

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

**Product Description:** Paraformaldehyde, 20% w/v aq. soln., methanol free  
**Cat No. :** 47340  
**CAS No** 50-00-0  
**Molecular Formula** (CH<sub>2</sub> O)

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

**Recommended Use** Laboratory chemicals  
**Uses advised against** No Information available

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

**Company** Avocado Research Chemicals Ltd.  
(Part of Thermo Fisher Scientific)  
Shore Road, Heysham  
Lancashire, LA3 2XY,  
United Kingdom  
Office Tel: +44 (0) 1524 850506  
Office Fax: +44 (0) 1524 850608

**E-mail address** [begel.sdsdesk@thermofisher.com](mailto:begel.sdsdesk@thermofisher.com)

### 1.4. Emergency telephone number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

#### GHS Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

#### Physical hazards

Based on available data, the classification criteria are not met

#### Health hazards

|                                    |                   |
|------------------------------------|-------------------|
| Acute oral toxicity                | Category 4 (H302) |
| Acute dermal toxicity              | Category 4 (H312) |
| Acute Inhalation Toxicity - Vapors | Category 3 (H331) |

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|  |                    |
|--|--------------------|
| Skin Corrosion/Irritation                          | Category 2 (H315)  |
| Serious Eye Damage/Eye Irritation                  | Category 2 (H319)  |
| Skin Sensitization                                 | Category 1 (H317)  |
| Germ Cell Mutagenicity                             | Category 2 (H341)  |
| Carcinogenicity                                    | Category 1B (H350) |
| Specific target organ toxicity - (single exposure) | Category 3 (H335)  |

## Environmental hazards

Based on available data, the classification criteria are not met

Full text of Hazard Statements: see section 16

## 2.2. Label elements



Signal Word

Danger

## Hazard Statements

- H302 + H312 - Harmful if swallowed or in contact with skin
- H331 - Toxic if inhaled
- H315 - Causes skin irritation
- H317 - May cause an allergic skin reaction
- H319 - Causes serious eye irritation
- H335 - May cause respiratory irritation
- H341 - Suspected of causing genetic defects
- H350 - May cause cancer

## Precautionary Statements

- P280 - Wear protective gloves/protective clothing/eye protection/face protection
- P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
- P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
- P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P311 - Call a POISON CENTER or doctor/physician

## Additional EU labelling

Restricted to professional users

## 2.3. Other hazards

This product does not contain any known or suspected endocrine disruptors  
Toxic to terrestrial vertebrates

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

## 3.2. Mixtures

ALFAA47340

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| Component    | CAS No    | EC No     | Weight % | GHS Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567  |
|--------------|-----------|-----------|----------|--|
| Water        | 7732-18-5 | 231-791-2 | 80.00    | -  |
| Formaldehyde | 50-00-0   | 200-001-8 | 20       | Acute Tox. 3 (H301)<br>Acute Tox. 3 (H311)<br>Acute Tox. 3 (H331)<br>Skin Corr. 1B (H314)<br>Eye Dam. 1 (H318)<br>Skin Sens. 1 (H317)<br>STOT SE 3 (H335)<br>Muta. 2 (H341)<br>Carc. 1B (H350)<br>EUH071 |

| Component    | Specific concentration limits (SCL's)  | M-Factor | Component notes |
|--------------|--|----------|-----------------|
| Formaldehyde | Skin Corr. 1B :: C>=25%<br>Eye Irrit. 2 :: 5%<=C<25%<br>Skin Irrit. 2 :: 5%<=C<25%<br>STOT SE 3 :: C>=5%<25%<br>EUH071 :: C>=25% | -        | -               |

| Component    | ECHA (RAC) ATE (Oral)    | ECHA (RAC) ATE (Dermal) | ECHA (RAC) ATE (Inhalation)        |
|--------------|--------------------------|-------------------------|------------------------------------|
| Formaldehyde | oral: ATE = 100 mg/kg bw | -                       | inhalation: ATE = 100 ppmV (gases) |

ECHA (RAC) - Committee for Risk Assessment - European CHemicals Agency  
ATE - Acute Toxicity Estimate; mg/kg bw - milligrams per kilogram of body weight

