



Be Right™

# SAFETY DATA SHEET

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

Issue Date 12-May-2005

Revision Date 14-Feb-2023

Version 2.3

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

### 1.1. Product identifier

**Product Code(s)** 2376626  
**Product Name** Mineral Stabilizer  
**Molecular weight** No data available

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

**Recommended Use** Laboratory Use. Hardness Sequestering Agent.  
**Uses advised against** Consumer use

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

#### **Supplier**

HACH UK  
Laser House  
Ground Floor, Suite B  
Waterfront Quay, Salford Quays  
GB - Manchester, M50 3XW  
Tel. +44 (0) 161 872 1487  
info-uk@hach.com

HACH Ireland  
Unit 34 GB Business Park  
Little Island  
IRL-Co. Cork  
T45 H681  
Tel. +353 (0)146 02 522  
info-ie@hach.com

### 1.4. Emergency telephone number

UK: Poison Control Center Mainz: Tel: +49 (0) 6131 19240 - 24 hour emergency service  
IE: National Poisons Information Centre (NPIC) 01 809 2566 (24/7)

## Section 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

### 2.2. Label elements

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

#### Hazard statements

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

#### 2.3. Other hazards

No information available.

#### PBT & vPvB

This mixture contains no substance considered to be persistent, bioaccumulating or toxic (PBT)

This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB)

## Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Not applicable

### 3.2 Mixtures

Chemical name	CAS No. EC No. Index No.	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Trisodium citrate	68-04-2 200-675-3 -	10 - 20%	Not classified	-	-	-

#### Full text of H- and EUH-phrases: see section 16

Acute Toxicity Estimate No information available

## 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.
<b>Inhalation</b>	Remove to fresh air.
<b>Eye contact</b>	Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a doctor.
<b>Skin contact</b>	Wash skin with soap and water. In the case of skin irritation or allergic reactions see a doctor.
<b>Ingestion</b>	Never give anything by mouth to an unconscious person. Get medical attention.
<b>Self-protection of the first aider</b>	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8). 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**

**Symptoms** No information available.

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

**Note to doctors** Treat symptomatically.

**Section 5: FIREFIGHTING MEASURES****5.1. Extinguishing media**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media** No information available.

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

**Specific hazards arising from the chemical** Thermal decomposition can lead to release of irritating and toxic gases and vapours.

**Hazardous combustion products** No information available.

**5.3. Advice for firefighters**

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**Additional information** Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

**Section 6: ACCIDENTAL RELEASE MEASURES****6.1. Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Evacuate personnel to safe areas.

**For emergency responders** Use personal protection recommended in Section 8.

**6.2. Environmental precautions**

**Environmental precautions** Do not flush into surface water or sanitary sewer system. See Section 12 for additional Ecological Information.

**6.3. 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.

**6.4. Reference to other sections**

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

## Section 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

**Advice on safe handling** Avoid contact with skin and eyes.

**General hygiene considerations** Avoid contact with skin, eyes or clothing. Wash hands before breaks and after work. Do not eat, drink or smoke when using this product.

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

**Storage Conditions** Keep container tightly closed in a dry and well-ventilated place.

### 7.3. Specific end use(s)

**Specific use(s)** Analytical reagent.

**Risk Management Methods (RMM)** The information required is contained in this Safety Data Sheet.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

**Exposure Limits** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

**Derived No Effect Level (DNEL)** No information available.

**Predicted No Effect Concentration (PNEC)** No information available.

**Additional information** No information available.

### 8.2. Exposure controls

**Engineering controls** 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.

**Personal protective equipment  
Eye/face protection** Wear safety glasses with side shields (or goggles).

**Hand protection** Barrier creams may help to protect the exposed areas of skin. Wear suitable gloves. 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 374-1:2016 derived from it. Chemical resistant gloves made of butyl rubber or nitrile rubber category III acco.

