



# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/27/2002

Reviewed on 11/27/2002

Product name: **Hektren Energetic Agar**

(Contd. of page 1)

Information for doctor: Show this label.

## 5 Fire fighting measures

- Suitable extinguishing agents
- CO<sub>2</sub>, extinguishing powder or water spray. Fight large fires with water spray or alcohol resistant foam.
- Protective equipment: No special measures required.

## 6 Accidental release measures

- Person-related safety precautions: Not required.
- Measures for environmental protection: Wipe up with damp sponge or mop.
- Measures for cleaning/collecting: No special measures required.
- Additional information: See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

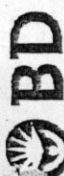
## 7 Handling and storage

- Handling
  - Information for safe handling: No special measures required.
  - Information about protection against explosions and fires: No special measures required.
- Storage
  - Requirements to be met by storerooms and receptacles: No special requirements
  - Information about storage in one common storage facility: Store away from oxidizing agents.
  - Further information about storage conditions: Store in cool, dry conditions in well sealed containers.

## 8 Exposure controls and personal protection

- Additional information about design of technical systems: No further data, see item 7.
- Components with limit values that require monitoring at the workplace: The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- Additional information: The lists that were valid during the creation were used as basis.
- Personal Protective Equipment
  - General protective and hygienic measures: The usual precautionary measures for handling chemicals should be followed.
  - Breathing equipment: In case of brief exposure, use a chemical fume hood or a NIOSH/MSHA approved respirator
  - Protection of hands: Chemical resistant gloves.
  - Eye protection: Safety glasses

(Contd. on page 2)



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## 1 Identification of substances

Product details:

Product name: **Hektren Energetic Agar**

Catalog number: 212211

Manufacturer/Supplier:  
Becton, Dickinson and Company

7 Loveton Circle

Sparks, MD 21152

Tel: (410) 771-0100 or (800) 638-8663

Information department: Technical Services

Emergency information:  
In case of a chemical emergency, spill, fire, exposure, or accident contact Becton, Dickinson and Company at (410) 771-0100 or (800) 638-8663, or ChemTree at (800) 424-9300.

## 2 Composition/Details on components

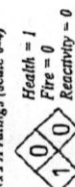
- Chemical characterization  
Description: Mixture of the substances listed below with non-hazardous additions.
- Dangerous components:  
bile salts No. 3 6.4%

## 3 Hazard identification

Hazard descriptions



- Information pertaining to particular dangers for men and environment  
R 36/38 Irritating to eyes, respiratory system and skin.
- Classification system  
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data
- NFPA ratings (scale 0-4)  
Health = 1  
Fire = 0  
Reactivity = 0



## 4 First aid measures

- General information: No special measures required.
- After inhalation: Seek medical treatment in case of complaint.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rubs opened eyes for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing: If symptoms persist consult doctor.

(Contd. on page 2)



Product name: Hektren Enteric Agar

Body protection: Protective work clothing (lab coat)

(Cont. of page 2)

### Physical and chemical properties

|                                         |                                               |
|-----------------------------------------|-----------------------------------------------|
| General Information                     |                                               |
| Form:                                   | Solid                                         |
| Color:                                  | Light beige                                   |
| Odor:                                   | Characteristic                                |
| Change in condition                     |                                               |
| Melting point/Melting range:            | Not determined                                |
| Boiling point/Boiling range:            | Undetermined                                  |
| Flash point:                            | Not applicable                                |
| Auto igniting:                          | Product is not self igniting                  |
| Danger of explosion:                    | Product does not present an explosion hazard. |
| Density:                                | Not determined                                |
| Solubility in / Miscibility with Water: | Soluble                                       |
| pH-value:                               | Not applicable                                |
| Solvent content:                        |                                               |
| Solids content:                         | 100.0 %                                       |

### Stability and reactivity

- Thermal decomposition / conditions to be avoided:  
No decomposition if used according to specification.
- Dangerous reactions: Reacts with acids, alkalis and oxidizing agents
- Dangerous products of decomposition: No dangerous decomposition products known

