

## SAFETY DATA SHEET

Creation Date 18-Mar-2014

Revision Date 18-Mar-2014

Revision Number 1

### 1. Identification

**Product Name** Bluing Reagent  
**Cat No. :** 7301, 7341, V7301  
**Synonyms** No information available.  
**Recommended Use** Laboratory chemicals  
**Uses advised against** No Information available

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

|   |   |
|---|---|
| <b>Company</b><br>Richard Allan Scientific<br>A Subsidiary of Thermo Fisher Scientific<br>4481 Campus Drive<br>Kalamazoo, MI 49008<br>Tel: (800) 522-7270 | <b>Emergency Telephone Number</b><br>Chemtrec US: (800) 424-9300<br>Chemtrec EU: 001 (202) 483-7616 |
|---|---|

### 2. Hazard(s) identification

#### Classification

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

|  |            |
|--|------------|
| Specific target organ toxicity - (repeated exposure)<br>Target Organs - Liver. | Category 2 |
|--|------------|

#### Label Elements

##### **Signal Word**

Warning

##### **Hazard Statements**

May cause damage to organs through prolonged or repeated exposure



#### **Precautionary Statements**

##### **Prevention**

Do not breathe dust/fume/gas/mist/vapors/spray

##### **Response**

Get medical attention/advice if you feel unwell

##### **Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

None identified

**3. Composition / information on ingredients****Haz/Non-haz**

| Component                                      | CAS-No    | Weight % |
|--|-----------|----------|
| Sodium bicarbonate                             | 144-55-8  | < 1.0    |
| Magnesium sulfate                              | 7487-88-9 | <1       |
| Water  | 7732-18-5 | >99      |
| 1-Tetradecanaminium, N,N,N-trimethyl-, bromide | 1119-97-7 | < 0.1    |

**4. First-aid measures**

|  |   |
|--|---|
| <b>Eye Contact</b>                     | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.      |
| <b>Skin Contact</b>                    | Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur. |
| <b>Inhalation</b>                      | Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms occur.         |
| <b>Ingestion</b>                       | Do not induce vomiting. Obtain medical attention.   |
| <b>Most important symptoms/effects</b> | No information available  |
| <b>Notes to Physician</b>              | Treat symptomatically.  |

**5. Fire-fighting measures**

|   |  |
|---|--|
| <b>Suitable Extinguishing Media</b>     | Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.. |
| <b>Unsuitable Extinguishing Media</b>   | No information available.  |
| <b>Flash Point</b>                      | No information available.  |
| <b>Method -</b>                         | No information available.  |
| <b>Autoignition Temperature</b>         | No information available.  |
| <b>Explosion Limits</b>                 |  |
| <b>Upper</b>                            | No data available  |
| <b>Lower</b>                            | No data available  |
| <b>Sensitivity to mechanical impact</b> | No information available.  |
| <b>Sensitivity to static discharge</b>  | No information available.  |

**Specific Hazards Arising from the Chemical**

Thermal decomposition can lead to release of irritating gases and vapors.

**Hazardous Combustion Products** Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Sulfur oxides.**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

**NFPA**Health  
2 \*Flammability  
0Instability  
0Physical hazards  
N/A**6. Accidental release measures**

|   |   |
|---|---|
| <b>Personal Precautions</b>                 | Use personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. |
| <b>Environmental Precautions</b>            | Should not be released into the environment. See Section 12 for additional ecological Information.          |
| <b>Methods for Containment and Clean Up</b> | Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.                    |

**7. Handling and storage**

|                 |   |
|-----------------|---|
| <b>Handling</b> | Wear personal protective equipment. Ensure adequate ventilation. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing. |
| <b>Storage</b>  | Keep containers tightly closed in a dry, cool and well-ventilated place.  |

**8. Exposure controls / personal protection**

|                                      |  |
|--------------------------------------|--|
| <b>Exposure Guidelines</b>           | This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.  |
| <b>Engineering Measures</b>          | Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.  |
| <b>Personal Protective Equipment</b> |  |
| <b>Eye/face Protection</b>           | Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166   |
| <b>Skin and body protection</b>      | Wear appropriate protective gloves and clothing to prevent skin exposure   |
| <b>Respiratory Protection</b>        | Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced |
| <b>Hygiene Measures</b>              | Handle in accordance with good industrial hygiene and safety practice  |

**9. Physical and chemical properties**

|   |                           |
|---|---------------------------|
| <b>Physical State</b>                   | Liquid                    |
| <b>Appearance</b>                       | White                     |
| <b>Odor</b>                             | No information available  |
| <b>Odor Threshold</b>                   | No information available. |
| <b>pH</b>                               | No information available. |
| <b>Melting Point/Range</b>              | No data available         |
| <b>Boiling Point/Range</b>              | No information available. |
| <b>Flash Point</b>                      | No information available. |
| <b>Evaporation Rate</b>                 | No information available. |
| <b>Flammability (solid,gas)</b>         | No information available. |
| <b>Flammability or explosive limits</b> |                           |
| <b>Upper</b>                            | No data available         |
| <b>Lower</b>                            | No data available         |
| <b>Vapor Pressure</b>                   | No information available. |

## 9. Physical and chemical properties

|  |                           |
|--|---------------------------|
| Vapor Density                          | No information available. |
| Relative Density                       | No information available. |
| Solubility                             | No information available. |
| Partition coefficient; n-octanol/water | No data available         |
| Autoignition Temperature               | No information available. |
| Decomposition temperature              | No information available. |
| Viscosity                              | No information available. |

