

# SAFETY DATA SHEET

**Issue Date** 04-May-2021 **Revision Date** 26-Jan-2024 **Version** 4.9 **Page** 1 / 17

## 1. IDENTIFICATION

**Product identifier** 

**Product Name** Standard 1, 0.5 mg/L as F

Other means of identification

Product Code(s) 2743811

Safety data sheet number M00606

Recommended use of the chemical and restrictions on use

**Recommended Use** Standard solution. Water Analysis.

Uses advised against Consumer use.

**Restrictions on use** For Laboratory Use Only.

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

#### **Manufacturer Address**

Hach Company, P.O.Box 389, Loveland, CO 80539, USA, +1(970) 669-3050

#### Emergency telephone number

+1(303) 623-5716 - 24 Hour Service

## 2. HAZARDS IDENTIFICATION

#### Classification

### **Regulatory Status**

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

#### Hazards not otherwise classified (HNOC)

Not applicable

#### Label elements

# Signal word

None

#### **Hazard statements**

The product contains no substances which at their given concentration, are considered to be hazardous to health

## Other Hazards Known

None

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

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Substance Not applicable

**Mixture** 

Chemical Family Mixture.

Chemical nature aqueous solution.

Percent ranges are used where confidential product information is applicable.

| Chemical name   | CAS No    | Percent<br>Range | HMRIC # |
|-----------------|-----------|------------------|---------|
| Formaldehyde    | 50-00-0   | <0.1%            | -       |
| Methanol        | 67-56-1   | <0.1%            | -       |
| Sodium fluoride | 7681-49-4 | <0.01%           | -       |

# 4. FIRST AID MEASURES

**Description of first aid measures** 

General advice No hazards which require special first aid measures. Use first aid treatment according to the

nature of the injury.

**Inhalation** Remove to fresh air.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.

Consult a physician.

**Skin contact** Wash skin with soap and water.

**Ingestion** Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects, both acute and delayed

Symptoms See Section 11 for additional Toxicological Information.

Indication of any immediate medical attention and special treatment needed

### 5. FIRE-FIGHTING MEASURES

surrounding environment.

Unsuitable Extinguishing Media Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the

chemical

No information available.

**Hazardous combustion products** No information available.

Special protective equipment for

fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

Use personal protection equipment.

## 6. ACCIDENTAL RELEASE MEASURES

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U.S. Notice Only persons properly qualified to respond to an emergency involving hazardous

substances may respond to a spill according to federal regulations (OSHA 29 CFR

1910.120(a)(v)) and per your company's emergency response plan and

guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should

respond to a spill involving chemicals.

## Personal precautions, protective equipment and emergency procedures

**Personal precautions** Ensure adequate ventilation.

Environmental precautions

**Environmental precautions** See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder,

sawdust). Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## 7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Flammability class Not applicable

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## Control parameters

## **Exposure Guidelines**

| Chemical name   | ACGIH TLV                     | OSHA PEL                              | NIOSH                         |
|-----------------|-------------------------------|---------------------------------------|-------------------------------|
| Formaldehyde    | dermal sensitizer;respiratory | TWA: 0.75 ppm                         | IDLH: 20 ppm                  |
| CAS#: 50-00-0   | sensitizer                    | (vacated) TWA: 3 ppm                  | Ceiling: 0.1 ppm 15 min       |
|                 | STEL: 0.3 ppm                 | (vacated) STEL: 10 ppm                | TWA: 0.016 ppm                |
|                 | TWA: 0.1 ppm                  | (vacated) Ceiling: 5 ppm              |                               |
|                 |                               | STEL: 2 ppm                           |                               |
| Methanol        | STEL: 250 ppm                 | TWA: 200 ppm                          | IDLH: 6000 ppm                |
| CAS#: 67-56-1   | TWA: 200 ppm                  | TWA: 260 mg/m <sup>3</sup>            | TWA: 200 ppm                  |
|                 | S*                            | (vacated) TWA: 200 ppm                | TWA: 260 mg/m <sup>3</sup>    |
|                 |                               | (vacated) TWA: 260 mg/m <sup>3</sup>  | STEL: 250 ppm                 |
|                 |                               | (vacated) STEL: 250 ppm               | STEL: 325 mg/m <sup>3</sup>   |
|                 |                               | (vacated) STEL: 325 mg/m <sup>3</sup> |                               |
|                 |                               | (vacated) SKN*                        |                               |
| Sodium fluoride | TWA: 2.5 mg/m <sup>3</sup> F  | TWA: 2.5 mg/m <sup>3</sup>            | IDLH: 250 mg/m <sup>3</sup> F |

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| CAS#: 7681-49-4 | (vacated) TWA: 2.5 mg/m <sup>3</sup> | TWA: 2.5 mg/m <sup>3</sup> F |
|-----------------|--------------------------------------|------------------------------|
| <br>            | (,                                   |                              |

Appropriate engineering controls

**Engineering Controls** 

Showers

Eyewash stations

Ventilation systems. Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. The type of protective equipment must be selected according to the concentration and amount of the dangerous

substance at the specific workplace.

