



Be Right™

SAFETY DATA SHEET

Issue Date 08-Apr-2016

Revision Date 08-Apr-2016

Version 3

Page 1 / 19

1. IDENTIFICATION

Product identifier

Product Name Reagent 1 Ammonia/Monochloramine Indicator Solutio

Other means of identification

Product Code(s) 2776353

Safety data sheet number M01711

UN/ID no UN1987

HMRIC # -

Recommended use of the chemical and restrictions on use

Recommended Use Determination of monochloramine and ammonia.

Uses advised against None.

Restrictions on use None.

Details of the supplier of the safety data sheet

Manufacturer Address

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

Emergency telephone number

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

Product Information

Chemical Name Not applicable

Formula Not applicable

CAS No Not applicable

Alternate CAS Number Not applicable

NIOSH (RTECS) Number None reported

2. HAZARDS IDENTIFICATION

Classification

Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| | |
|--|------------|
| Flammable liquids | Category 3 |
| Serious eye damage/eye irritation | Category 2 |
| Specific target organ toxicity (single exposure) | Category 3 |

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Signal word - Warning

Product Code(s) 2776353

Issue Date 08-Apr-2016

Version 3

Product Name Reagent 1 Ammonia/Monochloramine Indicator
Solutio

Revision Date 08-Apr-2016

Page 2 / 19



Hazard statements

H226 - Flammable liquid and vapor

H319 - Causes serious eye irritation

H335 - May cause respiratory irritation

H336 - May cause drowsiness or dizziness

Precautionary statements

P264 - Wash face, hands and any exposed skin thoroughly after handling

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P271 - Use only outdoors or in a well-ventilated area

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking

P233 - Keep container tightly closed

P240 - Ground/bond container and receiving equipment

P241 - Use explosion-proof electrical/ ventilating/ lighting/ equipment

P242 - Use only non-sparking tools

P243 - Take precautionary measures against static discharge

P235 - Keep cool

P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

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

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P337 + P313 - If eye irritation persists: Get medical advice/attention

P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

P405 - Store locked up

P501 - Dispose of contents/ container to an approved waste disposal plant

Other Information

Causes mild skin irritation

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable

Mixture

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Product Code(s) 2776353

Issue Date 08-Apr-2016

Version 3

Product Name Reagent 1 Ammonia/Monochloramine Indicator
Solutio

Revision Date 08-Apr-2016

Page 3 / 19

| Chemical Name | CAS No | Weight-% | HMRIC # |
|--------------------------------|------------|----------|---------|
| Demineralized Water | 7732-18-5 | 65.2782 | - |
| Isopropanol | 67-63-0 | 29.04 | - |
| 2-Hydroxybenzyl Alcohol | 90-01-7 | 5.1653 | - |
| Sodium Nitroprusside Dihydrate | 14402-89-2 | 0.5165 | - |

4. FIRST AID MEASURES

Description of first aid measures

| | |
|---|--|
| General advice | Immediate medical attention is required. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). If symptoms persist, call a physician. Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/spray. Call a POISON CENTER or doctor if you feel unwell. In the case of skin irritation or allergic reactions see a physician. |
| Eye contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician. Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If eye irritation persists: Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| Skin contact | Wash off immediately with plenty of water. Immediate medical attention is not required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash hands thoroughly after handling. |
| Inhalation | Remove to fresh air. If symptoms persist, call a physician. Immediate medical attention is not required. Move to fresh air in case of accidental inhalation of vapors. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. |
| Ingestion | Immediate medical attention is not required. Rinse mouth. Drink plenty of water. Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician. Call a POISON CENTER or doctor/physician if you feel unwell. |
| Self-protection of the first aider | Remove all sources of ignition. Use personal protective equipment as required. |

Most important symptoms and effects, both acute and delayed

Symptoms See Section 11: TOXICOLOGICAL INFORMATION.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Carbon dioxide. Alcohol foam. Dry chemical.

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

Flammable properties

Product Code(s) 2776353

Issue Date 08-Apr-2016

Version 3

Product Name Reagent 1 Ammonia/Monochloramine Indicator
Solutio

Revision Date 08-Apr-2016

Page 4 / 19

Flammable; may be ignited by heat, sparks or flames. Flammable liquid. Classified as flammable according to GHS criteria. Flammable.

