# SAFETY DATA SHEET

according to Regulation UK SI 2019/758 and UK SI 2020/1577 as amended

**Revision Date** 17-Nov-2026 **Revision Number** 5

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

### 1.1. Product identifier

**Product Description:** **Paraformaldehyde, 4% in PBS + Mg + EGTA**
**Cat No. :** **J62478** Not applicable for mixtures;

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

**Recommended Use** Laboratory chemicals
**Uses advised against** REACH Annex XVII Restriction - refer to SECTION 15. Substances in tattoo inks and permanent make up.

### 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

### 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

**Poison Centre - Emergency information services**

**Ireland :** National Poisons Information Centre (NPIC) -
**01 809 2166** (8am-10pm, 7 days a week)
**Malta :** +356 2395 2000
**Cyprus :** +357 2240 5611

## 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**

| | |
|---|---|
| Skin Corrosion/Irritation | Category 2 (H315) |
| Serious Eye Damage/Eye Irritation | Category 1 (H318) |
| Skin Sensitization | Category 1 (H317) |
| Germ Cell Mutagenicity | Category 2 (H341) |
| Carcinogenicity | Category 1B (H350) |

**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**
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H341 - Suspected of causing genetic defects
H350 - May cause cancer

**Precautionary Statements**
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor/physician
P280 - Wear protective gloves/protective clothing/eye protection/face protection

**Additional EU labelling**
Restricted to professional users

### 2.3. Other hazards

This product does not contain any known or suspected endocrine disruptors

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2. Mixtures

| 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 | 94.9803 | - |
| Formaldehyde | 50-00-0 | 200-001-8 | 4 | Acute Tox. 3 (H301)<br>Acute Tox. 3 (H311)<br>Acute Tox. 3 (H331) |

| | | | | |
|---|---|---|---|---|
| | | | | 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 |
| Sodium chloride | 7647-14-5 | 231-598-3 | 0.7672 | - |
| Sodium phosphate dibasic | 7558-79-4 | 231-448-7 | 0.1093 | - |
| 6,9-Dioxa-3,12-diazatetradecanedioic acid, 3,12-bis(carboxymethyl)- | 67-42-5 | EEC No. 200-651-2 | 0.08 | - |
| Dihydrogen potassium phosphate | 7778-77-0 | 231-913-4 | 0.024 | - |
| Magnesium chloride | 7786-30-3 | EEC No. 232-094-6 | 0.02 | - |
| Potassium chloride | 7447-40-7 | 231-211-8 | 0.0192 | - |

| 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 Toxiciy Estimate; mg/kg bw - milligrams per kilogram of body weight
Not applicable for mixtures;

*Full text of Hazard Statements: see section 16*

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

**General Advice** If symptoms persist, call a physician.

**Eye Contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

**Skin Contact** Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

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

**Inhalation** Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

**Self-Protection of the First Aider** 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. Causes severe eye damage. May cause allergic skin reaction. 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

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

**Notes to Physician** Treat symptomatically.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1. Extinguishing media

**Suitable Extinguishing Media**
Not combustible.

**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.

**Hazardous Combustion Products**
Hydrogen chloride, Oxides of phosphorus, Potassium oxides, Sodium oxides, Magnesium oxides.

### 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.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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

Ensure adequate ventilation. Use personal protective equipment as required.

### 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. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation.

**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 refrigerated.

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

### 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/m³ 15 min<br>TWA: 2 ppm 8 hr<br>TWA: 2.5 mg/m³ 8 hr<br>Carc. | TWA: 0.37 mg/m³ (8h)<br>TWA: 0.62 mg/m³ (8h)<br>TWA: 0.3 ppm (8h)<br>TWA: 0.5 ppm (8h)<br>Skin<br>STEL: 0.74 mg/m³ (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/m³ 8 hr.<br>TWA: 0.62 mg/m³ 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/m³ 15 min<br>STEL: 0.62 mg/m³ 15 min |

