

# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
US - OSHA Hazard Communication Standard (29 CFR 1910.1200)

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Revision Number 4

## 1. Identification

### Product identifier

Product Name Hybridisation Solution

### Other means of identification

Product Code(s) HA \*\*\*\* / HB \*\*\*\* / HI \*\*\*\*

Synonyms None

### Recommended use of the chemical and restrictions on use

Recommended use Laboratory chemicals  
For professional use only

Restrictions on use None known

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

#### Supplier Address

Oxford Gene Technology Inc.  
(North America office)  
520 White Plains Road, Suite 500  
Tarrytown, NY 10591  
USA  
914 467 5285

#### Manufacturer Address

CytoCell Ltd., Oxford Gene Technology  
418 Cambridge Science Park, Milton Road,  
Cambridge  
CB4 0PZ, United Kingdom  
T: +44 (0)1223 294048  
F: +44 (0)1223 294986  
probes@cytoCell.com

E-mail support@ogt.com

### Emergency telephone number

Emergency telephone 914 467 5285

## 2. Hazard(s) identification

### Classification

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

|                                   |             |
|-----------------------------------|-------------|
| Skin corrosion/irritation         | Category 2  |
| Serious eye damage/eye irritation | Category 2A |
| Reproductive toxicity             | Category 1B |

### Hazards not otherwise classified (HNOC)

Not applicable.

**Label elements****Danger****Hazard statements**

Causes skin irritation.  
 Causes serious eye irritation.  
 May damage the unborn child.

**Precautionary Statements - Prevention**

Obtain special instructions before use.  
 Do not handle until all safety precautions have been read and understood.  
 Wear protective gloves/clothing and eye/face protection.  
 Wash face, hands and any exposed skin thoroughly after handling.

**Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention.  
 Specific treatment (see supplemental first aid instructions on this label).  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 If eye irritation persists: Get medical advice/attention.  
 IF ON SKIN: Wash with plenty of water and soap.  
 If skin irritation occurs: Get medical advice/attention.  
 Take off contaminated clothing and wash it before reuse.

**Precautionary Statements - Storage**

Store locked up.

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant.

**Other information**

No information available.

**3. Composition/information on ingredients****Substance**

Not applicable.

**Mixture**

| Chemical name          | CAS No    | Weight-% | Trade secret |
|------------------------|-----------|----------|--------------|
| Formamide              | 75-12-7   | <70      | *            |
| Dextran sulfate sodium | 9011-18-1 | 10 - <15 | *            |

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

## 4. First-aid measures

### Description of first aid measures

|   |   |
|---|---|
| <b>General advice</b>                     | Show this safety data sheet to the doctor in attendance.  |
| <b>Inhalation</b>                         | Remove person to fresh air and keep comfortable for breathing. Get medical attention immediately if symptoms occur.   |
| <b>Eye contact</b>                        | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists. |
| <b>Skin contact</b>                       | Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.  |
| <b>Ingestion</b>                          | Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.   |
| <b>Self-protection of the first aider</b> | Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).   |

### Most important symptoms and effects, both acute and delayed

|                 |  |
|-----------------|--|
| <b>Symptoms</b> | May cause redness and tearing of the eyes. Burning sensation. Skin irritation. |
|-----------------|--|

### Indication of any immediate medical attention and special treatment needed

|                           |                        |
|---------------------------|------------------------|
| <b>Note to physicians</b> | Treat symptomatically. |
|---------------------------|------------------------|

## 5. Fire-fighting measures

|   |  |
|---|--|
| <b>Suitable Extinguishing Media</b>                                   | Dry chemical, CO <sub>2</sub> , alcohol-resistant foam or water spray.   |
| <b>Unsuitable extinguishing media</b>                                 | Do not scatter spilled material with high pressure water streams.  |
| <b>Specific hazards arising from the chemical</b>                     | No information available.  |
| <b>Hazardous combustion products</b>                                  | Thermal decomposition can lead to release of irritating gases and vapors: Carbon oxides. Nitrogen oxides (NO <sub>x</sub> ). Sodium oxides. Hydrogen cyanide. Ammonia. |
| <b>Explosion data</b>   |  |
| <b>Sensitivity to mechanical impact</b>                               | None.  |
| <b>Sensitivity to static discharge</b>                                | None.  |
| <b>Special protective equipment and precautions for fire-fighters</b> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.                                     |

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

|                             |  |
|-----------------------------|--|
| <b>Personal precautions</b> | Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. |
| <b>Other information</b>    | Refer to protective measures listed in Sections 7 and 8.   |