### Toxicological information

- Acute toxicity:
  - Primary irritant effect:  
on the skin: Irritant to skin and mucous membranes.
  - on the eye: Irritating effect.
  - Sensitization: No sensitizing effects known.
  - Additional toxicological information:
  - Irritant
- The product shows the following dangers according to internally approved calculation methods for preparations:

(Cont. on page 3)

Product name: Hektren Enteric Agar

(Cont. of page 3)

### Ecological information

- Ecological effects:
- Other information:  
The ecological effects have not been thoroughly investigated, but currently none have been identified.
- General notes: Generally not hazardous for water.

### Disposal considerations

- Product:
- Recommendation:  
Must adhere to state and federal regulations.  
Smaller quantities can be disposed of with solid waste.  
Disposal must be made according to the regulations found in 40 CFR 261.  
This product is not considered a RCRA hazardous waste.
- Uncleaned packagings:  
Recommendation: Disposal must be made according to state and federal regulations.
- Recommended cleansing agent: Water, if necessary with cleansing agents.

### Transport information

- DOT regulations:
- Hazard class:
- Land transport ADR/RID (cross border):
- ADR/RID class:
- Maritime transport IMDG:
- IMDG Class:
- Marine pollutant: No
- Air transport ICAO-TI and IATA-DGR:
- ICAO/IATA Class:

### Regulations

- SARA Section 355 (extremely hazardous substances):  
None of the ingredients is listed.
- SARA Section 313 (specific toxic chemical listings):  
None of the ingredients is listed.
- TSCA (Toxic Substances Control Act):
- 57-50-1 sucrose
- 7773-38-7 sodium thiosulfate
- 1183-57-5 ferric ammonium citrate
- 8013-01-2 Yeast, ext.
- 497-19-8 sodium carbonate
- 7487-88-9 magnesium sulfate
- 10043-53-4 calcium chloride
- 76-59-5 bromothymol blue

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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------|
| Product name: <b>Hektren Enzetic Agar</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  | (Cont. of page 4) |
| California Proposition 65 - Chemicals known to cause cancer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                   |
| None of the ingredients is listed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                   |
| California Proposition 65 - Chemicals known to cause reproductive toxicity                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |                   |
| None of the ingredients is listed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                   |
| Carcinogenicity categories                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |                   |
| IARC (International Agency for Research on Cancer)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                   |
| None of the ingredients is listed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                   |
| NTP (National Toxicology Program)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |                   |
| None of the ingredients is listed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                   |
| TLV (Threshold Limit Value established by ACGIH)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |                   |
| 37-50-1 (sucrose) 43                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |                   |
| MAK (German Maximum Workplace Concentration)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |                   |
| None of the ingredients is listed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                   |
| Product related hazard information: Observe the general safety regulations when handling chemicals                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                   |
| Hazard symbols:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                   |
| Xi Irritant                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                   |
| Hazard-determining components of labelling:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                   |
| sodium thiosulfate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                   |
| ferric ammonium citrate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |                   |
| bile salts No. 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |                   |
| Risk phrases:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |                   |
| 36/37/38 Irritating to eyes, respiratory system and skin.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |                   |
| Safety phrases:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                   |
| 7 Keep container tightly closed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |                   |
| 22 Do not breathe dust.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |                   |
| 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                   |
| 36 Wear suitable protective clothing.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                   |
| National regulations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |                   |
| Water hazard class: Generally not hazardous for water.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |                   |
| 16 Other information:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                   |
| To the best of our knowledge, the information contained herein is accurate. However, neither Becton, Dickinson and Company, nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. |  |                   |
| Department Issuing MSDS: Safety & Environment Department                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |                   |
| Contact: Technical Service Representative                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |                   |