Specific hazards arising from the chemical

flammable liquid. Do not expose to sparks or other ignition sources. Flammable.

Hazardous combustion products

carbon monoxide, carbon dioxide.

Protective equipment and precautions for firefighters

Containers can build up pressure if exposed to heat.

6. ACCIDENTAL RELEASE MEASURES

U.S. Notice

Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

EC Notice

Only persons properly qualified to respond to an emergency involving hazardous substances should respond to a spill involving chemicals. See Section 13, Special Instructions for disposal assistance.

WHMIS Notice

Only persons properly qualified to respond to an emergency involving hazardous substances should respond to a spill involving chemicals. See Section 13, Special Instructions for disposal assistance.

Personal precautions, protective equipment and emergency procedures

Personal precautions

Remove all sources of ignition. Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required. Keep people away from and upwind of spill/leak.

For emergency responders

Use personal protection recommended in Section 8. Ventilate the area.

Environmental precautions

Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. 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. Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Soak up with inert absorbent material. Use only non-sparking tools. Ground and bond containers when transferring material. Take precautionary measures against static discharges. Use personal protective equipment as required.

Emergency Response Guide Number

127

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling

Ensure adequate ventilation, especially in confined areas. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Take precautionary measures against static discharges. Use spark-proof tools and

Product Code(s) 2776353

Issue Date 08-Apr-2016

Version 3

Product Name Reagent 1 Ammonia/Monochloramine Indicator
Solutio

Revision Date 08-Apr-2016

Page 5 / 19

explosion-proof equipment. All equipment used when handling the product must be grounded. Use with local exhaust ventilation. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep tightly closed in a dry and cool place. Keep in properly labeled containers. Keep containers tightly closed in a cool, well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Use spark-proof tools and explosion-proof equipment. Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Flammability class

Class IC

Incompatible materials

Incompatible with:.. OXIDIZERS.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|---|-------------------------------|---|---|
| Isopropanol (20 - 30%) CAS#: 67-63-0 | STEL: 400 ppm TWA: 200 ppm | TWA: 400 ppm TWA: 980 mg/m ³ (vacated) TWA: 400 ppm (vacated) TWA: 980 mg/m ³ (vacated) STEL: 500 ppm (vacated) STEL: 1225 mg/m ³ | IDLH: 2000 ppm TWA: 400 ppm TWA: 980 mg/m ³ STEL: 500 ppm STEL: 1225 mg/m ³ |
| Sodium Nitroprusside Dihydrate (0 - 10%) CAS#: 14402-89-2 | TWA: 1 mg/m ³ | TWA: 5 mg/m ³ (vacated) TWA: 1 mg/m ³ (vacated) TWA: 5 mg/m ³ S* | IDLH: 25 mg/m ³ CN TWA: 1 mg/m ³ Fe |

| Chemical Name | Alberta OEL | British Columbia OEL | Manitoba OEL | New Brunswick OEL | New Foundland & Labrador OEL |
|---|--|---|-------------------------------|---|-------------------------------|
| Isopropanol (20 - 30%) CAS#: 67-63-0 | TWA: 200 ppm TWA: 492 mg/m ³ STEL: 400 ppm STEL: 984 mg/m ³ | TWA: 200 ppm STEL: 400 ppm | TWA: 200 ppm STEL: 400 ppm | TWA: 400 ppm TWA: 983 mg/m ³ STEL: 500 ppm STEL: 1230 mg/m ³ | TWA: 200 ppm STEL: 400 ppm |
| Sodium Nitroprusside Dihydrate (0 - 10%) CAS#: 14402-89-2 | TWA: 1 mg/m ³ | TWA: 1 mg/m ³ STEL: 2 mg/m ³ | TWA: 1 mg/m ³ | NDF | TWA: 1 mg/m ³ |

