1. **IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY**

1.1 **Product identifier**
- **Trade name**: MycoSPY® Master Mix
- **Product number**: M020-...
- **Product description**: Laboratory chemicals

1.2 **Relevant identified uses of the substance or mixture and uses advised against**
- **General use**: For research use only
- **Uses advised against**: Not intended for human or animal diagnostic or therapeutic uses

1.3 **Details of the supplier of the safety data sheet (Manufacturer/Supplier)**
- **Company name**: Biontex Laboratories GmbH
- **Street/POB-No.**: Landsberger Str. 234
- **Postal Code/City**: 80687 München, GERMANY
- **Dept. responsible for information**
  - **Telefon**: 01149 89-32479950
  - **Telefax**: 01149 89-32479952
  - **E-mail**: contact@biontex.com
  - **WWW**: www.biontex.com

1.4 **Emergency telephone number**
- **Centre of detoxification**: USA or Canada +1 800-424-9300

2. **HAZARDS IDENTIFICATION**

2.1 **Classification of the substance or mixture**
- **Classification according to Globally Harmonized System (GHS)**
  - Not classified as hazardous.
- **Skin corrosion/irritation**: Not classified
- **Eye damage/irritation**: Not classified

2.2 **Label elements**
- **Classification according to Globally Harmonized System (GHS)**
  - None

2.2.1 **GHS US labeling**
- **Signal word**: Not applicable
- **Pictogram / Hazard symbol**: Not applicable
- **Health hazard**: not hazardous
- **Physical hazard**: not hazardous
- **Environmental hazards**: not hazardous

**Hazard statements**
- None

**Hazard-determining components of labeling**
- None
Precautionary statements

- Chapter 4, 6, 7, 13

Classification system

NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme

NFPA/HMIS ratings (scale 0 - 4)

OSHA Hazard Overview (Criteria according to 29CFR1910.1200)
Not applicable

2.3 Other hazards / Hazards not otherwise classified

None
Based on present knowledge and when handled correctly, the product poses no danger for humans and the environment.
The usual minimum standards for protective measures in the chemical industry must be observed.
Results of PBT and vPVB assessment ➔ Chapter 12

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances
This product is a mixture.

3.1.1 Chemical identity and characterisation:

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS-No.</th>
<th>GHS classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>MycoSPY Master Mix (synthetic nucleic acids, not applicable</td>
<td>not applicable</td>
<td>not applicable</td>
</tr>
<tr>
<td>recombinant thermostable enzyme, synthetic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>buffer salts, deoxy nucleotides, stabilizer,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>tracking dyes)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal Control (synthetic nucleic acid)</td>
<td>not applicable</td>
<td>not applicable</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>not applicable</td>
</tr>
</tbody>
</table>

3.2 Mixtures
Classification according to Globally Harmonized System (GHS)

- not hazardous/no dangerous components

Chemical identity and characterisation

- mixture with harmless/nonhazardous ingredients

Hazardous ingredients
- not applicable

UN-No.
- not applicable

3.3 Additional information
Ingredients are not hazardous or their concentrations do not exceed the limit specified according to 29 CFR 1910.1200 Hazard Communication Standard (USA) and Regulation 1907/2006/EC and Directive 2001/59/EC (EU).
4. **FIRST AID MEASURES**

4.1 **Description of first aid measures**

**General information**
Remove contaminated clothing immediately. Contaminated clothing should be laundered before reusing. Seek medical attention immediately if symptoms develop.

**Inhalation**
Remove victim to fresh air, if necessary seek medical advice. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

**Skin contact**
Wash skin with plenty of water thoroughly. Remove contaminated clothing. In case of skin reactions, consult a physician.

**Eye contact**
Remove contact lenses. Immediately flush eyes with plenty of flowing water for at least 20 minutes, also under the eyelids. If necessary seek medical advice.

**Swallowing / Ingestion**
Never give anything by mouth to an unconscious person. Rinse mouth with water thoroughly. If malaise develops, call a physician. Do not induce vomiting without medical advice.

4.2 **Most important symptoms and effects, both acute and delayed**
No further relevant information available.

4.3 **Indication of any immediate medical attention and special treatment needed**
No information available for special treatment. Treat symptomatically.

After first aid, get appropriate in-plant, paramedic, or community medical support if exposure symptoms persist.

