

MATERIAL SAFETY DATA SHEET



LIBRO 18-18-18+TE MSDS

1. Product Identification

Formula: LIBRO 18-18-18+TE

Product : NPK fertilizer for agricultural use

Manufacturer: Astra Industrial Complex Co., Ltd. "ASTRACHEM"
Kingdom of Saudi Arabia

Tel. No: (+ 966)13 8121464

Fax No: (+ 966) 13 8121347

2. Composition/Information on Ingredients

<u>CONTENT</u>	<u>w/w</u>
<u>Total Nitrogen (N)</u>	<u>% 18.0</u>
<u>Water soluble Phosphorus pentoxide (P₂O₅)</u>	<u>% 18.0</u>
<u>Water soluble Potassium oxide (K₂O)</u>	<u>% 18.0</u>
<u>Water soluble Boron (B)</u>	<u>% 0.01</u>
<u>Water soluble Copper (Cu)</u>	<u>% 0.002</u>
<u>Water soluble Iron (Fe)</u>	<u>% 0.02</u>
<u>Water soluble Manganese (Mn)</u>	<u>% 0.01</u>
<u>Water soluble Molybdenum (Mo)</u>	<u>% 0.001</u>
<u>Water soluble Zinc (Zn)</u>	<u>% 0.002</u>

3. Hazards Identification

Human Health

This product is basically harmless when handled correctly.

Skin contact: Prolonged contact may cause some irritation.

Eye contact: May cause irritation following contact.

Ingestion: Small quantities are unlikely to cause any toxic effect. Large quantities may give rise

MATERIAL SAFETY DATA SHEET



LIBRO 18-18-18+TE MSDS

to gastro-intestinal disorders.

Inhalation: High dust concentrations of air-borne material may cause irritation of the nose and upper respiratory tract with symptoms such as sore throat and coughing.

Long term effects: No adverse effects are known.

Environment: Possible eutrophication in confined surface waters in case of massive spillage.

4. First Aid Measures

Inhalation: Remove from exposure, lie down and move to fresh air.

Skin Contact: Wash off with plenty of water. Remove all contaminated clothing.

Eye contact: Rinse immediately with plenty of water also under the eyelids for at least 15 minutes. If symptoms persist call a physician.

Ingestion: Drink plenty of water. Do not induce vomiting immediately and call a physician.

5. Fire Fighting Measures

Suitable extinguishing media: The material itself does not burn.

Specific hazards: Heating can release hazardous gases. Special protective equipment for fire fighters: Wear acid suit, safety shoes, PVC hand gloves, face mask and self contained breathing apparatus.

6. Accidental Release Measures

Personal Precautions: Avoid contact with the skin and eyes.

Environmental precautions: Should not be released into the environment.

Methods for cleaning up: Flush with plenty of water. Dispose of as special waste in compliance with local and national regulations.

7. Handling and Storage

Safe handling advice: Wear personal protective equipment. Avoid dust.

MATERIAL SAFETY DATA SHEET



LIBRO 18-18-18+TE MSDS

Storage: Technical measures/storage conditions. Keep in a dry place or keep container tightly closed.

Incompatible product: Keep away from combustible materials. Incompatible with bases.

8. Exposure Controls/Personal Protection

Engineering measure: Provide sufficient air exchange and or exhaust in workrooms. Wear suitable gloves and safety goggles.

Personal protective equipment:

Hygiene measures: Avoid contact with skin, eyes and clothing.

Respiratory protection: Half mask with a particle filter.

Hand protection: PVC or other plastic material gloves

Eye protection: Safety goggles/face shield.

Skin and body protection: Wear suitable protective clothing and gloves.

9. Physical and Chemical Properties

Appearance: crystalline powder

Solubility in water: 100%

Moisture content : less than 1%

10. Stability and Reactivity

Stable at normal conditions of storage handling and use.

Conditions to avoid: High temperature.

MATERIAL SAFETY DATA SHEET



LIBRO 18-18-18+TE MSDS

11. Toxicological Information

Contact with skin and eyes may cause irritation. Dust may irritate nose and throat. Target organs are not identified.

12. Ecological Information

When released to the soil, this material is expected to leach into groundwater. When released into the soil. This material is not expected to evaporate significantly.

13. Disposal Considerations

Contaminated packaging:

Clean container with water. Dispose of as special waste in compliance with local and national regulations. Empty containers should be returned to the supplier .

Waste from residues/unused products:

Solutions with low pH must be neutralized.

14. Transport Information

UN Classification:

Not classed ie considered non hazardous material according to the UN orange book and following international transport codes e.g RID (rail), ADR (road) and IMDG (sea)

15. Regulatory Information

Refer to national and local regulations.

MATERIAL SAFETY DATA SHEET



LIBRO 18-18-18+TE MSDS

16. Other Information

To the best of our knowledge, the information provided in this Safety Data Sheet is accurate as at the date of its issue. The information it contains is being given for safety guidance purposes and relates only to the specific material and uses described in it.

This information does not necessarily apply to that material when combined with other material/(s) or when used otherwise than as described herein. Final determination of the suitability of any material is the sole responsibility of the user. All materials may represent unknown hazards and should be used with caution.

ASTRA INDUSTRIAL COMPLEX CO., LTD.
For Fertilizers and Agrochemicals
"ASTRACHEM"