| Chemical Name | Northwest Territories OEL | Nova Scotia OEL | Nunavut OEL | Ontario TWA | Prince Edward Island OEL |
|---|---|-------------------------------|---|-------------------------------|-------------------------------|
| Isopropanol (20 - 30%) CAS#: 67-63-0 | TWA: 400 ppm TWA: 983 mg/m ³ STEL: 500 ppm STEL: 1228 mg/m ³ | STEL: 400 ppm TWA: 200 ppm | TWA: 400 ppm TWA: 983 mg/m ³ STEL: 500 ppm STEL: 1228 mg/m ³ | TWA: 200 ppm STEL: 400 ppm | STEL: 400 ppm TWA: 200 ppm |
| Sodium Nitroprusside Dihydrate (0 - 10%) CAS#: 14402-89-2 | NDF | NDF | NDF | TWA: 1 mg/m ³ | TWA: 1 mg/m ³ |

| Chemical Name | Quebec OEL | Saskatchewan OEL | Yukon OEL |
|---------------|--------------|------------------|---------------|
| Isopropanol | TWA: 400 ppm | TWA: 200 ppm | STEL: 500 ppm |

Product Code(s) 2776353

Issue Date 08-Apr-2016

Version 3

Product Name Reagent 1 Ammonia/Monochloramine Indicator
Solutio

Revision Date 08-Apr-2016

Page 6 / 19

| | | | |
|---|--|---------------|--|
| (20 - 30%) CAS#: 67-63-0 | TWA: 985 mg/m ³ STEL: 500 ppm STEL: 1230 mg/m ³ | STEL: 400 ppm | STEL: 1225 mg/m ³ TWA: 400 ppm TWA: 980 mg/m ³ |
| Sodium Nitroprusside Dihydrate (0 - 10%) CAS#: 14402-89-2 | TWA: 1.0 mg/m ³ Ceiling: 10 ppm Ceiling: 11 mg/m ³ Skin | NDF | NDF |

Other Information

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Controls

Eyewash stations. Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Eye/face protection

Tight sealing safety goggles. Face protection shield. Goggles. Avoid contact with eyes.

Skin and body protection

Wear protective gloves and protective clothing.

Respiratory protection

Ensure adequate ventilation, especially in confined areas. Do not breathe gas/fumes/vapor/spray.

General Hygiene Considerations

When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Wash face, hands and any exposed skin thoroughly after handling. Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Avoid breathing (dust, vapor, mist, gas). Use personal protective equipment as required. Wear suitable gloves and eye/face protection. Wash hands thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state

Liquid

Gas Under Pressure

Not classified according to GHS criteria

Appearance aqueous solution

Color brown

Odor Alcoholic

Odor threshold No data available

Property

Values

Remarks • Method

Molecular weight

No data available

pH

7.4

Melting point/freezing point

~ -5 °C / 23 °F

Estimation based on theoretical calculation

Boiling point / boiling range

82 °C / 180 °F

Evaporation rate

1.06 (water = 1)

Estimation based on theoretical calculation

Vapor pressure

20.777 mm Hg / 2.77 kPa at 25 °C / 77 °F

Estimation based on theoretical calculation

Product Code(s) 2776353

Issue Date 08-Apr-2016

Version 3

Product Name Reagent 1 Ammonia/Monochloramine Indicator
Solutio

Revision Date 08-Apr-2016

Page 7 / 19

| | |
|--|-------------------|
| Vapor density (air = 1) | 0.79 (air = 1) |
| Specific gravity (water = 1 / air = 1) | 0.968 |
| Partition Coefficient (n-octanol/water) | Not applicable |
| Soil Organic Carbon-Water Partition Coefficient | Not applicable |
| Autoignition temperature | No data available |
| Decomposition temperature | No data available |
| Dynamic viscosity | No data available |
| Kinematic viscosity | No data available |

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

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

Other Information

Metal Corrosivity Not classified as corrosive to metal according to GHS criteria

Steel Corrosion Rate No data available

Aluminum Corrosion Rate No data available

Volitale Organic Compounds (VOC) Content See ingredients information below.

| <u>Chemical Name</u> | <u>Volatile organic compounds (VOC) content</u> |
|--|---|
| Isopropanol (20 - 30%) CAS#: 67-63-0 | ~ 100% |

Bulk density Not applicable

Explosive properties Not classified according to GHS criteria.

