

# Safety Data Sheet

## DD1000SS

Version number: 2.2

Revision: 2026-06-08

### SECTION 1: Identification

#### 1.1 Product identifier

Trade name **Dimidium Bromide/Disulfine**

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

Relevant identified uses laboratory and analytical use

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

AquaPhoenix Scientific  
860 Gitts Run Road  
Hanover PA 17331  
United States

Telephone: (866) 632-1291  
e-mail: [info@aquaphoenixsci.com](mailto:info@aquaphoenixsci.com)  
Website: <https://www.aquaphoenixsci.com/>

#### 1.4 Emergency telephone number

Emergency information service ChemTel Inc.: 1-800-255-3924, +01-813-248-0585

### SECTION 2: Hazard(s) identification

#### 2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200, Rev. 2024)

| Hazard class     | Category | Hazard class and category | Hazard statement |
|------------------|----------|---------------------------|------------------|
| flammable liquid | 2        | Flam. Liq. 2              | H225             |
| carcinogenicity  | 1A       | Carc. 1A                  | H350             |

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

The product is combustible and can be ignited by potential ignition sources.

#### 2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200, Rev. 2024)

- Signal word **danger**

- Pictograms

GHS02, GHS08



- Hazard statements

H225 Highly flammable liquid and vapour.  
H350 May cause cancer.

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### - Precautionary statements

|                |                                                                                                                  |
|----------------|------------------------------------------------------------------------------------------------------------------|
| P203           | Obtain, read and follow all safety instructions before use.                                                      |
| P210           | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.                   |
| P233           | Keep container tightly closed.                                                                                   |
| P240           | Ground and bond container and receiving equipment.                                                               |
| P241           | Use explosion-proof electrical/ventilating/lighting equipment.                                                   |
| P242           | Use non-sparking tools.                                                                                          |
| P243           | Take action to prevent static discharges.                                                                        |
| P280           | Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.                    |
| P303+P361+P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water or shower. |
| P318           | IF exposed or concerned, get medical advice.                                                                     |
| P370+P378      | In case of fire: Use sand, carbon dioxide or powder extinguisher to extinguish.                                  |
| P403+P235      | Store in a well-ventilated place. Keep cool.                                                                     |
| P405           | Store locked up.                                                                                                 |
| P501           | Dispose of contents/container in accordance with local/regional/national/international regulations.              |

### - Hazardous ingredients for labelling

Ethanol, Disulfine Blue VN 150

## 2.3 Other hazards

### Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance at a concentration of  $\geq 0.1\%$ .

### Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) in a concentration of  $\geq 0.1\%$ .

## 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                                                                                                                                                                                                                                                        |
|-------------------|---------------------|--------|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Water             | CAS No<br>7732-18-5 | 94.7   |                                                                                                              |                                                                                                                                                                                                                                                                   |
| Ethanol           | CAS No<br>64-17-5   | 4.29   | Flam. Liq. 2 / H225<br>Eye Irrit. 2 / H319<br>Carc. 1A / H350                                                |    |
| Isopropanol       | CAS No<br>67-63-0   | 0.4505 | Flam. Liq. 2 / H225<br>Eye Irrit. 2 / H319<br>STOT SE 3 / H336                                               |                                                                                         |
| methyl alcohol    | CAS No<br>67-56-1   | 0.2145 | Flam. Liq. 2 / H225<br>Acute Tox. 3 / H301<br>Acute Tox. 3 / H311<br>Acute Tox. 3 / H331<br>STOT SE 1 / H370 |    |
| Dimidium Bromide  | CAS No<br>518-67-2  | 0.2    | Skin Irrit. 2 / H315<br>Eye Irrit. 2 / H319<br>STOT SE 3 / H335                                              |                                                                                                                                                                              |

