



Safety Data Sheet

Product Name: Human Methylcellulose Complete Media Without Epo

Reviewed on: 14 November 2012

1. Identification of Substance:

- **GHS product identifier:** Human Methylcellulose Complete Media Without Epo
Components: Human Methylcellulose Complete Media Without Epo (contains Sodium selenite and 2-Mercaptoethanol), Cell Resuspension Solution (contains Sodium selenite).
- **Other means of identification: Catalog Number: HSC004**
- **Application of the substance / the preparation:** For Research Use Only
- **Manufacturer/Supplier:**
R&D Systems Inc.
614 McKinley Place N.E.
Minneapolis, MN 55413
USA
- **For product related questions call:** 1-800-343-7475 or 1-612-379-2956, In Europe call: +44(0)1235-529449.
- **Emergency information:** In case of a chemical emergency, spill, leak, fire, or accident, call **CHEMTREC** at 1-800-424-9300 (USA or Canada). Outside USA or Canada: +1 703-527-3887 (collect calls accepted)

2. Hazard Identification:

- **Classification: Regulation (EC) No. 1272/2008 [CLP/EU-GHS]: Sodium Selenite**
- **GHS Classification:** Acute toxicity, Oral (Category 2)
Acute toxicity, Inhalation (Category 3)
- **Signal Word: DANGER**
- **Hazard Statements:** H300: Fatal if swallowed; H331: Toxic if inhaled.
- **Precautionary Statements:** P264: Wash hands thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P261: Avoid breathing dust/fumes/gas/mist/vapors/spray. P271: Use only outdoors or in a well-ventilated area.
- **Responses:**
IF SWALLOWED: Immediately call a Poison Center or physician. Specific treatment in this SDS. Rinse mouth.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a poison control center or physician. See specific treatments in this SDS.
- **Classification according to EU Directives 67/548/EEC or 1999/45/EC:** T+: Very toxic. N: Dangerous for the environment.
- **R Phrases:** R28: Very toxic if swallowed. R23: Toxic by inhalation. R31: Contact with acids liberates toxic gas. R43: May cause sensitization by skin contact. R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **S Phrases:** S1/2: Keep locked up and out of reach of children. S28: After contact with skin, wash immediately with plenty of soap and water. S36/37 Wear suitable protective clothing and gloves. S45: In case of accident or if you feel unwell, seek medical advice immediately (show label where possible). S61: Avoid release to the environment. Refer to special instructions/Safety data sheets
- **Special Hazards: EUH031:** Contact with acids liberates toxic gas.



3. Information on Ingredients:

Description: Sodium selenite Formula: Na₂O₃Se Molecular Weight: 172.94 g/mol

Contains	CAS No.	EC-No.	Index-No.	Content
Sodium selenite	10102-18-8	233-267-9	034-003-00-3	< 0.001%



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4. First Aid Measures:

- **After Inhalation:** If breathed in, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.
- **After Skin Contact:** Wash off with soap and plenty of water. Take victim immediately to a hospital. Consult a physician.
- **After Eye Contact:** Flush eyes with water as a precaution.
- **After Swallowing:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
- **Most important symptoms and effects, both acute and delayed:** Acute: Abdominal cramps. Vomiting. Cough, dizziness, Headache.
Delayed: contact with skin may cause dermatitis.
- **Indication of any immediate medical attention and special treatment needed:** Consult a physician.

5. Fire Fighting Measures:

- **Suitable extinguishing agents:** Water spray, foam, carbon dioxide, dry sand, special powder.
- **Special hazards arising from the substance or mixture:** Hazardous decomposition products formed under fire conditions – Sodium oxides, Selenium/Selenium oxides.
- **Special protective actions for fire-fighters:** Self contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental Release Measures:

- **Personal precautions, protective equipment and emergency procedures:** Wear respiratory protection. Use appropriate personal protective equipment to prevent contamination of skin, eyes and personal clothing. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.
- **Environmental precautions:** Keep away from drains. **Discharge into environment must be avoided.**
- **Methods and materials for containment and cleaning up:** Pick up and arrange disposal without creating dust. Sweep up and shovel. Do not flush with water. Keep in suitable closed containers for disposal.