Full text of Hazard Statements: see section 16

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

|   |  |
|---|--|
| <b>General Advice</b>                     | Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.  |
| <b>Eye Contact</b>                        | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.   |
| <b>Skin Contact</b>                       | Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.  |
| <b>Ingestion</b>                          | Do NOT induce vomiting. Call a physician or poison control center immediately.   |
| <b>Inhalation</b>                         | If not breathing, give artificial respiration. Remove to fresh air. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. |
| <b>Self-Protection of the First Aider</b> | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.   |

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

None reasonably foreseeable. May cause allergic skin reaction. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and

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feet, dizziness, lightheadedness, chest pain, muscle pain or flushing: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

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

**Notes to Physician** Treat symptomatically. Symptoms may be delayed.

## **SECTION 5: FIREFIGHTING MEASURES**

### **5.1. Extinguishing media**

#### **Suitable Extinguishing Media**

CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam. Water mist may be used to cool closed containers.

#### **Extinguishing media which must not be used for safety reasons**

No information available.

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

Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous membranes.

#### **Hazardous Combustion Products**

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

### **5.3. Advice for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

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

Ensure adequate ventilation. Use personal protective equipment as required. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

### **6.2. Environmental precautions**

Do not flush into surface water or sanitary sewer system.

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

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

### **6.4. Reference to other sections**

Refer to protective measures listed in Sections 8 and 13.

## **SECTION 7: HANDLING AND STORAGE**

### **7.1. Precautions for safe handling**

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume

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hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance.

### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

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

Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area.

**Technical Rules for Hazardous Substances (TRGS) 510**      Class 6.1C  
**Storage Class (LGK) (Germany)**

### 7.3. Specific end use(s)

Use in laboratories

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

#### Exposure limits

List source(s): **EU** - Commission Directive (EU) 2019/1831 of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC **UK** - EH40/2005 Work Exposure Limits, Fourth edition. Published 2020. **IRE** - 2021 Code of Practice for the Chemical Agents Regulations, Schedule 1. Published by the Health and Safety Authority

| Component    | The United Kingdom  | European Union  | Ireland   |
|--------------|---|---|---|
| Formaldehyde | STEL: 2 ppm 15 min<br>STEL: 2.5 mg/m <sup>3</sup> 15 min<br>TWA: 2 ppm 8 hr<br>TWA: 2.5 mg/m <sup>3</sup> 8 hr<br>Carc. | TWA: 0.37 mg/m <sup>3</sup> (8h)<br>TWA: 0.62 mg/m <sup>3</sup> (8h)<br>TWA: 0.3 ppm (8h)<br>TWA: 0.5 ppm (8h)<br>Skin<br>STEL: 0.74 mg/m <sup>3</sup> (8h)<br>STEL: 0.6 ppm (8h) | TWA: 0.3 ppm 8 hr.<br>TWA: 0.5 ppm 8 hr. for the healthcare, funeral and embalming sectors until July 11, 2024<br>TWA: 0.37 mg/m <sup>3</sup> 8 hr.<br>TWA: 0.62 mg/m <sup>3</sup> 8 hr. for the healthcare, funeral and embalming sectors until July 11, 2024<br>STEL: 0.6 ppm 15 min<br>STEL: 0.738 mg/m <sup>3</sup> 15 min<br>STEL: 0.62 mg/m <sup>3</sup> 15 min |

#### Biological limit values

List source(s):

#### Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

See table for values

| Component                      | Acute effects local (Dermal) | Acute effects systemic (Dermal) | Chronic effects local (Dermal) | Chronic effects systemic (Dermal) |
|--------------------------------|------------------------------|---------------------------------|--------------------------------|-----------------------------------|
| Formaldehyde<br>50-00-0 ( 20 ) |                              |                                 | DNEL = 37µg/cm <sup>2</sup>    | DNEL = 240mg/kg bw/day            |

| Component | Acute effects local (Inhalation) | Acute effects systemic (Inhalation) | Chronic effects local (Inhalation) | Chronic effects systemic (Inhalation) |
|-----------|----------------------------------|-------------------------------------|------------------------------------|---------------------------------------|
|           |                                  |                                     |                                    |                                       |