Explosion data May be combustible at high temperature.

Upper explosion limit No data available

Lower explosion limit No data available

Flammable properties Flammable; may be ignited by heat, sparks or flames. Flammable liquid. Classified as flammable according to GHS criteria.
Flammable.

GHS Flammability Classification Liquid - Category 3, H226

Flammability Limit in Air

Product Code(s) 2776353

Issue Date 08-Apr-2016

Version 3

Product Name Reagent 1 Ammonia/Monochloramine Indicator
Solutio

Revision Date 08-Apr-2016

Page 8 / 19

Upper flammability limit:

No data available

Lower flammability limit:

No data available

Flash point

30 °C / 86 °F

Method

CC (closed cup)

Oxidizing properties

Not classified according to GHS criteria.

Reactivity properties

Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria.

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Special dangers of the product

None reported

Possibility of Hazardous Reactions

None under normal processing.

Hazardous polymerization

Hazardous polymerization does not occur.

Conditions to avoid

Heat, flames and sparks. Contact with heat, sparks, open flames or other ignition sources. Take precautionary measures against static discharges. Poor Ventilation.

Incompatible materials

Incompatible with:.. OXIDIZERS.

Hazardous Decomposition Products

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

Explosive properties

Not classified according to GHS criteria. May be combustible at high temperature.

Upper explosion limit

No data available

Lower explosion limit

No data available

Autoignition temperature

No data available

Sensitivity to Static Discharge

None reported

Sensitivity to Mechanical Impact

None reported

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Product Information

Causes serious eye irritation. Vapors may cause drowsiness and dizziness. May cause respiratory irritation. May cause

Product Code(s) 2776353

Issue Date 08-Apr-2016

Version 3

Product Name Reagent 1 Ammonia/Monochloramine Indicator
Solutio

Revision Date 08-Apr-2016

Page 9 / 19

| | |
|--|--|
| | drowsiness or dizziness. Causes mild skin irritation. |
| Inhalation | Avoid breathing dust/fume/gas/mist/vapors/spray. |
| Eye contact | Avoid contact with eyes. Wash thoroughly after handling. Severely irritating to eyes. |
| Skin contact | Wash thoroughly after handling. Causes mild skin irritation. Avoid contact with skin and clothing. |
| Ingestion | No known effect based on information supplied. |
| Aggravated Medical Conditions | Preexisting eye disorders. Skin disorders. Respiratory disorders. |
| Toxicologically synergistic products | None known. |
| Toxicokinetics, metabolism and distribution | See ingredients information below. |

| Chemical Name | Toxicokinetics, metabolism and distribution |
|--|---|
| Isopropanol (20 - 30%) CAS#: 67-63-0 | Isopropanol is rapidly absorbed across the gastric mucosa and reaches a peak concentration approximately 30-120 minutes after ingestion. Isopropanol is primarily metabolized via alcohol dehydrogenase to acetone. |

Acute Toxicity Information

Acute toxicity Based on the classification principles the classification criteria are not met.

STOT - single exposure May cause respiratory irritation. and/or. May cause drowsiness or dizziness.

Aspiration hazard Based on the classification principles the classification criteria are not met.

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

Other Exposure Routes No data available

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

ATEmix (oral) 8,785.00 mg/kg

Ingredient Acute Toxicity Data

Oral Exposure Route

| Chemical Name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
|--|---------------------------|----------------------|----------------------|------------------------------|---|
| Isopropanol (20 - 30%) CAS#: 67-63-0 | Rat LD ₅₀ | 4710 mg/kg | None reported | None reported | OECD (Organization for Economic Co-operation and Development) |
| Chemical Name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
| Isopropanol (20 - 30%) CAS#: 67-63-0 | Human TD _{Lo} | 223 mg/kg | None reported | Vascular | RTECS (Registry of Toxic Effects of Chemical Substances) |

Dermal Exposure Route

| Chemical Name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
|----------------------|----------------------|----------------------|----------------------|------------------------------|---|
| Isopropanol | Rat | 12800 mg/kg | None | None reported | RTECS (Registry of Toxic |