4.4 **Special precautions/procedures**
None

4.5 **Notes to physician**
Treat symptomatically

5. **FIREFIGHTING MEASURES**

5.1 **Extinguishing media**

**Suitable**
Carbon dioxide (CO₂), dry-chemical or foam fire extinguisher, water spray

**Unsuitable**
Water jet, otherwise there is a risk of spread of fire

5.2 **Special hazards arising from the substance or mixture**
Dangerous decomposition is not anticipated, do not breathe fumes of fire.

5.3 **Advice for firefighters**
Wear self-contained breathing apparatus and protective suit. Use fine water spray to cool endangered containers (from a safe distance). Suppress gases/vapours/mists with water spray jet. Pay attention to backdraft.
6. **ACCIDENTAL RELEASE MEASURES**

6.1 **Personal precautions, protective equipment and emergency procedures**
Use personal protective equipment / personal protection measures.
Keep unprotected persons away / evacuate personnel to safe areas.
Ensure adequate ventilation.

6.2 **Environmental precautions**
Prevent further leakage or spillage if safe to do so.
Prevent product from entering drains/surface water/groundwater.
Additional special actions to limit damages are not necessary.

6.3 **Methods and material for containment and cleaning up**
Dilute spilled liquids with plenty of water and adsorb. Sweep or vacuum (if powder) or soak up with inert absorbent material (if liquid), then replace into a suitable clean, dry, closed container and label for disposal.
Never return spills in original containers for reuse.

6.4 **Reference to other sections**
Information on safe handling ➔ Chapter 7
Information on personal protection equipment ➔ Chapter 8
Information for disposal ➔ Chapter 13

7. **HANDLING AND STORAGE**

7.1 **Precautions for safe handling**
Handling according to Guidelines for Laboratories.

Advices on safe handling
Usual precautions when handling chemicals ➔ Chapter 8.
Handle with care and avoid unnecessary, prolonged or repeated exposure. Avoid inhalation.
Avoid contact with eyes, skin and clothing. Use protective equipment to minimize exposure.

Precautions against fire and explosion
Autoignition does not occur. no special precautions are necessary

Measures to prevent aerosol and dust generation
No special precautions are necessary.

Measures to protect the environment
No special precautions are necessary.

General Hygiene measures
No special precautions are necessary.

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

Storage conditions
This item is supplied uncooled and should be stored at 5°F (≤ - 15°C) immediately after receipt. Keep container tightly closed. Use original container and store in original receptacle.

Requirements for storerooms and containers/hints on joint storage
There is no restriction and/or requirements for storage with other materials.

Storage class/storage in one common storage facility
10-13 Other liquids and solids

7.3 **Specific end uses(s)**
Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific application.
8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameter

None

8.1.1 Occupational exposure limit / biological limit

The product does not contain any relevant quantities of materials with critical value that have to be monitored.

8.1.2 Control Banding (e.g. ILO, OSHA)

None

8.2 Exposure controls

Exposure limitation and controlling are workplace related and must be regulated by the user.

8.2.1 Appropriate technical safety devices

Technical measures and appropriate working operations are just as important as the use of personal protective equipment. Provide good ventilation and/or an exhaust system in the work area. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

8.2.2 Personal protective equipment

Personal protective equipment should be selected specifically for the workplace.

Eye / Face protection

Tightly sealed goggles. Ensure that an eyewash station is proximal to the workstation.

Skin / Body protection

Wear protective clothes. Ensure that safety showers are proximal to the workstation.

Hand protection

Protective gloves - the material has to be impermeable and resistant to the product. Break through time, permeation and degradation has to be found out by the manufacturer of the protective gloves and has to be observed.

Breathing protection

Not required

General protection and hygiene measures

The usual precautionary measures are to be adhered to when handling chemicals. Remove contaminated clothing immediately and wash it before re-use. After contact clean skin with soap and water or use appropriate detergent. Wash hands before breaks and after work. Keep out of reach of children. Keep away from food, drink and animal feed. Do not eat, drink or smoke during work/in work areas.

