

1 Identification of the substances/ mixture and of the company/ undertaking**1.1 Product Identifiers**

Product Number PT051
Product Name Murashige & Skoog Medium
(Finer & Nagasawa Modification)
w/ Macroelements & Microelements;
w/o Vitamins, Sucrose & Agar

REACH Registration Number Reach registration number is not available for this mixture. According to REACH regulation EC 1907/2006 this product is exempted from registration. The annual tonnage does not require a REACH registration or it is envisaged for a later registration deadline.

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

1.2.1 Relevant identified uses Laboratory chemicals, Manufacture of substances

1.2.2 Uses advised against No data available

1.3 Details of the supplier of the safety data sheet

Produced by HiMedia Laboratories Private Limited
Address 23, Vadhani Industrial Estate, LBS Marg, Ghatkopar (W), Mumbai - 400 086
India
Tel. No. +91-22-2500 0970, +91-22-2500 1607 Fax No.
Mail Id ptc@himedialabs.com Website : www.himedialabs.com

1.4 Emergency Tel. No.

Emergency Tel. No. Please contact the regional HiMedia representation in your country

2 Hazards Identification**2.1 Classification of the substance or mixture**

CLP Classification-Regulation (EC) No. 1272/2008[EU-GHS/CLP]

Oxidising solids, (Category 3), H272

Skin corrosion or irritation, (Category 2), H315

Serious eye damage or eye irritation, (Category 2A), H319

Specific target organ toxicity, single exposure, Respiratory tract irritation, (Category 3), H335

For the full text of the H-Statements mentioned in this Section, See Section 16

2.2 Label elements

Labeling according to Regulation (EC) No.1272/2008



Pictogram

Signal word Warning

Hazard Statement(s)

H272 May intensify fire; oxidizer

H315 Causes skin irritation

H319 Causes serious eye irritation

H335 May cause respiratory irritation

Precautionary Statement(s)

P221 Take any precaution to avoid mixing with combustibles.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3 Other Hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3 Composition/Information On Ingredients

3.2 Mixture

| Component | Classification | Concentration |
|---|---|---------------|
| Potassium nitrate | | |
| CAS No. : 7757-79-1 EC No. : 231-818-8 | As Per EC Regulation 1272/2008 Ox. Sol. 3 H272 | >=60 - <=70% |

| Component | Classification | Concentration |
|---|--|---------------|
| Ammonium nitrate | | |
| CAS No. : 6484-52-2 EC No. : 229-347-8 | As Per EC Regulation 1272/2008 Ox. Sol. 2; Skin Irrit. 2; Eye Irrit. 2A; STOT SE 3 H272; H315; H319; H335 As Per EC Directive 67/548/EEC or 1999/45/EC O (gas); Xi R8; R36/37/38 | >=15 - <=20% |

| Component | Classification | Concentration |
|--|--|---------------|
| Calcium chloride,anhydrous | | |
| CAS No. : 10043-52-4 EC No. : 233-140-8 | As Per EC Regulation 1272/2008 Eye Irrit. 2A H319 | >=5 - <=10% |

| Component | Classification | Concentration |
|---|---|----------------|
| Manganese sulphate | | |
| CAS No. : 10034-96-5 EC No. : 232-089-9 Index-No : 025-003-00-4 | As Per EC Regulation 1272/2008 STOT RE 2; Aquatic Chronic 2 H373; H411 | >=0.3 - <=0.5% |

| Component | Classification | Concentration |
|---|--|----------------|
| Boric acid | | |
| CAS No. : 10043-35-3 EC No. : 233-139-2 Index-No : 005-007-00-2 | As Per EC Regulation 1272/2008 Repr.Tox. 1A, 1B H360 | >=0.1 - <=0.3% |

| Component | Classification | Concentration |
|---|---|------------------|
| Potassium iodide | | |
| CAS No. : 7681-11-0 EC No. : 231-659-4 | As Per EC Regulation 1272/2008 Acute Tox.oral 4; Skin Irrit. 2; Eye Irrit. 2A H302; H315; H319 | >=0.01 - <=0.03% |

| Component | Classification | Concentration |
|--|--|----------------|
| Zinc sulphate, heptahydrate | | |
| CAS No. : 7446-20-0 EC No. : 231-793-3 Index-No : 030-006-00-9 | As Per EC Regulation 1272/2008 Acute Tox.oral 4; Eye Dam. 1; Aquatic Chronic 1 H302; H318; H410 | >=0.1 - <=0.3% |

| Component | Classification | Concentration |
|------------------------------|---|-------------------------|
| Copper sulphate pentahydrate | | |
| CAS No. : 7758-99-8 | As Per EC Regulation 1272/2008 H302; H315; H319; H410 | >=0.0004 - <=0.0007% |

| Component | Classification | Concentration |
|--|--|-------------------------|
| Cobalt chloride, 6H ₂ O | | |
| CAS No. : 7791-13-1 EC No. : 231-589-4 Index-No : 027-004-00-5 | As Per EC Regulation 1272/2008 Acute Tox.oral 4; Skin Sens. 1; Resp. Sens. 1; Muta. 2; Carc. 1B; Repr. 1B; Aquatic Chronic 1 H302; H317; H334; H341; H350i; H360F; H410 | >=0.0004 - <=0.0007% |

4 First Aid Measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse immediately with plenty of water for at least 15 minutes. Consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11.

4.3 Indication of immediate medical attention and special treatment needed

Treat symptomatically.

5 Fire Fighting Measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media

No data available.

5.2 Special hazards arising from the substance or mixture

Magnesium oxides, Sulphur oxides, Sodium oxides, Iron oxides, Calcium Oxide, Cobalt oxides, Copper oxides, Manganese oxides,, Molybdenum oxides, Oxides of Phosphorus, Potassium oxides, Zinc oxides

5.3 Precautions for fire-fighters

Cool closed containers exposed to fire with water spray.