Product Code(s) 2776353

Product Name Reagent 1 Ammonia/Monochloramine Indicator
Solutio

Issue Date 08-Apr-2016

Revision Date 08-Apr-2016

Version 3

Page 10 / 19

| | | | | | |
|--|----------------------------|--------------------------|--------------------------|------------------------------|---|
| (20 - 30%) CAS#: 67-63-0 | LD ₅₀ | | reported | | Effects of Chemical Substances) |
| Chemical Name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
| Isopropanol (20 - 30%) CAS#: 67-63-0 | Rabbit LD ₅₀ | 12870 mg/kg | None reported | None reported | No information available |

Inhalation (Dust/Mist) Exposure Route

Toxicological data for ingredients is not indicative of likely harm.

Inhalation (Vapor) Exposure Route

| | | | | | |
|--|---------------------------|--------------------------|--------------------------|--|--|
| Chemical Name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
| Isopropanol (20 - 30%) CAS#: 67-63-0 | Human TC _{Lo} | 35 mg/L | 4 hours | Lungs, Thorax, or Respiration Other changes | RTECS (Registry of Toxic Effects of Chemical Substances) |
| Chemical Name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
| Isopropanol (20 - 30%) CAS#: 67-63-0 | Human TC _{Lo} | 150 mg/L | 2 hours | Biochemical Enzyme inhibition, induction, or change in blood or tissue levels | RTECS (Registry of Toxic Effects of Chemical Substances) |

Inhalation (Gas) Exposure Route

No data available

Other Exposure Routes

No data available

Skin corrosion/irritation

Causes mild skin irritation.

Product Skin Corrosion/Irritation Data

No data available.

Ingredient Skin Corrosion/Irritation Data

| | | | | | | |
|--|-------------------------|----------------|--------------------------|--------------------------|--------------------|--|
| Chemical Name | Test method | Species | Reported dose | Exposure time | Results | Key literature references and sources for data |
| Isopropanol (20 - 30%) CAS#: 67-63-0 | Standard Draize Test | Rabbit | 500 mg | None reported | Mild skin irritant | RTECS (Registry of Toxic Effects of Chemical Substances) |

Serious eye damage/eye irritation

Causes serious eye irritation.

Product Serious Eye Damage/Eye Irritation Data

No data available.

Ingredient Eye Damage/Eye Irritation Data

| | | | | | | |
|--|-------------------------|----------------|--------------------------|--------------------------|-------------------|--|
| Chemical Name | Test method | Species | Reported dose | Exposure time | Results | Key literature references and sources for data |
| Isopropanol (20 - 30%) CAS#: 67-63-0 | Standard Draize Test | Rabbit | 100 mg | None reported | Corrosive to eyes | RTECS (Registry of Toxic Effects of Chemical Substances) |

Product Code(s) 2776353

Issue Date 08-Apr-2016

Version 3

Product Name Reagent 1 Ammonia/Monochloramine Indicator
Solutio

Revision Date 08-Apr-2016

Page 11 / 19

Sensitization Information

Sensitization Based on the classification principles the classification criteria are not met.

Product Sensitization Data

Skin Sensitization Exposure Route No data available.

Respiratory Sensitization Exposure Route No data available.

Ingredient Sensitization Data

Skin Sensitization Exposure Route Toxicological data for ingredients is not indicative of likely harm.

Respiratory Sensitization Exposure Route No data available.

Chronic Toxicity Information

Chronic toxicity Avoid repeated exposure.

STOT - repeated exposure Based on the classification principles the classification criteria are not met.

Product Repeat Dose 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.

Other Exposure Routes No data available.