7. Handling and Storage:

- **Precautions for safe handling:** Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid inhalation of vapour or mist. Provide appropriate exhaust ventilation at places where dust is formed.
- **Conditions for safe storage, including incompatibilities:** Store locked up. Keep container tightly closed in a dry and well-ventilated place. Never allow product to get in contact with water during storage. Do not allow to come in contact with acids.

8. Exposure Controls and Personal Protection:

- **Control parameters:**
Component: Sodium Selenite (CAS# 10102-18-8): USA Occupational Exposure Limits (OSHA): TWA – 0.2 mg/m³
UK EH40 WEL – Workplace Exposure Limits: TWA – 0.1 mg/m³
- **Appropriate engineering controls:** Use with adequate ventilation including local extraction. Ensure that eyewash stations and safety showers are close to the workstation location.
- **Individual protection measures:** Wash hands thoroughly after handling chemical products and before eating, smoking or using the toilet. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.
Eye/face protection: Face Shield and Safety Glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).
Skin/hand protection: Handle with protective gloves, plastic or rubber. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Body protection: Complete Suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Other skin protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved.



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Respiratory protection: In case of inadequate ventilation, use a suitable respirator. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. Physical and Chemical Properties:

- | | |
|---|---|
| <ul style="list-style-type: none">▪ Appearance: Liquid▪ Odor: Odorless▪ Odor threshold: Not available▪ pH: Not available▪ Melting point/freezing point: Not available▪ Boiling point/Boiling range: Not available▪ Flash point: Not available▪ Evaporation rate: Not available▪ Flammability (solid, gas): Not available | <ul style="list-style-type: none">Upper/lower flammability or explosive limits: Not availableVapor density : Not availableVapor pressure: Not availableRelative density: Not availableSolubility in Water: SolublePartition coefficient: noctanol/water: Not availableAuto igniting: Not availableDecomposition temperature: Not availableViscosity: Not available |
|---|---|

10. Stability and Reactivity:

- **Reactivity:** No data available
- **Chemical stability:** Stable under recommended storage conditions.
- **Possibility of hazardous reactions:** No data available
- **Conditions to avoid:** No data available
- **Incompatible materials:** Strong acids
- **Hazardous decomposition products:** Products formed under fire conditions: Sodium oxides, Selenium/selenium oxides.

11. Toxicological Information:

- **Acute toxicity: Oral LD50:** LD50 Oral – mouse – 7.08 mg/kg, LD50 Oral – rabbit – 2.25 mg/.
- **Inhalation LC50 and Dermal LD50** – No data available.
- **Skin corrosion/irritation:** Skin rashes.
- **Serious eye damage/irritation:** Severe eye irritation may occur with exposure to selenium dust.
- **Respiratory or skin sensitization:** Upper respiratory irritation.
- **Germ cell mutagenicity:** Laboratory experiments have shown mutagenic effects.
- **Carcinogenicity:** No data available.
- **Reproductive toxicity:** No data available.
- **Specific target organ toxicity (STOT) -single exposure:** No data available.
- **Specific target organ toxicity (STOT) -repeated exposure:** No data available.
- **Aspiration hazard:** No data available
- **Information on likely routes of exposure:** Routes of entry anticipated; oral, dermal, inhalation.
- **Potential Health Effects:**
 - Inhalation: Toxic if inhaled. May cause respiratory tract irritation.
 - Ingestion: May be fatal if swallowed.
 - Skin: May be harmful if absorbed through skin. May cause skin irritation.
 - Eyes: May cause eye irritation.
- **Symptoms related to the physical, chemical and toxicological characteristics:**
 - Inhalation: Toxic if inhaled. May cause respiratory tract irritation.
 - Ingestion: May be fatal if swallowed.
 - Skin: May be harmful if absorbed through skin. May cause skin irritation.
 - Eyes: May cause eye irritation.

Signs and Symptoms of Exposure: Salivation, Tremors, Alopecia, Vomiting, Dermatitis

Delayed and immediate effects and also chronic effects from short and long term exposure:

Short term exposure: Potential immediate effects: facial flushing, light headedness, muscle tenderness, tremors. Upper GI irritation. Eye irritation. **Potential delayed effects:** Nausea, vomiting, upper GI irritation, skin rash.

Long term exposure: Potential immediate effects: Not available. **Potential delayed effects:** Not available.



