point/freezing point	≥46.7 °C
Initial boiling point and boiling range	>130 °C at 16 hPa
Flash point	not applicable
Evaporation rate	not determined
Flammability (solid, gas)	non-combustible
Explosion limits of dust clouds	not determined
Vapor pressure	0.73 Pa at 25 °C

## Tissue Marking Dye - Red

Version number: GHS 1.0

Date of compilation: 2021-11-03

Density	not determined
Vapor density	this information is not available
Relative density	information on this property is not available
Solubility(ies)	not determined

Partition coefficient

- n-octanol/water (log KOW)	this information is not available
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Auto-ignition temperature

Viscosity	not relevant (solid matter)
Explosive properties	none
Oxidizing properties	none

### 9.2 Other information

Solvent content	0.1575 %
Solid content	2.076 %
Temperature class (USA, acc. to NEC 500)	T2 (maximum permissible surface temperature on the equipment: 300°C)

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

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

### 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

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

There is no additional information.

## Tissue Marking Dye - Red

Version number: GHS 1.0

Date of compilation: 2021-11-03

### 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

Test data are not available for the complete mixture.

#### Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

#### Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

This mixture does not meet the criteria for classification.

#### Acute toxicity

Shall not be classified as acutely toxic.

GHS of the United Nations, annex 4: May be harmful if inhaled.

#### Acute toxicity estimate (ATE) of components of the mixture

Name of substance	CAS No	Exposure route	ATE
METHYLISOTHIAZOLINONE	2682-20-4	oral	120 mg/kg
METHYLISOTHIAZOLINONE	2682-20-4	dermal	242 mg/kg
METHYLISOTHIAZOLINONE	2682-20-4	inhalation: dust/mist	0.11 mg/l/4h
octhiline	26530-20-1	oral	500 mg/kg
octhiline	26530-20-1	dermal	300 mg/kg
octhiline	26530-20-1	inhalation: vapor	3 mg/l/4h
1,2-benzisothiazol-3(2H)-one	2634-33-5	oral	670 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 sensitization

Contains octhiline, 1,2-benzisothiazol-3(2H)-one. May produce 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.



## Tissue Marking Dye - Red

Version number: GHS 1.0

Date of compilation: 2021-11-03

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.

### SECTION 12: Ecological information

#### 12.1 Toxicity

Toxic to aquatic life.

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
METHYLISO-THIAZOLINONE	2682-20-4	LC50	4.77 mg/l	fish	96 h
METHYLISO-THIAZOLINONE	2682-20-4	EC50	1.7 mg/l	aquatic invertebrates	24 h
METHYLISO-THIAZOLINONE	2682-20-4	ErC50	>0.072 mg/l	algae	96 h
1,2-benzisothiazol-3(2H)-one	2634-33-5	LC50	16.7 mg/l	fish	96 h
1,2-benzisothiazol-3(2H)-one	2634-33-5	EC50	2.94 mg/l	aquatic invertebrates	48 h
1,2-benzisothiazol-3(2H)-one	2634-33-5	ErC50	150 µg/l	algae	72 h

#### 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

Data are not available.

#### 12.6 Endocrine disrupting properties

None of the ingredients are listed.

#### 12.7 Other adverse effects

Data are not available.

## Tissue Marking Dye - Red

Version number: GHS 1.0

Date of compilation: 2021-11-03

### 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/packages

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

- |  |   |
|--|---|
| <b>14.1 UN number</b>  | not subject to transport regulations                                  |
| <b>14.2 UN proper shipping name</b>  | not relevant  |
| <b>14.3 Transport hazard class(es)</b>   | not assigned  |
| <b>14.4 Packing group</b>  | not assigned  |
| <b>14.5 Environmental hazards</b>  | non-environmentally hazardous acc. to the dangerous goods regulations |
| <b>14.6 Special precautions for user</b>                                       |   |
| There is no additional information.  |   |
| <b>14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code</b> |   |
| The cargo is not intended to be carried in bulk.                               |   |

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

##### **Transport of dangerous goods by road or rail (49 CFR US DOT) - Additional information**

Not subject to transport regulations.

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

Not subject to IMDG.

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

Not subject to ICAO-IATA.

### SECTION 15: Regulatory information

#### 15.1 Safety, health and environmental regulations specific for the product in question

##### **National regulations (United States)**

##### **Superfund Amendment and Reauthorization Act (SARA TITLE III )**

- The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

none of the ingredients are listed

## Tissue Marking Dye - Red

Version number: GHS 1.0

Date of compilation: 2021-11-03

### - Specific Toxic Chemical Listings (EPCRA Section 313)

none of the ingredients are listed

### Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

#### - List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

none of the ingredients are listed

### Clean Air Act

none of the ingredients are listed

### Right to Know Hazardous Substance List

#### - Hazardous Substance List (NJ-RTK)

none of the ingredients are listed

### California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

none of the ingredients are listed

### Industry or sector specific available guidance(s)

#### NPCA-HMIS® III

Hazardous Materials Identification System. American Coatings Association.

Category	Rating	Description
Chronic	/	none
Health	0	no significant risk to health
Flammability	0	material that will not burn under typical fire conditions
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protection	-	

#### NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

Category	Degree of hazard	Description
Flammability	0	material that will not burn under typical fire conditions
Health	0	material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

## Tissue Marking Dye - Red

Version number: GHS 1.0

Date of compilation: 2021-11-03

### National inventories

Country	Inventory	Status
EU	REACH Reg.	not all ingredients are listed
US	TSCA	not all ingredients are listed

#### Legend

REACH Reg. REACH registered substances  
TSCA Toxic Substance Control Act

### 15.2 Chemical Safety Assessment

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

### SECTION 16: Other information, including date of preparation or last revision

#### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
29 CFR 1910.1000	29 CFR 1910.1000, Tables Z-1, Z-2, Z-3 - Occupational Safety and Health Standards: Toxic and Hazardous Substances (permissible exposure limits)
49 CFR US DOT	49 CFR U.S. Department of Transportation
Acute Tox.	Acute toxicity
ATE	Acute Toxicity Estimate
Cal/OSHA PEL	California Division of Occupational Safety and Health (Cal/OSHA): Permissible Exposure Limits (PELs)
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)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
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
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval

## Tissue Marking Dye - Red

Version number: GHS 1.0

Date of compilation: 2021-11-03

Abbr.	Descriptions of used abbreviations
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NIOSH REL	National Institute for Occupational Safety and Health (NIOSH): Recommended Exposure Limits (RELs)
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
PEL	Permissible exposure limit
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
RTECS	Registry of Toxic Effects of Chemical Substances (database of NIOSH with toxicological information)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
Skin Sens.	Skin sensitization
STEL	Short-term exposure limit
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative

### Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

### Classification procedure

Physical and chemical properties: The classification is based on tested mixture.

Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

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

Code	Text
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.

## Tissue Marking Dye - Red

Version number: GHS 1.0

Date of compilation: 2021-11-03

Code	Text
H331	Toxic if inhaled.

### Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.