**Methods and material for containment and cleaning up**

|  |  |
|--|--|
| <b>Methods for containment</b>         | Prevent further leakage or spillage if safe to do so. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). |
| <b>Methods for cleaning up</b>         | Pick up and transfer to properly labeled containers. Wash thoroughly after handling. After cleaning, flush away traces with water.                           |
| <b>Prevention of secondary hazards</b> | Clean contaminated objects and areas thoroughly observing environmental regulations.   |

**7. Handling and storage****Precautions for safe handling**

|                                |  |
|--------------------------------|--|
| <b>Advice on safe handling</b> | Wear personal protective equipment. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Avoid breathing vapors or mists. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. |
|--------------------------------|--|

**Conditions for safe storage, including any incompatibilities**

|                           |  |
|---------------------------|--|
| <b>Storage Conditions</b> | Store locked up. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from Incompatible materials. |
|---------------------------|--|

**8. Exposure controls/personal protection****Control parameters**

|                        |  |
|------------------------|--|
| <b>Exposure Limits</b> | The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here. |
|------------------------|--|

| Chemical name        | ACGIH TLV        | OSHA PEL   | NIOSH                                    |
|----------------------|------------------|--|--|
| Formamide<br>75-12-7 | TWA: 1 ppm<br>S* | (vacated) TWA: 20 ppm<br>(vacated) TWA: 30 mg/m <sup>3</sup><br>(vacated) STEL: 30 ppm<br>(vacated) STEL: 45 mg/m <sup>3</sup> | TWA: 10 ppm<br>TWA: 15 mg/m <sup>3</sup> |

**Appropriate engineering controls**

|                             |   |
|-----------------------------|---|
| <b>Engineering controls</b> | Showers<br>Eyewash stations<br>Ventilation systems. |
|-----------------------------|---|

**Individual protection measures, such as personal protective equipment**

|                                 |  |
|---------------------------------|--|
| <b>Eye/face protection</b>      | If splashes are likely to occur, wear safety glasses with side-shields.  |
| <b>Hand protection</b>          | Wear suitable gloves. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. |
| <b>Skin and body protection</b> | Wear suitable protective clothing. Long sleeved clothing.  |

|                                       |   |
|---------------------------------------|---|
| <b>Respiratory protection</b>         | No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.  |
| <b>General hygiene considerations</b> | Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Wear suitable gloves and eye/face protection. Avoid contact with skin, eyes or clothing. |

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

#### Appearance

|                |                   |
|----------------|-------------------|
| Physical state | Liquid            |
| Color          | Varies            |
| Odor           | Odorless          |
| Odor threshold | No data available |

| <u>Property</u>                         | <u>Values</u>     | <u>Remarks • Method</u> |
|---|-------------------|-------------------------|
| pH                                      |                   | Not applicable          |
| pH (as aqueous solution)                |                   | No data available       |
| Melting point / freezing point          |                   | No data available       |
| Initial boiling point and boiling range |                   | No data available       |
| Flash point                             | 154 °C / 309.2 °F |                         |
| Evaporation rate                        |                   | No data available       |
| Flammability                            |                   | Not applicable          |
| Flammability Limit in Air               |                   |                         |
| Upper flammability or explosive limits  |                   | Not applicable          |
| Lower flammability or explosive limits  |                   | Not applicable          |
| Vapor pressure                          |                   | No data available       |
| Vapor density                           |                   | No data available       |
| Relative density                        |                   | No data available       |
| Water solubility                        |                   | No data available       |
| Solubility(ies)                         |                   | No data available       |
| Partition coefficient                   |                   | No data available       |
| Autoignition temperature                |                   | No data available       |
| Decomposition temperature               |                   | No data available       |
| Kinematic viscosity                     |                   | No data available       |
| Dynamic viscosity                       |                   | No data available       |

### Other information

|                      |                          |
|----------------------|--------------------------|
| Explosive properties | No information available |
| Oxidizing properties | No information available |
| Softening point      | No information available |
| Molecular weight     | No information available |
| VOC content          | No information available |
| Liquid Density       | No information available |
| Bulk density         | No information available |

## 10. Stability and reactivity

|   |   |
|---|---|
| <b>Reactivity</b>                         | None under normal use conditions.         |
| <b>Chemical stability</b>                 | Stable under normal conditions.           |
| <b>Possibility of hazardous reactions</b> | None under normal processing.             |
| <b>Conditions to avoid</b>                | None known based on information supplied. |

**Incompatible materials** Sulfur trioxide. Strong acids. Strong bases. Strong oxidizing agents. Metals.

**Hazardous decomposition products** Carbon oxides. Nitrogen oxides (NOx). Silicon oxides. Hydrogen cyanide. Ammonia.

## 11. Toxicological information

### Information on likely routes of exposure

#### Product Information

|                     |   |
|---------------------|---|
| <b>Inhalation</b>   | Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.  |
| <b>Eye contact</b>  | Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain. |
| <b>Skin contact</b> | Specific test data for the substance or mixture is not available. Causes skin irritation. (based on components).  |
| <b>Ingestion</b>    | Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.             |