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- **Effects of chronic exposure:** marked hepatic necrosis in laboratory experiments.
- **Numerical measures of toxicity:** Not available
- **Other Information:** RTECS: VS7350000

12. Ecological Information:

- **Ecotoxicity:** Toxicity to fish: LC50 – *Oncorhynchus mykiss* (rainbow trout) – 2.75 mg/L – 96.0 hr.
Mortality NOEC – *Daphnia magna* (Water flea) – 0.24 mg/L – 21 hr.
- **Biodegradability and Persistence:** No data available.
- **Bioaccumulative potential:** may occur along the food chain in plants and fish.
- **Mobility in soil:** No data available.
- **Other adverse effects:** Toxic to aquatic organisms. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.

13. Disposal Considerations:

- **Disposal methods:** Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with a afterburner and scrubber. Dispose of waste in accordance to applicable national, regional, or local regulations.
- **Contaminated packaging:** Dispose in the same manner as unused product.
- **Special precautions:** no data available

14. Transport Information:

- **UN Number:** None
- **DOT regulations:** - **Hazard class:** None
- **Land transport ADR/RID (cross-border):** Not regulated.
- **Maritime transport IMDG:** Not regulated.
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:** Not regulated.
- **Transport/Additional information:** Not dangerous according to the above specifications.

15. Regulations:

- **US. Toxic Substances Control Act:** On TSCA inventory
SARA 313 Components: Sodium Selenite is listed
SARA 311/312 Hazards: Acute Health Hazard
CERCLA Reportable Quantity: 100 lbs.
California Prop. 65: Not listed.

16. Other Information:

- **Notice to reader:** To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, 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.



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2. Hazard Identification:

- Classification: Regulation (EC) No. 1272/2008 [CLP/EU-GHS]
Some components indicated above contain: 2-Mercaptoethanol Solution
Not listed at this concentration.
- Classification according to EU Directives 67/548/EEC or 1999/45/EC: Not listed at this concentration.

3. Information on Ingredients:

Description: Thioethylene glycol, 2-Hydroxyethylmercaptan, BME, β -Mercaptoethanol
Molecular Weight: 78.13 g/mol

Formula: C₂H₆OS

Contains	CAS No.	EC-No.	Content
2-Mercaptoethanol	60-24-2	200-464-6	< 0.1%

4. First Aid Measures:

- After inhalation: Move person into fresh air. Consult a physician if you feel unwell.
- After skin contact: Wash off with soap and plenty of water. Remove contaminated clothing. Consult a physician.
- After eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
- After swallowing: Rinse mouth with water. Call a physician.
- Most important symptoms and effects, both acute and delayed: Unknown
- Indication of any immediate medical attention and special treatment needed: no data available

5. Fire Fighting Measures:

- Suitable extinguishing agents: Powder, water spray, foam or carbon dioxide.
- Special hazards arising from the substance or mixture: Emits irritating fumes under fire conditions.
- Protective equipment: Wear self contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
- Further information: Use water spray to cool unopened containers.

6. Accidental Release Measures:

- Person-related safety precautions: Wear respiratory protection. Use appropriate personal protective equipment to prevent contamination of skin, eyes and personal clothing. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition.
- Measures for environmental protection: Keep away from drains. **Discharge into environment must be avoided.**
- Measures for containment and cleaning: Contain spillage and collect with a electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations. Keep in suitable closed containers for disposal. See section 13.

7. Handling and Storage:

- Precautions for safe handling: Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid inhalation of vapour or mist. Keep away from sources of ignition. No smoking or eating in the laboratory areas.
- Conditions for safe storage: Store in a cool, dry place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
- Recommended storage: 2 - 8° C.

8. Exposure Controls and Personal Protection:

- Control parameters: Contains no substances with occupational exposure limit values.



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- **Appropriate engineering controls:** Use adequate general or local exhaust ventilation to keep airborne odors low. Facilities should be equipped with an eyewash and a safety shower.
- **Individual protection measures:** Wash hands thoroughly after handling chemical products and before eating, smoking or using the toilet. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.
 - **Eye/face protection:** Wear appropriate protective eyeglasses or chemical safety goggles.
 - **Skin/hand protection:** Wear appropriate protective gloves to prevent skin exposure. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
 - **Body protection:** Wear appropriate protective clothing to prevent contact with skin.

