



MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Product name	MAK All Season HMO
Product type	Agricultural Spray Oil
Product Supplier	Bharat Petroleum Corporation Limited, 4 & 6, Currimbhoy Road, Ballard Estate, Mumbai – 400 001. Maharashtra India.

2. COMPOSITION/INFORMATION ON INGREDIENTS

Preparation description	Blend of highly refined mineral oils and additives.
A) Highly Refined HVI Base Oils	85 – 90 % wt.
B) Additives as emulsifier	10 – 15 % wt.

The chemical identity of some or all the ingredients is confidential business information and is being withheld.

3. HAZARDS IDENTIFICATION

Human health hazards	No specific hazards under normal use conditions. Prolonged contact may cause skin irritation, defatting, drying and dermatitis. May cause mild irritation of the eyes with coughing, nausea, vomiting, headache and drowsiness. May be irritating to respiratory system. Not acutely toxic by ingestion.
Safety hazards	Not classified as flammable, but will burn.
Environmental hazards	Not readily biodegradable.
Other information	Not classified as dangerous for supply or conveyance.

4. FIRST AID MEASURES

Symptoms and effects	Not expected to give rise to an acute hazard under normal conditions of use
First Aid – Inhalation	In the event of dizziness or nausea, remove casualty to fresh air. If symptoms persist, obtain medical attention.
First Aid – Skin	Remove contaminated clothing and wash affected skin thoroughly with soap and lukewarm water. If persistent irritation occurs, obtain medical attention.

First Aid – Eye	Flush eye with copious quantities of lukewarm water. If persistent irritation occurs, obtain medical attention.
First Aid - Ingestion	Wash out mouth with water and obtain medical attention. DO NOT INDUCE VOMITING.
Advice to physicians	Treat symptomatically, Aspiration into the lungs may result in chemical pneumonitis. Dermatitis may result from prolonged or repeated exposure.

5. FIRE FIGHTING MEASURES

Specific hazards	Combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates and gases, including carbon monoxide, and unidentified organic and inorganic compounds.
Extinguishing media	Foam and dry chemical powder, Carbon dioxide, sand and earth may be used for small fires only.
Unsuitable extinguishing media	Never use a water jet. Use of Halon extinguishers should be avoided for environmental reasons.
Protective equipment	Fires in confined spaces should be dealt with by trained personnel wearing breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Avoid contact with skin and eyes.
Personal protection	Wear impermeable gloves and boots.
Environmental precautions	Prevent from spreading or entering into drains, ditches or rivers by using sand, earth or other appropriate barriers. Inform local authorities if this cannot be prevented.
Clean-up methods – small spillage	Absorb liquid with sand or earth, Sweep up and remove to a suitable, clearly marked container for disposal in accordance with local regulations.
Clean-up methods – large spillage	Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an absorbent. Dispose of as for small spills.

7. HANDLING AND STORAGE

Handling	Carry out a health risk assessment to determine safe handling procedures and equipment that are necessary to avoid contact and that are appropriate to the job. Prevent spillages.
storage	Store in a cool, dry, well-ventilated place. Use properly labelled and closable containers. Avoid direct sunlight, heat sources, and strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering control measures	Carry out a health risk assessment to determine safe operating procedures to avoid contact and exposure. Apply engineering controls appropriate to the job.
Hygiene measures	Wash hands before eating, drinking, smoking and using the toilet.
Respiratory protection	Carry out a health risk assessment to determine personal protection equipment that is necessary to avoid contact and exposure and that is appropriate to the job.
Hand protection	Wear PVC or nitrile rubber gloves.
Eye protection	Wear safety glasses or full face shield if splashes are likely to occur.
Body protection	Minimise all forms of skin contact, Wear overalls to minimise contamination of personal clothing. Launder overalls and undergarments regularly.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid at ambient temperature.
Colour	Bright and Clear
Initial boiling point	Not determined
Pour point	-15 °C max.
Kinematic Viscosity at 40°C, cSt	12 to 18
Flash point, °C (COC)	150 min.
Auto-ignition temperature	Not determined
Solubility in water	Instantly soluble in water at doses upto 2% V/V.

10. STABILITY/REACTIVITY

Stability	Stable
Conditions to avoid	Extremes of temperature and direct sunlight
Materials to avoid	Strong oxidizing agents
Hazardous decomposition products	Hazardous decomposition products are not expected to form during normal storage.

11 TOXICOLOGICAL INFORMATION

Acute toxicity - Inhalation	Not considered to be Inhalation hazard under normal conditions of use.
Eye Irritation	Expected to be slightly irritant
Skin irritation	Expected to be slightly irritant
Respiratory Irritation	If mists are inhaled, slight irritation of the respiratory tract may occur
Skin Sensitization	Not expected to be a skin sensitizer
Other information	Prolonged and / or repeated contact with other products containing mineral oils can result in defatting of the skin, particularly at elevated temperatures. This can lead to irritation and possibly dermatitis, especially under conditions of poor personal hygiene. Skin contact should be minimised

12. ECOLOGICAL INFORMATION

Basis of assessment	Ecotoxicological data have been determined specifically for this product.
Acute oral toxicity: Rats	Category 5 as per Globally Harmonized System (GHS) of OECD.
Acute dermal toxicity: Rats	LD ₅₀ value more than 2000 mg/kg body weight
Acute toxicity : Fish	Not available
Acute toxicity : Plant	Non Phytotoxic at recommended doses

13. DISPOSAL CONSIDERATIONS

Waste disposal	Dispose of in accordance with appropriate Federal, State, & local regulations.
Product disposal	As for waste disposal.
Container disposal	200 litre drums should be drained and returned to the suppliers or sent to a drum reconditioner without removing or defacing marking or labels.

14. TRANSPORT INFORMATION

Not dangerous for conveyance under UN, IMO, ADR/RID and IATA/ICAO codes.

15. REGULATORY INFORMATION

EC Classification Not classified as dangerous under EC criteria

16. OTHER INFORMATION

Compiled By P&AD Department,
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