8.2.3 Environmental exposure controls

Information on environmental exposure ➔ Chapter 6, 7 und 12

8.3 Engineering measures

Always provide fresh air. Ensure that eyewash stations and safety showers are close to the workstation location.
SAFETY DATA SHEET according to OSHA HazCom Standard 29 CFR 1910.2100(g), Rev. 2012 and GHS Rev 03

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Master Mix:</th>
<th>Other ingredients:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance/physical state</td>
<td>lyophilised</td>
<td>liquid/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>mild characteristic odour</td>
</tr>
<tr>
<td>Colour/Odour</td>
<td>green/</td>
<td>colorless/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>mild characteristic odour</td>
</tr>
</tbody>
</table>

- pH value: No data available
- Evaporation rate: No data available
- Melting point/range: No data available
- Boiling point/range: No data available
- Flash point: No data available
- Flammability (solid, gaseous): No data available
- Ignition temperature (solid/gaseous): No data available
- Autoignition temperature: No data available
- Oxidising properties: No data available
- Vapour pressure: No data available
- Vapour density: No data available
- Relative density: No data available
- Bulk density: No data available
- Water solubility 68°F (20°C) in g/l: Completely
- Partition coefficient n-Octanol/Wasser: No data available
- Viscosity, kinematic: No data available
- Viscosity, dynamic: No data available
- Dust explosion hazard: No data available
- Explosion properties: No data available
- Explosion limits (lower/upper): No data available
- Substance groups relevant properties: No data available
- Surface tension: No data available
- Solvent content (organic/water): No data available
- Solids content: None
- Decomposition: No data available

9.2 Other information

No further relevant information available.

10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Product is stable under normal storage conditions and if it used according to specifications.

10.3 Possibility of hazardous reactions

No dangerous reactions known under conditions of normal use, handling and storage.

10.4 Conditions to avoid

No dangerous reactions known under conditions of normal use, handling and storage.

10.5 Incompatible materials

Strong oxidizing agents
SAFETY DATA SHEET according to OSHA HazCom Standard 29 CFR 1910.2100(g), Rev. 2012 and GHS Rev 03

10.6 Thermal decomposition products
No decomposition known if used according to specifications.

10.7 Hazardous decomposition products
Carbon monoxide, Carbon dioxide

10.8 Polymerisation
Hazardous polymerisation does not occur.

10.9 Incompatible materials
No further relevant information available.

11. TOXICOLOGICAL INFORMATION

11.1 Information to toxicological effects

<table>
<thead>
<tr>
<th>Effect Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (LD$<em>{50}$/LC$</em>{50}$)</td>
<td>unknown</td>
</tr>
<tr>
<td>Eye irritation</td>
<td>may cause irritation/allergic sensitization</td>
</tr>
<tr>
<td>Skin irritation</td>
<td>may cause irritation/allergic sensitization</td>
</tr>
<tr>
<td>Aspiration</td>
<td>may cause irritation/allergic sensitization</td>
</tr>
<tr>
<td>Ingestion</td>
<td>may cause irritation/allergic sensitization</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>unknown</td>
</tr>
<tr>
<td>Mutagenic effects/Reproductive toxicity</td>
<td>unknown</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>unknown</td>
</tr>
<tr>
<td>EPA</td>
<td>none of the ingredients are listed</td>
</tr>
<tr>
<td>TLV (established by ACGIH)</td>
<td>none of the ingredients are listed</td>
</tr>
<tr>
<td>NIOSH</td>
<td>none of the ingredients are listed</td>
</tr>
<tr>
<td>NTP</td>
<td>none of the ingredients are listed</td>
</tr>
<tr>
<td>OSHA</td>
<td>none of the ingredients are listed</td>
</tr>
<tr>
<td>IARC</td>
<td>not classified</td>
</tr>
<tr>
<td>Sensitisation</td>
<td>unknown</td>
</tr>
<tr>
<td>Target organ effects (single or repeated exposure)</td>
<td>no known effects under normal use conditions</td>
</tr>
<tr>
<td>Chronic effects from short/long-term exposure</td>
<td>no information available</td>
</tr>
<tr>
<td>Numerical measures of toxicity</td>
<td>no information available</td>
</tr>
<tr>
<td>Assessment of other acute effects</td>
<td>no information available</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

12.1 Toxicity / Ecotoxicity
No effects or hazards known.

12.2 Aquatic toxicity
No further relevant information available.

12.3 Persistence and degradability
No effects or hazards known.

12.4 Bioaccumulative potential
No effects or hazards known.

12.5 Mobility in soil
No effects or hazards known.
SAFETY DATA SHEET according to OSHA HazCom Standard 29 CFR 1910.2100(g), Rev. 2012 and GHS Rev 03

12.6 Results of PBT and vPvB assessment
The substance does not meet the criteria for a classification.
- PBT not applicable
- vPvB not applicable

12.7 Other adverse effects
No data available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Dispose of in accordance with local regulations and national laws and provisions.

