

## Section 1 – Identification of the substance/mixture and of the company/undertaking

### 1.1 Product Identifier

**Catalog No.** 203120350012  
**Product Name** Lyfectol®

### 1.2 Relevant identified uses of the substance or mixture and uses advised against.

**Identified uses** Biochemical research/analysis, Laboratory chemicals, Analytical purpose,  
For *In vitro* Diagnostics Use.

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

**Company Name** Microxpress®  
Division of Tulip Diagnostics (P) Ltd.  
**Address** Plot No. S-124, S-125, S-126, Utility Plot No. VIII,  
Phase III-B, Verna Industrial Estate, Verna, Goa-403 722, INDIA  
**Telephone** (0832) 6625806  
**Emergency Telephone** Please contact your local emergency center.  
**E-mail** [sales@tulipgroup.com](mailto:sales@tulipgroup.com); [mex.queries@tulipgroup.com](mailto:mex.queries@tulipgroup.com)  
**Website** [www.microxpress.in](http://www.microxpress.in)

## Section 2 – Hazards Identification

### 2.1 Classification of the substance or mixture:

**CLP Classification-Regulation (EC) No. 1272/2008[EU-GHS/CLP]**  
Not a hazardous substance or mixture according to Regulation (EC) No.1272/2008

### 2.2 Label elements:

**Labeling according to Regulation (EC) No.1272/2008.**  
The product does not need to be labelled in accordance with EC directives or respective national laws.

### 2.3 Other hazards: None.

## Section 3 – Composition / Information on Ingredients

### 3.1 Substance: Not applicable.

### 3.2 Mixture: Ingredients used for this mixture are nonhazardous. No disclosure requirement according to regulations.

## Section 4 – First Aid Measures

### 4.1 Description of first aid measures

<b>General Information</b>	Get medical attention if symptoms occur.
<b>Inhalation</b>	Provide fresh air, in case unconscious; maintain adequate airway and respiration. Consult a doctor/medical service in case of breathing problems.
<b>Ingestion</b>	Wash out mouth with water. If symptoms persist, consult a physician.
<b>Skin Contact</b>	Wash thoroughly with soap and water. Take off immediately all contaminated clothing. Consult a doctor/medical service if irritation persists.
<b>Eye Contact</b>	Rinse out with plenty of water. Remove contact lenses. If symptoms persists consult a physician.

**4.2 Most important symptoms and effects, both acute and delayed:** None.

## Section 5 – Fire Fighting Measures

**5.1 Suitable Extinguishing Agents:** CO<sub>2</sub>, ABC multipurpose dry chemical or water spray. Fight large fires with water spray or alcohol resistant foam.

**5.2 Special hazards arising from the substance or mixture:** Development of hazardous combustion gases or vapours possible in the event of fire.

**5.3 Special Protective Equipment and Advice for firefighters:** Wear self-contained breathing apparatus for firefighting, if necessary.

## Section 6 – Accidental Release Measures

**6.1 Personal precautions, protective equipment and emergency procedures:** No special precautionary health measures should be needed under anticipated conditions of use. Wear appropriate personal protective equipment (PPE) as regulated by your laboratory protocol including lab coat, safety glasses, and gloves.

**6.2 Methods and materials for containment and cleaning up:** Clean up affected area. Avoid generation of dusts. Soak up with inert absorbent material and dispose contaminated material as waste according to section 13.

**6.3 Environmental precautions:** Avoid release to the environment.

## Section 7 – Handling and Storage

**7.1 Precautions for safe handling:** Avoid contact with eyes, skin and clothing.

**7.2 Conditions for safe storage, including any incompatibilities:** Store in a cool, dry place. Recommended storage temperature, check product label.

**7.3 Specific end uses:** Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.  
**Storage:** Store at 2°C-8°C.

## Section 8 – Exposure Control / Personal Protection

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

**8.2 Appropriate engineering controls:** General industrial hygiene practice; Avoid contact with skin, eyes and clothing. Wash hands before and after handling the products.

### Personal protective equipment:

**Eye/face protection:** Use safety glasses.

**Skin protection:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique to avoid contact. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Body Protection:** Choose body protection in relation to the specific work-place.

**Respiratory protection:** Wear mask or other protective equipment's. Ensure adequate ventilation.

**Environmental exposure controls:** Do not empty into drains.

## Section 9 – Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties:

<b>Appearance</b>	Lyfectol Reagent A (2% NaOH Solution): Clear colourless liquid. Lyfectol Reagent B (N Acetyl -L-Cysteine): White crystalline powder. Reagent C (Phosphate Buffer): Clear, colourless liquid.
<b>Odour</b>	No data available.
<b>Odour Threshold</b>	No data available.
<b>pH</b>	Lyfectol Reagent A (2% NaOH Solution): $13 \pm 0.2$ Lyfectol Reagent C (Phosphate Buffer): $6.8 \pm 0.2$
<b>Melting/freezing point</b>	No data available.
<b>Initial boiling point and boiling range</b>	No data available.
<b>Flash point</b>	No data available.
<b>Flammability (Solid, gas)</b>	No data available.
<b>Vapour pressure</b>	No data available.
<b>Relative density</b>	No data available.
<b>Water Solubility</b>	No data available.
<b>Partition coefficient: n-octanol/water</b>	No data available.
<b>Autoignition Temperature</b>	No data available.
<b>Viscosity</b>	No data available.
<b>Explosive properties</b>	No data available.
<b>Oxidizing properties</b>	No data available.
<b>Vapour density</b>	No data available.

