

ThermoFisher

SCIENTIFIC

Material Safety Data Sheet

Creation Date 15-Dec-2009

Revision Date 15-Dec-2009

Revision Number 1

1. PRODUCT AND COMPANY IDENTIFICATION

| | |
|--|-----------------------------------|
| Product Name | Total Bilirubin Reagent |
| Cat No. | 1245-250; BU3261-20LBP |
| Synonyms | No information available. |
| Recommended Use | In vitro diagnostic |
| Company | Emergency Telephone Number |
| Fisher Diagnostics | Chemtrec US: (800) 424-9300 |
| A Division of Fisher Scientific Company, LLC | Chemtrec EU: (202) 483-7616 |
| A Part of Thermo Fisher Scientific, Inc. | |
| 8365 Valley Pike | |
| Middletown, VA 22645-1905 | |
| Tel: (800) 528-0494 | |

2. HAZARDS IDENTIFICATION

WARNING!

Emergency Overview

Irritating to eyes. May cause skin and respiratory tract irritation. The toxicological properties have not been fully investigated.

Appearance Clear - Pale yellow

Physical State Liquid

Odor odorless

Target Organs

Eyes

Potential Health Effects

Acute Effects

Principle Routes of Exposure

Eyes

Skin

Inhalation

Ingestion

Irritating to eyes.

May cause irritation. May be harmful in contact with skin.

May cause irritation of respiratory tract. May be harmful if inhaled.

May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic Effects

None known.

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Haz/Non-haz

| Component | CAS-No | Weight % |
|---|-----------|----------|
| Water | 7732-18-5 | > 90% |
| Succinic acid | 110-15-6 | < 2% |
| D-Mannitol | 69-65-8 | < 5% |
| Dodecyl sodium sulfate | 151-21-3 | < 1% |
| 3,5-Dichlorophenyldiazoniumfluoroborate | 350-67-4 | < 1% |
| Laureth-23 ethoxylated alcohol | 9002-92-0 | < 5% |

4. FIRST AID MEASURES

| | |
|---------------------------|---|
| Eye Contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required. |
| Skin Contact | Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur. |
| Inhalation | Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms occur. |
| Ingestion | Do not induce vomiting. Obtain medical attention. |
| Notes to Physician | Treat symptomatically. |

5. FIRE-FIGHTING MEASURES

| | |
|---|--|
| Flash Point | Not applicable |
| Method | No information available. |
| Autoignition Temperature | No information available. |
| Explosion Limits | |
| Upper | No data available |
| Lower | No data available |
| Suitable Extinguishing Media | Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.. |
| Unsuitable Extinguishing Media | No information available. |
| Hazardous Combustion Products | No information available. |
| Sensitivity to mechanical impact | No information available. |
| Sensitivity to static discharge | No information available. |

Specific Hazards Arising from the Chemical

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

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** 1 **Flammability** 0 **Instability** 0 **Physical hazards** N/A

6. ACCIDENTAL RELEASE MEASURES

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

7. HANDLING AND STORAGE

| | |
|-----------------|--|
| Handling | Wear personal protective equipment. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Do not breathe vapors or spray mist. |
| Storage | Keep containers tightly closed in a dry, cool and well-ventilated place. Keep at temperatures between 2° and 8 °C. |

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

| | |
|-----------------------------|---|
| Engineering Measures | Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. |
| Exposure Guidelines | This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies. |

NIOSH IDLH: *Immediately Dangerous to Life or Health*

Personal Protective Equipment**Eye/face Protection**

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

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure

Respiratory Protection

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

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|----------------------------|---------------------------|
| Physical State | Liquid |
| Appearance | Clear - Pale yellow |
| Odor | odorless |
| Odor Threshold | No information available. |
| pH | 2.45 - 2.55 @ 19 - 22°C |
| Vapor Pressure | No information available. |
| Vapor Density | No information available. |
| Viscosity | No information available. |
| Boiling Point/Range | Not applicable |