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|                                |                              |                               |                           |
|--------------------------------|------------------------------|-------------------------------|---------------------------|
| Formaldehyde<br>50-00-0 ( 20 ) | DNEL = 0.75mg/m <sup>3</sup> | DNEL = 0.375mg/m <sup>3</sup> | DNEL = 9mg/m <sup>3</sup> |
|--------------------------------|------------------------------|-------------------------------|---------------------------|

## Predicted No Effect Concentration (PNEC)

See values below.

| Component                      | Fresh water     | Fresh water sediment        | Water Intermittent | Microorganisms in sewage treatment | Soil (Agriculture)      |
|--------------------------------|-----------------|-----------------------------|--------------------|------------------------------------|-------------------------|
| Formaldehyde<br>50-00-0 ( 20 ) | PNEC = 0.44mg/L | PNEC = 2.3mg/kg sediment dw | PNEC = 4.44mg/L    | PNEC = 0.19mg/L                    | PNEC = 0.2mg/kg soil dw |

| Component                      | Marine water    | Marine water sediment       | Marine water intermittent | Food chain | Air |
|--------------------------------|-----------------|-----------------------------|---------------------------|------------|-----|
| Formaldehyde<br>50-00-0 ( 20 ) | PNEC = 0.44mg/L | PNEC = 2.3mg/kg sediment dw |                           |            |     |

## 8.2. Exposure controls

### Engineering Measures

Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting equipment.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

### Personal protective equipment

#### Eye Protection

Goggles (European standard - EN 166)

#### Hand Protection

Protective gloves

| Glove material  | Breakthrough time                 | Glove thickness | EU standard | Glove comments        |
|-----------------|-----------------------------------|-----------------|-------------|-----------------------|
| Nitrile rubber  | See manufacturers recommendations | -               | EN 374      | (minimum requirement) |
| Viton (R)       |                                   |                 |             |                       |
| Butyl rubber    |                                   |                 |             |                       |
| Neoprene gloves |                                   |                 |             |                       |

#### Skin and body protection

Long sleeved clothing.

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

#### Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.  
To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

#### Large scale/emergency use

Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

**Recommended Filter type:** low boiling organic solvent Type AX Brown conforming to EN371 or Organic gases and vapours filter Type A Brown conforming to EN14387

#### Small scale/Laboratory use

Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Recommended half mask:-** Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141

When RPE is used a face piece Fit Test should be conducted

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**Environmental exposure controls** Prevent product from entering drains. Do not allow material to contaminate ground water system.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

|  |                          |  |
|--|--------------------------|--|
| <b>Physical State</b>                          | Liquid                   |  |
| <b>Appearance</b>                              | Clear                    |  |
| <b>Odor</b>                                    | No information available |  |
| <b>Odor Threshold</b>                          | No data available        |  |
| <b>Melting Point/Range</b>                     | No data available        |  |
| <b>Softening Point</b>                         | No data available        |  |
| <b>Boiling Point/Range</b>                     | No information available |  |
| <b>Flammability (liquid)</b>                   | No data available        | On basis of test data                    |
| <b>Flammability (solid,gas)</b>                | Not applicable           | Liquid                                   |
| <b>Explosion Limits</b>                        | No data available        |  |
| <b>Flash Point</b>                             | -17 °C / 1.4 °F          | <b>Method -</b> No information available |
| <b>Autoignition Temperature</b>                | No data available        |  |
| <b>Decomposition Temperature</b>               | No data available        |  |
| <b>pH</b>                                      | No information available |  |
| <b>Viscosity</b>                               | No data available        |  |
| <b>Water Solubility</b>                        | Immiscible               |  |
| <b>Solubility in other solvents</b>            | No information available |  |
| <b>Partition Coefficient (n-octanol/water)</b> |                          |  |
| <b>Component</b>                               | <b>log Pow</b>           |  |
| Formaldehyde                                   | -0.35                    |  |
| <b>Vapor Pressure</b>                          | 23 hPa @ 20 °C           |  |
| <b>Density / Specific Gravity</b>              | No data available        |  |
| <b>Bulk Density</b>                            | Not applicable           | Liquid                                   |
| <b>Vapor Density</b>                           | No data available        | (Air = 1.0)                              |
| <b>Particle characteristics</b>                | Not applicable (liquid)  |  |