Gloves			
Duration of contact	PPE - Glove material	Glove thickness	Break through time
Long term (repeated)	Wear protective Viton™ gloves	0,70 mm	>480 minutes
Short term	Wear protective nitrile rubber gloves	0,20 mm	>30 minutes

<b>Skin and body protection</b>	Avoid contact with eyes, skin and clothing. Wash contaminated clothing before reuse. Long sleeved clothing.
<b>Respiratory protection</b>	Ensure adequate ventilation.
<b>General hygiene considerations</b>	Avoid contact with skin, eyes or clothing. Wash hands before breaks and after work. Do not eat, drink or smoke when using this product.
<b>Environmental exposure controls</b>	No information available.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

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

**Physical state** Liquid

**Colour** colourless

**Odour** Odourless

**Odour threshold** No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Molecular weight</b>	No data available	
<b>pH</b>	8.7	@ 20 °C
<b>Melting point / freezing point</b>	-8 °C / 17.6 °F	
<b>Initial boiling point and boiling range</b>	98 °C / 208.4 °F	
<b>Evaporation rate</b>	0.65 (water = 1)	
<b>Vapour pressure</b>	22.802 mm Hg / 3.04 kPa at 25 °C / 77 °F	
<b>Relative vapor density</b>	0.62	
<b>Specific Gravity</b>	1.290	
<b>Partition coefficient</b>	Not applicable	
<b>Soil Organic Carbon-Water Partition Coefficient</b>	Not applicable	
<b>Autoignition temperature</b>	No data available	
<b>Decomposition temperature</b>	No information available	
<b>Dynamic viscosity</b>	No data available	
<b>Kinematic viscosity</b>	No data available	
<b>Relative density</b>	1.29 g/mL	@ 20 °C

### Solubility(ies)

#### **Water solubility**

<u>Water solubility classification</u>	<u>Water solubility</u>	<u>Water Solubility Temperature</u>
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

**Metal Corrosivity**

Steel Corrosion Rate	0.03 mm/yr / 0 in/yr
Aluminum Corrosion Rate	0.41 mm/yr / 0.02 in/yr

**Explosive properties**

Upper explosion limit	No data available
Lower explosion limit	No data available

**Flammable properties**

Flash point	No data available
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**Flammability**

Upper flammability limit:	No data available
Lower flammability limit	No data available

**Oxidising properties**

No data available.

**Bulk density**

Not applicable

**9.2. Other information**

No information available.

**Section 10: STABILITY AND REACTIVITY****10.1. Reactivity****Reactivity** No information available.**10.2. Chemical stability****Stability** Stable under normal conditions.**10.3. Possibility of hazardous reactions****Possibility of hazardous reactions** None under normal processing.**Hazardous polymerisation** None under normal processing.**10.4. Conditions to avoid****Conditions to avoid** Extremes of temperature and direct sunlight.**10.5. Incompatible materials****Incompatible materials** Organic material.**10.6. Hazardous decomposition products****Hazardous Decomposition Products** Sodium oxides, potassium oxide.

## Section 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

#### **Acute toxicity**

Based on available data, the classification criteria are not met

Mixture No data available.

Substance No data available.

#### **Acute Toxicity Estimate (ATE)**

#### **Unknown acute toxicity**

0.01 % of the mixture consists of ingredient(s) of unknown toxicity.

#### **Skin corrosion/irritation**

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

Mixture No data available.

Substance Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Butanedioic acid, 2,3-dihydroxy-[R-(R*,R*)]-, monopotassium monosodium salt	Patch test	Rabbit	500 mg	None reported	Data Source	ECHA
Trisodium citrate	Draize Test	Rabbit	500 mg	24 hours	Not corrosive or irritating to skin	ECHA

#### **Serious eye damage/eye irritation**

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

Mixture No data available.

Substance Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Butanedioic acid, 2,3-dihydroxy-[R-(R*,R*)]-, monopotassium monosodium salt	OECD Test 439: In Vitro Skin Irritation: Reconstructed Human Epidermis (Rhe) Test Method	Rabbit	100 mg	1 hours	Data Source	ECHA
Trisodium citrate	Draize Test	Rabbit	0.1 mL	24 hours	Mild eye irritant	IUCLID

#### **Respiratory or skin sensitisation**

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

Mixture No data available.