Individual protection measures, such as personal protective equipment

**Respiratory protection**No protective equipment is needed under normal use conditions. If exposure limits are

exceeded or irritation is experienced, ventilation and evacuation may be required. Ensure

adequate ventilation.

**Hand Protection** Wear suitable gloves. Barrier creams may help to protect the exposed areas of skin.

Gloves must be inspected prior to use. The selected protective gloves have to satisfy the specifications of EU Directive 2016/425 and the standard EN 374 derived from it. Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN

374-1:2016.

**Eve/face protection** Wear safety glasses with side shields (or goggles).

Skin and body protection No special protective equipment required. Avoid contact with eyes, skin and clothing.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls** Local authorities should be advised if significant spillages cannot be contained. Do not allow

into any sewer, on the ground or into any body of water.

Thermal hazards None under normal processing.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Information on basic physical and chemical properties

Physical state

Liquid

Appearance aqueous solution
Odor Odorless

ous solution Color colorless

dor Odorless Odor threshold No information available

<u>Property</u> <u>Values</u> <u>Remarks • Method</u>

Molecular weight No data available

**pH** ~ 7 @ 20 °C

Melting point / freezing point  $\sim 0 \, ^{\circ}\text{C} \, / \, 32 \, ^{\circ}\text{F}$ 

Initial boiling point and boiling range ~ 100 °C / 212 °F

**Evaporation rate** 0.76 (water = 1)

**Vapor pressure** 23.777 mm Hg / 3.17 kPa at 25 °C / 77 °F

Relative vapor density 0.62

Specific gravity - VALUE 1 0.986

Partition coefficient Not applicable

Soil Organic Carbon-Water Partition Not applicable

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Coefficient

Autoignition temperature No data available

**Decomposition temperature**No information available

Dynamic viscosity No information available

Kinematic viscosity

No information available

Solubility(ies)

## Water solubility

| Water solubility classification | Water solubility_ | Water Solubility Temperature |
|---------------------------------|-------------------|------------------------------|
| Soluble                         | > 1000 mg/L       | 25 °C / 77 °F                |

### Solubility in other solvents

| Chemical Name_ | Solubility classification | Solubility  | Solubility Temperature |
|----------------|---------------------------|-------------|------------------------|
| Acid           | Soluble                   | > 1000 mg/L | 25 °C / 77 °F          |

## **Other information**

### **Metal Corrosivity**

Steel Corrosion Rate Aluminum Corrosion Rate No data available No data available

### **Volatile Organic Compounds (VOC) Content**

See ingredients information below

| Chemical name   | CAS No    | Volatile organic compounds (VOC) content | CAA (Clean Air Act) |
|-----------------|-----------|--|---------------------|
| Formaldehyde    | 50-00-0   | No data available                        | Χ                   |
| Methanol        | 67-56-1   | 100%                                     | Χ                   |
| Sodium fluoride | 7681-49-4 | Not applicable                           | -                   |

#### **Explosive properties**

Upper explosion limitNot applicableLower explosion limitNot applicable

# Flammable properties

Flash point No data available

Flammability Limit in Air

Upper flammability limit:No data availableLower flammability limit:No data available

Oxidizing properties No data available.

Bulk density Not applicable

# 10. STABILITY AND REACTIVITY

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#### Reactivity

Not applicable.

## **Chemical stability**

Stable under normal conditions.

### **Explosion data**

Sensitivity to Mechanical Impact None. Sensitivity to Static Discharge None.

### Possibility of hazardous reactions

None under normal processing.

### **Hazardous polymerization**

None under normal processing.

#### Conditions to avoid

None known based on information supplied.

#### Incompatible materials

Strong oxidizing agents, strong acids, and strong bases.

### Hazardous decomposition products

No information available.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### **Product Information**

**Inhalation** No known effect based on information supplied.

**Eye contact** No known effect based on information supplied.

**Skin contact** No known effect based on information supplied.

**Ingestion** No known effect based on information supplied.

**Symptoms** No information available.

#### Acute toxicity

Based on available data, the classification criteria are not met

#### Mixture

No data available.

