



**Be Right™**

# SAFETY DATA SHEET

Issue Date 03-Jun-2016

Revision Date 29-Mar-2018

Version 1.2

Page 1 / 12

## Section 1: PRODUCT AND COMPANY IDENTIFICATION

### Product identifier

Product Code(s) 2314111-BR

Product Name Free Chlorine Buffer for CL17 Analyzer

### Other means of identification

Safety data sheet number M00599

### Recommended use of the chemical and restrictions on use

Recommended Use Laboratory reagent. Determination of Free Chlorine.

Restrictions on use None.

Uses advised against None

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

#### **Supplier Address**

Hexis Cientifica Ltda CNPJ: 53.276.010 / 00001-10 Av. Antonieta Piva Barranqueiros, 385 - Industrial District - Jundiai - SP -  
Phone: 11 4589-2672

#### **Manufacturer Address**

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

### Emergency telephone number

#### **Argentina**

+(54)-1159839431

#### **Costa Rica**

Costa Rica National Poison Center: +506-2223-1028

#### **United States of America**

+1(303) 623-5716 - 24 Hour Service +1(515)232-2533 - 8am - 4pm CST

## Section 2: HAZARDS IDENTIFICATION

### **GHS Classification**

#### **Most Important Hazards**

According to ABNT NBR 14725-2

Acute toxicity - Oral	Category 5
-----------------------	------------

### Label elements

Signal word - Warning

### Hazard statements

H303 - May be harmful if swallowed

### Precautionary statements

P312 - Call a POISON CENTER or doctor if you feel unwell

**Product Code(s)** 2314111-BR  
**Issue Date** 03-Jun-2016  
**Version** 1.2

**Product Name** Free Chlorine Buffer for CL17 Analyzer  
**Revision Date** 29-Mar-2018  
**Page** 2 / 12

**Other Hazards Known**

**Section 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**Substance**

Not applicable

**Mixture**

**Raw Material/Pure Substance** Mixture

**Chemical Name** Not applicable

**CAS No** Not applicable

Chemical name	CAS No.	Percent Range
2-Butenedioic acid (Z)-, dilithium salt	50977-65-6	20 - 30%
2-Butenedioic acid (Z)-, monolithium salt	85796-96-9	3 - 7%

**Section 4: FIRST AID MEASURES**

**Description of necessary first aid measures**

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

**Inhalation** Remove to fresh air.

**Skin contact** Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.

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

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

**For emergency responders**

**Most important symptoms/effects, acute and delayed**

**Symptoms** No information available.

**Indication of immediate medical attention and special treatment needed, if necessary**

**Note to physicians** Treat symptomatically.

**Section 5: FIRE FIGHTING MEASURES**

**Suitable Extinguishing Media**

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

**Unsuitable Extinguishing Media** No information available

**Specific hazards arising from the chemical**

**Specific hazards arising from the chemical** No information available.

**Flammable properties**

During a fire, this product decomposes to form toxic gases.

**Explosive properties**

**Product Code(s)** 2314111-BR  
**Issue Date** 03-Jun-2016  
**Version** 1.2

**Product Name** Free Chlorine Buffer for CL17 Analyzer  
**Revision Date** 29-Mar-2018  
**Page** 3 / 12

Not classified according to GHS criteria.

**Hazardous combustion products** Carbon monoxide, Carbon dioxide.

**Specific/special fire-fighting measures**

**Specific/special fire-fighting measures** No information available.

**Special protective equipment and precautions for fire-fighters**

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

## Section 6: ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Ensure adequate ventilation.

**For emergency responders** Use personal protective equipment as required.

**Environmental precautions**

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

**Methods and material for containment and cleaning up**

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

**Methods for cleaning up** Pick up and transfer to properly labeled containers.

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

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

## Section 7: HANDLING AND STORAGE

**Preventive measures for safe handling**

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

**Precautions for safe handling**

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

**Conditions for safe storage, including any incompatibilities**

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

**Incompatible materials** Strong oxidizing agents, strong acids, and strong bases.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure Guidelines**