## 10. Stability and reactivity

|                                  |  |
|----------------------------------|--|
| Reactive Hazard                  | None known, based on information available.                            |
| Stability                        | Stable under normal conditions.  |
| Conditions to Avoid              | Incompatible products. Excess heat.                                    |
| Incompatible Materials           | Strong oxidizing agents  |
| Hazardous Decomposition Products | Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Sulfur oxides |
| Hazardous Polymerization         | Hazardous polymerization does not occur                                |
| Hazardous Reactions              | None under normal processing   |

## 11. Toxicological information

### Acute Toxicity

**Product Information** No acute toxicity information is available for this product

### Component Information

| Component                                      | LD50 Oral          | LD50 Dermal | LC50 Inhalation |
|--|--------------------|-------------|-----------------|
| Sodium bicarbonate                             | 4220 mg/kg ( Rat ) | Not listed  | Not listed      |
| 1-Tetradecanaminium, N,N,N-trimethyl-, bromide | 3900 mg/kg ( Rat ) | Not listed  | Not listed      |

**Toxicologically Synergistic Products** No information available.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Irritation** No information available.

**Sensitization** No information available.

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen

| Component                                      | CAS-No    | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|--|-----------|------------|------------|------------|------------|------------|
| Sodium bicarbonate                             | 144-55-8  | Not listed | Not listed | Not listed | Not listed | Not listed |
| Magnesium sulfate                              | 7487-88-9 | Not listed | Not listed | Not listed | Not listed | Not listed |
| Water  | 7732-18-5 | Not listed | Not listed | Not listed | Not listed | Not listed |
| 1-Tetradecanaminium, N,N,N-trimethyl-, bromide | 1119-97-7 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Mutagenic Effects** Mutagenic effects have occurred in experimental animals.

**Reproductive Effects** Experiments have shown reproductive toxicity effects on laboratory animals.

|   |   |
|---|---|
| <b>Developmental Effects</b>                      | Developmental effects have occurred in experimental animals.  |
| <b>Teratogenicity</b>                             | Teratogenic effects have occurred in humans..   |
| <b>STOT - single exposure</b>                     | None known.   |
| <b>STOT - repeated exposure</b>                   | Liver.  |
| <b>Aspiration hazard</b>                          | No information available.   |
| <b>Symptoms / effects, both acute and delayed</b> | No information available.   |
| <b>Endocrine Disruptor Information</b>            | No information available  |
| <b>Other Adverse Effects</b>                      | The toxicological properties have not been fully investigated.. See actual entry in RTECS for complete information. |

## 12. Ecological information

### Ecotoxicity

| Component          | Freshwater Algae      | Freshwater Fish                                  | Microtox  | Water Flea  |
|--------------------|-----------------------|--|---|---|
| Sodium bicarbonate | EC50: 650 mg/L/120h   | 8250-9000 mg/L LC50 96 h                         | Not listed  | EC50: 2350 mg/L/48h                                   |
| Magnesium sulfate  | 2700 mg/L EC50 = 72 h | 2610-3080 mg/L LC50 96 h<br>19000 mg/L LC50 24 h | = 84000 mg/L EC50<br>Photobacterium<br>phosphoreum 30 min | 1700 mg/L EC50 = 24 h<br>266.4 - 417.3 mg/L EC50 48 h |

**Persistence and Degradability** No information available.

**Bioaccumulation/ Accumulation** No information available

### Mobility

| Component                                      | log Pow |
|--|---------|
| 1-Tetradecanaminium, N,N,N-trimethyl-, bromide | 2.2     |

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification

## 14. Transport information

|                 |               |
|-----------------|---------------|
| <b>DOT</b>      | Not regulated |
| <b>TDG</b>      | Not regulated |
| <b>IATA</b>     | Not regulated |
| <b>IMDG/IMO</b> | Not regulated |

## 15. Regulatory information

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### International Inventories

| Component                                      | TSCA | DSL | NDSL | EINECS    | ELINCS | NLP | PICCS | ENCS | AICS | CHINA | KECL |
|--|------|-----|------|-----------|--------|-----|-------|------|------|-------|------|
| Sodium bicarbonate                             | X    | X   | -    | 205-633-8 | -      |     | X     | X    | X    | X     | X    |
| Magnesium sulfate                              | X    | X   | -    | 231-298-2 | -      |     | X     | X    | X    | X     | X    |
| Water  | X    | X   | -    | 231-791-2 | -      |     | X     | -    | X    | X     | X    |
| 1-Tetradecanaminium, N,N,N-trimethyl-, bromide | X    | X   | -    | 214-291-9 | -      |     | -     | X    | X    | X     | X    |

#### Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

### U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313 Not applicable

#### SARA 311/312 Hazardous Categorization

|                                   |     |
|-----------------------------------|-----|
| Acute Health Hazard               | Yes |
| Chronic Health Hazard             | Yes |
| Fire Hazard                       | No  |
| Sudden Release of Pressure Hazard | No  |
| Reactive Hazard                   | No  |

Clean Water Act Not applicable

| Component | CWA - Hazardous Substances | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants |
|-----------|----------------------------|-----------------------------|------------------------|---------------------------|
| Water     | -                          | 1 LB                        | -                      | -                         |

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration  
Not applicable

CERCLA  
Not Applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals.

State Right-to-Know Not applicable

#### U.S. Department of Transportation

|                             |   |
|-----------------------------|---|
| Reportable Quantity (RQ):   | N |
| DOT Marine Pollutant        | N |
| DOT Severe Marine Pollutant | N |

**U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade** No information available

**Canada**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

**WHMIS Hazard Class** D2B Toxic materials

**16. Other information**

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**Revision Summary** This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

**Disclaimer**

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of SDS**