### **Ingredient Acute Toxicity Data**

Test data reported below.

#### **Oral Exposure Route**

| Chemical name                                  | Endpoint    | Reported  | Exposure      | Toxicological effects | Key literature references and |
|--|-------------|-----------|---------------|-----------------------|-------------------------------|
|  | type        | dose      | time          |                       | sources for data              |
| Formaldehyde<br>(<0.1%)<br>CAS#: 50-00-0       | Rat<br>LD₅o | 100 mg/kg | None reported | None reported         | GESTIS                        |
| Sodium fluoride<br>(<0.01%)<br>CAS#: 7681-49-4 | Rat<br>LD₅o | 52 mg/kg  | None reported | None reported         | GESTIS                        |

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### **Dermal Exposure Route**

| Chemical name                                  | Endpoint type              | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
|--|----------------------------|---------------|---------------|-----------------------|--|
| Formaldehyde<br>(<0.1%)<br>CAS#: 50-00-0       | Rabbit<br>LD <sub>50</sub> | 270 mg/kg     | None reported | None reported         | GESTIS   |
| Sodium fluoride<br>(<0.01%)<br>CAS#: 7681-49-4 | Rat<br>LD <sub>50</sub>    | 175 mg/kg     | None reported | None reported         | ERMA   |

## Inhalation (Dust/Mist) Exposure Route

| Chemical name                            | Endpoint type           | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
|--|-------------------------|---------------|---------------|-----------------------|--|
| Formaldehyde<br>(<0.1%)<br>CAS#: 50-00-0 | Rat<br>LC <sub>50</sub> | 0.578 mg/L    | 4 hours       | None reported         | LOLI   |

## Inhalation (Vapor) Exposure Route

## **Unknown Acute Toxicity**

0% of the mixture consists of ingredient(s) of unknown toxicity.

## **Acute Toxicity Estimations (ATE)**

| ATEmix (oral)                 | No information available |
|-------------------------------|--------------------------|
| ATEmix (dermal)               | No information available |
| ATEmix (inhalation-dust/mist) | No information available |
| ATEmix (inhalation-vapor)     | No information available |
| ATEmix (inhalation-gas)       | No information available |

### Skin corrosion/irritation

Based on available data, the classification criteria are not met.

# Mixture

No data available.

## Ingredient Skin Corrosion/Irritation Data

Test data reported below.

| Chemical name                            | Test method  | Species | Reported<br>dose | Exposure<br>time | Results                             | Key literature<br>references and<br>sources for data |
|--|--|---------|------------------|------------------|-------------------------------------|--|
| Formaldehyde<br>(<0.1%)<br>CAS#: 50-00-0 | Standard Draize<br>Test  | Human   | 0.150 mg         | 72 hours         | Corrosive to skin                   | RTECS  |
| Methanol<br>(<0.1%)<br>CAS#: 67-56-1     | OECD Test 439: In<br>Vitro Skin Irritation:<br>Reconstructed<br>Human Epidermis<br>(Rhe) Test Method |         | None reported    | 20 hours         | Not corrosive or irritating to skin | ECHA   |

# Serious eye damage/irritation

Based on available data, the classification criteria are not met.

### **Mixture**

No data available.

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## Ingredient Eye Damage/Eye Irritation Data

Test data reported below.

| Chemical name                                  | Test method  | Species | Reported<br>dose | Exposure<br>time | Results                             | Key literature<br>references and<br>sources for data |
|--|--|---------|------------------|------------------|-------------------------------------|--|
| Formaldehyde<br>(<0.1%)<br>CAS#: 50-00-0       | Rinse Test   | Human   | 1 ppm            | 6 minutes        | Corrosive to eyes                   | RTECS  |
| Methanol<br>(<0.1%)<br>CAS#: 67-56-1           | OECD Test 439: In<br>Vitro Skin Irritation:<br>Reconstructed<br>Human Epidermis<br>(Rhe) Test Method |         | 0.05 mL          | 24 hours         | Not corrosive or irritating to eyes | ECHA   |
| Sodium fluoride<br>(<0.01%)<br>CAS#: 7681-49-4 | Standard Draize<br>Test  | Rabbit  | 20 mg            | 24 hours         | Eye irritant                        | RTECS  |

## Respiratory or skin sensitization

Based on available data, the classification criteria are not met.