Substance Test data reported below.

**Skin Sensitization Exposure Route:**

Chemical name	Test method	Species	Results	Key literature references and sources for data
Trisodium citrate	OECD Test No. 406: Skin Sensitisation	Guinea pig	No sensitisation responses were observed.	IUCLID

**STOT - single exposure**

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

Mixture No data available.

Substance No data available.

**STOT - repeated exposure**

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

Mixture No data available.

Substance No data available.

**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 dose	Exposure time	Results	Key literature references and sources for data
Butanedioic acid, 2,3-dihydroxy-[R-(R*,R*)]-, monopotassium monosodium salt	Mutation in microorganisms	<i>Salmonella typhimurium</i>	10 mg/plate	None reported	Negative	CCRIS
Trisodium citrate	Mutation in microorganisms	<i>Salmonella typhimurium</i>	None reported	None reported	Negative	IUCLID

Mixture in vivo **Data** No data available.

Substance in vivo **Data** No data available.

**Carcinogenicity**

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

Mixture No data available.

Substance Test data reported below.

**Oral Exposure Route:**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Trisodium citrate	Rat	3000 mg/kg	2 years	Not Carcinogenic	IUCLID

**Reproductive toxicity**

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



Mixture No data available.

Substance No data available.

#### Aspiration hazard

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

#### 11.2 Information on other hazards

Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

##### 11.2.1. Endocrine disrupting properties

**Endocrine disrupting properties** No information available.

##### 11.2.2. Other information

**Other adverse effects** No information available.

## Section 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

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

**Unknown aquatic toxicity** Contains 0.01 % of components with unknown hazards to the aquatic environment.

#### Mixture

**Acute aquatic toxicity:** No data available.

**Aquatic Chronic Toxicity:** No data available.

#### Substance

**Acute aquatic toxicity:** Test data reported below.

Fish:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Butanedioic acid, 2,3-dihydroxy-[R-(R*,R*)]-, monopotassium monosodium salt	96 hours	None reported	LC <sub>50</sub>	612000 mg/L	ECOSARS

Crustacea:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Butanedioic acid, 2,3-dihydroxy-[R-(R*,R*)]-, monopotassium monosodium salt	48 Hours	None reported	LC <sub>50</sub>	263000 mg/L	ECOSARS

Algae:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Butanedioic acid, 2,3-dihydroxy-[R-(R*,R*)]-, monopotassium monosodium salt	96 hours	None reported	EC <sub>50</sub>	62377.086 mg/L	ECOSARS

monopotassium monosodium salt					
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**Aquatic Chronic Toxicity:** No data available.

### **12.2. Persistence and degradability**

**Mixture** No data available.

### **12.3. Bioaccumulative potential**

**Mixture:** No data available.

Partition coefficient Not applicable

### **12.4. Mobility in soil**

Soil Organic Carbon-Water Partition Coefficient Not applicable

### **12.5. Results of PBT and vPvB assessment**

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

### **12.6. Endocrine disrupting properties**

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

### **12.7. Other adverse effects**

No information available.

Ozone: Not applicable

Ozone depletion potential (ODP): No information available

## **Section 13: DISPOSAL CONSIDERATIONS**

### **13.1. Waste treatment methods**

#### **Advice on Disposal**

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

#### **Waste disposal number of waste from residues/unused products**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste.