9. Physical and Chemical Properties:

Appearance: Form: Liquid, Colorless yellow

- **Odor:** Stench, rotten egg-like
- **Odor threshold:** Not available
- **pH:** Not available.
- **Melting point/freezing point:** Not available.
- **Boiling point/Boiling range:** Not available.
- **Flash point:** Not available.
- **Evaporation rate:** Not available
- **Flammability (solid, gas):** Not available

Upper/lower flammability or explosive limits: Not available.

Vapor density: Not available.

Vapor pressure: Not available.

Relative density: Not available.

Solubility in/Miscibility with Water: Soluble

Partition coefficient: octanol/water: Not available.

Auto igniting: Not available

Decomposition temperature: Not available

Viscosity: Not available

10. Stability and Reactivity:

- **Reactivity:** No data available
- **Chemical Stability:** Stable under normal temperatures and pressures.
- **Possibility of hazardous reactions:** No data available
- **Conditions to avoid:** Heat, Flames, Sparks
- **Incompatible materials:** Metals, Oxidizing agents
- **Hazardous decomposition products:** Carbon monoxide, oxides of sulfur, irritating and toxic fumes and gases, carbon dioxide.

11. Toxicological Information:

- **Acute toxicity: Oral LD50:** LD50 Oral, rat – 244 mg/kg, LD50 Inhalation, mouse – 13200 mg/m³. LD50 Dermal, rabbit – 150 mg/kg
- **Skin corrosion/irritation:** Skin, rabbit – irritating to skin.
- **Serious eye damage/irritation:** Eyes, rabbit – Risk of serious damage to eyes.
- **Respiratory or skin sensitization:** No data available.
- **Germ cell mutagenicity:** Experiments showed mutagenic effects in cultured bacterial cells.
- **Carcinogenicity:** IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- **Reproductive toxicity:** No data available
- **Specific target organ toxicity (STOT) -single exposure:** Irritating to eyes, skin and respiratory tract. May cause effects on the central nervous system.
- **Specific target organ toxicity (STOT) -repeated exposure:** No data available
- **Aspiration hazard:** No data available
- **Information on likely routes of exposure:** oral, dermal, inhalation.
- **Potential Health Effects:**
 - Inhalation: May cause respiratory tract irritation or shortness of breath.
 - Ingestion: Toxic if swallowed.
 - Skin: May cause skin irritation, redness and pain.
 - Eyes: May cause eye irritation, redness and pain.
- **Symptoms related to the physical, chemical and toxicological characteristics:**
 - Inhalation: Caused respiratory tract irritation, respiratory depression, nausea and headache.
 - Ingestion: Causes nausea.
 - Skin: Causes skin irritation.
 - Eyes: Causes eye irritation.
- **Delayed and immediate effects and also chronic effects from short and long term exposure:** No data available.



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- **Other Information:** RTECS: KL5600000

12. Ecological Information:

- **Ecotoxicity: This substance is toxic to aquatic life. Fish:** LC50 (Leuciscus idus-Carp) – 46 mg/L – 96 hr.
Daphnia: LC50 (Daphnia magna-Water flea) – 1.2 mg/L – 48 hr.
- **Biodegradability:** no data available
- **Bioaccumulative potential:** Not expected to biodegrade rapidly under anaerobic conditions.
- **Mobility in soil:** Is expected to have very high mobility in soil.
- **Other adverse effects:** Toxic to aquatic life.

13. Disposal Considerations:

- **Disposal methods:** This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
- **Contaminated packaging:** Dispose in the same manner as unused product.
- **Special precautions:** no data available

14. Transport Information:

- **UN Number:** None required at this concentration.
- **DOT regulations:** Hazard class: None
- **Land transport ADR/RID (cross-border):** Not regulated.
- **Maritime transport IMDG:** Not regulated.
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:** Not regulated.
- **Transport/Additional information:** Not dangerous at this concentration.

15. Regulations:

- **US Federal and State Regulations**
 - TSCA (Toxic Substances Control Act):** 2-Mercaptoethanol is listed.
 - SARA 313:** not listed.
 - CERCLA/SARA 304:** not listed.
 - SARA 311/312 Hazards:** Acute Health Hazard
 - CERCLA Reportable Quantity:** not listed.
 - California Proposition 65:** 2-Mercaptoethanol is not listed.

16. Other Information:

- **Notice to reader:** To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, 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.