

Kit SDS Cover Sheet

Doc. ID: 467910-75: Rev. AH
Revised (year/month/day) 2015/05/08

Product Information

Product Name Iron Color Reagent
Part Number 467910
Series Name SYNCHRON Systems

Additional Product Information

For In Vitro Diagnostic Use. See product literature for details.

Components

Description Iron Reagent (Compartment A)
Iron Reagent (Compartment C)

Transport Information

Transportation of this product is not regulated under ICAO, IMDG, US DOT, European ADR or Canadian TDG.



SAFETY DATA SHEET

Doc. ID: 467910-75 Rev. AH
Revised (year/month/day) 2015/05/08

Section 1 Identification of the Substance/mixture and of the Company/undertaking

1.1 Product Identifier

Product Name Iron Reagent (Compartment A)
Part Number Component of P/N 467910
Series Name SYNCHRON Systems

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

Product Use For In Vitro Diagnostic Use. See product literature for details.

1.3 Details of the supplier of the safety data sheet

Manufacturer

Beckman Coulter, Inc.
250 S. Kraemer Blvd
Brea, CA 92821, U.S.A.
Tel: 800-854-3633

EC REP Address

Beckman Coulter Eurocenter S.A.
22, rue Juste-Oliver, Case Postale 1044,
CH-1260 Nyon 1, Switzerland.
Telephone +41 (0)22 365 36 11
Monday through Friday, 9:00 am to
7:00pm)

e-mail address SDSNT@beckman.com

1.4 Emergency telephone number

Telephone number (24H) Chemtrec Emergency Tel No. U.S.A. 800-424-9300, International (001)
703-527-3887

Distributor and Emergency Phone No.

Refer to attached list, Document ID: [472050](#), for local distributor and emergency phone numbers.

Section 2 Hazards Identification

2.1 Classification of substance or mixture

Product Description Mixture
Colorless; Clear; Liquid; Strong penetrating odor

Classification according to EC 1272/2008 (CLP/GHS)

Acute Toxicity Oral, Category 4
Skin Irritation Category 2
Eye Damage Category 1
Skin Sensitization Category 1
Carcinogenicity Category 2
Aquatic Hazard Long term, Category 3

Classification according to EC Directives 1999/45/EC and 67/548/EEC

Xn;R40-43

Section 2 Hazards Identification (Continued)

Classification according to US-OSHA (HCS 29 CFR 1910.1200) and UN GHS

Acute Toxicity Oral, Category 4
Skin Irritation Category 2
Eye Damage Category 1
Skin Sensitization Category 1
Carcinogenicity Category 2
Specific Target Organ Toxicity Repeated Exposure Category 2
Aquatic Hazard Acute, Category 3
Aquatic Hazard Long term, Category 3

2.2 Label Elements

According to EC 1272/2008 (CLP/GHS), US-OSHA and UN GHS

Hazardous Ingredients

Acetic Acid
Hydroxylamine Hydrochloride
Guanidine Hydrochloride
octylphenoxypoly(ethoxyethanol)

Pictogram



Signal Word

DANGER

Hazard Statements

H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements

P201 Obtain special instructions before use.
P261 Avoid breathing vapours.
P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves, protective clothing and eye/face protection.
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
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.
P308+P313 IF exposed or concerned: Get medical advice/attention.

Section 2 Hazards Identification (Continued)

P310 Immediately call a POISON CENTER or doctor/physician.
P314 Get medical advice/attention if you feel unwell.
P330 Rinse mouth.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before use.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/national regulations
Product label will display most significant precautionary statements.

2.3 Other hazards

Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

See Section 11 Toxicological Information for more detailed health information.