**Biological limit values**
This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

**Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)**
See table for values

| Component | Acute effects local (Oral) | Acute effects systemic (Oral) | Chronic effects local (Oral) | Chronic effects systemic (Oral) |
|---|---|---|---|---|
| Magnesium chloride<br>7786-30-3 ( 0.02 ) | | | | 7 mg/kg bw/day |

| Component | Acute effects local (Dermal) | Acute effects systemic (Dermal) | Chronic effects local (Dermal) | Chronic effects systemic (Dermal) |
|---|---|---|---|---|
| Formaldehyde<br>50-00-0 ( 4 ) | | | DNEL = 37µg/cm2 | DNEL = 240mg/kg bw/day |
| Sodium chloride<br>7647-14-5 ( 0.7672 ) | | DNEL = 295.52mg/kg bw/day | | DNEL = 295.52mg/kg bw/day |
| Potassium chloride<br>7447-40-7 ( 0.0192 ) | | DNEL = 910mg/kg bw/day | | DNEL = 303mg/kg bw/day |

| Component | Acute effects local | Acute effects | Chronic effects local | Chronic effects |
|---|---|---|---|---|

| | (Inhalation) | systemic (Inhalation) | (Inhalation) | systemic (Inhalation) |
|---|---|---|---|---|
| Formaldehyde 50-00-0 ( 4 ) | DNEL = 0.75mg/m³ | | DNEL = 0.375mg/m³ | DNEL = 9mg/m³ |
| Sodium chloride 7647-14-5 ( 0.7672 ) | | DNEL = 2068.62mg/m³ | | DNEL = 2068.62mg/m³ |
| Dihydrogen potassium phosphate 7778-77-0 ( 0.024 ) | | | | DNEL = 14.82mg/m³ |
| Potassium chloride 7447-40-7 ( 0.0192 ) | | DNEL = 5320mg/m³ | | DNEL = 1064mg/m³ |

**Predicted No Effect Concentration (PNEC)**
See values below.

| Component | Fresh water | Fresh water sediment | Water Intermittent | Microorganisms in sewage treatment | Soil (Agriculture) |
|---|---|---|---|---|---|
| Formaldehyde 50-00-0 ( 4 ) | PNEC = 0.44mg/L | PNEC = 2.3mg/kg sediment dw | PNEC = 4.44mg/L | PNEC = 0.19mg/L | PNEC = 0.2mg/kg soil dw |
| Sodium chloride 7647-14-5 ( 0.7672 ) | PNEC = 5mg/L | | | PNEC = 500mg/L | PNEC = 4.86mg/kg soil dw |
| Sodium phosphate dibasic 7558-79-4 ( 0.1093 ) | PNEC = 0.05mg/L | | PNEC = 0.5mg/L | PNEC = 50mg/L | |
| Magnesium chloride 7786-30-3 ( 0.02 ) | PNEC = 3.21mg/L | PNEC = 288.9mg/kg sediment dw | PNEC = 5.48mg/L | PNEC = 90mg/L | PNEC = 662.77mg/kg soil dw |
| Potassium chloride 7447-40-7 ( 0.0192 ) | PNEC = 0.1mg/L | | PNEC = 1mg/L | PNEC = 10mg/L | |

| Component | Marine water | Marine water sediment | Marine water intermittent | Food chain | Air |
|---|---|---|---|---|---|
| Formaldehyde 50-00-0 ( 4 ) | PNEC = 0.44mg/L | PNEC = 2.3mg/kg sediment dw | | | |
| Sodium phosphate dibasic 7558-79-4 ( 0.1093 ) | PNEC = 0.005mg/L | | | | |
| Magnesium chloride 7786-30-3 ( 0.02 ) | PNEC = 0.32mg/L | PNEC = 28.89mg/kg sediment dw | | | |
| Potassium chloride 7447-40-7 ( 0.0192 ) | PNEC = 0.1mg/L | | | | |

**8.2. Exposure controls**

**Engineering Measures**
Ensure that eyewash stations and safety showers are close to the workstation location.
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 |
|---|---|---|---|---|
| Natural rubber<br>Nitrile rubber<br>Neoprene<br>PVC | See manufacturers recommendations | - | EN 374 | (minimum requirement) |