**HALON 1211**

QUICK IDENTIFIER (In Plant Common Name)

|                      |                                              |                          |                |
|----------------------|----------------------------------------------|--------------------------|----------------|
| Manufacturer's Name: | ANSUL FIRE PROTECTION, WORMALD U.S., INC.    | Emergency Telephone No.: | (715) 735-7411 |
| Address:             | One Stanton Street, Marinette, WI 54143-2542 | Other Information Calls: | Same           |
| Prepared By:         | Safety and Health Department                 | Date Prepared:           | June 1, 1986   |

**SECTION 1 — IDENTITY**

|                                                           |                            |                  |                         |
|-----------------------------------------------------------|----------------------------|------------------|-------------------------|
| Common Name: (used on label)<br>(Trade Name and Synonyms) | Halon 1211, BCF            | CAS No.:         | N/A                     |
| Chemical Name:                                            | Bromochlorodifluoromethane | Chemical Family: | Halogenated Hydrocarbon |
| Formula:                                                  | CF <sub>2</sub> ClBr       |                  |                         |

**SECTION 2 — INGREDIENTS****PART A — HAZARDOUS INGREDIENTS**

| Principal Hazardous Component(s) (chemical and common name(s)): | %               | CAS No.  | ACGIH TLV  | Acute Toxicity Data                     |
|-----------------------------------------------------------------|-----------------|----------|------------|-----------------------------------------|
| Bromochlorodifluoromethane                                      | Greater than 99 | 353-59-3 | Not listed | ihl rat LC <sub>50</sub><br>32 pph/15 M |

**PART B — OTHER INGREDIENTS**

| Other Component(s) (chemical and common name(s)) | %   | CAS No. | Acute Toxicity Data |
|--------------------------------------------------|-----|---------|---------------------|
| None                                             | N/A | N/A     | N/A                 |

**SECTION 3 — PHYSICAL AND CHEMICAL CHARACTERISTICS (Fire and Explosion Data)**

|                                 |                        |                                        |            |                                       |                         |
|---------------------------------|------------------------|----------------------------------------|------------|---------------------------------------|-------------------------|
| Boiling Point:                  | 26 °C                  | Specific Gravity (H <sub>2</sub> O=1): | 1.83       | Vapor Pressure (mm Hg):               | 37.5 psi @70 °F         |
| Percent Volatile by Volume (%): | 100                    | Vapor Density (Air = 1):               | 5.7        | Evaporation Rate (Butyl acetate = 1): | gas at room temperature |
| Solubility in Water:            | Negligible             | Reactivity in Water:                   | Unreactive |                                       |                         |
| Appearance and Odor:            | Colorless, sweet odor. |                                        |            |                                       |                         |

|              |                 |                                      |     |                     |     |                            |     |
|--------------|-----------------|--------------------------------------|-----|---------------------|-----|----------------------------|-----|
| Flash Point: | None to boiling | Flammable Limits in Air % by Volume: | N/A | Extinguisher Media: | N/A | Auto-Ignition Temperature: | N/A |
|--------------|-----------------|--------------------------------------|-----|---------------------|-----|----------------------------|-----|

Special Fire Fighting Procedures: THIS IS AN EXTINGUISHING AGENT. Use water to cool fire-exposed cylinders or other containers. Self-contained breathing apparatus with full facepiece and protective clothing when re-entering unventilated fire areas where product has been used.

Unusual Fire and Explosion Hazards: Containers are equipped with pressure and temperature relief devices, but rupture may occur under fire conditions and toxic decomposition by-products may be formed if used in fires over 900 °F.

**SECTION 4 — PHYSICAL HAZARDS**

Stability: Unstable ☐ Conditions to Avoid: ☒ Decomposes under fire conditions above 900 °F.

Incompatibility (Materials to Avoid): Active metals, such as aluminum and magnesium, and fires of metal hydrides

Hazardous Decomposition Products: Thermal decomposition; BCF begins decomposing at temperatures above 900 °F to give free halogens, halogen acids, and small amounts of carbonyl halides. These by-products have a sharp irritating odor. They are dangerous even in low concentrations, and in sufficient concentrations, can result in personal injury or death.