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| Name of substance      | Identifier         | Wt%   | Classification acc. to GHS                                                                                                                         | Pictograms                                                                                                                                                                                                                                                  |
|------------------------|--------------------|-------|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Disulfine Blue VN 150  | CAS No<br>129-17-9 | 0.1   | Acute Tox. 4 / H312<br>Resp. Sens. 1 / H334<br>Aquatic Acute 3 / H402<br>Aquatic Chronic 3 / H412                                                  |                                                                                       |
| Methyl isobutyl ketone | CAS No<br>108-10-1 | 0.045 | Flam. Liq. 2 / H225<br>Acute Tox. 5 / H303<br>Acute Tox. 4 / H332<br>Eye Irrit. 2 / H319<br>Carc. 2 / H351<br>STOT SE 3 / H335<br>STOT SE 3 / H336 |    |

### Remarks

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

Wash with plenty of soap and water.

#### 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: Fire-fighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Water spray, Alcohol resistant foam, BC-powder, Carbon dioxide (CO<sub>2</sub>)

#### Unsuitable extinguishing media

Water jet

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

In case of insufficient ventilation and/or in use, may form flammable/explosive vapor-air mixture. Solvent vapors are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures.

#### Hazardous combustion products

Nitrogen oxides (NO<sub>x</sub>), Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>)

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### 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

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

Appropriate containment techniques

Use of adsorbent materials.

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

Wear impact- and splash-resistant eyewear.

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

Use local and general ventilation. Avoidance of ignition sources. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Use only in well-ventilated areas. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools.

- Specific notes/details

Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapors are heavier than air, spread along floors and form explosive mixtures with air. Vapors may form explosive mixtures with air.

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

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Keep container tightly closed and in a well-ventilated place. Use local and general ventilation. Keep cool. Protect from sunlight.

### - Flammability hazards

Keep away from sources of ignition - No smoking. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Protect from sunlight.

### Control of the effects

Protect against external exposure, such as

heat, high temperatures, light, UV-radiation/sunlight

### - Ventilation requirements

Use local and general ventilation. Ground/bond container and receiving equipment.

## 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                                                             | hexone                          | 108-10-1 | REL        | 50 (10 h)    | 205 (10 h)   | 75         | 300          |                 |                   |          | NIOSH REL         |
| US                                                             | hexone (methyl isobutyl ketone) | 108-10-1 | PEL        | 100          | 410          |            |              |                 |                   |          | 29 CFR 1910.10 00 |
| US                                                             | methyl isobutyl ketone          | 108-10-1 | TLV®       | 20           | 82           | 75         | 307          |                 |                   |          | ACGIH® 2025       |
| US                                                             | methyl isobutyl ketone (hexone) | 108-10-1 | PEL (CA)   | 50           | 205          | 75         | 300          |                 |                   |          | Cal/OSH A PEL     |
| US                                                             | ethanol                         | 64-17-5  | TLV®       |              |              | 1,000      | 1,880        |                 |                   |          | ACGIH® 2025       |
| US                                                             | ethyl alcohol                   | 64-17-5  | REL        | 1,000 (10 h) | 1,900 (10 h) |            |              |                 |                   |          | NIOSH REL         |
| US                                                             | ethyl alcohol (ethanol)         | 64-17-5  | PEL (CA)   | 1,000        | 1,900        |            |              |                 |                   |          | Cal/OSH A PEL     |
| US                                                             | ethyl alcohol (ethanol)         | 64-17-5  | PEL        | 1,000        | 1,900        |            |              |                 |                   |          | 29 CFR 1910.10 00 |
| US                                                             | methanol                        | 67-56-1  | TLV®       | 200          | 262          | 250        | 328          |                 |                   | H        | ACGIH® 2025       |
| US                                                             | methyl alcohol                  | 67-56-1  | PEL        | 200          | 260          |            |              |                 |                   |          | 29 CFR 1910.10 00 |
| US                                                             | methyl alcohol                  | 67-56-1  | REL        | 200 (10 h)   | 260 (10 h)   | 250        | 325          |                 |                   | H        | NIOSH REL         |
| US                                                             | methyl alcohol (methanol)       | 67-56-1  | PEL (CA)   | 200          | 260          | 250        | 325          | 1,000           |                   | H        | Cal/OSH A PEL     |
| US                                                             | 2-propanol                      | 67-63-0  | TLV®       | 200          | 491          | 400        | 984          |                 |                   |          | ACGIH® 2025       |
| US                                                             | isopropyl alcohol               | 67-63-0  | PEL (CA)   | 400          | 980          | 500        | 1,225        |                 |                   |          | Cal/OSH A PEL     |
| US                                                             | isopropyl alcohol               | 67-63-0  | REL        | 400          | 980          | 500        | 1,225        |                 |                   |          | NIOSH             |