**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 compatability, 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.<br>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<br>**Recommended Filter type:** Multi-purpose/ABEK conforming to EN14387 Particulates filter conforming to EN 143 |
| **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.<br>**Recommended half mask:-** Particle filtering: EN149:2001<br>When RPE is used a face piece Fit Test should be conducted |
| **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

| | | |
|---|---|---|
| **Physical State** | Liquid | |
| **Appearance** | | |
| **Odor** | No information available | |
| **Odor Threshold** | No data available | |
| **Melting Point/Range** | No data available | |
| **Softening Point** | No data available | |
| **Boiling Point/Range** | No information available | |
| **Flammability (liquid)** | No data available | |
| **Flammability (solid,gas)** | Not applicable | Liquid |
| **Explosion Limits** | No data available | |
| **Flash Point** | No information available | **Method -** No information available |
| **Autoignition Temperature** | No data available | |
| **Decomposition Temperature** | No data available | |
| **pH** | No information available | |
| **Viscosity** | No data available | |
| **Water Solubility** | Immiscible | |
| **Solubility in other solvents** | No information available | |
| **Partition Coefficient (n-octanol/water)** | | |
| **Component** | **log Pow** | |
| Formaldehyde | -0.35 | |
| **Vapor Pressure** | No data available | |
| **Density / Specific Gravity** | No data available | |
| **Bulk Density** | Not applicable | Liquid |
| **Vapor Density** | No data available | (Air = 1.0) |
| **Particle characteristics** | Not applicable (liquid) | |

### 9.2. Other information

## SECTION 10: STABILITY AND REACTIVITY

**10.1. Reactivity**

None known, based on information available

**10.2. Chemical stability**

Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

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

**10.4. Conditions to avoid**

Incompatible products. Excess heat.

**10.5. Incompatible materials**

Water.

**10.6. Hazardous decomposition products**

Hydrogen chloride. Oxides of phosphorus. Potassium oxides. Sodium oxides. Magnesium oxides.

## SECTION 11: TOXICOLOGICAL INFORMATION

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

**Product Information**

**(a) acute toxicity;**

**Oral** Based on available data, the classification criteria are not met
**Dermal** Based on available data, the classification criteria are not met
**Inhalation** Based on available data, the classification criteria are not met

**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 |
| Sodium chloride | LD50 = 3550 mg/kg ( Rat ) | LD50 > 10000 mg/kg ( Rabbit ) | LC50 > 42 mg/L ( Rat ) 1 h |
| Sodium phosphate dibasic | LD50 = 17 g/kg ( Rat ) | - | - |
| 6,9-Dioxa-3,12-diazatetradecanedioic acid, 3,12-bis(carboxymethyl)- | LD50 = 3587 mg/kg ( Rat ) | - | - |
| Dihydrogen potassium phosphate | LD50 = 3200 mg/kg ( Rat ) | LD50 > 4640 mg/kg ( Rabbit ) | LC50 > 0.83 mg/L ( Rat ) 4 h |
| Magnesium chloride | LD50 = 2800 mg/kg ( Rat ) | LD50 > 2000 mg/kg ( Rat ) | - |
| Potassium chloride | LD50 = 2600 mg/kg ( Rat ) | - | - |

| 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 Toxiciy Estimate; mg/kg bw - milligrams per kilogram of body weight

**(b) skin corrosion/irritation;** Category 2

**(c) serious eye damage/irritation;** Category 1

**(d) respiratory or skin sensitization;**
**Respiratory** No data available
**Skin** Category 1

| Component | Test method | Test species | Study result |
|---|---|---|---|
| Formaldehyde<br>50-00-0 ( 4 ) | Skin sensitization<br>Test method Patch Test<br><br>Respiratory sensitization<br>in vitro | Man<br>guinea pig | Sensitizer<br>Sensitization |