### 9.2. Other information

**Molecular Formula** (CH<sub>2</sub>O)  
**Explosive Properties** Vapors may form explosive mixtures with air

## SECTION 10: STABILITY AND REACTIVITY

**10.1. Reactivity** None known, based on information available

**10.2. Chemical stability** Stable under recommended storage conditions.

### 10.3. Possibility of hazardous reactions

**Hazardous Polymerization** No information available.  
**Hazardous Reactions** None under normal processing.

**10.4. Conditions to avoid** None known.

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## 10.5. Incompatible materials

Strong bases. Oxidizing agent.

## 10.6. Hazardous decomposition products

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

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Product Information

##### (a) acute toxicity;

Oral Category 4  
Dermal Category 4  
Inhalation Category 3

#### Toxicology data for the components

| Component    | LD50 Oral       | LD50 Dermal               | LC50 Inhalation      |
|--------------|-----------------|---------------------------|----------------------|
| Water        | -               | -                         | -                    |
| Formaldehyde | 500 mg/kg (Rat) | LD50 = 270 mg/kg (Rabbit) | 0.578 mg/L (Rat) 4 h |

| Component    | ECHA (RAC) ATE (Oral)    | ECHA (RAC) ATE (Dermal) | ECHA (RAC) ATE (Inhalation)        |
|--------------|--------------------------|-------------------------|------------------------------------|
| Formaldehyde | oral: ATE = 100 mg/kg bw | -                       | inhalation: ATE = 100 ppmV (gases) |

ECHA (RAC) - Committee for Risk Assessment - European Chemicals Agency  
ATE - Acute Toxicity Estimate; mg/kg bw - milligrams per kilogram of body weight

(b) skin corrosion/irritation; Category 2

(c) serious eye damage/irritation; Category 2

##### (d) respiratory or skin sensitization;

Respiratory Based on available data, the classification criteria are not met  
Skin Category 1

| Component                      | Test method                                  | Test species      | Study result                |
|--------------------------------|--|-------------------|-----------------------------|
| Formaldehyde<br>50-00-0 ( 20 ) | Skin sensitization<br>Test method Patch Test | Man<br>guinea pig | Sensitizer<br>Sensitization |
|                                | Respiratory sensitization<br>in vitro        |                   |                             |

May cause sensitization by skin contact

(e) germ cell mutagenicity; Category 2

(f) carcinogenicity; Category 1B

Limited evidence of a carcinogenic effect. The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Component    | EU           | UK    | Germany | IARC    |
|--------------|--------------|-------|---------|---------|
| Formaldehyde | Carc Cat. 1B | Cat 3 |         | Group 1 |

(g) reproductive toxicity; Based on available data, the classification criteria are not met

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(h) STOT-single exposure; Category 3

Results / Target organs Respiratory system.

(i) STOT-repeated exposure; Based on available data, the classification criteria are not met

Target Organs None known.

(j) aspiration hazard; Based on available data, the classification criteria are not met

**Symptoms / effects, both acute and delayed** Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

## 11.2. Information on other hazards

**Endocrine Disrupting Properties** Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

#### Ecotoxicity effects

The product contains following substances which are hazardous for the environment. Contains a substance which is: Toxic to aquatic organisms.

| Component    | Freshwater Fish                       | Water Flea                              | Freshwater Algae                                    |
|--------------|---------------------------------------|---|---|
| Formaldehyde | Leuciscus idus: LC50 = 15 mg/L<br>96h | EC50 = 20 mg/L 96h<br>EC50 = 2 mg/L 48h | EC50 (72h) = 4.89 mg/L<br>(Desmodesmus subspicatus) |

**12.2. Persistence and degradability** Expected to be biodegradable

#### Persistence

May persist, based on information available, Immiscible with water.