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### 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           |
|---------|-------------------|---------|------------|-----------|-------------|------------|--------------|-----------------|-------------------|----------|------------------|
|         |                   |         |            | (10 h)    | (10 h)      |            |              |                 |                   |          | REL              |
| US      | isopropyl alcohol | 67-63-0 | PEL        | 400       | 980         |            |              |                 |                   |          | 29 CFR 1910.1000 |

#### Notation

|           |                                                                                                                                                                          |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ceiling-C | ceiling value is a limit value above which exposure should not occur                                                                                                     |
| H         | absorbed through the skin                                                                                                                                                |
| 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) |

### Biological limit values

| Country | Name of agent          | Parameter              | Notation | Identifier | Value   | Source      |
|---------|------------------------|------------------------|----------|------------|---------|-------------|
| US      | methyl isobutyl ketone | methyl isobutyl ketone |          | BEI®       | 1 mg/l  | ACGIH® 2025 |
| US      | methanol               | methanol               |          | BEI®       | 15 mg/l | ACGIH® 2025 |
| US      | 2-propanol             | acetone                |          | BEI®       | 40 mg/l | ACGIH® 2025 |

### Relevant DNELs of components

| Name of substance      | CAS No   | Endpoint | Threshold level    | Protection goal, route of exposure | Used in           | Exposure time              |
|------------------------|----------|----------|--------------------|------------------------------------|-------------------|----------------------------|
| methyl alcohol         | 67-56-1  | DNEL     | 130 mg/m³          | human, inhalatory                  | worker (industry) | chronic - systemic effects |
| methyl alcohol         | 67-56-1  | DNEL     | 130 mg/m³          | human, inhalatory                  | worker (industry) | acute - systemic effects   |
| methyl alcohol         | 67-56-1  | DNEL     | 130 mg/m³          | human, inhalatory                  | worker (industry) | chronic - local effects    |
| methyl alcohol         | 67-56-1  | DNEL     | 130 mg/m³          | human, inhalatory                  | worker (industry) | acute - local effects      |
| methyl alcohol         | 67-56-1  | DNEL     | 20 mg/kg bw/day    | human, dermal                      | worker (industry) | chronic - systemic effects |
| methyl alcohol         | 67-56-1  | DNEL     | 20 mg/kg bw/day    | human, dermal                      | worker (industry) | acute - systemic effects   |
| Disulfine Blue VN 150  | 129-17-9 | DNEL     | 13.56 mg/m³        | human, inhalatory                  | worker (industry) | chronic - systemic effects |
| Disulfine Blue VN 150  | 129-17-9 | DNEL     | 7.689 mg/kg bw/day | human, dermal                      | worker (industry) | chronic - systemic effects |
| Methyl isobutyl ketone | 108-10-1 | DNEL     | 83 mg/m³           | human, inhalatory                  | worker (industry) | chronic - systemic effects |
| Methyl isobutyl ketone | 108-10-1 | DNEL     | 208 mg/m³          | human, inhalatory                  | worker (industry) | acute - systemic effects   |
| Methyl isobutyl ketone | 108-10-1 | DNEL     | 83 mg/m³           | human, inhalatory                  | worker (industry) | chronic - local effects    |
| Methyl isobutyl ketone | 108-10-1 | DNEL     | 208 mg/m³          | human, inhalatory                  | worker (industry) | acute - local effects      |