May cause sensitization by skin contact

**(e) germ cell mutagenicity;** Category 2

**(f) carcinogenicity;** Category 1B

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;** No data available

**(h) STOT-single exposure;** No data available

**(i) STOT-repeated exposure;** No data available

**Target Organs** None known.

**(j) aspiration hazard;** No data available

**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.

**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 96h | EC50 = 20 mg/L 96h<br>EC50 = 2 mg/L 48h | EC50 (72h) = 4.89 mg/L (Desmodesmus subspicatus) |
| Sodium chloride | Pimephals prome: LC50: 7650 mg/L/96h | EC50: 1000 mg/L/48h | |
| Magnesium chloride | Pimephales promelas: EC50: 2.12 g/L:96H | EC50 : 1400 mg/L/24h | EC50: 2200 mg/L/72h |
| Potassium chloride | Lepomis macrochirus: LC50: 1060 mg/L /96h<br>Pimephales promelas: LC50: 750 - 1020 mg/L /96h | EC50: 825 mg/L/48h | EC50: 2500 mg/L/72h |

| Component | Microtox | M-Factor |
|---|---|---|
| Magnesium chloride | EC50 Pseudomonas putida: EC50:26,14 g/L/h<br>Photobacterium phosphoreum: EC50: 36,3 mg/L/30 min<br>Photobacterium phosphoreum: EC50: 77,2 mg/L/24 h | |

### 12.2. Persistence and degradability

**Persistence** Immiscible with water.

| Component | Degradability |
|---|---|
| Formaldehyde<br>50-00-0 ( 4 ) | Readily biodegradable (OECD guideline 301A, 301C and 301D) 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

Spillage unlikely to penetrate soil Is not likely mobile in the environment due its low water solubility.

### 12.5. Results of PBT and vPvB assessment

No data available for assessment.

### 12.6. Endocrine disrupting properties

**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors

### 12.7. Other adverse effects

**Persistent Organic Pollutant** This product does not contain any known or suspected substance
**Ozone Depletion Potential** 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.

**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** Not regulated

**14.1. UN number or ID number**
**14.2. UN proper shipping name**
**14.3. Transport hazard class(es)**
**14.4. Packing group**

**ADR** Not regulated

**14.1. UN number or ID number**
**14.2. UN proper shipping name**
**14.3. Transport hazard class(es)**
**14.4. Packing group**

**IATA** Not regulated

**14.1. UN number or ID number**
**14.2. UN proper shipping name**
**14.3. Transport hazard class(es)**
**14.4. Packing group**

**14.5. Environmental hazards** No hazards identified

**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 |
| Sodium chloride | 7647-14-5 | 231-598-3 | - | - | X | X | KE-31387 | X | X |
| Sodium phosphate dibasic | 7558-79-4 | 231-448-7 | - | - | X | X | KE-12344 | X | X |
| 6,9-Dioxa-3,12-diazatetradecanedioic acid, 3,12-bis(carboxymethyl)- | 67-42-5 | 200-651-2 | - | - | X | X | - | - | - |
| Dihydrogen potassium phosphate | 7778-77-0 | 231-913-4 | - | - | X | X | KE-28622 | X | X |
| Magnesium chloride | 7786-30-3 | 232-094-6 | - | - | X | X | KE-22691 | X | X |
| Potassium chloride | 7447-40-7 | 231-211-8 | - | - | X | X | KE-29086 | X | X |

| Component | CAS No | TSCA | TSCA Inventory notification - | DSL | NDSL | AICS | NZIoC | PICCS |
|---|---|---|---|---|---|---|---|---|