| Component                      | Degradability   |
|--------------------------------|---|
| Formaldehyde<br>50-00-0 ( 20 ) | Readily biodegradable (OECD guideline 301A, 301C and 301D)<br>under aerobic and anaerobic conditions. |

#### Degradation in sewage treatment plant

Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

### 12.3. Bioaccumulative potential

May have some potential to bioaccumulate

| Component    | log Pow | Bioconcentration factor (BCF) |
|--------------|---------|-------------------------------|
| Formaldehyde | -0.35   | No data available             |

### 12.4. Mobility in soil

The product is water soluble, and may spread in water systems Spillage unlikely to penetrate soil Will likely be mobile in the environment due to its water solubility but will likely degrade over time. Is not likely mobile in the environment due its low water solubility. Highly mobile in soils

### 12.5. Results of PBT and vPvB assessment

No data available for assessment.

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## 12.6. Endocrine disrupting properties

Endocrine Disruptor Information

## 12.7. Other adverse effects

Persistent Organic Pollutant  
Ozone Depletion Potential

This product does not contain any known or suspected substance  
This product does not contain any known or suspected substance

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

**Waste from Residues/Unused Products**

Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

**Contaminated Packaging**

Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.

**European Waste Catalogue (EWC)**

According to the European Waste Catalog, Waste Codes are not product specific, but application specific.

**Other Information**

Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains.

## SECTION 14: TRANSPORT INFORMATION

### IMDG/IMO

14.1. UN number

UN3334

14.2. UN proper shipping name

AVIATION REGULATED LIQUID, N.O.S.

Technical Shipping Name

Paraformaldehyde

14.3. Transport hazard class(es)

9

14.4. Packing group

### ADR

14.1. UN number

UN3334

14.2. UN proper shipping name

AVIATION REGULATED LIQUID, N.O.S.

Technical Shipping Name

Paraformaldehyde

14.3. Transport hazard class(es)

9

14.4. Packing group

### IATA

14.1. UN number

UN3334

14.2. UN proper shipping name

AVIATION REGULATED LIQUID, N.O.S.

Technical Shipping Name

Paraformaldehyde

14.3. Transport hazard class(es)

9

14.4. Packing group

III

14.5. Environmental hazards

No hazards identified

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**14.6. Special precautions for user** No special precautions required.

**14.7. Maritime transport in bulk according to IMO instruments** Not applicable, packaged goods

## SECTION 15: REGULATORY INFORMATION

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

#### International Inventories

China, X = listed, Australia, U.S.A. (TSCA), Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Australia (AICS), Korea (KECL), China (IECSC), Japan (ENCS), Philippines (PICCS), Taiwan (TCSI), Japan (ISHL), New Zealand (NZIoC), Japan (ISHL). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

| Component    | CAS No    | EINECS    | ELINCS | NLP | IECSC | TCSI | KECL     | ENCS | ISHL |
|--------------|-----------|-----------|--------|-----|-------|------|----------|------|------|
| Water        | 7732-18-5 | 231-791-2 | -      | -   | X     | X    | KE-35400 | X    | -    |
| Formaldehyde | 50-00-0   | 200-001-8 | -      | -   | X     | X    | KE-17074 | X    | X    |

| Component    | CAS No    | TSCA | TSCA Inventory notification - Active-Inactive | DSL | NDSL | AICS | NZIoC | PICCS |
|--------------|-----------|------|---|-----|------|------|-------|-------|
| Water        | 7732-18-5 | X    | ACTIVE  | X   | -    | X    | X     | X     |
| Formaldehyde | 50-00-0   | X    | ACTIVE  | X   | -    | X    | X     | X     |

**Legend:** X - Listed '-' - Not Listed

**KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

#### Authorisation/Restrictions according to EU REACH

| Component    | CAS No    | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances  | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|--------------|-----------|---|--|---|
| Water        | 7732-18-5 | -   | -  | -   |
| Formaldehyde | 50-00-0   | -   | Use restricted. See entry 72. (see link for restriction details)<br>Use restricted. See entry 77. (see link for restriction details)<br>Use restricted. See entry 28. (see link for restriction details)<br>Use restricted. See entry 75. (see link for restriction details) | -   |