Section 3 Composition and Information on Ingredients

3.2 Mixtures

Hazardous Ingredients:		Hazard Classification of Pure Ingredients			
Chemical Name	% by wt.	EU-67/548/EEC	EU 1272/2008 CLP/GHS	GHS	
Guanidine Hydrochloride CAS # 50-01-1 EINECS # 200-002-3 Index # 607-148-00-0	10 - 20	Xn;R22-36/38	Acute Tox. Oral 4 Eye Irrit. 2 Skin Irrit. 2 H302; H315; H319	Acute Tox. Inhal. 5 Acute Tox. Oral 4 Eye Irrit. 2 Skin Irrit. 2 H302; H315; H319; H333	
Acetic Acid CAS # 64-19-7 EINECS # 200-580-7 Index # 607-002-00-6	< 3	C;R10-35	Flam. Liq. 3 Skin Corr. 1A H226; H314	Flam. Liq. 3 Skin Corr. 1A H226; H314	
Hydroxylamine Hydrochloride CAS # 5470-11-1 EINECS # 226-798-2 Index # Not available	< 3	Xn;R2-21/22-36/38- 40-43-48/22-50 Carc. Cat. 3 N;R50	Acute Tox. Dermal 4 Acute Tox. Oral 3 Aquatic Acute 1 Aquatic Longterm 1 Carc. 2 Eye Irrit. 2 Met. Corr. 1 STOT RE 2 Skin Irrit. 2 Skin Sens. 1 H290; H301; H312; H315; H317; H319; H351; H373; H410	Acute Tox. Dermal 4 Acute Tox. Oral 3 Aquatic Acute 1 Aquatic Longterm 1 Carc. 2 Eye Irrit. 2 Met. Corr. 1 STOT RE 2 Skin Irrit. 2 Skin Sens. 1 H290; H301; H312; H315; H317; H319; H351; H373; H410	

Section 3 Composition and Information on Ingredients (Continued)

octylphenoxypoly(ethoxyethanol) CAS # 9036-19-5 EINECS # Not available Index # Not available	< 1	Xi;R37/38-41	Eye Dam. 1 H318	Acute Tox. Oral 5 Eye Dam. 1 H303; H318
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See section 8 for available Occupational exposure limits

See Section 15 for additional regulatory information

See Section 16 for hazard class, hazard statements and risk phrase description

Section 4 First Aid Measures

4.1 Description of first aid measures

Inhalation

If product is inhaled, move exposed individual to fresh air. If individual is not breathing, begin artificial respiration immediately and obtain medical attention.

Eye Contact

If product enters eyes, wash eyes gently under running water for 15 minutes or longer, making sure that the eyelids are held open and obtain medical attention immediately.

Skin Contact

In case of skin contact, flush with copious amounts of water for at least 15 minutes. If pain or irritation occur, obtain medical attention.

Ingestion

If ingested, wash mouth out with water. If irritation or discomfort occurs, seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Harmful if swallowed.

Causes skin irritation.

Causes serious eye damage.

May cause an allergic skin reaction.

Suspected of causing cancer.

May cause damage to organs through prolonged or repeated exposure.

See Section 11 Toxicological Information for more detailed health information.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

Section 5 Fire Fighting Measures

Flammable Properties

Nonflammable aqueous solution.

5.1 Extinguishing Media

In case of fire use carbon dioxide (CO₂), dry chemical, water spray or foam.
For large fires use extinguishing media suitable for surrounding fire.

5.2 Special hazards arising from the substance or mixture

Special Fire and Explosion Hazards

No special hazards determined.

Section 5 Fire Fighting Measures (Continued)

Hazardous Combustion Products

No combustion products posing significant hazards are expected from this product (an aqueous solution).

5.3 Advice for fire fighters

Protective Equipment

Self-contained breathing apparatus is recommended for firefighters in all chemical fire situations.

5.4 Additional information

No further relevant information available.

Section 6 Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions

Avoid inhaling, ingesting, and contact with eyes and skin.
Wear protective gloves, protective clothing and eye/face protection.

6.2 Environmental Precautions

Contain spill to prevent migration.
Do not allow the undiluted product to enter sewers/surface or ground water.
Dispose of contents/container in accordance with local regulations

6.3 Methods and material for containment and cleaning up

Spill and Leak Procedures

Absorb spilled material with an appropriate inert, non-flammable absorbent and dispose according to local regulations.

6.4 Reference to other sections

Refer sections 8 and 13.

Section 7 Handling and Storage

7.1 Precautions for safe handling

Avoid inhaling, ingesting, and contact with eyes and skin.

7.2 Conditions for safe storage, including any incompatibilities

Store at 2 to 8°C , as directed on the product label.
To maintain product quality, store according to the instructions in the product labeling.
Store away from strong acids, strong bases, strong oxidizers and incompatible materials (section 10).

7.3 Specific end uses

No further relevant information available.