#### **Mixture**

No data available.

### **Ingredient Sensitization Data**

Test data reported below.

## **Skin Sensitization Exposure Route**

| Chemical name                                  | Test method                                 | Species    | Results                               | Key literature references and sources for data |
|--|---|------------|---------------------------------------|--|
| Formaldehyde<br>(<0.1%)<br>CAS#: 50-00-0       | Patch test                                  | Human      | Confirmed to be a skin sensitizer     | ERMA   |
| Methanol<br>(<0.1%)<br>CAS#: 67-56-1           | OECD Test No.<br>406: Skin<br>Sensitization | Guinea pig | Not confirmed to be a skin sensitizer | ECHA   |
| Sodium fluoride<br>(<0.01%)<br>CAS#: 7681-49-4 | OECD Test No.<br>406: Skin<br>Sensitization | Guinea pig | Not confirmed to be a skin sensitizer | ECHA   |

## **Respiratory Sensitization Exposure Route**

| Chemical name            | Test method             | Species    | Results                       | Key literature references and sources for data |
|--------------------------|-------------------------|------------|-------------------------------|--|
| Formaldehyde             | IgE Specific            | Guinea pig | Confirmed to be a respiratory | CICAD  |
| (<0.1%)<br>CAS#: 50-00-0 | Immune Response<br>Test |            | sensitizer                    |  |

# STOT - single exposure

Based on available data, the classification criteria are not met.

### **Mixture**

No data available.

## Ingredient Specific Target Organ Toxicity Single Exposure Data

Test data reported below.

### **Oral Exposure Route**

| Chemical name | Endpoint | Reported | Exposure | Toxicological effects | Key literature references and |
|---------------|----------|----------|----------|-----------------------|-------------------------------|
|               |          |          |          |                       |                               |

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|  | type          | dose        | time          |   | sources for data |
|--|---------------|-------------|---------------|---|------------------|
| Formaldehyde<br>(<0.1%)<br>CAS#: 50-00-0       | Human<br>LDLo | 70 mg/kg    | None reported | Gastrointestinal Kidney, Ureter, or Bladder Liver Other changes Ulcerated stomach Other changes | RTECS            |
| Methanol<br>(<0.1%)<br>CAS#: 67-56-1           | Human<br>LD∟₀ | 143 mg/kg   | None reported | J   | RTECS            |
| Sodium fluoride<br>(<0.01%)<br>CAS#: 7681-49-4 | Human<br>TD∟₀ | 0.214 mg/kg | None reported | Gastrointestinal Changes in structure or function of salivary glands Hypermotility Diarrhea     | RTECS            |

## Inhalation (Vapor) Exposure Route

| Chemical name | Endpoint<br>type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
|---------------|------------------|---------------|---------------|-----------------------|--|
| Methanol      | Human            | 300 mg/L      | None reported | Lungs, Thorax, or     | RTECS  |
| (<0.1%)       | TCLo             |               |               | Respiration           |  |
| CAS#: 67-56-1 |                  |               |               | Other changes         |  |

## STOT - repeated exposure

Based on available data, the classification criteria are not met.

#### **Mixture**

No data available.

# Ingredient Specific Target Organ Toxicity Repeat Exposure Data

Test data reported below.

## **Oral Exposure Route**

| Chemical name                                  | Endpoint type | Reported dose | Exposure time | Toxicological effects  | Key literature references and sources for data |
|--|---------------|---------------|---------------|--|--|
| Methanol<br>(<0.1%)<br>CAS#: 67-56-1           | Monkey        | 2340 mg/kg    | 3 days        | None reported  | ECHA   |
| Sodium fluoride<br>(<0.01%)<br>CAS#: 7681-49-4 | Rat<br>TD⊾o   | 420 mg/kg     | 42 days       | Brain and Coverings Other degenerative changes Behavioral Somnolence (general depressed activity) Blood Changes in serum composition (e.g. TP, bilirubin, cholesterol) |  |

# Inhalation (Dust/Mist) Exposure Route

| Chemical name   | Endpoint | Reported | Exposure | Toxicological effects           | Key literature references and |
|-----------------|----------|----------|----------|---------------------------------|-------------------------------|
|                 | type     | dose     | time     |                                 | sources for data              |
| Sodium fluoride | Rat      | 1.0 mg/L | 119 days | Biochemical                     | RTECS                         |
| (<0.01%)        | TCL₀     |          |          | Other degenerative changes      |                               |
| CAS#: 7681-49-4 |          |          |          | Kidney, Ureter, or Bladder      |                               |
|                 |          |          |          | Other changes in urine          |                               |
|                 |          |          |          | composition                     |                               |
|                 |          |          |          | Musculoskeletal                 |                               |
|                 |          |          |          | Changes in teeth and supporting |                               |
|                 |          |          |          | structures                      |                               |