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### Relevant DNELs of components

| Name of substance      | CAS No   | Endpoint | Threshold level   | Protection goal, route of exposure | Used in           | Exposure time              |
|------------------------|----------|----------|-------------------|------------------------------------|-------------------|----------------------------|
| Methyl isobutyl ketone | 108-10-1 | DNEL     | 11.8 mg/kg bw/day | human, dermal                      | worker (industry) | chronic - systemic effects |

### Relevant PNECs of components

| Name of substance      | CAS No   | Endpoint | Threshold level | Organism              | Environmental compartment    | Exposure time                |
|------------------------|----------|----------|-----------------|-----------------------|------------------------------|------------------------------|
| Disulfine Blue VN 150  | 129-17-9 | PNEC     | 0.046 mg/l      | aquatic organisms     | freshwater                   | short-term (single instance) |
| Disulfine Blue VN 150  | 129-17-9 | PNEC     | 0.005 mg/l      | aquatic organisms     | marine water                 | short-term (single instance) |
| Disulfine Blue VN 150  | 129-17-9 | PNEC     | 111.5 mg/l      | aquatic organisms     | sewage treatment plant (STP) | short-term (single instance) |
| Disulfine Blue VN 150  | 129-17-9 | PNEC     | 5,506 mg/kg     | aquatic organisms     | freshwater sediment          | short-term (single instance) |
| Disulfine Blue VN 150  | 129-17-9 | PNEC     | 550.6 mg/kg     | aquatic organisms     | marine sediment              | short-term (single instance) |
| Disulfine Blue VN 150  | 129-17-9 | PNEC     | 2,639 mg/kg     | terrestrial organisms | soil                         | short-term (single instance) |
| Methyl isobutyl ketone | 108-10-1 | PNEC     | 0.6 mg/l        | aquatic organisms     | freshwater                   | short-term (single instance) |
| Methyl isobutyl ketone | 108-10-1 | PNEC     | 0.06 mg/l       | aquatic organisms     | marine water                 | short-term (single instance) |
| Methyl isobutyl ketone | 108-10-1 | PNEC     | 27.5 mg/l       | aquatic organisms     | sewage treatment plant (STP) | short-term (single instance) |
| Methyl isobutyl ketone | 108-10-1 | PNEC     | 8.27 mg/kg      | aquatic organisms     | freshwater sediment          | short-term (single instance) |
| Methyl isobutyl ketone | 108-10-1 | PNEC     | 0.83 mg/kg      | aquatic organisms     | marine sediment              | short-term (single instance) |
| Methyl isobutyl ketone | 108-10-1 | PNEC     | 1.3 mg/kg       | terrestrial organisms | soil                         | short-term (single instance) |

## 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 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.

##### - Other protection measures

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Wash hands thoroughly after handling.

### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

### 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

**Product description:** See website or catalog for details.

|                                                          |                                                        |
|----------------------------------------------------------|--------------------------------------------------------|
| Physical state                                           | liquid                                                 |
| Color                                                    | greenish-blue                                          |
| Odor                                                     | mild - like alcohol                                    |
| Melting point/freezing point                             | -97.8 °C                                               |
| Boiling point or initial boiling point and boiling range | 100 – 102 °C                                           |
| Evaporation rate                                         | not determined                                         |
| Flammability                                             | flammable liquid in accordance with GHS criteria       |
| Lower and upper explosion limit                          | not determined                                         |
| Flash point                                              | not determined                                         |
| Auto-ignition temperature                                | 455 °C (auto-ignition temperature (liquids and gases)) |
| Decomposition temperature                                | not relevant                                           |
| pH (value)                                               | not determined                                         |
| Kinematic viscosity                                      | not determined                                         |

### Solubility(ies)

|                  |                            |
|------------------|----------------------------|
| Water solubility | miscible in any proportion |
|------------------|----------------------------|