Section 8 Exposure Controls and Personal Protection

8.1 Control parameters

Exposure Limits

US OSHA

Acetic Acid
CAS # 64-19-7

10 ppm TWA; 25 mg/m³ TWA

Section 8 Exposure Controls and Personal Protection (Continued)

ACGIH

Acetic Acid
CAS # 64-19-7 15 ppm STEL; 10 ppm TWA

DFG MAK

Acetic Acid
CAS # 64-19-7 20 ppm Peak; 50 mg/m³ Peak; 10 ppm TWA MAK; 25 mg/m³ TWA MAK

Ireland

Acetic Acid
CAS # 64-19-7 10 ppm TWA; 25 mg/m³ TWA; 15 ppm STEL; 37 mg/m³ STEL

IOELVs

None established

NIOSH

Acetic Acid
CAS # 64-19-7 50 ppm IDLH; 15 ppm STEL; 37 mg/m³ STEL; 10 ppm TWA; 25 mg/m³ TWA

Japan

Acetic Acid
CAS # 64-19-7 10 ppm OEL; 25 mg/m³ OEL

8.2 Exposure controls

Engineering Controls

No special engineering controls are required. Use with good general ventilation.

Eye Protection

Safety glasses or chemical goggles should be worn to prevent eye contact. Refer U.S. OSHA 29 CFR 1910.133, European Standard EN166 or appropriate government standards.

Skin Protection

Impervious gloves, such as Nitrile or equivalent, should be worn to prevent skin contact. Refer U.S. OSHA 29 CFR 1910.138, European Standard EN374 or appropriate government standards.

Respiratory Protection

Under normal conditions, the use of this product should not require respiratory protection. If overexposure should occur and ventilation is not adequate to maintain airborne concentrations at acceptable levels, the use of respiratory protection should be evaluated by a qualified professional.

Section 9 Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid	Specific Gravity (Water=1.0)	≈1.071 @22-26°C
Color	Colorless	Solubility	
Transparency	Clear	Water	Miscible
Odor	Strong penetrating odor	Organic	Not determined
pH	4.1-4.5 @22-26°C	Partition coefficient: n-octanol/water	Not determined

Section 9 Physical and Chemical Properties (Continued)

Freezing Point	Not determined	Auto-ignition Temp.	Not applicable
Boiling Point	Not determined	Decomposition Temperature	Not determined
Flash Point	Not applicable	Percent Volatiles	Not applicable
Evaporation Rate	Not determined	Vapor Pressure	Not determined
Flammability (Solid, Gas)	Not applicable	Viscosity	Not determined
Flammability Limits	Not applicable	Explosive Properties	Not applicable
Vapor Density	Not determined	Oxidizing Properties	Not applicable
Odor Threshold	Acetic Acid 0.074 ppm geometric mean air odor threshold = (detectable)		
9.2 Other Information	No further relevant information available.		

Section 10 Stability and Reactivity

10.1 Reactivity	No further relevant information available.
10.2 Chemical Stability	The product is stable in accordance with recommended storage conditions.
10.3 Possibility of hazardous reactions	No further relevant information available.
10.4 Conditions to Avoid	To maintain product performance keep away from strong acids, strong bases, strong oxidizers. Avoid exposure to heat and direct sunlight.
10.5 Incompatible materials	No further relevant information available.
10.6 Hazardous Decomposition Products	No decomposition products posing significant hazards would be expected from this product (an aqueous solution).

Section 11 Toxicological Information

11.1 Information on toxicological effects	
Toxicity Data for Hazardous Ingredients	
Guanidine Hydrochloride CAS # 50-01-1	Dermal LD50 Rabbit >2000 mg/kg
Acetic Acid CAS # 64-19-7	Inhalation LC50 Rat 11.4 mg/L 4 h; Oral LD50 Rat 3310 mg/kg; Dermal LD50 Rabbit 1060 mg/kg
octylphenoxypoly(ethoxyethanol) CAS # 9036-19-5	Oral LD50 Rat 4190 mg/kg
Primary Routes of Exposure	Eye contact, ingestion, inhalation, and skin contact.
Skin Corrosion/Irritation	Causes skin irritation.

Section 11 Toxicological Information (Continued)

Serious eye damage/eye irritation	Causes serious eye damage.
Respiratory/skin sensitization	May cause an allergic skin reaction.
Carcinogenicity	Suspected of causing cancer. Hydroxylamine hydrochloride (CAS 5470-11-1) is listed with 1272/2008 EC as Category 2 carcinogen.
Germ cell mutagenicity	No data available.
Reproductive Toxicity	No data available.
Specific target organ toxicity – single exposure	No data available.
Specific target organ toxicity – repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	No data available.
Other Information	Harmful if swallowed.

