

**MATERIAL SAFETY DATA SHEET****EVADE 80%****Mancozeb 80% WP**

|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                |                   |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| <u>Mancozeb 80% WP</u> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | CAS Number for Mancozeb                                                                                                                                                        | [8018 -01 -7]     |
| 1.                     | Substance/ preparation and company identification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                |                   |
|                        | Chemical Company<br>Registered Office:M/s.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | NatureManufacturer of Agrochemicals<br><br>Coromandel International Limited<br>1-2-10, S.P. Road, Secunderabad - 500 003<br>Andhra Pradesh, India<br>Tel: +91 40 27842034/7212 |                   |
| 2                      | COMPOSITION /INFORMATION ON INGREDIENTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                |                   |
| Sr. No.                | KIND OF INGREDIENTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | CAS No                                                                                                                                                                         | CONCENTRATION (%) |
| 1.                     | Mancozeb technical                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | [8018 -01 -7]                                                                                                                                                                  | 80% min           |
| 2.                     | Sodium Lignosulfonate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | [8061-51-6]                                                                                                                                                                    | 20% max           |
|                        | Total                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                | 100 %             |
| 3.                     | HAZARD DENTIFICATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                |                   |
|                        | Emergency Overview:-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                |                   |
|                        | <p><b>CAUTION!</b><br/><b>KEEP OUT OF REACH OF CHILDREN</b></p> <p><b>HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN</b><br/>Avoid contact with eyes, skin and clothing.<br/>Avoid breathing spray mist or dust.<br/>May cause Allergic skin reaction.</p> <p><b>Potential Health Effects</b><br/>Inhalation and skin contact are expected to the primary routs of occupational exposure to this material. Based on single exposure animal, it is considered to be practically non- toxic if swallowed no more than slightly toxic if absorbed through skin, practically non-toxic if inhaled and slightly irritating to eyes and skin. Inhalation mat to be moderately irritating to the respiratory tract. Repeated exposure may cause an allergic skin reaction. Repeated and long term exposure may cause adverse effect on thyroid.</p> |                                                                                                                                                                                |                   |
| 4.                     | FIRST AID MEASURES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                |                   |

|           |                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                           |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           | <b><u>Skin Contact</u></b>                                                                                                                      | Remove contaminated clothing immediately. Wash contaminated skin areas with soap or mild detergent and large amount of water. Get medical attention if symptoms occur.                                                                                                                                                                                                    |
|           | <b><u>Eye contact</u></b>                                                                                                                       | Hold eyes open and rinse slowly and gently with water for 10-15 min. If persist continue rinsing eye. Call doctor for treatment advice.                                                                                                                                                                                                                                   |
|           | <b><u>Swallowed</u></b>                                                                                                                         | Call doctor immediately for treatment advice. Have person sip a glass of water if able to swallow.                                                                                                                                                                                                                                                                        |
| <b>5.</b> | <b>FIRE - FIGHTING MEASURES</b>                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                           |
|           | Suitable Extinguishing Media.                                                                                                                   | Dry chemical, CO <sub>2</sub> , foam, if material becomes wet, it will deteriorate and become a fire hazard.                                                                                                                                                                                                                                                              |
|           | Unsuitable Extinguishing Media.                                                                                                                 | Not applicable.                                                                                                                                                                                                                                                                                                                                                           |
|           | Exposure Hazards                                                                                                                                | Thermal decomposition products may include toxic oxides of carbon, nitrogen and sulfur.                                                                                                                                                                                                                                                                                   |
|           | Fire fighting                                                                                                                                   | Move container from the fire area if possible. Fight fire from the maximum distance, avoid breathing hazardous vapours, keep upwind. Stay away from storage tank ends. Use agents suitable for type of surrounding. Extinguish only if flow can be stopped. Do not scatter spilled material with high pressure water streams. Dike fire control water for later disposal. |
| <b>6.</b> | <b>ACCIDENTAL RELEASE MEASURES</b>                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                           |
|           | In case of Spill or leak                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                           |
|           | Contain spill. Sweep or scoop up and remove suitable container. Flush with water. Prevent spilled Product from entering sewer or natural water. |                                                                                                                                                                                                                                                                                                                                                                           |
| <b>7.</b> | <b>HANDLING AND STORAGE</b>                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                           |
|           | <b><u>Handling</u></b>                                                                                                                          | Use appropriate (impervious) clothing, gloves and closed footwear to prevent the repeated contact with skin.<br>Use flash proof and dust resistant goggles to prevent the contact with eyes.                                                                                                                                                                              |
|           | <b><u>Storage</u></b>                                                                                                                           | Keep the product in original container tightly closed and correctly labeled. Store in suitable, cool, dry, well ventilated place under lock and key, away from the reach of the children, animals, food and animal feeding stuffs. Store away from the incompatible substances and source of ignition.                                                                    |