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# Inhalation (Vapor) Exposure Route

| Chemical name | Endpoint | Reported   | Exposure | Toxicological effects | Key literature references and |
|---------------|----------|------------|----------|-----------------------|-------------------------------|
|               | type     | dose       | time     |                       | sources for data              |
| Formaldehyde  | Human    | 0.017 mg/L | 0.5 days | Eye                   | RTECS                         |
| (<0.1%)       | TCLo     |            |          | Lungs, Thorax, or     |                               |
| CAS#: 50-00-0 |          |            |          | Respiration           |                               |
|               |          |            |          | Lacrimation           |                               |
|               |          |            |          | Other changes         |                               |

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## Carcinogenicity

Based on available data, the classification criteria are not met.

#### **Mixture**

No data available.

# **Ingredient Carcinogenicity Data**

Test data reported below.

| Chemical name   | CAS No    | ACGIH | IARC    | NTP   | OSHA |
|-----------------|-----------|-------|---------|-------|------|
| Formaldehyde    | 50-00-0   | A1    | Group 1 | Known | X    |
| Methanol        | 67-56-1   | -     | -       | -     | -    |
| Sodium fluoride | 7681-49-4 | -     | Group 3 | -     | X    |

### Legend

| ACGIH (American Conference of Governmental Industrial Hygienists) | Does not apply                        |
|---|---------------------------------------|
| IARC (International Agency for Research on Cancer)                | Group 3 - Not classifiable as a human |
|   | carcinogen                            |
| NTP (National Toxicology Program)                                 | Does not apply                        |
| OSHA  | X - Present                           |

## **Oral Exposure Route**

| Chemical name                                  | Endpoint<br>type | Reported dose | Exposure time | Toxicological effects         | Key literature references and sources for data |
|--|------------------|---------------|---------------|-------------------------------|--|
| Sodium fluoride<br>(<0.01%)<br>CAS#: 7681-49-4 | Mouse<br>TD∟₀    | 14 mg/kg      | 43 weeks      | Skin and Appendages<br>Tumors | RTECS  |

### Inhalation (Vapor) Exposure Route

| Chemical name                            | Endpoint type | Reported dose | Exposure time | Toxicological effects      | Key literature references and sources for data |
|--|---------------|---------------|---------------|----------------------------|--|
| Formaldehyde<br>(<0.1%)<br>CAS#: 50-00-0 | Rat           | 15 mg/L       | 78 weeks      | <b>Olfaction</b><br>Tumors | RTECS  |

### Germ cell mutagenicity

Based on available data, the classification criteria are not met.

## Mixture invitro Data

No data available.

# Substance invitro Data

Test data reported below.

| Chemical name | Test | Cell Strain | Reported | Exposure | Results | Key literature                  |
|---------------|------|-------------|----------|----------|---------|---------------------------------|
|               |      |             | dose     | time     |         | references and sources for data |

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| Methanol<br>(<0.1%)<br>CAS#: 67-56-1           | DNA inhibition       | Human lymphocyte | 300 mmol/L | None reported | Positive test result for mutagenicity    | RTECS |
|--|----------------------|------------------|------------|---------------|--|-------|
| Sodium fluoride<br>(<0.01%)<br>CAS#: 7681-49-4 | Cytogenetic analysis | Human fibroblast | 20 mg/L    | None reported | Positive test result for<br>mutagenicity | RTECS |

Mixture invivo Data

No data available.

Substance invivo Data

Test data reported below.

## **Oral Exposure Route**

| Chemical name                                  | Test                 | Species | Reported<br>dose | Exposure<br>time | Results                                  | Key literature references and sources for data |
|--|----------------------|---------|------------------|------------------|--|--|
| Methanol<br>(<0.1%)<br>CAS#: 67-56-1           | DNA damage           | Rat     | 0.405 mg/kg      | None reported    | Positive test result for<br>mutagenicity | RTECS  |
| Sodium fluoride<br>(<0.01%)<br>CAS#: 7681-49-4 | Cytogenetic analysis | Mouse   | 1 mg/L           | 3 weeks          | Positive test result for<br>mutagenicity | RTECS  |

## Inhalation (Vapor) Exposure Route

| Chemical name                            | Test              | Species | Reported dose | Exposure<br>time | Results                               | Key literature references and sources for data |
|--|-------------------|---------|---------------|------------------|---------------------------------------|--|
| Formaldehyde<br>(<0.1%)<br>CAS#: 50-00-0 | Micronucleus test | Human   | .000985 mg/L  | 8.5 years        | Positive test result for mutagenicity | RTECS  |

## **Reproductive toxicity**

Based on available data, the classification criteria are not met.