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|-------------------------------------|---------------------------|
| Melting Point/Range | No information available. |
| Decomposition temperature °C | No information available. |
| Flash Point | Not applicable |
| Evaporation Rate | No information available. |
| Specific Gravity | No information available. |
| Solubility | No information available. |
| log Pow | No data available |

10. STABILITY AND REACTIVITY

| | |
|---|--|
| 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 ₂), Nitrogen oxides (NO _x), 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 |
|------------------------|---------------------|----------------------|------------------------------------|
| Water | 90 mL/kg (Rat) | Not listed | Not listed |
| Succinic acid | 2260 mg/kg (Rat) | Not listed | Not listed |
| D-Mannitol | 13500 mg/kg (Rat) | Not listed | Not listed |
| Dodecyl sodium sulfate | 1288 mg/kg (Rat) | 580 mg/kg (Rabbit) | 3900 mg/m ³ (Rat) 1 h |

Irritation Irritating to eyes

Toxicologically Synergistic Products No information available.

Chronic Toxicity

Carcinogenicity There are no known carcinogenic chemicals in this product

Sensitization No information available.

Mutagenic Effects No information available.

| | |
|--|---|
| Reproductive Effects | No information available. |
| Developmental Effects | No information available. |
| Teratogenicity | No information available. |
| Other Adverse Effects | The toxicological properties have not been fully investigated.. See actual entry in RTECS for complete information. |
| Endocrine Disruptor Information | No information available |

12. ECOLOGICAL INFORMATION

Ecotoxicity

| Component | Freshwater Algae | Freshwater Fish | Microtox | Water Flea |
|------------------------|---|-----------------|---|--------------------|
| Dodecyl sodium sulfate | EC50 72 h 53 mg/L EC50 96 h 30 - 100 mg/L EC50 96 h 117 mg/L EC50 72 h 53 mg/L | Not listed | = 0.46 mg/L EC50 Photobacterium phosphoreum 30 min = 0.72 mg/L EC50 Photobacterium phosphoreum 15 min = 1.19 mg/L EC50 Photobacterium phosphoreum 5 min | EC50 48 h 1.8 mg/L |

Persistence and Degradability No information available

Bioaccumulation/ Accumulation No information available

Mobility

| Component | log Pow |
|------------------------|---------|
| Dodecyl sodium sulfate | 1.6 |

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

DOT Not regulated

TDG Not regulated

IATA Not regulated

14. TRANSPORT INFORMATION

IMDG/IMO

Not regulated

15. REGULATORY INFORMATION

International Inventories

| Component | TSCA | DSL | NDSL | EINECS | ELINCS | NLP | PICCS | ENCS | AICS | CHINA | KECL |
|--------------------------------|------|-----|------|-----------|--------|------------------------------|-------|------|------|-------|---------------|
| Water | X | X | - | 231-791-2 | - | | X | - | X | X | KE-35400 X |
| Succinic acid | X | X | - | 203-740-4 | - | | X | X | X | X | KE-13150 X |
| D-Mannitol | X | X | - | 200-711-8 | - | | X | X | X | X | KE-23061 X |
| Dodecyl sodium sulfate | X | X | - | 205-788-1 | - | | X | X | X | X | KE-21884 X |
| Laureth-23 ethoxylated alcohol | XU | X | - | - | - | >1<2.5 mol ethoxylated units | X | 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

No

Chronic Health Hazard

No

| | |
|--|----|
| Fire Hazard | No |
| Sudden Release of Pressure Hazard | No |
| Reactive Hazard | No |

Clean Water Act

Not applicable

Clean Air Act

Not applicable

OSHA

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

Prepared By Regulatory Affairs
Thermo Fisher Scientific
Tel: (412) 490-8929

Creation Date 15-Dec-2009

Print Date 15-Dec-2009

Revision Summary "****", and red text indicates revision

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 MSDS