13.2 Contaminated/appropriate packaging
Dispose of empty packs via local recycling or waste disposal routes, if necessary, clean them beforehand.

13.3 Additional information
Prevent discharge of the liquid into the sewage system, cesspit and cellars.
Vapours can form potentially explosive atmosphere.
Waste disposal must be in accordance with appropriate Federal, State and local regulations.
This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority. Residue from fires extinguished with this material may be hazardous.

14. TRANSPORT INFORMATION

14.1 UN number
None

14.2 UN proper shipping name
None

14.3 Transport hazard class(es)
None
Is not subject to current regulations for transportation of dangerous goods (ADR/RID, IMO, ADN, IMDG/EmS, IATA/ICAO, DOT, MERCOSUR).
The product is not hazardous to ship.

14.4 Packing group
None

14.5 Environmental hazards
None

14.6 Special precautions for user
Not applicable ➔ Chapter 6 - 8

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable
15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Federal Regulations
- Respectively in the latest version incl. all amendments, additions and corrections.
- SARA/CERCLA not listed
- TSCA not listed
- Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) not contains HAPs

U.S. State Regulations
- Compliance with applicable agreements, regulations and laws of the respective country.
- California Proposition 65 does not contain chemicals listed under Proposition 65

Other relevant regulations, restrictions and prohibition regulations
- None

Inventory status
- WHMIS hazard class (Canada) not listed
- NDSL/DSL (Canada) not listed
- AICS (Australia) not listed
- ENCS/PACS (Japan) not listed
- IECSC (China) not listed
- KECI (Korea) not listed
- NECI/TSCA (Taiwan) not listed
- NZIoC (New Zealand) not listed
- PICCS (Phillipines) not listed

15.2 Chemical safety assessment
- Not been carried out.

16. OTHER INFORMATION

16.1 Issuing institution
- Department issuing SDS
  Department of Health, Safety and Environmental Protection
- Contact
  Dr. Roland Klösel

16.2 Abbreviations and acronyms
- AICS: Australian Inventory of Chemical Substances
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- ADN: Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
- ACGIH: American Conference of Governmental Industrial Hygienists
- CAS: Chemical Abstracts Service (Division of the American Chemical Society)
- CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act
- DOT: Department of Transportation
- (N)DSL: Canadian (Non-)Domestic Substance List
- EmS: Emergency Schedule

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SAFETY DATA SHEET according to OSHA HazCom Standard 29 CFR 1910.2100(g), Rev. 2012 and GHS Rev 03

EPA Environmental Protection Agency
ENCS Japanese Existing and New Chemical Substances
GHS Globally Harmonized System of Classification and Labelling of Chemicals
HMIS Hazardous Materials Identification System
IARC International Agency for Research on Cancer
IATA International Air Transport Association
IBC Intermediate Bulk Container
ICAO International Civil Aviation Organization
IECSC Existing Chemical Substances Produced or Imported in China
ILO International Labour Organization
IMDG International Maritime Code for Dangerous Goods
IMO International Maritime Organization
KECI Korean Existing Chemicals Inventory
LC$_{50}$/LD$_{50}$ Lethal concentration, 50 percent / Lethal dose, 50 percent
MARPOL International Convention for the Prevention of Marine Pollution from Ships
MERCOSUR Mercado Común del Sur
NECI Taiwan’s National Existing Chemical Inventory
NIOSH National Institute for Occupational Safety and Health
NZIoC New Zealand Inventory of Chemicals
NFPA National Fire Protection Association
NTP National Toxicology Programme
OSHA Occupational Safety & Health Administration
PACS Japanese Priority Assessment Chemical Substances
PBT Persistent, Bioaccumulative, Toxic
PICCS Philippine Inventory of Chemicals and Chemical Substances
RID Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations concerning the International Transport of dangerous goods by rail)
SARA The Superfund Amendments and Reauthorization Act
TLV Threshold Limit Value
TSCA Toxic Substances Control Act
TCSA Toxic Chemical Substances Control Act in Taiwan
UN No. United Nation Number
vPvB Very persistent, very bioaccumulative
WHMIS Workplace Hazardous Materials Information System

16.3 Further information
The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. However, Biontex does not warrant the accuracy of this information.
All materials and mixtures may present unknown hazards and should be used with caution. When necessary or appropriate, independent opinions regarding the risk of handling or exposure should be obtained from trained professionals.
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