5.4 Further information

Wear self-contained breathing apparatus for firefighting if necessary.

6 Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personnel protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Keep in suitable, closed containers for disposal. Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for

disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see Section 13.

7 Handling and Storage

7.1 Precautions for safe handling

Avoid formation of dust and aerosols. Use only in well ventilated areas. Keep away from heat, sparks and open flame.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool/well-ventilated place. Storage class (TRGS 510): Oxidizing Solids

Recommended Storage Temperature : 2 - 8°C

7.3 Specific end uses

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8 Exposure Controls/Personal Protection

8.1 Control parameters

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance to general industrial hygiene and safety practice. Wash hands before breaks, immediately after handling the products and at the end of workday.

Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN 166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU). Have eye-washing facilities readily available where eye contact can occur.

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

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.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Environment exposure controls

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|--|---------------------------------------|
| Appearance | White to off-white, homogenous powder |
| Odour | No data available |
| Odour Threshold | No data available |
| pH | 3.5 - 4.5 |
| Melting/freezing point | No data available |
| Initial boiling point and boiling range | No data available |
| Flash point | No data available |
| Upper/lower flammability or explosive limits | No data available |
| Evaporation rate | No data available |
| Flammability (Solid, gas) | No data available |
| Vapour pressure | No data available |
| Relative density | No data available |
| Water Solubility | Soluble in water |
| Autoignition Temperature | No data available |
| Decomposition Temperature | No data available |
| Viscosity | No data available |
| Explosive properties | No data available |
| Oxidizing properties | No data available |
| Vapour density | No data available |
| Thermal decomposition | No data available |

9.2 Other safety information

No data available

10 Stability and Reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions - Nitrogen oxides(NOx), Sulphur oxides, Oxides of phosphorus, Potassium oxides, Magnesium oxide, Cobalt/cobalt oxides, Calcium oxide, Copper oxides

11 Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

No data available

Remarks : No data available

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

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 - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

RTECS : Not Applicable

12 Ecological Information

12.1 Toxicity

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 PBT and vPvB assessment

This preparation contains no substance considered to be persistent, bioaccumulating or toxic (PBT) or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

13 Disposal Considerations

13.1 Waste treatments methods

Product

Dispose of as unused product.

13.2 Contaminated packaging

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Contact a licenced professional waste disposal service to dispose off this material.

14 Transport Information

14.1 UN-No

ADNR : 1477 ADR : 1477 IATA_C : 1477 IATA_P : 1477 IMDG : 1477 RID : 1477

14.2 UN proper shipping name

ADNR : Nitrates, inorganic, n.o.s.
ADR : Nitrates, inorganic, n.o.s.
IATA_C : Nitrates, inorganic, n.o.s.
IATA_P : Nitrates, inorganic, n.o.s.
IMDG : Nitrates, inorganic, n.o.s.
RID : Nitrates, inorganic, n.o.s.

14.3 Transport hazard class(es)

ADNR : 5.1 ADR : 5.1 IATA_C : 5.1 IATA_P : 5.1 IMDG : 5.1 RID : 5.1

14.4 Packaging group

ADNR : II ADR : II IATA_C : II IATA_P : II IMDG : II RID : II

14.5 Environmental hazards

ADR : No IMDG : Marine Pollutant : No IATA_C : No

14.6 Special precautions for use

No data available

15 Regulatory Information

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

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

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

16 Other information

| | |
|-------|---|
| H272 | May intensify fire; oxidizer |
| H302 | Harmful if swallowed |
| H315 | Causes skin irritation |
| H317 | May cause an allergic skin reaction |
| H318 | Causes serious eye damage |
| H319 | Causes serious eye irritation |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled |
| H335 | May cause respiratory irritation |
| H341 | Suspected of causing genetic defects |
| H350i | May cause cancer by inhalation |
| H360 | May damage fertility or the unborn child |
| H360F | May damage fertility |
| H373 | May cause damage to organs through prolonged or repeated exposure |
| H410 | Very toxic to aquatic life with long lasting effects |
| H411 | Toxic to aquatic life with long lasting effects |

| | |
|--------------------|---|
| Acute Tox.oral 4 | Acute toxicity, oral, Category 4 |
| Aquatic Chronic 1 | Hazardous to the aquatic environment, long term hazard, Category 1 |
| Aquatic Chronic 2 | Hazardous to the aquatic environment, long term hazard, Category 2 |
| Carc. 1B | Carcinogenicity, Category 1B |
| Eye Dam. 1 | Serious eye damage or eye irritation, Category 1 |
| Eye Irrit. 2A | Serious eye damage or eye irritation, Category 2A |
| Muta. 2 | Germ cell mutagenicity, Category 2 |
| Ox. Sol. 3 | Oxidising solids, Category 3 |
| Repr. 1B | Reproductive toxicity, Category 1B |
| Repr.Tox. 1A, 1B | Reproductive toxicity, Category 1A, 1B |
| Resp. Sens. 1 Skin | Sensitisation, respiratory, Category 1 |
| Irrit. 2 | Skin corrosion or irritation, Category 2 |
| Skin Sens. 1 STOT | Sensitisation, Skin, Category 1 |
| RE 2 | Specific target organ toxicity, repeated exposure, Category 2 |
| STOT SE 3 | Specific target organ toxicity, single exposure, Respiratory tract irritation, Category 3 |
| R36/37/38 | Irritating to eyes, respiratory system and skin. |
| R8 | Contact with combustible material may cause fire. |
| O (gas) | Oxidising (gas) |
| Xi | Irritant |

Further Information

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