#### REACH links

<https://echa.europa.eu/substances-restricted-under-reach>

#### Seveso III Directive (2012/18/EC)

| Component    | CAS No    | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements |
|--------------|-----------|---|--|
| Water        | 7732-18-5 | Not applicable  | Not applicable   |
| Formaldehyde | 50-00-0   | 5 tonne   | 50 tonne   |

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

ALFAA47340

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| Component    | CAS No    | OECD HPV | Restriction of Hazardous Substances (RoHS) | Basel Convention (Hazardous Waste) |
|--------------|-----------|----------|--|------------------------------------|
| Water        | 7732-18-5 | Listed   | Not applicable                             | Not applicable                     |
| Formaldehyde | 50-00-0   | Listed   | Not applicable                             | Not applicable                     |

## Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals

Not applicable

## Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?

Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work .

Take note of Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values

Take note of Dir 76/769/EEC relating to restrictions on the marketing and use of certain dangerous substances and preparations

## National Regulations

**UK** - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

## WGK Classification

Water endangering class = 3 (self classification)

| Component    | Germany - Water Classification (AwSV) | Germany - TA-Luft Class  |
|--------------|---------------------------------------|--|
| Formaldehyde | WGK 3                                 | Krebserzeugende Stoffe - : 5 mg/m <sup>3</sup> (Massenkonzentration) |

| Component    | France - INRS (Tables of occupational diseases)      |
|--------------|--|
| Formaldehyde | Tableaux des maladies professionnelles (TMP) - RG 43 |

| Component                      | Switzerland - Ordinance on the Reduction of Risk from handling of hazardous substances preparation (SR 814.81) | Switzerland - Ordinance on Incentive Taxes on Volatile Organic Compounds (OVOC) | Switzerland - Ordinance of the Rotterdam Convention on the Prior Informed Consent Procedure |
|--------------------------------|--|---|---|
| Formaldehyde<br>50-00-0 ( 20 ) |  | Group I   |   |

## 15.2. Chemical safety assessment

Chemical Safety Assessment/Reports (CSA/CSR) are not required for mixtures

## SECTION 16: OTHER INFORMATION

### Full text of H-Statements referred to under sections 2 and 3

H302 - Harmful if swallowed

H312 - Harmful in contact with skin

H331 - Toxic if inhaled

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H319 - Causes serious eye irritation

H335 - May cause respiratory irritation

H341 - Suspected of causing genetic defects

H350 - May cause cancer

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H301 - Toxic if swallowed  
H311 - Toxic in contact with skin  
H314 - Causes severe skin burns and eye damage  
H318 - Causes serious eye damage  
EUH071 - Corrosive to the respiratory tract

## Legend

**CAS** - Chemical Abstracts Service

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

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

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

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

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

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

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**WEL** - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**DNEL** - Derived No Effect Level

**RPE** - Respiratory Protective Equipment

**LC50** - Lethal Concentration 50%

**NOEC** - No Observed Effect Concentration

**PBT** - Persistent, Bioaccumulative, Toxic

**TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer

Predicted No Effect Concentration (PNEC)

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**POW** - Partition coefficient Octanol:Water

**vPvB** - very Persistent, very Bioaccumulative

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

**Key literature references and sources for data**

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**ATE** - Acute Toxicity Estimate

**VOC** - (Volatile Organic Compound)

**Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:**

**Physical hazards** On basis of test data

**Health Hazards** Calculation method

**Environmental hazards** Calculation method

## Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Fire prevention and fighting, identifying hazards and risks, static electricity, explosive atmospheres posed by vapours and dusts.

Chemical incident response training.

**Prepared By** Health, Safety and Environmental Department

**Revision Date** 13-Apr-2026

**Revision Summary** Initial Release.

**This safety data sheet complies with Regulation UK SI 2019/758 and UK SI 2020/1577 as amended.**

## Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other

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materials or in any process, unless specified in the text

**End of Safety Data Sheet**