| | | | Active-Inactive | | | | | |
|---|---|---|---|---|---|---|---|---|
| Water | 7732-18-5 | X | ACTIVE | X | - | X | X | X |
| Formaldehyde | 50-00-0 | X | ACTIVE | X | - | X | X | X |
| Sodium chloride | 7647-14-5 | X | ACTIVE | X | - | X | X | X |
| Sodium phosphate dibasic | 7558-79-4 | X | ACTIVE | X | - | X | X | X |
| 6,9-Dioxa-3,12-diazatetradecanedioic acid, 3,12-bis(carboxymethyl)- | 67-42-5 | X | ACTIVE | X | - | X | X | X |
| Dihydrogen potassium phosphate | 7778-77-0 | X | ACTIVE | X | - | X | X | X |
| Magnesium chloride | 7786-30-3 | X | ACTIVE | X | - | X | X | X |
| Potassium chloride | 7447-40-7 | 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) Use restricted. See entry 77. (see link for restriction details) Use restricted. See entry 28. (see link for restriction details) Use restricted. See entry 75. (see link for restriction details) | - |
| Sodium chloride | 7647-14-5 | - | - | - |
| Sodium phosphate dibasic | 7558-79-4 | - | - | - |
| 6,9-Dioxa-3,12-diazatetradecanedioic acid, 3,12-bis(carboxymethyl)- | 67-42-5 | - | - | - |
| Dihydrogen potassium phosphate | 7778-77-0 | - | - | - |
| Magnesium chloride | 7786-30-3 | - | - | - |
| Potassium chloride | 7447-40-7 | - | - | - |

**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 |
| Sodium chloride | 7647-14-5 | Not applicable | Not applicable |
| Sodium phosphate dibasic | 7558-79-4 | Not applicable | Not applicable |
| 6,9-Dioxa-3,12-diazatetradecanedioic acid, 3,12-bis(carboxymethyl)- | 67-42-5 | Not applicable | Not applicable |
| Dihydrogen potassium phosphate | 7778-77-0 | Not applicable | Not applicable |
| Magnesium chloride | 7786-30-3 | Not applicable | Not applicable |
| Potassium chloride | 7447-40-7 | Not applicable | Not applicable |

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

| 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 |
| Sodium chloride | 7647-14-5 | Listed | Not applicable | Not applicable |
| Sodium phosphate dibasic | 7558-79-4 | Listed | Not applicable | Not applicable |
| 6,9-Dioxa-3,12-diazatetradecanedioi c acid, 3,12-bis(carboxymethyl)- | 67-42-5 | Not applicable | Not applicable | Not applicable |
| Dihydrogen potassium phosphate | 7778-77-0 | Listed | Not applicable | Not applicable |
| Magnesium chloride | 7786-30-3 | Listed | Not applicable | Not applicable |
| Potassium chloride | 7447-40-7 | 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/m³ (Massenkonzentration) |
| Sodium chloride | WGK1 | |
| Sodium phosphate dibasic | WGK1 | |
| Dihydrogen potassium phosphate | WGK1 | |
| Magnesium chloride | WGK1 | |
| Potassium chloride | WGK1 | |

| Component | France - INRS (Tables of occupational diseases) |
|---|---|
| Formaldehyde | Tableaux des maladies professionnelles (TMP) - RG 43 |
| Sodium chloride | Tableaux des maladies professionnelles (TMP) - RG 78 |
| Potassium chloride | Tableaux des maladies professionnelles (TMP) - RG 67 |

| 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 50-00-0 ( 4 ) | | Group I | |
| Sodium chloride 7647-14-5 ( 0.7672 ) | Prohibited and Restricted Substances | | |
| Magnesium chloride 7786-30-3 ( 0.02 ) | Prohibited and Restricted Substances | | |

### 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**
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H341 - Suspected of causing genetic defects
H350 - May cause cancer
H301 - Toxic if swallowed
H311 - Toxic in contact with skin
H314 - Causes severe skin burns and eye damage
H331 - Toxic if inhaled
H335 - May cause respiratory irritation
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/NDSL** - 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
**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)

**Key literature references and sources for data**
https://echa.europa.eu/information-on-chemicals
Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

**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.

| | |
|---|---|
| **Prepared By** | Health, Safety and Environmental Department |
| **Revision Date** | 17-Nov-2026 |

**Revision Summary** SDS sections updated.

## 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 materials or in any process, unless specified in the text**

# End of Safety Data Sheet