#### **Waste disposal number of used product**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste.

**Contaminated packaging** Dispose of contents/containers in accordance with local regulations.

**Other Information** Do not reuse empty containers.

## Section 14: TRANSPORT INFORMATION

### IMDG

14.1 UN number or ID number	Not regulated
14.2 Proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing Group	Not regulated
14.5 Marine pollutant	Not applicable
14.6 Special precautions for user	See section 6-8 for more information
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code	Not applicable

### ADR

14.1 UN number or ID number	Not regulated
14.2 Proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing Group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	See section 6-8 for more information

### IATA

14.1 UN number or ID number	Not regulated
14.2 Proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	See section 6-8 for more information

### **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.

## Section 15: REGULATORY INFORMATION

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

#### **European Union**

#### **Authorisations and/or restrictions on use:**

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

**Persistent Organic Pollutants** Not applicable

#### **Dangerous substance category per Seveso Directive (2012/18/EU)**

• Non-controlled

#### **Ozone-depleting substances (ODS) regulation (EC) 1005/2009**

Not applicable

**Germany**

**Water hazard class (WGK)** slightly hazardous to water (WGK 1)

**International Inventories**

<b>EINECS/ELINCS</b>	Complies
<b>TSCA</b>	Complies
<b>DSL/NDSL</b>	Complies
<b>ENCS</b>	Complies
<b>IECSC</b>	Complies
<b>KECL - Existing substances</b>	Complies
<b>PICCS</b>	Complies
<b>AICS</b>	Complies

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

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

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

**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

**AICS** - Australian Inventory of Chemical Substances

**15.2. Chemical safety assessment**

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

**Section 16: OTHER INFORMATION**

<b>Issue Date</b>	12-May-2005
<b>Revision Date</b>	14-Feb-2023
<b>Revision Note</b>	New SDS, SDS sections updated, 3, 9, 11, 12.

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

**	Hazard Designation
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieure
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service Number
Ceiling	Maximum limit value
CLP	Classification, Labelling and Packaging of substances and mixtures [Regulation (EC) No. 1272/2008]
DNEL	Derived No Effect Level (DNEL)
EC	European Community
ECHA	ECHA (The European Chemicals Agency)

EC50	Effective Concentration to 50% of a test population
EEC	European Economic Community
EN	European Standard
IMDG	International Maritime Dangerous Goods (IMDG)
IATA	International Air Transport Association (IATA)
IATA-DGR	International Air Transport Association - Dangerous Goods Regulations
ICAO	International Civil Aviation Organization
ICAO-TI	International Civil Aviation Organization - Technical Instructions
IUCLID	IUCLID (The International Uniform Chemical Information Database)
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
LOAEL	Lowest observed adverse effect level
LOAEC	Lowest observed adverse effect concentration
LC50	Lethal Concentration to 50% of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
MAK	Maximale Arbeitsplatz-Konzentration, a German expression corresponding to threshold limit value, which relates to safe daily exposure levels to chemical substances
NOAEL	NOAEL (No observed adverse effect level)
NOAEC	No observed adverse effect concentration
OSHA	OSHA (Occupational Safety and Health Administration of the US Department of Labour)
PEC	Predicted Effect Concentration
PNEC	Predicted No Effect Concentration (PNEC)
PBT	Persistent, Bioaccumulative, and Toxic (PBT) Chemicals
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals [Regulation (EC) No. 1907/2006]
RID	Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
RTECS	RTECS (Registry of Toxic Effects of Chemical Substances)
TWA	TWA (time-weighted average)
SKN*	Skin designation
SKN+	Skin sensitisation
STEL	STEL (Short Term Exposure Limit)
STOT	Specific Target Organ Toxicity
STOT RE	Specific target organ toxicity — repeated exposure
STOT SE	Specific target organ toxicity — single exposure
SVHC	Substances of Very High Concern
TLV	Threshold Limit Value
TRGS	Technical rules for hazardous substances, Germany
TSCA	Toxic Substances Control Act
UN	United Nations
vPvB	very persistent and very bioaccumulative
VOC	Volatile organic compounds
AwSV	Administrative regulation of water polluting substances, Germany

#### Key literature references and sources for data

See Section 11: TOXICOLOGICAL INFORMATION

See Section 12: ECOLOGICAL INFORMATION

#### Classification procedure

Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - Vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method

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Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration toxicity	Calculation method
Ozone	Calculation method

**Training Advice** 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

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

**This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

**End of Safety Data Sheet**