<b>Thermal decomposition</b>	No data available.																												
<b>Section 10 – Stability and Reactivity</b>																													
<p><b>10.1 Reactivity:</b> Stable under recommended transport or storage condition.</p> <p><b>10.2 Chemical stability:</b> Stable under recommended storage conditions.</p> <p><b>10.3 Possibility of hazardous reactions:</b> Hazardous reactions will not occur under normal transport or storage conditions.</p> <p><b>10.4 Conditions to avoid:</b> Avoid exposure to heat and moisture to maintain product stability.</p> <p><b>10.5 Incompatible materials:</b> No data available.</p> <p><b>10.6 Hazardous decomposition products:</b> No decomposition if used according to the specification.</p>																													
<b>Section 11 – Toxicological Information</b>																													
<p><b>11.1 Information on toxicological effects:</b></p> <table> <tr> <td>Acute toxicity</td><td>No data available.</td></tr> <tr> <td>Skin corrosion/irritation</td><td>No data available.</td></tr> <tr> <td>Serious eye damage/eye irritation</td><td>No data available.</td></tr> <tr> <td>Respiratory or skin sensitization</td><td>No data available.</td></tr> <tr> <td>Germ cell mutagenicity</td><td>No data available.</td></tr> <tr> <td>Carcinogenicity IARC</td><td>No data available.</td></tr> <tr> <td>Reproductive toxicity</td><td>No data available.</td></tr> <tr> <td>Specific target organ toxicity- single exposure</td><td>No data available.</td></tr> <tr> <td>Aspiration hazard</td><td>No data available.</td></tr> </table> <p><b>Potential Health Effects:</b></p> <table> <tr> <td>Inhalation</td><td>May be irritating if inhaled.</td></tr> <tr> <td>Skin</td><td>No irritating effects.</td></tr> <tr> <td>Eyes</td><td>No irritating effects.</td></tr> <tr> <td>Ingestion</td><td>May be harmful.</td></tr> <tr> <td>Sensitization</td><td>No sensitization effects known. Repeated exposure might cause allergic reactions in sensitive individuals.</td></tr> </table> <p><b>Additional Toxicological Information:</b> None.</p>		Acute toxicity	No data available.	Skin corrosion/irritation	No data available.	Serious eye damage/eye irritation	No data available.	Respiratory or skin sensitization	No data available.	Germ cell mutagenicity	No data available.	Carcinogenicity IARC	No data available.	Reproductive toxicity	No data available.	Specific target organ toxicity- single exposure	No data available.	Aspiration hazard	No data available.	Inhalation	May be irritating if inhaled.	Skin	No irritating effects.	Eyes	No irritating effects.	Ingestion	May be harmful.	Sensitization	No sensitization effects known. Repeated exposure might cause allergic reactions in sensitive individuals.
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<b>Section 12 – Ecological Information</b>																													
<p><b>12.1 Toxicity:</b> No data available.</p> <p><b>12.2 Persistence and degradability:</b> No data available.</p> <p><b>12.3 Bioaccumulative potential:</b> No data available.</p>																													

**12.4 Mobility in soil:** No data available.

**12.5 PBT and vPvB assessment:** This product is not identified as a PBT/vPvB.

**12.6 Other adverse effects:** No data available.

### Section 13 – Disposal Considerations

#### 13.1 Waste treatment methods

**Product:** Dispose of waste in accordance with current legislation and local regulations as per established safety procedures.

The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

**Contaminated packaging:** Handle uncleaned containers like the product itself.

**Recommendation:** Ensure decontamination of the prepared material and contaminated containers by autoclaving and / or incineration before discarding.

### Section 14 – Transport Information

**14.1 UN number:** NA

**14.2 UN proper shipping name:** This product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADA/RID).

**14.3 Transport hazard class(es):** Non-hazardous for transport.

**14.4 Packaging group:** NA

**14.5 Environmental hazards**

**ADR/RID:** No

**IMDG Marine pollutant:** No

**IATA:** No

**14.6 Special precautions for user:** Store the product as per recommended storage conditions refer section 7.

### Section 15 – Regulatory Information

**15.1 Safety health and environment regulations / legislation specific for the substance or mixture:**

**Specific regulation:** Applicable national / regional or local regulations. Safe for all kinds of modes of transportation.

**15.2 Chemical Safety Assessment:** Not applicable.

### Section 16 – Other Information

This product is for use by professionals.

To the best of our knowledge the above mentioned information is accurate. However, Microexpress® - Division of Tulip Diagnostics (P) Ltd., makes no warranty with respect to its completeness nor assumes any liability resulting from its use. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text. It remains the user's own responsibility to make sure that the information is appropriate and complete for his specific use of this product. The user is also responsible for observing any laws and applicable guidelines.