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

**Legend** See section 16 for terms and abbreviations

**Appropriate engineering controls**

**Engineering Controls** Showers  
Eyewash stations  
Ventilation systems.

**Product Code(s)** 2314111-BR  
**Issue Date** 03-Jun-2016  
**Version** 1.2

**Product Name** Free Chlorine Buffer for CL17 Analyzer  
**Revision Date** 29-Mar-2018  
**Page** 4 / 12

**Individual protection measures, such as personal protective equipment**

<b>Respiratory protection</b>	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
<b>Hand Protection</b>	Wear suitable gloves.
<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles).
<b>Skin and body protection</b>	No special protective equipment required.
<b>General Hygiene Considerations</b>	Handle in accordance with good industrial hygiene and safety practice.
<b>Environmental exposure controls</b>	Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water.
<b>Thermal hazards</b>	None under normal processing.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

<b>Physical state</b>	Liquid
<b>Appearance</b>	aqueous solution
<b>Odor</b>	Bland
<b>Color</b>	yellow
<b>Odor threshold</b>	No data available

<b><u>Property</u></b>	<b><u>Values</u></b>	<b><u>Remarks • Method</u></b>
<b>Molecular weight</b>	No data available	
<b>pH</b>	7.06	
<b>Melting point/freezing point</b>	-65 °C / -85 °F	
<b>Boiling point / boiling range</b>	99 °C / 210 °F	
<b>Evaporation rate</b>	0.53 (water = 1)	
<b>Vapor pressure</b>	22.427 mm Hg / 2.99 kPa at 25 °C / 77 °F	Estimation based on theoretical calculation
<b>Vapor density (air = 1)</b>	0.62 (air = 1)	
<b>Specific gravity (water = 1 / air = 1)</b>	1.21	
<b>Partition Coefficient (n-octanol/water)</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 data available	
<b>Dynamic viscosity</b>	No data available	
<b>Kinematic viscosity</b>	No data available	

**Solubility(ies)**

**Water solubility**

**Product Code(s)** 2314111-BR  
**Issue Date** 03-Jun-2016  
**Version** 1.2

**Product Name** Free Chlorine Buffer for CL17 Analyzer  
**Revision Date** 29-Mar-2018  
**Page** 5 / 12

<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

<u>Chemical Name</u>	<u>Solubility classification</u>	<u>Solubility</u>	<u>Solubility Temperature</u>
Acid	Soluble	> 1000 mg/L	25 °C / 77 °F

#### Other Information

##### Metal Corrosivity

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

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

<b>Chemical name</b>	<b>CAS No.</b>	<b>Volatile organic compounds (VOC) content</b>	<b>CAA (Clean Air Act)</b>
2-Butenedioic acid (Z)-, dilithium salt	50977-65-6	No data available	-
2-Butenedioic acid (Z)-, monolithium salt	85796-96-9	No data available	-

##### Explosive properties

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

##### Flammable properties

**Flash point** No data available

##### Flammability Limit in Air

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

##### Oxidizing properties

No data available.

##### Bulk density

Not applicable

**Particle Size** No information available

**Particle Size Distribution** No information available

## Section 10: STABILITY AND REACTIVITY

##### Reactivity

Not applicable.

##### Chemical stability

**Stability** Stable under normal conditions.

##### Explosion data

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

##### Possibility of Hazardous Reactions

**Product Code(s)** 2314111-BR  
**Issue Date** 03-Jun-2016  
**Version** 1.2

**Product Name** Free Chlorine Buffer for CL17 Analyzer  
**Revision Date** 29-Mar-2018  
**Page** 6 / 12

**Possibility of Hazardous Reactions** None under normal processing.

**Hazardous polymerization**  
None under normal processing.

**Conditions to avoid**

**Conditions to avoid** None known based on information supplied.

**Incompatible materials**

**Incompatible materials** Strong oxidizing agents, strong acids, and strong bases.

**Hazardous Decomposition Products**

Heating to decomposition releases toxic fumes of carbon monoxide and carbon dioxide.