Ingredient Repeat Dose 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

Other Exposure Routes No data available

Carcinogenicity

Based on the classification principles the classification criteria are not met.

| Chemical Name | ACGIH | IARC | NTP | OSHA |
|------------------------|-------|---------|-----|------|
| Isopropanol 67-63-0 | - | Group 3 | - | X |

Legend

| | |
|---|----------------|
| ACGIH (American Conference of Governmental Industrial Hygienists) | Does not apply |
|---|----------------|

Product Code(s) 2776353

Issue Date 08-Apr-2016

Version 3

Product Name Reagent 1 Ammonia/Monochloramine Indicator Solutio

Revision Date 08-Apr-2016

Page 12 / 19

| | |
|---|--|
| IARC (International Agency for Research on Cancer) | Not classifiable as a human carcinogen |
| NTP (National Toxicology Program) | Does not apply |
| OSHA (Occupational Safety and Health Administration of the US Department of Labor) | X - Present |

Product Carcinogenicity Data No data available

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

Other Exposure Routes No data available

Ingredient Carcinogenicity 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

Other Exposure Routes No data available

Germ cell mutagenicity

Based on the classification principles the classification criteria are not met.

Product Germ Cell Mutagenicity *invitro* Data

No data available.

Ingredient Germ Cell Mutagenicity *invitro* Data No data available

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

Other Exposure Routes No data available

Ingredient Germ Cell Mutagenicity *invivo* Data

Oral Exposure Route No data available

Dermal Exposure Route No data available

Product Code(s) 2776353

Issue Date 08-Apr-2016

Version 3

Product Name Reagent 1 Ammonia/Monochloramine Indicator
Solutio

Revision Date 08-Apr-2016

Page 13 / 19

Inhalation (Dust/Mist) Exposure Route

Toxicological data for ingredients is not indicative of likely harm.

Inhalation (Vapor) Exposure Route

No data available

Inhalation (Gas) Exposure Route

No data available

Other Exposure Routes

No data available

Reproductive toxicity

Based on the classification principles the classification criteria are not met.

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

Other Exposure Routes

No data available

Ingredient Reproductive Toxicity Data

Oral Exposure Route

| Chemical Name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
|--|-------------------------|---------------|---------------|--|--|
| Isopropanol (20 - 30%) CAS#: 67-63-0 | Rat TD _{Lo} | 32.4 mg/kg | None reported | Effects on Embryo or Fetus Fetal death | RTECS (Registry of Toxic Effects of Chemical Substances) |
| Chemical Name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
| Isopropanol (20 - 30%) CAS#: 67-63-0 | Rat TD _{Lo} | 3500 mg/kg | None reported | Effects on Fertility Mating performance (e.g. # sperm positive females per # females mated; # copulations per # estrus cycles) | RTECS (Registry of Toxic Effects of Chemical Substances) |
| Chemical Name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
| Isopropanol (20 - 30%) CAS#: 67-63-0 | Rat TD _{Lo} | 8000 mg/kg | 9 days | Effects on Embryo or Fetus Fetotoxicity (except death e.g. stunted fetus) | RTECS (Registry of Toxic Effects of Chemical Substances) |

Dermal Exposure Route

No data available

Inhalation (Dust/Mist) Exposure Route

No data available

Inhalation (Vapor) Exposure Route

| Chemical Name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
|--|-------------------------|---------------|---------------|---|--|
| Isopropanol (20 - 30%) CAS#: 67-63-0 | Rat TC _{Lo} | 7000 mg/L | 19 days | Specific Developmental Abnormalities Musculoskeletal system | RTECS (Registry of Toxic Effects of Chemical Substances) |
| Chemical Name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
| Isopropanol (20 - 30%) CAS#: 67-63-0 | Rat TC _{Lo} | 10000 mg/L | 19 days | Effects on Embryo or Fetus Fetal death Effects on Fertility | RTECS (Registry of Toxic Effects of Chemical Substances) |

Product Code(s) 2776353

Issue Date 08-Apr-2016

Version 3

Product Name Reagent 1 Ammonia/Monochloramine Indicator
Solutio

Revision Date 08-Apr-2016

Page 14 / 19

| | | | | | |
|--|----------------------|----------------------|----------------------|---|--|
| | | | | Post-implantation mortality (e.g. dead and/or resorbed implants per total number of implants) Pre-implantation mortality (e.g. reduction in number of implants per female; total number of implants per corpora lutea) | |
| Chemical Name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
| Isopropanol (20 - 30%) CAS#: 67-63-0 | Rat TC _{Lo} | 3500 mg/L | 19 days | Effects on Embryo or Fetus Fetotoxicity (except death e.g. stunted fetus) | RTECS (Registry of Toxic Effects of Chemical Substances) |

Inhalation (Gas) Exposure Route

No data available

Other Exposure Routes

No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Based on the classification principles, not classified as hazardous to the environment.