Section 12 Ecological Information

12.1 Ecotoxicity	
Fresh Water Species	
Acetic Acid CAS # 64-19-7	96 h LC50 Pimephales promelas: 79 mg/L [static]; 96 h LC50 Lepomis macrochirus: 75 mg/L [static]
Microtox	No information available.
Water Flea	
Acetic Acid CAS # 64-19-7	24 h EC50 Daphnia magna: 47 mg/L; 48 h EC50 Daphnia magna: 65 mg/L [Static]
Fresh Water Algae	No information available.
12.2 Persistence and degradability	Not determined for the product.
12.3 Bioaccumulation	Not determined for the product.
12.4 Mobility in soil	Not determined for the product.

Section 12 Ecological Information (Continued)

12.5 Results of PBT and vPvB assessment

Not determined for the product. PBT: Not applicable, vPvB: Not applicable.

12.6 Other Adverse Effects

Harmful to aquatic life with long lasting effects.

This product is classified as environmentally hazardous. Do not allow undiluted product to enter sewer/surface or ground water. Dispose of contents/container to in accordance with local/national regulations

Section 13 Disposal Considerations

13.1 Waste treatment methods

Product Waste Disposal

Chemical residues and remains should be routinely handled as special waste. This must be disposed of in compliance with anti-pollution and other laws of the country concerned. To ensure compliance we recommend that you contact the relevant (local) authorities and/or an approved waste-disposal company for information.

13.2 Additional information

Suggested European waste catalogue 18 01 06* - chemicals consisting of or containing dangerous substances. Dispose in accordance with national, state and local waste regulations.

Section 14 Transport Information

Transportation of this product is not regulated under ICAO, IMDG, US DOT, European ADR or Canadian TDG.

Section 15 Regulatory Information

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

US Federal and State Regulations

SARA 313 No ingredients listed.

CERCLA RG's, 40 CFR 302.4 Acetic Acid is listed.

California Proposition 65 No ingredients listed.

Massachusetts MSL Acetic Acid is listed.

New Jersey Dept. of Health RTK List

Acetic Acid is listed.

Pennsylvania RTK Acetic Acid is listed.

EU Regulations

This SDS complies with EC Regulations 1907/2006 (REACH) and amendments.

Water Hazard Class (Germany) WGK 2, water endangering

REACH 1907/2006 EC - Annex XIV - list of substances subject to authorization.

No ingredients listed.

Section 15 Regulatory Information (Continued)

According to EC Directives (1999/45/EC and 67/548 EEC)

Harmful

Xn



Risk and Safety Phrases

R40 Limited evidence of a carcinogenic effect

R43 May cause sensitization by skin contact.

S36/37 Wear suitable protective clothing and gloves.

S61 Avoid release to the environment. Refer to special instructions/Safety data sheets.

Canada

This product is exempt from WHMIS label and SDS requirements.

PIN

Not applicable

Ingredients on Ingredient Disclosure List

Acetic Acid

octylphenoxypoly(ethoxyethanol)

Ingredients with unknown toxicological properties

Product is exempt

15.2 Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out.

Some hazardous ingredients listed in Section 15 are below OSHAs and WHMIS' 1.0% w/w (0.1% for carcinogens) or EU's ingredient specific concentrations required for reporting in Section 3.

Section 16 Other Information

Beckman Coulter Safety Rating	Flammability: 0 Health: 3 Reactivity with Water: 0 Contact: 3	Code 0=None 1=Slight 2=Caution 3=Severe
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Revision Changes

Updated to GHS.

Hazard Class, hazard statements and risk phrase description from section 3

C - Corrosive

Carc. Cat. 3 - Carcinogen Category 3

N - Dangerous for the environment

Xi - Irritant

Xn - Harmful

R10 Flammable.

R35 Causes severe burns.

R2 Risk of explosion by shock, friction, fire or other sources of ignition.

R21/22 Harmful in contact with skin and if swallowed.

R36/38 Irritating to eyes and skin.

R40 Limited evidence of a carcinogenic effect

R43 May cause sensitization by skin contact.

R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.

R50 Very toxic to aquatic organisms.

Section 16 Other Information (Continued)