## Section 11: TOXICOLOGICAL INFORMATION

**Information on Likely Routes of Exposure**

**Product Information**

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

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

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

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

**Symptoms** No information available.

**Aggravated Medical Conditions** None known.

**Toxicologically synergistic** None known.

**products**

**Toxicokinetics, metabolism and distribution** No information available.

**Product Acute Toxicity Data**

**Oral Exposure Route** No data available

**Dermal Exposure Route** No data available

**Inhalation (Dust/Mist) Exposure Route** No data available

**Inhalation (Vapor) Exposure Route** No data available

**Inhalation (Gas) Exposure Route** No data available

**Unknown Acute Toxicity**

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

**Acute Toxicity Estimations (ATE)**

The following values are calculated based on chapter 3.1 of the GHS document

<b>Oral LD50</b>	2,870.00 mg/kg
<b>Dermal LD50</b>	No information available
<b>Mist</b>	No information available
<b>Vapor</b>	No information available
<b>Gas</b>	No information available

**Ingredient Acute Toxicity Data**

**Oral Exposure Route** If available, see data below

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
---------------	---------------	---------------	---------------	-----------------------	--

**Product Code(s)** 2314111-BR  
**Issue Date** 03-Jun-2016  
**Version** 1.2

**Product Name** Free Chlorine Buffer for CL17 Analyzer  
**Revision Date** 29-Mar-2018  
**Page** 7 / 12

2-Butenedioic acid (Z)-, monolithium salt (3 - 7%) CAS#: 85796-96-9	Rat LD <sub>50</sub>	836 mg/kg	None reported	None reported	No information available
--	-------------------------	-----------	------------------	---------------	--------------------------

**Dermal Exposure Route**

If available, see data below

**Inhalation (Dust/Mist) Exposure Route**

If available, see data below

**Inhalation (Vapor) Exposure Route**

If available, see data below

**Inhalation (Gas) Exposure Route**

If available, see data below

**Product Specific Target Organ Toxicity Single Exposure Data**

**Oral Exposure Route**

No data available

**Dermal Exposure Route**

No data available

**Inhalation (Dust/Mist) Exposure Route**

No data available

**Inhalation (Vapor) Exposure Route**

No data available

**Inhalation (Gas) Exposure Route**

No data available

**Ingredient Specific Target Organ Toxicity Single Exposure Data**

**Oral Exposure Route**

If available, see data below

**Dermal Exposure Route**

If available, see data below

**Inhalation (Dust/Mist) Exposure Route**

If available, see data below

**Inhalation (Vapor) Exposure Route**

If available, see data below

**Inhalation (Gas) Exposure Route**

If available, see data below

**Aspiration toxicity**

No data available

**Product Skin Corrosion/Irritation Data**

No data available.

**Ingredient Skin Corrosion/Irritation Data**

If available, see data below

**Product Serious Eye Damage/Eye Irritation Data**

No data available.

**Ingredient Eye Damage/Eye Irritation Data**

No data available

**Sensitization Information**

**Product Sensitization Data**

**Skin Sensitization Exposure Route**

No data available.

**Respiratory Sensitization Exposure Route**

No data available.

**Ingredient Sensitization Data**

**Skin Sensitization Exposure Route**

If available, see data below.

**Respiratory Sensitization Exposure Route**

If available, see data below.

**Chronic Toxicity Information**

**Product Specific Target Organ Toxicity Repeat Dose Data**

**Oral Exposure Route**

No data available.

**Dermal Exposure Route**

No data available.

**Inhalation (Dust/Mist) Exposure Route**

No data available.

**Inhalation (Vapor) Exposure Route**

No data available.

**Inhalation (Gas) Exposure Route**

No data available.

**Ingredient Specific Target Organ Toxicity Repeat Exposure Data**

**Oral Exposure Route**

If available, see data below

**Dermal Exposure Route**

If available, see data below

**Product Code(s)** 2314111-BR  
**Issue Date** 03-Jun-2016  
**Version** 1.2

**Product Name** Free Chlorine Buffer for CL17 Analyzer  
**Revision Date** 29-Mar-2018  
**Page** 8 / 12

**Inhalation (Dust/Mist) Exposure Route**  
**Inhalation (Vapor) Exposure Route**  
**Inhalation (Gas) Exposure Route**

If available, see data below  
If available, see data below  
If available, see data below

**Product Carcinogenicity Data**

**Oral Exposure Route**  
**Dermal Exposure Route**  
**Inhalation (Dust/Mist) Exposure Route**  
**Inhalation (Vapor) Exposure Route**  
**Inhalation (Gas) Exposure Route**

No data available  
No data available  
No data available  
No data available  
No data available