Product Ecological Data

Aquatic toxicity

Fish

No data available

Crustacea

No data available

Algae

No data available

Other Aquatic Species

No data available

Terrestrial toxicity

Soil

No data available

Vertebrates

No data available

Invertebrates

No data available

Ingredient Ecological Data

Aquatic toxicity

Fish

Toxicological data for ingredients is not indicative of likely harm.

Crustacea

Toxicological data for ingredients is not indicative of likely harm.

Algae

Toxicological data for ingredients is not indicative of likely harm.

Other Aquatic Species

No data available

Terrestrial toxicity

Soil

No data available

Vertebrates

No data available

Invertebrates

No data available

Product Code(s) 2776353

Issue Date 08-Apr-2016

Version 3

Product Name Reagent 1 Ammonia/Monochloramine Indicator
Solutio

Revision Date 08-Apr-2016

Page 15 / 19

Other Information

| Canadian Environmental Protection Act (CEPA) - Domestic Substances List (DSL): Environmentally Hazardous Substances Categorizations | | | | |
|--|------------|------------|-----------------|---|
| Chemical Name | Category | Persistent | Bioaccumulation | Inherently Toxic to Aquatic Organisms |
| Sodium Nitroprusside Dihydrate (0 - 10%) CAS#: 14402-89-2 | Inorganics | Yes | No | Yes |

Persistence and degradability

None known.

Product Biodegradability Data

If available, see ingredient data below.

Ingredient Biodegradability Data

Test data reported below

| Chemical Name | Test method | Biodegradation | Exposure time | Results |
|--|---------------|----------------|------------------|--------------------------|
| Isopropanol (20 - 30%) CAS#: 67-63-0 | None reported | 95% | 21 days | Readily biodegradable |

Bioaccumulation

If available, see ingredient data below.

Product Bioaccumulation Data

Test data reported below.

Ingredient Bioaccumulation Data

No data available

Additional information

Product Information

Partition Coefficient (n-octanol/water)

Not applicable

Ingredient Information

Mobility

Mobility in soil: High mobility. If available, see ingredient data below.

Product Information

Soil Organic Carbon-Water Partition Coefficient

Not applicable

Ingredient Information

Additional information

Water solubility

Product Code(s) 2776353

Product Name Reagent 1 Ammonia/Monochloramine Indicator
Solutio

Issue Date 08-Apr-2016

Revision Date 08-Apr-2016

Version 3

Page 16 / 19

Product Information

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

Ingredient Information

| Chemical Name | Water solubility classification | Water solubility | Water solubility temperature °C | Water solubility temperature °F |
|---|--|-------------------------|--|--|
| Isopropanol (20 - 30%) CAS#: 67-63-0 | Soluble | > 1000 mg/L | 25 °C | 77 °F |
| 2-Hydroxybenzyl Alcohol (0 - 10%) CAS#: 90-01-7 | Slightly soluble | > 0.1 mg/L | 25 °C | 77 °F |
| Sodium Nitroprusside Dihydrate (0 - 10%) CAS#: 14402-89-2 | Soluble | > 1000 mg/L | 25 °C | 77 °F |

Other adverse effects

No information available.

| Chemical Name | EU - Endocrine Disrupters Candidate List | EU - Endocrine Disruptors - Evaluated Substances | Endocrine disrupting potential |
|---|---|---|---------------------------------------|
| Sodium Nitroprusside Dihydrate (0 - 10%) CAS#: 14402-89-2 | Group III Chemical | - | - |

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging

Working in a well-ventilated area,. Rinse three times with an appropriate solvent. Collect rinsate and dispose of according to local, state or federal regulations. Dispose of empty container as normal trash. In the US, rinsate from empty containers is classified as hazardous waste and should be disposed of at an E.P. A. approved facility. Rinsate from empty containers may contain sufficient product to require disposal as hazardous waste in countries other than the US. Improper disposal or reuse of this container may be dangerous and illegal. Disposal should be in accordance with applicable regional, national and local laws and regulations.