### Partition coefficient

|                                                   |                                   |
|---------------------------------------------------|-----------------------------------|
| Partition coefficient n-octanol/water (log value) | this information is not available |
|---------------------------------------------------|-----------------------------------|

|                |                    |
|----------------|--------------------|
| Vapor pressure | 169.3 hPa at 25 °C |
|----------------|--------------------|

### Density and/or relative density

|                         |                                               |
|-------------------------|-----------------------------------------------|
| Density                 | 0.98 – 1 g/cm <sup>3</sup> at 20 °C           |
| Relative vapour density | information on this property is not available |

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Particle characteristics

not relevant (liquid)

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". The mixture contains reactive substance(s). Risk of ignition.

If heated:

Risk of ignition

#### 10.2 Chemical stability

See below "Conditions to avoid".

#### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

#### 10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

#### 10.5 Incompatible materials

Oxidizers

#### 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, Rev. 2024)**

Acute toxicity

Shall not be classified as acutely toxic.

Acute toxicity estimate (ATE) of components

| Name of substance      | CAS No   | Exposure route    | ATE          |
|------------------------|----------|-------------------|--------------|
| methyl alcohol         | 67-56-1  | oral              | 100 mg/kg    |
| methyl alcohol         | 67-56-1  | dermal            | 300 mg/kg    |
| methyl alcohol         | 67-56-1  | inhalation: vapor | 3 mg/l/4h    |
| Disulfine Blue VN 150  | 129-17-9 | dermal            | 1,314 mg/kg  |
| Methyl isobutyl ketone | 108-10-1 | oral              | 4,570 mg/kg  |
| Methyl isobutyl ketone | 108-10-1 | inhalation: vapor | 11.6 mg/l/4h |

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

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

### Respiratory or skin sensitization

Shall not be classified as a respiratory or skin sensitizer.

### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

### Carcinogenicity

May cause cancer.

### IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

| Name of substance      | CAS No   | Classification | Number |
|------------------------|----------|----------------|--------|
| Isopropanol            | 67-63-0  | 3              |        |
| Ethanol                | 64-17-5  | 1              |        |
| Disulfine Blue VN 150  | 129-17-9 | 3              |        |
| Methyl isobutyl ketone | 108-10-1 | 2B             |        |

#### Legend

- 1 Carcinogenic to humans
- 2B Possibly carcinogenic to humans
- 3 Not classifiable as to carcinogenicity in humans

### 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.

## 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

Does not contain a PBT-/vPvB-substance at a concentration of  $\geq 0.1\%$ .

### 12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) in a concentration of  $\geq 0.1\%$ .

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### 12.7 Other adverse effects

Data are not available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Waste treatment-relevant information

Solvent reclamation/regeneration.

Please consider the relevant national or regional provisions.

## 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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | none                                                                  |
| <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 Other relevant information</b><br>Shipping container markings and labels, received from AquaPhoenix, may vary from the above information. Products that are regulated for transport will be packaged by AquaPhoenix as Dangerous Goods in Excepted Quantities according to IATA, US DOT, and IMDG regulations. AquaPhoenix may also elect to ship certain products as UN 3316 Chemical Kit, Hazard Class 9, Packing Group II or III. In case of reshipment, it is the responsibility of the shipper to determine appropriate labels and markings in accordance with applicable transportation regulations. |                                                                       |
| <b>14.7 Maritime transport in bulk according to IMO instruments</b><br>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)**

**Toxic Substance Control Act (TSCA)** not all ingredients are listed (ACTIVE)

#### **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

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

| Toxics Release Inventory: Specific Toxic Chemical Listings |          |                                                                                                         |                |
|------------------------------------------------------------|----------|---------------------------------------------------------------------------------------------------------|----------------|
| Name of substance                                          | CAS No   | Remarks                                                                                                 | Effective date |
| Isopropanol                                                | 67-63-0  | only persons who manufacture by the strong acid process are subject, supplier notification not required | 1986-12-31     |
| methyl alcohol                                             | 67-56-1  |                                                                                                         | 1986-12-31     |
| Methyl isobutyl ketone                                     | 108-10-1 |                                                                                                         | 1986-12-31     |