**Ingredient Carcinogenicity Data**

Chemical name	CAS No.	ACGIH	IARC	NTP	OSHA
2-Butenedioic acid (Z)-, dilithium salt	50977-65-6	-	-	-	-
2-Butenedioic acid (Z)-, monolithium salt	85796-96-9	-	-	-	-

**Legend**

<b>ACGIH (American Conference of Governmental Industrial Hygienists)</b>	Does not apply
<b>IARC (International Agency for Research on Cancer)</b>	Does not apply
<b>NTP (National Toxicology Program)</b>	Does not apply
<b>OSHA (Occupational Safety and Health Administration of the US Department of Labor)</b>	Does not apply

**Oral Exposure Route**  
**Dermal Exposure Route**  
**Inhalation (Dust/Mist) Exposure Route**  
**Inhalation (Vapor) Exposure Route**  
**Inhalation (Gas) Exposure Route**

If available, see data below  
If available, see data below  
If available, see data below  
If available, see data below  
If available, see data below

**Product Germ Cell Mutagenicity *invitro* Data**

No data available.

**Ingredient Germ Cell Mutagenicity *invitro* Data**

No data available

**Product Germ Cell Mutagenicity *in vivo* Data**

**Oral Exposure Route**  
**Dermal Exposure Route**  
**Inhalation (Dust/Mist) Exposure Route**  
**Inhalation (Vapor) Exposure Route**  
**Inhalation (Gas) Exposure Route**

No data available  
No data available  
No data available  
No data available  
No data available

**Ingredient Germ Cell Mutagenicity *in vivo* Data**

**Oral Exposure Route**  
**Dermal Exposure Route**  
**Inhalation (Dust/Mist) Exposure Route**  
**Inhalation (Vapor) Exposure Route**  
**Inhalation (Gas) Exposure Route**

If available, see data below  
If available, see data below  
If available, see data below  
If available, see data below  
If available, see data below

**Product Reproductive Toxicity Data**

**Oral Exposure Route**  
**Dermal Exposure Route**  
**Inhalation (Dust/Mist) Exposure Route**  
**Inhalation (Vapor) Exposure Route**  
**Inhalation (Gas) Exposure Route**

No data available  
No data available  
No data available  
No data available  
No data available

**Ingredient Reproductive Toxicity Data**

**Oral Exposure Route**

If available, see data below



**Product Code(s)** 2314111-BR  
**Issue Date** 03-Jun-2016  
**Version** 1.2

**Product Name** Free Chlorine Buffer for CL17 Analyzer  
**Revision Date** 29-Mar-2018  
**Page** 9 / 12

**Inhalation (Dust/Mist) Exposure Route**  
**Inhalation (Vapor) Exposure Route**  
**Inhalation (Gas) Exposure Route**

If available, see data below  
If available, see data below  
If available, see data below

## Section 12: ECOLOGICAL INFORMATION

**Ecotoxicity** Not considered to be harmful to aquatic life

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

### Product Ecological Data

#### **Aquatic toxicity**

<b>Fish</b>	No data available
<b>Crustacea</b>	No data available
<b>Algae</b>	No data available

### Ingredient Ecological Data

#### **Aquatic toxicity**

<b>Fish</b>	No data available
<b>Crustacea</b>	No data available
<b>Algae</b>	No data available

### Other Information

#### Persistence and degradability

**Product Biodegradability Data**  
No data available.

#### **Ingredient Biodegradability Data**

### Bioaccumulation

**Product Bioaccumulation Data**  
No data available.

**Partition Coefficient (n-octanol/water)** Not applicable

#### **Ingredient Bioaccumulation Data**

### Mobility

**Soil Organic Carbon-Water Partition Coefficient** Not applicable

### Water solubility

<u>Water solubility classification</u>	<u>Water solubility</u>	<u>Water Solubility Temperature</u>
Soluble	> 1000 mg/L	25 °C / 77 °F

