GUARAN CHEMICALS PRIVATE LIMITED

Factory and Registered office at Hisar Road, Siwani, Distt. Bhiwani-127046, Haryana-India
Telephone: Off: 0091 1255 277026, Fax # 0091 1255 277126
CIN # U51100DL2011PTC228398
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MATERIAL

HANDLING AND SAFETY DATA SHEET
REF: 91/155/EEC AND AMENDMENTS
WITH RESPECTIVE IMPLEMENTATIONS
GUAR GUM POWDER
(FOOD GRADE GUAR GUM POWDER)

1.0 SUBSTANCE IDENTIFICATION

1.1	Commercial Product Name	:	Guar Gum Powder
	CAS#	:	9000-30-0
1.2	Chemical characterization	:	Guar gum powder - obtained from the seed of the legume Cyamopsis tetragonolobus, an annual plant that grows mainly in arid and semiarid regions of the Indian subcontinent.
1.3	Molecular weight	:	1-2 x 10^6 DALTONS
1.4	FOR USE IN FOOD	:	Yes for all food grades Guar gum Powder
1.5	Manufactured by	:	GUARAN CHEMICALS PVT. LIMITED, INDIA

2.0 COMPOSITION

2.1 D - mannosyl (1.8), D-glactosyl (1.0). Guaran, the functional polysaccharide in guar gum is a chain of : (1 --> 4)-linked D-mannopyranosyl units with single D-galactopyranosyl units connected by (1 --> 6) linkages to, on the average, every second main chain unit. The primary structure consist of a mannan backbone.

2.2 Impurities : No hazardous impurities

3.0 HAZARDS INDENTIFICATION

3.1 Guar gum is not classified as a Dangerous Substance within the definitions of EC Directive.

3.2 The dry powder may cause foreign body irritation in the eyes of some individuals.

3.3 Long-term exposure to skin may cause chapping and irritation.

3.4 Excessive inhalation of dust may cause slight irritation and can impede respiration owing to the hydrophilic nature of the gum which can form a gel in the airway.

4.0 FIRST AID MEASURES

4.1. After contact with eyes, flush immediately with plenty of water. If irritation develops, seek medical advice.

4.2. After contact with skin, wash with warm soapy water. If any irritation persists, seek medical advice.

4.3 If large quantities of dust are inhaled, keep the airway open. Move immediately to fresh air and seek medical advice.

4.4 If Guar gum powder is swallowed, drink plenty of water.

4.5 No special precautions needed by those giving First Aid.

5.0 FIRE FIGHTING MEASURES

5.1 Guar Gum will burn when in contact with flame but self-extinguishes when the flame is removed.

5.2 Water, foam or CO_2 extinguishers may be used on fires involving Guar Gum.

5.3 The auto-ignition temperature is above 200^o C.

5.4 There is a risk of dust explosion if fine particles mix with air.

6.0 ACCIDENTAL RELEASE MEASURES

6.1 Recover dry product by vacuum or brush and shovel.

6.2 Do not flush affected area with water **unless absolutely necessary.** Wetted surfaces can become extremely slippery. If wetted, flush thoroughly with water until all product is removed.

7.0 HANDLING AND STORAGE

7.1 Manufacturing date + 12 months under dry, cool (25+2^{0}C) conditions of storage.

7.2 If required to store for a period of additional 6 months, the recommended storage temperature is <10^{0}C.

7.3 Avoid the formation of dust and where necessary use mechanical dust extraction.

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8.0 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Respiratory protection : A dust respirator is recommended if handling the product generates concentrations of dust.

8.2 Hand protection : Not normally necessary but standard work gloves recommended.

8.3 Eye protection : The use of goggles is recommended if there are heavy dust concentrations.

8.4 Other : No special precautions necessary.

9.0 PHYSICAL AND CHEMICAL PROPERTIES -- GUAR GUM POWDER

9.1	Appearance:	Beige-white or tan-coloured powder or fine granulation
9.2	Odour:	Slight.
9.3	pH:	A 1% aqueous solution is approx neutral.
9.4	Boiling Point:	Not applicable.
9.5	Freezing Point:	Not applicable.
9.6	Bulk density:	550-850 kg/m^3 (depending upon grade).
9.7	Vapor pressure:	Not applicable.
9.8	Solubility in water:	Soluble but forms very viscous solutions which become pasty at concentrations greater than 5%

10.0 STABILITY AND REACTIVITY

10.1 Chemical stability : Guar gum is stable if stored under cool, dry conditions.

10.2 Hazardous decomposition products: Thermal decomposition may produce carbon monoxide and dioxide.

10.3 Hazardous polymerization : Will not occur.

10.4 Incompatible with : Strong oxidising agents.

11.0 TOXICOLOGICAL INFORMATION

11.1 Guar gum is widely used in food and in pet food as a thickener, stabiliser and emulsifier.

11.2 LD_{50} , Oral, Rat : > 5000 mg/kg

12.0 ECOLOGICAL INFORMATIONS

12.1 Guar gum is biodegradable in waste treatment facilities when well diluted.

12.2 BOD_5 approx 200 mg 0_2/g

12.3 COD approx 1600 mg 0_2/g

13.0 DISPOSAL CONSIDERATIONS

13.1 Dispose in landfill or flush well-diluted wet materials to drain with large amount of water.

14.0 TRANSPORT INFORMATION

14.1 No special requirements, and no restrictions on transportation by land, sea or air as per IATA rules.

15.0 REGULATORY INFORMATION

15.1 Guar gum is an EC permitted Food Additive (E412), with Guaran Chemicals Pvt. Limited not Specified.

16.0 ADDITIONAL INFORMATION

16.1 See Guar Gum Powder Technical Data Sheet.

16.2 This Handling and Safety Data Sheet is based upon a limited review of Guaran Chemicals Pvt. files and standard toxicological handbooks.

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