|     |                                             |                            |                                                                     |                                                        |
|-----|---------------------------------------------|----------------------------|---------------------------------------------------------------------|--------------------------------------------------------|
| 8.  | EXPOSURE CONTROL / PERSONAL PROTECTION      |                            |                                                                     |                                                        |
|     | Technical protective measures               |                            | None.                                                               |                                                        |
|     | Exposure control limits                     |                            | Avoid breathing toxic vapors.                                       |                                                        |
|     | Respiratory protection                      |                            | Wear suitable mask.                                                 |                                                        |
|     | Hand protection                             |                            | Wear impervious gloves.                                             |                                                        |
|     | Eye protection                              |                            | Wear flash proof and dust resistant goggles.                        |                                                        |
|     | Skin protection                             |                            | Wear impervious clothing and closed footwear.                       |                                                        |
| 9.  | PHYSICAL AND CHEMICAL PROPERTIES.           |                            |                                                                     |                                                        |
|     | Melting Point                               | Decomposes before melting. | <u>Appearance</u>                                                   | Yellow to yellowish green coloured homogeneous powder. |
|     | Boiling point                               | N.A.                       | Odour                                                               | Musty odour.                                           |
|     | Oxidizing property                          | Non Oxidizing              | Vapour pressure                                                     | Negligible                                             |
|     | Bulk Density                                | Tap Density = 0.4-0.5 g/ml | Explosive properties                                                | Non - Explosive                                        |
|     | Flash Point                                 | Non flammable              | Solubility in water (20 °C)                                         | Partial Soluble                                        |
|     | pH of 1% solution                           | 5 - 9                      | Auto flammability                                                   | Non flammable                                          |
| 10. | STABILITY AND REACTIVITY                    |                            |                                                                     |                                                        |
|     | Thermal Stability                           |                            | Stable under normal temperature and pressure                        |                                                        |
|     | Conditions to avoid                         |                            | Never heat the compound above or near to melting point temperature. |                                                        |
|     | Material to avoid                           |                            | Avoid acidic material, strong oxidizers.                            |                                                        |
|     | Hazardous polymerization                    |                            | Does not occur.                                                     |                                                        |
| 11. | TOXICOLOGICAL INFORMATION                   |                            |                                                                     |                                                        |
|     | Acute LD <sub>50</sub> Oral Rat             |                            | > 2000 mg/kg body weight.                                           |                                                        |
|     | Acute LD <sub>50</sub> Dermal Rat           |                            | > 2000 mg/kg body weight.                                           |                                                        |
|     | Acute LC <sub>50</sub> (4 h) Inhalation Rat |                            | > 4.97 mg/l of air                                                  |                                                        |
|     | Eye Irritation Test Rabbits.                |                            | Nonirritant                                                         |                                                        |
|     | Skin Irritation Test Rabbits.               |                            | Nonirritant                                                         |                                                        |
|     | Skin Sensitization Guinea Pig               |                            | May be a sentizer to guinea pig                                     |                                                        |
|     | Mutagenic                                   |                            | Non - Mutagenic                                                     |                                                        |