**Other adverse effects**  
No information available.

## Section 13: DISPOSAL CONSIDERATIONS

**Product Code(s)** 2314111-BR  
**Issue Date** 03-Jun-2016  
**Version** 1.2

**Product Name** Free Chlorine Buffer for CL17 Analyzer  
**Revision Date** 29-Mar-2018  
**Page** 10 / 12

#### Disposal methods

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

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

### Section 14: TRANSPORT INFORMATION

**U.S. DOT** Not regulated

**Emergency Response Guide Number** Not applicable

**IMDG** Not regulated

**IATA** Not regulated

**ADR** Not regulated

#### **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

#### International Inventories

<b>TSCA</b>	Complies
<b>DSL/NDSL</b>	Complies
<b>EINECS/ELINCS</b>	Does not comply
<b>ENCS</b>	Does not comply
<b>IECSC</b>	Complies
<b>KECL</b>	Complies
<b>PICCS</b>	Does not comply
<b>TCSI</b>	Complies
<b>AICS</b>	Does not comply
<b>NZIoC</b>	Does not comply

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

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

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

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

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

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

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

**TCSI** - Taiwan Chemical Substances Inventory

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

#### Country Regulations

##### **Brazil**

Federal Decree No. 2.657, July 3, 1998

Standard ABNT NBR 14725-3

Ordinance No. 229, May 24, 2011 - Changes to Regulatory Standard No. 26

Standard ABNT NBR 14725-4

**Product Code(s)** 2314111-BR  
**Issue Date** 03-Jun-2016  
**Version** 1.2

**Product Name** Free Chlorine Buffer for CL17 Analyzer  
**Revision Date** 29-Mar-2018  
**Page** 11 / 12

Resolution no. 420/2004 - ANTT  
Resolution no. 5.232 / 2016 - ANTT  
NR 15 Ministry of Labor and Employment  
Ordinance no. 1274 / 2003  
Federal Decree 3.665 / 2000  
Law no. 12.305 / 10  
Law no. 10.357 / 2001

#### **Argentina**

SRT 3359/2015  
Resolution 801/2015  
Law of Health and Safety and Work (Law 19,587)  
Decree 351/79  
Regulatory Law 19587

#### **Columbia**

Law 253, 1996: Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal.  
Resolution 2400/1979: Ministry of Labour and Social Security, ACGIH Exposure Limits.  
Decision 602, Andean Regulation for the Control of chemical substances used in the illegal manufacture of narcotic drugs and psychotropic substances.  
Law 29/1992: Montreal Protocol on Substances that Deplete the Ozone Layer and its Amendments.  
Law 55/1993: Recommendation No. 177 on the International Work Conference on Safety in the Use of Chemical Products at Work.  
Law 30/1990: Vienna Convention for the Protection of the Ozone Layer.  
Law 55/1993: Convention No. 170 on the General Conference of the ILO.

#### **Uruguay**

Law 16.157: Approval of the Montreal Protocol on Substances that Deplete the Ozone Layer.  
Law 17.283: Regarding environmental protection and management of hazardous wastes.  
Presidential Decree 346/11: Implementation of GHS for all manufactured or distributed products.  
Presidential Decree 519/984: Regulates the activities relating to the use of radioactive materials and ionizing radiation throughout the country.

#### **Ecuador**

Law No. 37 - Environmental Management Act  
NTE INEN 2266:2013 - Requirements for Transport, Storage and Handling of Hazardous Materials  
Unified Text of Secondary Legislation of the Environment Ministry: Book VI

## **Section 16: OTHER INFORMATION**

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

NIOSH IDLH	<i>Immediately Dangerous to Life or Health</i>
ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
NDF	<i>no data</i>

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

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Ceiling Limit Value	MAC	Maximum Allowable Concentration
X	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.
SKN*	Skin designation	SKN+	Skin sensitization
RSP+	Respiratory sensitization	**	Hazard Designation

**Product Code(s)** 2314111-BR  
**Issue Date** 03-Jun-2016  
**Version** 1.2

**Product Name** Free Chlorine Buffer for CL17 Analyzer  
**Revision Date** 29-Mar-2018  
**Page** 12 / 12

C Carcinogen  
M Mutagen

R Reproductive toxicant

**NIOSH (RTECS) Number** None reported

**Key literature references and sources for data**

See Section 11: TOXICOLOGICAL INFORMATION

See Section 12: ECOLOGICAL INFORMATION

**Issue Date** 03-Jun-2016

**Revision Date** 29-Mar-2018

**Revision Note** None

**Restrictions on use** None

**Training Advice** Call a POISON CENTER or doctor/physician if you feel unwell

This material safety data sheet has been prepared according to Brazilian legislation and ABNT NBR 14725:2009

**Disclaimer**

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

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

HACH COMPANY©2018

End of Safety Data Sheet