#### Mixture

No data available.

# **Ingredient Reproductive Toxicity Data**

Test data reported below.

# **Oral Exposure Route**

| Chemical name   | Endpoint type | Reported dose | Exposure time | Toxicological effects           | Key literature references and sources for data |
|-----------------|---------------|---------------|---------------|---------------------------------|--|
| Methanol        | Rat           | 4118 mg/kg    | 10 days       | Effects on Embryo or Fetus      | RTECS  |
| (<0.1%)         | $TD_Lo$       |               |               | Specific Developmental          |  |
| CAS#: 67-56-1   |               |               |               | Abnormalities                   |  |
|                 |               |               |               | Ear                             |  |
|                 |               |               |               | Eye                             |  |
|                 |               |               |               | Fetotoxicity (except death e.g. |  |
|                 |               |               |               | stunted fetus)                  |  |
|                 |               |               |               | Urogenital System               |  |
| Sodium fluoride | Rat           | 240 mg/kg     | None reported | Specific Developmental          | RTECS  |
| (<0.01%)        | $TD_Lo$       |               |               | Abnormalities                   |  |
| CAS#: 7681-49-4 |               |               |               | Musculoskeletal system          |  |

# Inhalation (Dust/Mist) Exposure Route

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|   | Chemical name | Endpoint<br>type | Reported dose | Exposure time | Toxicological effects           | Key literature references and sources for data |
|---|---------------|------------------|---------------|---------------|---------------------------------|--|
| Ī | Methanol      | Rat              | 0.0026 mg/L   | 22 days       | Effects on Embryo or Fetus      | RTECS  |
| - | (<0.1%)       | TCLo             |               |               | Fetotoxicity (except death e.g. |  |
| L | CAS#: 67-56-1 |                  |               |               | stunted fetus)                  |  |

### Inhalation (Vapor) Exposure Route

| Chemical name | Endpoint type | Reported dose | Exposure time | Toxicological effects           | Key literature references and sources for data |
|---------------|---------------|---------------|---------------|---------------------------------|--|
| Formaldehyde  | Rat           | 40 mg/L       | 14 days       | Effects on Embryo or Fetus      | RTECS  |
| (<0.1%)       | TCLo          |               | _             | Fetotoxicity (except death e.g. |  |
| CAS#: 50-00-0 |               |               |               | stunted fetus)                  |  |

# **Aspiration hazard**

Based on available data, the classification criteria are not met.

# 12. ECOLOGICAL INFORMATION

**Ecotoxicity** Based on available data, the classification criteria are not met.

**Unknown aquatic toxicity** 0% of the mixture consists of components(s) of unknown hazards to the aquatic

environment.

**Mixture** 

Aquatic Acute Toxicity No data available.

**Aquatic Chronic Toxicity** 

No data available.

**Substance** 

**Aquatic Acute Toxicity** 

Test data reported below.

## Fish

| Chemical name                                  | Exposure time | Species          | Endpoint type | Reported dose | Key literature references and sources for data |
|--|---------------|------------------|---------------|---------------|--|
| Formaldehyde<br>(<0.1%)<br>CAS#: 50-00-0       | 96 hours      | Morone saxatilis | LC50          | 6.7 mg/L      | PEEN   |
| Sodium fluoride<br>(<0.01%)<br>CAS#: 7681-49-4 | 96 hours      | Channa punctatus | LC50          | 51 mg/L       | GESTIS   |

#### Crustacea

| Chemical name                                  | Exposure time | Species       | Endpoint type | Reported dose | Key literature references and sources for data |
|--|---------------|---------------|---------------|---------------|--|
| Formaldehyde<br>(<0.1%)<br>CAS#: 50-00-0       | 48 Hours      | Daphnia pulex | EC50          | 5.8 mg/L      | PEEN   |
| Sodium fluoride<br>(<0.01%)<br>CAS#: 7681-49-4 | 48 Hours      | Daphnia magna | EC50          | 98 mg/L       | GESTIS   |

# **Aquatic Chronic Toxicity**

No data available.