### Symptoms related to the physical, chemical and toxicological characteristics

**Symptoms** May cause redness and tearing of the eyes. Skin irritation.

### Acute toxicity

#### Numerical measures of toxicity

#### Component Information

| Chemical name                       | Oral LD50             | Dermal LD50         | Inhalation LC50       |
|-------------------------------------|-----------------------|---------------------|-----------------------|
| Formamide<br>75-12-7                | = 5577 mg/kg ( Rat )  | = 6 g/kg ( Rabbit ) | > 21 mg/L ( Rat ) 4 h |
| Dextran sulfate sodium<br>9011-18-1 | = 20600 mg/kg ( Rat ) | -                   | -                     |

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

|  |  |
|--|--|
| <b>Skin corrosion/irritation</b>         | Classification based on data available for ingredients. Causes skin irritation.        |
| <b>Serious eye damage/eye irritation</b> | Classification based on data available for ingredients. Causes serious eye irritation. |
| <b>Respiratory or skin sensitization</b> | No information available.  |
| <b>Germ cell mutagenicity</b>            | No information available.  |
| <b>Carcinogenicity</b>                   | No information available.  |

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

| Chemical name        | ACGIH | IARC | NTP | OSHA |
|----------------------|-------|------|-----|------|
| Formamide<br>75-12-7 | A3    | -    | -   | -    |

**Legend****ACGIH (American Conference of Governmental Industrial Hygienists)**

A3 - Animal Carcinogen

|                                 |  |
|---------------------------------|--|
| <b>Reproductive toxicity</b>    | Contains a known or suspected reproductive toxin. Classification based on data available for ingredients. May damage the unborn child. |
| <b>STOT - single exposure</b>   | No information available.  |
| <b>STOT - repeated exposure</b> | No information available.  |
| <b>Target organ effects</b>     | Respiratory system. Eyes. Skin. Central nervous system. Reproductive system.   |
| <b>Aspiration hazard</b>        | No information available.  |
| <b>Other adverse effects</b>    | No information available.  |
| <b>Interactive effects</b>      | No information available.  |

**12. Ecological information****Ecotoxicity** Not considered to be harmful to aquatic life.

| Chemical name        | Algae/aquatic plants   | Fish                                     | Toxicity to microorganisms | Crustacea                           |
|----------------------|--|--|----------------------------|-------------------------------------|
| Formamide<br>75-12-7 | EC50: >500mg/L (72h, Desmodesmus subspicatus)<br>EC50: >500mg/L (96h, Desmodesmus subspicatus) | LC50: =9135mg/L (96h, Brachydanio rerio) | -                          | EC50: >500mg/L (48h, Daphnia magna) |

**Persistence and degradability** No information available.**Bioaccumulation****Component Information**

| Chemical name        | Partition coefficient |
|----------------------|-----------------------|
| Formamide<br>75-12-7 | -0.82                 |

**Other adverse effects** No information available.**13. Disposal considerations****Waste treatment methods****Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.**Contaminated packaging** Do not reuse empty containers.**14. Transport information****DOT** Not regulated

**15. Regulatory information****International Inventories**

Contact supplier for inventory compliance status

**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**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).

**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 |
|----------------------|------------|---------------|--------------|
| Formamide<br>75-12-7 | X          | X             | X            |

**U.S. EPA Label Information**

EPA Pesticide Registration Number Not applicable

**16. Other information**

|                                   |                                  |                |                    |                       |
|-----------------------------------|----------------------------------|----------------|--------------------|-----------------------|
| <b><u>NFPA</u></b>                | Health hazards 2                 | Flammability 1 | Instability 0      | Special hazards -     |
| <b><u>HMIS</u></b>                | Health hazards 2*                | Flammability 1 | Physical hazards 0 | Personal protection X |
| <i>Chronic Hazard Star Legend</i> | <i>* = Chronic Health Hazard</i> |                |                    |                       |

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

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION



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|                |  |           |  |
|----------------|--|-----------|--|
| TWA<br>Ceiling | TWA (time-weighted average)<br>Maximum limit value | STEL<br>* | STEL (Short Term Exposure Limit)<br>Skin designation |
|----------------|--|-----------|--|

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
EPA (Environmental Protection Agency)  
Acute Exposure Guideline Level(s) (AEGl(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
Japan GHS Classification  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
Organization for Economic Co-operation and Development Screening Information Data Set  
World Health Organization

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**Disclaimer**

The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

**End of Safety Data Sheet**