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

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

| Name of substance      | CAS No   | Remarks | Statutory code | Final RQ pounds (Kg) |
|------------------------|----------|---------|----------------|----------------------|
| methyl alcohol         | 67-56-1  |         | 3<br>4         | 5000 (2270)          |
| Methyl isobutyl ketone | 108-10-1 |         | 3<br>4         | 5000 (2270)          |

#### Legend

3 "3" indicates that the source is section 112 of the Clean Air Act

4 "4" indicates that the source is section 3001 of the Resource Conservation and Recovery Act (RCRA)

### Clean Air Act

none of the ingredients are listed

### Right to Know Hazardous Substance List

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

| Name of substance      | CAS No   | Remarks | Classifications      |
|------------------------|----------|---------|----------------------|
| Isopropanol            | 67-63-0  |         | F3                   |
| methyl alcohol         | 67-56-1  |         | TE<br>F3             |
| Ethanol                | 64-17-5  |         | CA<br>MU<br>TE<br>F3 |
| Disulfine Blue VN 150  | 129-17-9 |         |                      |
| Methyl isobutyl ketone | 108-10-1 |         | F3<br>R1             |

#### Legend

CA Carcinogenic

F3 Flammable - Third Degree

MU Mutagenic

R1 Reactive - First Degree

TE Teratogenic

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

| Proposition 65 List of chemicals |          |                        |                      |
|----------------------------------|----------|------------------------|----------------------|
| Name acc. to inventory           | CAS No   | Remarks                | Type of the toxicity |
| methanol                         | 67-56-1  |                        | developmental        |
| ethanol (ethyl alcohol)          | 64-17-5  | in alcoholic beverages | developmental        |
| methyl isobutyl ketone           | 108-10-1 |                        | cancer               |
| methyl isobutyl ketone (MIBK)    | 108-10-1 |                        | developmental        |

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

#### NPCA-HMIS® III

Hazardous Materials Identification System. American Coatings Association.

| Category            | Rating | Description                                                                                                                                                |
|---------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chronic             | *      | chronic (long-term) health effects may result from repeated overexposure                                                                                   |
| Health              | 0      | no significant risk to health                                                                                                                              |
| Flammability        | 3      | material that can be ignited under almost all ambient temperature 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   | 3                | material that can be ignited under almost all ambient temperature 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 |                  |                                                                                                               |

### National inventories

| Country | Inventory  | Status                         |
|---------|------------|--------------------------------|
| AU      | AIIC       | all ingredients are listed     |
| CA      | DSL        | not all ingredients are listed |
| CN      | IECSC      | all ingredients are listed     |
| EU      | ECSI       | all ingredients are listed     |
| EU      | REACH Reg. | not all ingredients are listed |
| JP      | CSCL-ENCS  | not all ingredients are listed |

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| Country | Inventory | Status                         |
|---------|-----------|--------------------------------|
| JP      | ISHA-ENCS | not all ingredients are listed |
| KR      | KECI      | not all ingredients are listed |
| MX      | INSQ      | not all ingredients are listed |
| NZ      | NZIoC     | all ingredients are listed     |
| PH      | PICCS     | all ingredients are listed     |
| TR      | CICR      | not all ingredients are listed |
| TW      | TCSI      | all ingredients are listed     |
| US      | TSCA      | not all ingredients are listed |

