



Name of the Product Code No. Section 1 :	: Murashige & Skoog Medium (Modification No. 9) w/ ½ Macroelements, ½ Microelements & ½ Vitamins; w/o Sucrose & Agar : PT 1103 : Chemical Identification Code No. : PT 1103 Name of the Product : Murashige & Skoog Medium (Modification No. 9) w/ ½ Macroelements, ½ Microelements & ½ Vitamins; w/o Sucrose & Agar Produced by : Central Drug House Pvt. Ltd. Address : 7/28 Vardaan House, Darya Ganj, New Delhi (INDIA) Tel. No. : 00 91 11 49404040																				
Section 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 Hazardous to the aquatic environment, long term hazard, (Category 3), H412																				
2.2	Label elements Labeling according to Regulation (EC) No.1272/2008 <div style="text-align: center;">   </div> <p style="text-align: center;">GHS07 GHS03</p> <p><i>Pictogram</i></p> <p><i>Signal word</i> Warning</p> <p><i>Hazard Statement(s)</i></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 40%;"><i>H272</i></td> <td><i>May intensify fire; oxidizer</i></td> </tr> <tr> <td><i>H315</i></td> <td><i>Causes skin irritation</i></td> </tr> <tr> <td><i>H319</i></td> <td><i>Causes serious eye irritation</i></td> </tr> <tr> <td><i>H335</i></td> <td><i>May cause respiratory irritation</i></td> </tr> <tr> <td><i>H412</i></td> <td><i>Harmful to aquatic life with long lasting effects</i></td> </tr> </table> <p><i>Precautionary Statement(s)</i></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 40%;"><i>P210</i></td> <td><i>Keep away from heat/sparks/open flames/hot surfaces. — No smoking.</i></td> </tr> <tr> <td><i>P273</i></td> <td><i>Avoid release to the environment.</i></td> </tr> <tr> <td><i>P280</i></td> <td><i>Wear protective gloves/protective clothing/eye protection/face protection.</i></td> </tr> <tr> <td><i>P305+P351+P338</i></td> <td><i>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</i></td> </tr> <tr> <td><i>P370 + P378</i></td> <td><i>In case of fire: Use suitable extinguishing media for extinction.</i></td> </tr> </table>	<i>H272</i>	<i>May intensify fire; oxidizer</i>	<i>H315</i>	<i>Causes skin irritation</i>	<i>H319</i>	<i>Causes serious eye irritation</i>	<i>H335</i>	<i>May cause respiratory irritation</i>	<i>H412</i>	<i>Harmful to aquatic life with long lasting effects</i>	<i>P210</i>	<i>Keep away from heat/sparks/open flames/hot surfaces. — No smoking.</i>	<i>P273</i>	<i>Avoid release to the environment.</i>	<i>P280</i>	<i>Wear protective gloves/protective clothing/eye protection/face protection.</i>	<i>P305+P351+P338</i>	<i>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</i>	<i>P370 + P378</i>	<i>In case of fire: Use suitable extinguishing media for extinction.</i>
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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.																				
Section 3	Composition/Information On Ingredients																				



3.1

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	>=40 - <=50%

Component	Classification	Concentration
Ammonium nitrate		
CAS No. : 6484-52-2 EC No. : 229-347-8	As Per EC Regulation 1272/2008 Ox. Sol. 3; Skin Irrit. 2; Eye Irrit. 2A; STOT SE 3 H272; H315; H319; H335	>=35 - <=45%

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	>=6 - <=9%

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	>=0.01 - <=0.03%

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 <=0.003%

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	>=0.02 - <=0.04%



Component	Classification	Concentration
Nicotinic acid		
CAS No. : 59-67-6	As Per EC Regulation 1272/2008	>=0.01 - <=0.02%
EC No. : 200-441-0	Eye Irrit. 2A H319	

For the full text of the H-Statements and classification mentioned in this Section, see Section 16

Section 4	First - Aid Measures
	<p>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.</p> <p>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.</p> <p>4.3 Indication of immediate medical attention and special treatment needed Treat symptomatically.</p>
Section 5	Fire Fighting Measures
	<p>5.1 Extinguishing media Suitable extinguishing media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Unsuitable extinguishing media No data available.</p> <p>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.</p> <p>5.3 Precautions for fire-fighters Cool closed containers exposed to fire with water spray.</p> <p>5.4 Further information Wear self-contained breathing apparatus for firefighting if necessary.</p>
Section 6	Accidental Release Measures
	<p>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.</p> <p>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.</p> <p>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.</p> <p>6.4 Reference to other sections For disposal see Section 13.</p>