US EPA Waste Number

D001

| Chemical Name | RCRA | RCRA - Basis for Listing | RCRA - D Series Wastes | RCRA - U Series Wastes |
|------------------------------------|-------------|-----------------------------------|-------------------------------|-------------------------------|
| 2-Hydroxybenzyl Alcohol 90-01-7 | - | Included in waste stream: K060 | - | - |

Special instructions for disposal

Incinerate material at an E.P.A. approved hazardous waste facility.

14. TRANSPORT INFORMATION

DOT

Product Code(s) 2776353

Issue Date 08-Apr-2016

Version 3

Product Name Reagent 1 Ammonia/Monochloramine Indicator
Solutio

Revision Date 08-Apr-2016

Page 17 / 19

UN/ID no UN1987
Proper shipping name Alcohol, N.O.S.
DOT Technical Name (Isopropyl Alcohol Solution)
Hazard Class 3
Packing Group III
Emergency Response Guide Number 127

TDG

UN/ID no UN1987
Proper shipping name Alcohol, N.O.S.
Hazard Class 3
Packing Group III

IATA

UN/ID no UN1987
Proper shipping name Alcohol, N.O.S.
Hazard Class 3
Packing Group III
ERG Code 127

IMDG

UN/ID no UN1987
Proper shipping name Alcohol, N.O.S.
Hazard Class 3
Packing Group III

Note: No special precautions necessary.

15. REGULATORY INFORMATION

International Inventories

| | |
|----------------------|-----------------|
| TSCA | Complies |
| DSL/NDSL | Complies |
| EINECS/ELINCS | Complies |
| ENCS | Does not comply |
| IECSC | Complies |
| KECL | Does not comply |
| PICCS | Complies |
| AICS | Complies |

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

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Chemical Name | SARA 313 - Threshold Values % |
|------------------------------|-------------------------------|
| Isopropanol (CAS #: 67-63-0) | 1.0 |

SARA 311/312 Hazard Categories

Acute health hazard

Yes

Product Code(s) 2776353

Product Name Reagent 1 Ammonia/Monochloramine Indicator
Solutio

Issue Date 08-Apr-2016

Revision Date 08-Apr-2016

Version 3

Page 18 / 19

Chronic Health Hazard

No

Fire hazard

Yes

Sudden release of pressure hazard

No

Reactive Hazard

No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical Name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|--|-----------------------------|------------------------|---------------------------|----------------------------|
| Sodium Nitroprusside Dihydrate 14402-89-2 | - | X | X | - |

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

| Chemical Name | New Jersey | Massachusetts | Pennsylvania |
|--|------------|---------------|--------------|
| Isopropanol 67-63-0 | X | X | X |
| Sodium Nitroprusside Dihydrate 14402-89-2 | X | - | X |

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA and HMIS Classifications

| NFPA | Health hazards - 2 | Flammability - 3 | Instability - 0 | Physical and Chemical Properties - |
|------|--------------------|------------------|----------------------|---|
| HMIS | Health hazards - 1 | Flammability - 3 | Physical hazards - 0 | Personal protection - X - See section 8 for more information |

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

* = Chronic Health Hazard

NIOSH IDLH Immediately Dangerous to Life or Health

NDF no data

TWA (time-weighted average)

STEL (Short Term Exposure Limit)

Product Code(s) 2776353

Issue Date 08-Apr-2016

Version 3

Product Name Reagent 1 Ammonia/Monochloramine Indicator
Solutio

Revision Date 08-Apr-2016

Page 19 / 19

Ceiling - Maximum limit value

Vacated - These values have no official status. The only enforceable contaminant levels are those listed as OSHA Final PELs. These lists are provided as reference only. Please note that some state regulations reference these "vacated" exposure limits in their state regulations.

Prepared By Hach Product Compliance Department

Issue Date 08-Apr-2016

Revision Date 08-Apr-2016

Revision Note New SDS

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.

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End of Safety Data Sheet