### Legend

|            |                                                                         |
|------------|-------------------------------------------------------------------------|
| AIIC       | Australian Inventory of Industrial Chemicals                            |
| CICR       | Chemical Inventory and Control Regulation                               |
| CSCL-ENCS  | List of Existing and New Chemical Substances (CSCL-ENCS)                |
| DSL        | Domestic Substances List (DSL)                                          |
| ECSI       | EC Substance Inventory (EINECS, ELINCS, NLP)                            |
| IECSC      | Inventory of Existing Chemical Substances Produced or Imported in China |
| INSQ       | National Inventory of Chemical Substances                               |
| ISHA-ENCS  | Inventory of Existing and New Chemical Substances (ISHA-ENCS)           |
| KECI       | Korea Existing Chemicals Inventory                                      |
| NZIoC      | New Zealand Inventory of Chemicals                                      |
| PICCS      | Philippine Inventory of Chemicals and Chemical Substances (PICCS)       |
| REACH Reg. | REACH registered substances                                             |
| TCSI       | Taiwan Chemical Substance Inventory                                     |
| 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                                                                                                                                  |
| Aquatic Acute    | Hazardous to the aquatic environment - acute hazard                                                                                             |
| Aquatic Chronic  | Hazardous to the aquatic environment - chronic hazard                                                                                           |
| ATE              | Acute Toxicity Estimate                                                                                                                         |
| Cal/OSHA PEL     | California Division of Occupational Safety and Health (Cal/OSHA): Permissible Exposure Limits (PELs)                                            |
| Carc.            | Carcinogenicity                                                                                                                                 |
| 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)                                                                                                      |

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| Abbr.          | Descriptions of used abbreviations                                                                            |
|----------------|---------------------------------------------------------------------------------------------------------------|
| DNEL           | Derived No-Effect Level                                                                                       |
| ED             | Endocrine disruptor                                                                                           |
| EINECS         | European Inventory of Existing Commercial Chemical Substances                                                 |
| ELINCS         | European List of Notified Chemical Substances                                                                 |
| Eye Dam.       | Seriously damaging to the eye                                                                                 |
| Eye Irrit.     | Irritant to the eye                                                                                           |
| Flam. Liq.     | Flammable liquid                                                                                              |
| GHS            | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations     |
| IARC           | International Agency for Research on Cancer                                                                   |
| 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                                                                   |
| NIOSH REL      | National Institute for Occupational Safety and Health (NIOSH): Recommended Exposure Limits (RELs)             |
| NLP            | No-Longer Polymer                                                                                             |
| 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                                                                                             |
| Resp. Sens.    | Respiratory sensitization                                                                                     |
| RTECS          | Registry of Toxic Effects of Chemical Substances (database of NIOSH with toxicological information)           |
| Skin Corr.     | Corrosive to skin                                                                                             |
| Skin Irrit.    | Irritant to skin                                                                                              |
| STEL           | Short-term exposure limit                                                                                     |
| STOT SE        | Specific target organ toxicity - single exposure                                                              |
| TLV®           | Threshold Limit Values                                                                                        |
| TWA            | Time-weighted average                                                                                         |
| vPvB           | Very Persistent and very Bioaccumulative                                                                      |

### Key literature references and sources for data

Globally Harmonized System of Classification and Labelling of Chemicals ("Purple book").  
 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).

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

| Code | Text                                                                       |
|------|----------------------------------------------------------------------------|
| H225 | Highly flammable liquid and vapour.                                        |
| H301 | Toxic if swallowed.                                                        |
| H303 | May be harmful if swallowed.                                               |
| H311 | Toxic in contact with skin.                                                |
| H312 | Harmful in contact with skin.                                              |
| H315 | Causes skin irritation.                                                    |
| H319 | Causes serious eye irritation.                                             |
| H331 | Toxic if inhaled.                                                          |
| H332 | Harmful if inhaled.                                                        |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H335 | May cause respiratory irritation.                                          |
| H336 | May cause drowsiness or dizziness.                                         |
| H350 | May cause cancer.                                                          |
| H351 | Suspected of causing cancer.                                               |
| H370 | Causes damage to organs.                                                   |
| H402 | Harmful to aquatic life.                                                   |
| H412 | Harmful to aquatic life with long lasting effects.                         |

### Disclaimer

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