Section 7	<p>Handling and Storage</p> <p>7.1 Precautions for safe handling Avoid formation of dust and aerosols. Use only in well ventilated areas. Wear protective gloves and eye/face protection. Keep away from heat, sparks and open flame.</p> <p>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</p> <p>7.3 Specific end uses Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.</p>																																		
Section 8	<p>Exposure Controls / Personal Protection</p> <p>8.1 Control parameters</p> <p>8.2 Exposure controls</p> <p>Appropriate engineering controls Handle in accordance to general industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.</p> <p>Personal protective equipment</p> <p>Eye/face protection Safety glasses with side-shields conforming to EN 166 Use equipment for eye protection tested and approved under appropriate government such as NIOSH (US) or EN 166(EU). Have eye-washing facilities readily available where eye contact can occur.</p> <p>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.</p> <p>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.</p> <p>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).</p> <p>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.</p>																																		
Section 9	<p>Physical and Chemical Properties</p> <p>9.1 Information on basic physical and chemical properties</p> <table border="0" data-bbox="228 1518 1543 2040"> <tr> <td>Appearance</td> <td>White to off-white, homogenous powder</td> </tr> <tr> <td>Odour</td> <td>No data available</td> </tr> <tr> <td>Odour Threshold</td> <td>No data available</td> </tr> <tr> <td>pH</td> <td>3.9 - 4.9</td> </tr> <tr> <td>Melting/freezing point</td> <td>No data available</td> </tr> <tr> <td>Initial boiling point and boiling range</td> <td>No data available</td> </tr> <tr> <td>Flash point</td> <td>No data available</td> </tr> <tr> <td>Upper/lower flammability or explosive limits</td> <td>No data available</td> </tr> <tr> <td>Evaporation rate</td> <td>No data available</td> </tr> <tr> <td>Flammability (Solid, gas)</td> <td>No data available</td> </tr> <tr> <td>Vapour pressure</td> <td>No data available</td> </tr> <tr> <td>Relative density</td> <td>No data available</td> </tr> <tr> <td>Autoignition Temperature</td> <td>No data available</td> </tr> <tr> <td>Decomposition Temperature</td> <td>No data available</td> </tr> <tr> <td>Viscosity</td> <td>No data available</td> </tr> <tr> <td>Explosive properties</td> <td>No data available</td> </tr> <tr> <td>Oxidizing properties</td> <td>No data available</td> </tr> </table>	Appearance	White to off-white, homogenous powder	Odour	No data available	Odour Threshold	No data available	pH	3.9 - 4.9	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	Autoignition Temperature	No data available	Decomposition Temperature	No data available	Viscosity	No data available	Explosive properties	No data available	Oxidizing properties	No data available
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	9.2 Other safety information No data available	
Section 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.	
Section 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- single exposure No data available Specific target organ toxicity - repeated exposure No data available Aspiration hazard No data available Additional Information RTECS : Not applicable	
Section 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	



	<p>No data available</p> <p>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.</p> <p>12.6 Other adverse effects</p>																																		
Section 13	Disposal Considerations																																		
	<p>13.1 Waste treatments methods Product Dispose of as unused product.</p> <p>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.</p>																																		
Section 14	Transport Information																																		
	<p>14.1 UN-No ADNR : ADR : IATA_C : IATA_P : IMDG : RID :</p> <p>14.2 UN proper shipping name ADNR : No dangerous goods ADR : No dangerous goods IATA_C : No dangerous goods IATA_P : No dangerous goods IMDG : No dangerous goods RID : No dangerous goods</p> <p>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</p> <p>14.4 Packaging group ADNR : - ADR :- IATA_C : - II IATA_P : -II IMDG : -II RID : -II</p> <p>14.5 Environmental hazards ADR : NO IMDG : Marine Pollutant: No IATA_C : No</p> <p>14.6 Special precautions for use No data available</p>																																		
Section 15	Regulatory Information																																		
	<p>This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006</p> <p>15.1 Safety health and environment regulations/legislation specific for the substance or mixture</p> <p>15.2 Chemical Safety Assessment For this product a chemical safety assessment was not carried out.</p>																																		
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Skin Irrit. 2
STOT RE 2
STOT SE 3

Skin corrosion or irritation, Category 2
Specific target organ toxicity, repeated exposure, Category 2
Specific target organ toxicity, single exposure, Respiratory tract irritation,
Category 3

Further Information

The information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness and we assume no liability resulting from its use. The information is offered solely for user's obligation to investigate and determine the suitability of the information for their particular purpose.