R22 Harmful if swallowed.
R37/38 Irritating to respiratory system and skin.
R41 Risk of serious damage to eyes.
Aquatic Acute 1 - Aquatic Hazard Acute, Category 1
Acute Tox. Dermal 4 - Acute Toxicity Dermal, Category 4
Acute Tox. Inhal. 5 - Acute Toxicity Inhalation, Category 5
Acute Tox. Oral 3 - Acute Toxicity Oral, Category 3
Acute Tox. Oral 4 - Acute Toxicity Oral, Category 4
Acute Tox. Oral 5 - Acute Toxicity Oral, Category 5
Carc. 2 - Carcinogenicity Category 2
Met. Corr. 1 - Corrosive To Metal Category 1
Eye Dam. 1 - Eye Damage Category 1
Eye Irrit. 2 - Eye Irritation Category 2
Flam. Liq. 3 - Flammable Liquids, Category 3
Aquatic Longterm 1 - Aquatic Hazard Long term, Category 1
Skin Corr. 1A - Skin Corrosion Category 1A
Skin Irrit. 2 - Skin Irritation Category 2
Skin Sens. 1 - Skin Sensitization Category 1
STOT RE 2 - Specific Target Organ Toxicity Repeated Exposure Category 2
H226 - Flammable liquid and vapour.
H290 - May be corrosive to metals.
H301 - Toxic if swallowed.
H302 - Harmful if swallowed.
H303 - May be harmful if swallowed
H312 - Harmful in contact with skin.
H314 - Causes severe skin burns and eye damage.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H318 - Causes serious eye damage.
H319 - Causes serious eye irritation.
H333 - May be harmful if inhaled
H351 - Suspected of causing cancer.
H373 - May cause damage to organs through prolonged or repeated exposure.
H410 - Very toxic to aquatic life with long lasting effects.

Section 16 Other Information (Continued)

Abbreviations and Acronyms

ACGIH - American Conference of Governmental Industrial Hygienists
ADR - European Agreement Concerning The International Carriage Of Dangerous Goods By Road
CERCLA - The Comprehensive Environmental Response, Compensation, and Liability Act
CLP - Classification, Labeling and Packaging
DFGMAK - Republic Germany's maximum exposure limit
GHS - Globally Harmonized System
HCS - Hazard Communication Standard
IARC - International Agency for Research on Cancer
IATA - International Air Transport Association
ICAO - International Civil Aviation Organization
IMDG - International Maritime Dangerous Goods
IOELVs - European Unions' Indicative Occupational Exposure Limit Values
NIOSH - National Institute for Occupational Safety and Health
NTP - National Toxicology Program
OSHA - Occupational Safety and Health Administration
PBT - Persistent bioaccumulative and toxic substances
SARA - Superfund Amendments and Reauthorization Act
TDG - Canadian Transportation Of Dangerous Goods Regulations.
UN GHS - United Nations Globally Harmonized System
US DOT - United States Department of Transportation
WHMIS - Workplace Hazardous Material Information System
vPvB - Very persistent and very bioaccumulative substances
EC50 - Effective Concentration, 50%
LC50 - Lethal Concentration, 50%
LD50 - Lethal Dose, 50%

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SAFETY DATA SHEET

Doc. ID: 467910-75 Rev. AH
Revised (year/month/day) 2015/05/08

Section 1 Identification of the Substance/mixture and of the Company/undertaking

1.1 Product Identifier

Product Name Iron Reagent (Compartment C)
Part Number Component of P/N 467910
Series Name SYNCHRON Systems

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

Product Use For In Vitro Diagnostic Use. See product literature for details.

1.3 Details of the supplier of the safety data sheet

Manufacturer

Beckman Coulter, Inc.
250 S. Kraemer Blvd
Brea, CA 92821, U.S.A.
Tel: 800-854-3633

EC REP Address

Beckman Coulter Eurocenter S.A.
22, rue Juste-Oliver, Case Postale 1044,
CH-1260 Nyon 1, Switzerland.
Telephone +41 (0)22 365 36 11
Monday through Friday, 9:00 am to
7:00pm)

e-mail address SDSNT@beckman.com

1.4 Emergency telephone number

Telephone number (24H) Chemtrec Emergency Tel No. U.S.A. 800-424-9300, International (001)
703-527-3887

Distributor and Emergency Phone No.

Refer to attached list, Document ID: [472050](#), for local distributor and emergency phone numbers.

Section 2 Hazards Identification

2.1 Classification of substance or mixture

Product Description Mixture
Colorless; Transparent; Liquid; Pungent

Classification according to EC 1272/2008 (CLP/GHS)

Skin Sensitization Category 1
Carcinogenicity Category 2
Aquatic Hazard Long term, Category 3

Classification according to EC Directives 1999/45/EC and 67/548/EEC

Xn;R40-43

Section 2 Hazards Identification (Continued)

Classification according to US-OSHA (HCS 29 CFR 1910.1200) and UN GHS

Skin Irritation Category 3
Skin Sensitization Category 1
Carcinogenicity Category 2
Specific Target Organ Toxicity Repeated Exposure Category 2
Aquatic Hazard Acute, Category 3
Aquatic Hazard Long term, Category 3

2.2 Label Elements

According to EC 1272/2008 (CLP/GHS), US-OSHA and UN GHS

Hazardous Ingredients

Hydroxylamine Hydrochloride

Pictogram



Signal Word

WARNING

Hazard Statements

H316 Causes mild skin irritation.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements

P201 Obtain special instructions before use.
P261 Avoid breathing vapours.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves, protective clothing and eye/face protection.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P314 Get medical advice/attention if you feel unwell.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before use.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/national regulations
Product label will display most significant precautionary statements.