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### Persistence and degradability

**Mixture** 

No data available.

**Mixture** 

No data available.

Partition coefficient Not applicable

**Mobility** 

Soil Organic Carbon-Water Partition Coefficient Not applicable

Other adverse effects
No information available

## 13. DISPOSAL CONSIDERATIONS

#### Waste treatment methods

Waste from residues/unused

products

Dispose of in accordance with local regulations. Dispose of waste in accordance with

environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

US EPA Waste Number U122 U154

| Chemical name | RCRA | <b>RCRA - Basis for Listing</b> | RCRA - D Series Wastes | <b>RCRA - U Series Wastes</b> |
|---------------|------|---------------------------------|------------------------|-------------------------------|
| Formaldehyde  | U122 | Included in waste               | -                      | U122                          |
| 50-00-0       |      | streams: K009, K010,            |                        |                               |
|               |      | K038, K040, K156, K157          |                        |                               |
| Methanol      | -    | Included in waste stream:       | -                      | U154                          |
| 67-56-1       |      | F039                            |                        |                               |

#### Special instructions for disposal

If permitted by regulation. Open cold water tap completely, slowly pour the material to the drain. Allow cold water to run for 5 minutes to completely flush the system. Dispose of material in an E.P.A. approved hazardous waste facility.

## 14. TRANSPORT INFORMATION

**DOT** Not regulated

<u>TDG</u> Not regulated

IATA Not regulated

**IMDG** Not regulated

**Note:** No special precautions necessary.

#### Additional information

There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is not in a reagent set or kit, the classification given above applies.

If the item is part of a reagent set or kit the classification would change to the following:

UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.

If the item is not regulated, the Chemical Kit classification does not apply.

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# 15. REGULATORY INFORMATION

**National Inventories** 

TSCA Complies DSL/NDSL Complies

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory **DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

## **International Inventories**

**EINECS/ELINCS** Complies Complies **ENCS IECSC** Complies Complies KECL **PICCS** Complies **TCSI** Complies Complies **AICS** Complies **NZIoC** 

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

TCSI - Taiwan Chemical Substances Inventory

**AICS** - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

### **US Federal Regulations**

### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Chemical name                 | SARA 313 - Threshold Values % |
|-------------------------------|-------------------------------|
| Formaldehyde (CAS #: 50-00-0) | 0.1                           |
| Methanol (CAS #: 67-56-1)     | 1.0                           |

SARA 311/312 Hazard Categories

Acute health hazard No
Chronic Health Hazard No
Fire hazard No
Sudden release of pressure hazard No
Reactive Hazard No

## **CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical name                | CWA - Reportable<br>Quantities | CWA - Toxic Pollutants | CWA - Priority<br>Pollutants | CWA - Hazardous<br>Substances |
|------------------------------|--------------------------------|------------------------|------------------------------|-------------------------------|
| Formaldehyde<br>50-00-0      | 100 lb                         | -                      | -                            | Х                             |
| Sodium fluoride<br>7681-49-4 | 1000 lb                        | -                      | -                            | Х                             |

## **CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

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| Chemical name   | Hazardous Substances RQs | CERCLA/SARA RQ | Reportable Quantity (RQ) |
|-----------------|--------------------------|----------------|--------------------------|
| Formaldehyde    | 100 lb                   | 100 lb         | RQ 100 lb final RQ       |
| 50-00-0         |                          |                | RQ 45.4 kg final RQ      |
| Methanol        | 5000 lb                  | -              | RQ 5000 lb final RQ      |
| 67-56-1         |                          |                | RQ 2270 kg final RQ      |
| Sodium fluoride | 1000 lb                  | -              | RQ 1000 lb final RQ      |
| 7681-49-4       |                          |                | RQ 454 kg final RQ       |

# U.S. - Department of Homeland Security - Chemical Facility Anti-Terrorism Standards (CFATS) - Security Issues

| Chemical name            | U.S Department of Homeland Security - Chemical Facility Anti-Terrorism Standards (CFATS) - Security Issues |  |
|--------------------------|--|--|
| Formaldehyde             | Release - Toxic (solution)   |  |
| (<0.1%)<br>CAS#: 50-00-0 |  |  |

## **US State Regulations**

# **California Proposition 65**

This product contains the following Proposition 65 chemicals

| Chemical name                 | California Proposition 65 |  |
|-------------------------------|---------------------------|--|
| Formaldehyde (CAS #: 50-00-0) | Carcinogen                |  |
| Methanol (CAS #: 67-56-1)     | Developmental             |  |