|     |                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                               |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12. | <b>ECOLOGICAL INFORMATION</b>                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                               |
|     | Birds:                                                                                                                                                                                                 | Acute Oral LD <sub>50</sub> > 2000 mg/Kg BW for Japanese quail<br>Acute Oral LD <sub>50</sub> > 2000 mg/Kg BW for Bob White quail                                                                                                                                                                                             |
|     | Fish:                                                                                                                                                                                                  | LC <sub>50</sub> (96 hrs.) for rainbow trout 0.392 mg/L<br>NOEC for Rainbow Trout 0.0340 mg/L                                                                                                                                                                                                                                 |
|     | Daphnia:                                                                                                                                                                                               | EC <sub>50</sub> (48 hrs.) 0.528 mg/l.                                                                                                                                                                                                                                                                                        |
|     | Algae:                                                                                                                                                                                                 | EC <sub>50</sub> (72 hrs. Area under the growth curve) for <i>Pseudokirchneriella subcapitata</i> 0.0801 mg/l.                                                                                                                                                                                                                |
|     | Bees:                                                                                                                                                                                                  | LD <sub>50</sub> 48 Hrs. (oral) >100µg/bee; (contact) >100µg/bee                                                                                                                                                                                                                                                              |
|     | Earthworms:                                                                                                                                                                                            | LC <sub>50</sub> (14 d) for <i>Eisenia foetida</i> 243.88 mg/kg soil.                                                                                                                                                                                                                                                         |
| 13. | <b>DISPOSAL CONSIDERATION</b>                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                               |
|     | Recover, reclaim or recycle when practical. Dispose of accordance with state and local regulations. Contaminated liquid should be concentrated and incinerated as per the state and local regulations. |                                                                                                                                                                                                                                                                                                                               |
| 14. | <b>TRANSPORT INFORMATION</b>                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                               |
|     | UN Number / IMDG Code                                                                                                                                                                                  | 3077                                                                                                                                                                                                                                                                                                                          |
|     | IMDG CODE PAGE                                                                                                                                                                                         | 9029                                                                                                                                                                                                                                                                                                                          |
|     | Class                                                                                                                                                                                                  | 9                                                                                                                                                                                                                                                                                                                             |
|     | Packing group                                                                                                                                                                                          | III                                                                                                                                                                                                                                                                                                                           |
|     | Flash Point                                                                                                                                                                                            | N.A.                                                                                                                                                                                                                                                                                                                          |
| 15. | <b>REGULATORY INFORMATION</b>                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                               |
|     | Classification                                                                                                                                                                                         | Harmful, Toxic                                                                                                                                                                                                                                                                                                                |
|     | <u>Risk Phrases</u>                                                                                                                                                                                    | R22 Harmful if swallowed.<br>R25 Relatively less toxic to aquatic organism.<br>R53 May cause long-term adverse effects in the aquatic environment.                                                                                                                                                                            |
|     | <u>Safety Phrases</u>                                                                                                                                                                                  | S2 Keep out of reach of children.<br>Keep away from food, drink and animal feedings.<br>S36 Wear protective clothing.<br>S56 Dispose of this material and its container to hazardous or special waste collection point.<br>S62 if swallowed induce vomiting and seek medical advice immediately and show the container label. |

**16.****OTHER INFORMATION**

Incompatible with the acidic material. Antidote: No specific antidote available. Treat symptomatically and supportively.

**Disclaimer**

*The above information is intended to give general health and safety guidance on the storage and transport of the substance or product to which it relates. The requirement or recommendation of any relevant site or working procedure, system or policy in force or arising from any risk assessment involving the substance or product should take precedence over any of the guidance contained in this safety data sheet where there is a difference in the information given. The information provided in this safety data sheet is accurate at the date of publication, and will be updated as and when appropriate. No liability will be accepted for any injury loss or damage resulting from any failure to take account of information or advice contained in this safety data sheet.*

MSDS First modified

**30<sup>th</sup> April 2018**

MSDS revised

**30<sup>TH</sup> April 2020****Disclaimer**

The Content given here in, are as per the declaration given by the manufacturer and EABCL Claims zero Responsibility.