2.3 Other hazards

Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

See Section 11 Toxicological Information for more detailed health information.

Section 3 Composition and Information on Ingredients

3.2 Mixtures

Hazardous Ingredients:		Hazard Classification of Pure Ingredients			
Chemical Name	% by wt.	EU-67/548/EEC	EU 1272/2008 CLP/GHS	GHS	
Hydroxylamine Hydrochloride CAS # 5470-11-1 EINECS # 226-798-2 Index # Not available	< 3	Xn;R2-21/22-36/38-40-43-48/22-50 Carc. Cat. 3 N;R50	Acute Tox. Dermal 4 Acute Tox. Oral 3 Aquatic Acute 1 Aquatic Longterm 1 Carc. 2 Eye Irrit. 2 Met. Corr. 1 STOT RE 2 Skin Irrit. 2 Skin Sens. 1 H290; H301; H312; H315; H317; H319; H351; H373; H410	Acute Tox. Dermal 4 Acute Tox. Oral 3 Aquatic Acute 1 Aquatic Longterm 1 Carc. 2 Eye Irrit. 2 Met. Corr. 1 STOT RE 2 Skin Irrit. 2 Skin Sens. 1 H290; H301; H312; H315; H317; H319; H351; H373; H410	

See section 8 for available Occupational exposure limits

See Section 15 for additional regulatory information

See Section 16 for hazard class, hazard statements and risk phrase description

Section 4 First Aid Measures

4.1 Description of first aid measures

Inhalation	If product is inhaled, move exposed individual to fresh air. If individual is not breathing, begin artificial respiration immediately and obtain medical attention.
Eye Contact	If product enters eyes, wash eyes gently under running water for 15 minutes or longer, making sure that the eyelids are held open. If pain or irritation occur, obtain medical attention.
Skin Contact	In case of skin contact, flush with copious amounts of water for at least 15 minutes. If pain or irritation occur, obtain medical attention.
Ingestion	If ingested, wash mouth out with water. If irritation or discomfort occurs, seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Causes mild skin irritation.
May cause an allergic skin reaction.
Suspected of causing cancer.
May cause damage to organs through prolonged or repeated exposure.
See Section 11 Toxicological Information for more detailed health information.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

Section 5 Fire Fighting Measures

Flammable Properties	Nonflammable aqueous solution.
5.1 Extinguishing Media	In case of fire use carbon dioxide (CO ₂), dry chemical, water spray or foam. For large fires use extinguishing media suitable for surrounding fire.
5.2 Special hazards arising from the substance or mixture	
Special Fire and Explosion Hazards	No special hazards determined.
Hazardous Combustion Products	No combustion products posing significant hazards are expected from this product (an aqueous solution).
5.3 Advice for fire fighters	
Protective Equipment	Self-contained breathing apparatus is recommended for firefighters in all chemical fire situations.
5.4 Additional information	No further relevant information available.

Section 6 Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures	
Personal Precautions	Avoid inhaling, ingesting, and contact with eyes and skin. Wear protective gloves, protective clothing and eye/face protection.
6.2 Environmental Precautions	Contain spill to prevent migration. Do not allow the undiluted product to enter sewers/surface or ground water. Dispose of contents/container in accordance with local regulations
6.3 Methods and material for containment and cleaning up	
Spill and Leak Procedures	Absorb spilled material with an appropriate inert, non-flammable absorbent and dispose according to local regulations.
6.4 Reference to other sections	Refer sections 8 and 13.

Section 7 Handling and Storage

7.1 Precautions for safe handling	Avoid inhaling, ingesting, and contact with eyes and skin.
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Section 7 Handling and Storage (Continued)

7.2 Conditions for safe storage, including any incompatibilities

Store at 2 to 8°C , as directed on the product label.

To maintain product quality, store according to the instructions in the product labeling.

Store away from strong acids, strong bases, strong oxidizers and incompatible materials (section 10).

7.3 Specific end uses

No further relevant information available.