Hazardous Polymerization: May Occur ☐ Conditions Will Not Occur ☒ to Avoid: N/A

NOTE: As used in Ansul extinguishers or cylinders, Halon 1211 is a gas compressed under pressures up to 200 psi.

## SECTION 5 — HEALTH HAZARDS

Threshold  
Limit Value: None listed in ACGIH or OSHA.

### Routes of Entry

The effects of exposure to Halon 1211 should disappear quickly upon removal from exposure.

### Eye Contact:

The liquid form of this material can produce chilling sensations and discomfort.

### Skin Contact:

Systemically toxic concentrations are unlikely to be absorbed through the skin in man. Evaporation of liquid from the skin can produce chilling sensations. Skin injury does not result.

### Inhalation:

Exposures to concentrations of this material above 4% for longer than one (1) minute can cause toxic side effects.

### Ingestion:

Ingestion is not likely to occur since this material is gas at room temperature.

### Signs and Symptoms

#### Acute Overexposure:

Dizziness, impaired coordination, reduced mental acuity, and cardiac effects above 4% concentration in excess of one minute. Unconsciousness or even death in heavier concentrations with longer exposures.

### Chronic Overexposure:

Unknown

### Medical Conditions Generally Aggravated by Exposure:

Cardiac problems

### Chemical Listed as Carcinogen or Potential:

### National Toxicology Program:

Yes ☐  
No ☒

### I.A.R.C. Monographs:

Yes ☐  
No ☒

OSHA: Yes ☐  
No ☒

## SECTION 6 — EMERGENCY AND FIRST AID PROCEDURES

### Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes while holding lids open. If redness, itching or a burning sensation develops, get Medical attention.

### Skin Contact:

Wash the material off the skin with copious amounts of soap and water for at least 15 minutes. If redness, itching, or burning occurs, get Medical attention.

### Inhalation:

Remove victim to fresh air. If cough or other respiratory symptoms occur, consult Medical personnel. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Consult Medical personnel.

### Ingestion:

If patient is conscious, give 1 or 2 glasses of warm water to drink and get Medical attention. DO NOT INDUCE VOMITING. Have victim lie down and keep warm.

NOTE TO PHYSICIAN: Product is an asphyxiant and can induce cardiac muscle sensitization to circulating epinephrine-like compounds. Do NOT give adrenalin or similar sympathomimetic drugs. Do NOT allow victim to exercise until 24 hours following specific exposures. Freeze burns of mucosal tissue can develop following specific exposures.

## SECTION 7 — SPECIAL PROTECTION INFORMATION

### Respiratory Protection (Specify Type):

Not normally necessary if controls are adequate. For high concentrations exceeding 4%, or if exposure is prolonged, use positive pressure air-supplied respirator.

### Ventilation

#### Local Exhaust:

Recommended  
to control  
exposures. See  
mechanical.

#### Mechanical (General):

Recommended in low areas  
or indoors where vapors  
may collect.

### Protective Gloves:

Plastic if working with liquid.

### Eye Protection:

Chemical goggles recommended. Full faceshield in addition if splashing of liquid form is possible.

### Other Protective Clothing or Equipment:

Eye wash and safety showers are good safety practice in work area when working with liquefied product.

## SECTION 8 — SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

### Precautions to be Taken in Handling and Storage:

Store as a liquefied compressed gas in DOT approved pressure vessels away from high temperatures. If cylinder is not connected to a system, it must be safety capped to protect against actuation of valve and release of agent.

### Other

### Precautions:

Note incompatibility information in Section 4.

### Steps to be Taken in Case Material is Released or Spilled:

Evacuate area; ventilate to outside atmosphere. Cool or remove hot metal surfaces or source of non-extinguished flames.

### Waste Disposal Methods:

Dispose of in compliance with local, state, and federal regulations.

N/A = Not Applicable

NDA = No Data Available