**WARNING:** This product can expose you to chemicals including Formaldehyde, Methanol, which are known to the State of California to cause cancer or birth defects or reproductive harm. For more information, go to <a href="http://www.P65Warnings.ca.gov">http://www.P65Warnings.ca.gov</a>

IMERC: Not applicable

#### U.S. State Right-to-Know Regulations

This product may contain substances regulated by state right-to-know regulations.

| Chemical name                | New Jersey | Massachusetts | Pennsylvania |
|------------------------------|------------|---------------|--------------|
| Formaldehyde<br>50-00-0      | X          | X             | X            |
| Methanol<br>67-56-1          | Х          | X             | X            |
| Sodium fluoride<br>7681-49-4 | X          | X             | X            |

### **U.S. EPA Label Information**

| Chemical name   | FIFRA    | FDA |
|-----------------|----------|-----|
| Methanol        | 180.0910 | -   |
| Sodium fluoride | 180.0145 | -   |

# 16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

## **Special Comments**

None

#### **Additional information**

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### Global Automotive Declarable Substance List (GADSL)

| Chemical name | Global Automotive Declarable Substance List Classifications | Global Automotive Declarable Substance List Thersholds |
|---------------|---|--|
| Formaldehyde  | Prohibited Substance (FI)                                   | 0.1 %  |
| 50-00-0       | Prohibited Substance (LR)                                   |  |
|               | Declarable Substance (LR)                                   |  |
|               | Declarable Substance (FI)                                   |  |
| Methanol      | Declarable Substance (FI)                                   | 0.6 %  |
| 67-56-1       | Declarable Substance (LR)                                   |  |
|               | Prohibited Substance (FI)                                   |  |
|               | Prohibited Substance (LR)                                   |  |

### NFPA and HMIS Classifications

| NFPA | Health hazards - 0 | Flammability - 0 | Instability - 0      | Physical and chemical properties - |
|------|--------------------|------------------|----------------------|------------------------------------|
| HMIS | Health hazards - 0 | Flammability - 0 | Physical hazards - 0 | Personal protection -              |
|      |                    | -                | -                    | X                                  |
|      |                    |                  |                      | -                                  |

#### Key or legend to abbreviations and acronyms used in the safety data sheet

ACGIH (American Conference of Governmental Industrial Hygienists)
ATSDR (Agency for Toxic Substances and Disease Registry)
CCRIS (Chemical Carcinogenesis Research Information System)

CDC (Center for Disease Control)

CEPA (Canadian Environmental Protection Agency)

CICAD CICAD (Concise International Chemical Assessment Documents)

ECHA ECHA (The European Chemicals Agency)
EEA EEA (European Environment Agency)
EPA EPA (Environmental Protection Agency)

ERMA (New Zealands Environmental Risk Management Authority)

ECOSARS Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™

FDA FDA (Food & Drug Administration)

GESTIS GESTIS (Information System on Hazardous Substances of the German Social Accident

Insurance)

HSDB (Hazardous Substances Data Bank)

INERIS INERIS (The National Industrial Environment and Risks Institute)
IPCS INCHEM IPCS INCHEM (International Programme on Chemical Safety)
IUCLID IUCLID (The International Uniform Chemical Information Database)
NITE Japan National Institute of Technology and Evaluation (NITE)

NIH NIH (National Institutes of Health)

NIOSH NIOSH (National Institute for Occupational Safety and Health)
LOLI (List of Lists - An International Chemical Regulatory Database)

NDF no data

NICNAS Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH IDLH Immediately Dangerous to Life or Health

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

PEEN (Pan European Ecological Network)

RTECS (Registry of Toxic Effects of Chemical Substances)
SIDS (Screening Information Dataset) for High Volume Chemicals

SYKE The Finnish Environment Institute (SYKE)
USDA USDA (United States Department of Agriculture)
USDC USDC (United States Department of Commerce)

WHO (World Health Organization)

## Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)

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MAC Maximum Allowable Concentration Ceiling Ceiling Limit Value

X Listed Vacated

These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state

regulations.

SKN\* Skin designation SKN+ Skin sensitization
RSP+ Respiratory sensitization \*\* Hazard Designation
C Carcinogen R Reproductive toxicant

M mutagen

Prepared By Hach Product Compliance Department

Issue Date 04-May-2021

Revision Date 26-Jan-2024

Revision Note None

### Disclaimer

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

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**End of Safety Data Sheet** 

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