Section 8 Exposure Controls and Personal Protection

8.1 Control parameters

Exposure Limits

US OSHA None established

ACGIH None established

DFG MAK None established

Ireland None established

IOELVs None established

NIOSH None established

Japan None established

8.2 Exposure controls

Engineering Controls

No special engineering controls are required. Use with good general ventilation.

Eye Protection

Safety glasses or chemical goggles should be worn to prevent eye contact. Refer U.S. OSHA 29 CFR 1910.133, European Standard EN166 or appropriate government standards.

Skin Protection

Impervious gloves, such as Nitrile or equivalent, should be worn to prevent skin contact.

Refer U.S. OSHA 29 CFR 1910.138, European Standard EN374 or appropriate government standards.

Respiratory Protection

Under normal conditions, the use of this product should not require respiratory protection. If overexposure should occur and ventilation is not adequate to maintain airborne concentrations at acceptable levels, the use of respiratory protection should be evaluated by a qualified professional.

Section 9 Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid	Specific Gravity (Water=1.0)	≈1.011 @20°C
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Section 9 Physical and Chemical Properties (Continued)

Color	Colorless	Solubility	
Transparency	Transparent	Water	Miscible
Odor	Pungent	Organic	Not determined
pH	4.1 - 4.5	Partition coefficient: n-octanol/water	Not determined
Freezing Point	Not determined	Auto-ignition Temp.	Not applicable
Boiling Point	Not determined	Decomposition Temperature	Not determined
Flash Point	Not applicable	Percent Volatiles	Not applicable
Evaporation Rate	Not determined	Vapor Pressure	Not determined
Flammability (Solid, Gas)	Not applicable	Viscosity	Not determined
Flammability Limits	Not applicable	Explosive Properties	Not applicable
Vapor Density	Not determined	Oxidizing Properties	Not applicable
Odor Threshold	Not applicable		
9.2 Other Information	No further relevant information available.		

Section 10 Stability and Reactivity

10.1 Reactivity	No further relevant information available.
10.2 Chemical Stability	The product is stable in accordance with recommended storage conditions.
10.3 Possibility of hazardous reactions	No further relevant information available.
10.4 Conditions to Avoid	To maintain product performance keep away from strong acids, strong bases, strong oxidizers. Avoid exposure to heat and direct sunlight.
10.5 Incompatible materials	No further relevant information available.
10.6 Hazardous Decomposition Products	No decomposition products posing significant hazards would be expected from this product (an aqueous solution).

Section 11 Toxicological Information

11.1 Information on toxicological effects	
Toxicity Data for Hazardous Ingredients	
	Not applicable

Section 11 Toxicological Information (Continued)

Primary Routes of Exposure	Eye contact, ingestion, inhalation, and skin contact.
Skin Corrosion/Irritation	Causes mild skin irritation.
Serious eye damage/eye irritation	No data available.
Respiratory/skin sensitization	May cause an allergic skin reaction.
Carcinogenicity	Suspected of causing cancer. Hydroxylamine hydrochloride (CAS 5470-11-1) is listed with 1272/2008 EC as Category 2 carcinogen.
Germ cell mutagenicity	No data available.
Reproductive Toxicity	No data available.
Specific target organ toxicity – single exposure	No data available.
Specific target organ toxicity – repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	No data available.
Other Information	No further relevant information available.

Section 12 Ecological Information

12.1 Ecotoxicity	
Fresh Water Species	No information available.
Microtox	No information available.
Water Flea	No information available.
Fresh Water Algae	No information available.
12.2 Persistence and degradability	Not determined for the product.
12.3 Bioaccumulation	Not determined for the product.
12.4 Mobility in soil	Not determined for the product.

Section 12 Ecological Information (Continued)

12.5 Results of PBT and vPvB assessment

Not determined for the product. PBT: Not applicable, vPvB: Not applicable.

12.6 Other Adverse Effects

Harmful to aquatic life with long lasting effects.

This product is classified as environmentally hazardous. Do not allow undiluted product to enter sewer/surface or ground water. Dispose of contents/container to in accordance with local/national regulations

Section 13 Disposal Considerations

13.1 Waste treatment methods

Product Waste Disposal

Chemical residues and remains should be routinely handled as special waste. This must be disposed of in compliance with anti-pollution and other laws of the country concerned. To ensure compliance we recommend that you contact the relevant (local) authorities and/or an approved waste-disposal company for information.

13.2 Additional information

Suggested European waste catalogue 18 01 06* - chemicals consisting of or containing dangerous substances. Dispose in accordance with national, state and local waste regulations.

Section 14 Transport Information

Transportation of this product is not regulated under ICAO, IMDG, US DOT, European ADR or Canadian TDG.

Section 15 Regulatory Information

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

US Federal and State Regulations

SARA 313 No ingredients listed.

California Proposition 65 No ingredients listed.

Massachusetts MSL No ingredients listed.

New Jersey Dept. of Health RTK List

No ingredients listed.

Pennsylvania RTK No ingredients listed.

EU Regulations

This SDS complies with EC Regulations 1907/2006 (REACH) and amendments.

Water Hazard Class (Germany) WGK 2, water endangering

REACH 1907/2006 EC - Annex XIV - list of substances subject to authorization.

No ingredients listed.

Section 15 Regulatory Information (Continued)

According to EC Directives (1999/45/EC and 67/548 EEC)

Harmful

Xn



Risk and Safety Phrases

R40 Limited evidence of a carcinogenic effect

R43 May cause sensitization by skin contact.

S36/37 Wear suitable protective clothing and gloves.

S61 Avoid release to the environment. Refer to special instructions/Safety data sheets.

Canada

This product is exempt from WHMIS label and SDS requirements.

PIN

Not applicable

Ingredients on Ingredient Disclosure List

octylphenoxy poly(ethoxyethanol)

Ingredients with unknown toxicological properties

Product is exempt

15.2 Chemical Safety Assessment A Chemical Safety Assessment has not been carried out.

Some hazardous ingredients listed in Section 15 are below OSHAs and WHMIS' 1.0% w/w (0.1% for carcinogens) or EU's ingredient specific concentrations required for reporting in Section 3.

Section 16 Other Information

Beckman Coulter Safety Rating	Flammability: 0 Health: 2 Reactivity with Water: 0 Contact: 2	Code 0=None 1=Slight 2=Caution 3=Severe
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Revision Changes

Updated to GHS.

Hazard Class, hazard statements and risk phrase description from section 3

Carc. Cat. 3 - Carcinogen Category 3

N - Dangerous for the environment

Xn - Harmful

R2 Risk of explosion by shock, friction, fire or other sources of ignition.

R21/22 Harmful in contact with skin and if swallowed.

R36/38 Irritating to eyes and skin.

R40 Limited evidence of a carcinogenic effect

R43 May cause sensitization by skin contact.

R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.

R50 Very toxic to aquatic organisms.

Aquatic Acute 1 - Aquatic Hazard Acute, Category 1

Acute Tox. Dermal 4 - Acute Toxicity Dermal, Category 4

Acute Tox. Oral 3 - Acute Toxicity Oral, Category 3

Carc. 2 - Carcinogenicity Category 2

Met. Corr. 1 - Corrosive To Metal Category 1

Section 16 Other Information (Continued)

Eye Irrit. 2 - Eye Irritation Category 2
Aquatic Longterm 1 - Aquatic Hazard Long term, Category 1
Skin Irrit. 2 - Skin Irritation Category 2
Skin Sens. 1 - Skin Sensitization Category 1
STOT RE 2 - Specific Target Organ Toxicity Repeated Exposure Category 2
H290 - May be corrosive to metals.
H301 - Toxic if swallowed.
H312 - Harmful in contact with skin.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H351 - Suspected of causing cancer.
H373 - May cause damage to organs through prolonged or repeated exposure.
H410 - Very toxic to aquatic life with long lasting effects.

Abbreviations and Acronyms

ACGIH - American Conference of Governmental Industrial Hygienists
ADR - European Agreement Concerning The International Carriage Of Dangerous Goods By Road
CERCLA - The Comprehensive Environmental Response, Compensation, and Liability Act
CLP - Classification, Labeling and Packaging
DFGMAK - Republic Germany's maximum exposure limit
GHS - Globally Harmonized System
HCS - Hazard Communication Standard
IARC - International Agency for Research on Cancer
IATA - International Air Transport Association
ICAO - International Civil Aviation Organization
IMDG - International Maritime Dangerous Goods
IOELVs - European Unions' Indicative Occupational Exposure Limit Values
NIOSH - National Institute for Occupational Safety and Health
NTP - National Toxicology Program
OSHA - Occupational Safety and Health Administration
PBT - Persistent bioaccumulative and toxic substances
SARA - Superfund Amendments and Reauthorization Act
TDG - Canadian Transportation Of Dangerous Goods Regulations.
UN GHS - United Nations Globally Harmonized System
US DOT - United States Department of Transportation
WHMIS - Workplace Hazardous Material Information System
vPvB - Very persistent and very bioaccumulative substances

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