

# Godrej Industries Limited

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## Material safety data sheet (MSDS)

### 1. Chemical Product And Company Identification

Trade Name	:	<b>LIQUOLIC RBS</b>	
Manufacturer's Name and Address	:	GODREJ INDUSTRIES LIMITED Eastern Express Highway, Vikhroli East, Mumbai (India) Pin - 400 079	
Telephone	:	91-22-2518 80-10 / 20 / 30	
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### 2. Composition / Ingredients

Chemical Composition	:	Mainly Oleic Acid & Linoleic Acid	
Average Molecular Weight	:	282.5	
Chemical Identity of Components CH <sub>3</sub> (CH <sub>2</sub> ) <sub>7</sub> CH=CH (CH <sub>2</sub> ) <sub>7</sub> COOH CH <sub>3</sub> (CH <sub>2</sub> ) <sub>5</sub> (CH=CH) <sub>2</sub> (CH <sub>2</sub> ) <sub>7</sub> COOH	:	Synonym Octadecenoic Acid Octadecandienoic Acid	CAS Nos. of Components 112-80-1 60-33-3

### 3. Hazard Identification (reference: 4)

Health Rating	:	Slight
Flammability Rating	:	Slight
Reactivity Rating	:	Slight
Contact Rating	:	Slight

Storage	:	General
<b>4. First-aid Measures (reference: 4)</b>		
Ingestion	:	Drink plenty of water
Skin	:	Remove contaminated clothing and wash exposed area with plenty of water followed by soap and water
Eye	:	Irrigate the eyes with plenty of water
Inhalation	:	Take person into fresh air and allow to rest
<i>*In all of the above cases, get a doctor to check the affected person.</i>		
<b>5. Fire hazard and Fire-fighting Measures (reference: 1, 4)</b>		
Flammability	:	Flammable and Combustible in contact with heat or fire
Means of Extinction	:	Use Water spray, Carbon Dioxide, Dry Chemical, or Alcohol Foam. Use Water to keep fire exposed container cool
Flash Point	:	189° C
Auto Ignition	:	363° C
Hazardous Combustion Product	:	Cracked hydrocarbons
<b>6. Accidental Release (reference: 4)</b>		
Personal Protection	:	Use complete protective gear as prescribed in Section 8. High risk of slipping as product is a liquid
Leak And Spill Procedures	:	Remove sources of ignition, ventilate area, sweep up the liquid in dry sand and shovel into a closed container. Collect spillages into sumps/traps so as to minimise contamination of drains, surface & ground waters.
<b>7. Handling and Storage Measures (reference: 4, 5)</b>		
Handling Containers	:	Use full protective gear. Protect containers against physical damage / direct sunlight / water
Storage Conditions of Containers	:	Use leak-proof and compatible Drums. Store in dry and well ventilated locations at ambient temperature away from direct

sunlight.

### 8. Exposure controls and Personal protection Measures (reference: 4, 5)

Engineering Control :

Use adequate ventilation to keep airborne concentrations low. Avoid inhalation of heated vapours.

Personal Protection :

Skin	:	Rubber Gloves
Respiration	:	Air respirator
Eyes	:	Goggles
Feet	:	Safety Shoes
Body	:	Lab Coat
Hygienic precautions	:	Remove contaminated clothing and wash hands between breaks and at the end of duty hours. Eye washes & Emergency Showers must be located in all work & storage areas.

### 9. Physical and Chemical Properties (reference: 1, 4, 5)

Physical State	:	Liquid above 20 °C
Odour & Appearance	:	Clear Pale Pink Liquid with Slight Odour
Specific Gravity	:	0.884 at 60 °C
Boiling Point	:	264 °C at 50mm
Melting Point	:	< 16 °C
Vapour Pressure	:	1mm at 176.5 °C
Solubility in water ( 20 °C )	:	Insoluble

### 10. Reactivity Data (reference: 4, 5)

Chemical Stability	:	Product stable under the prescribed storage conditions.
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Incompatibility with Substances	:	Perchloric Acid
Reactivity / Conditions	:	Peroxidized acid with Aluminium
Hazardous Decomposition	:	Acrid smoke & irritating fumes of Carbon Oxides when heated above its BP
Hazardous Polymerization Products	:	None
<b>11. Toxicological Properties (reference: 2, 3, 4, 5)</b>		
Toxicity	:	Non toxic
Skin contact	:	Slight Erythema
Inhalation	:	Slight
Skin absorption	:	Slight
Eye contact	:	Slight Irritation
Ingestion	:	Rat LD <sub>50</sub> > 21.5 ml/kg
Effect of Acute and Chronic Exposure to Material	:	The extensive use of Oleic & Linoleic Acids in Industry has not been accompanied by any reports of injury.
Irritancy of Material	:	Slight
Carcinogenicity, Reproductive Effects, Teratogenicity, Mutagenicity	:	None Reported
<b>12. Ecological Information (reference: 4, 5)</b>		
<p>The product should not get into waters without treatment. Dissolved in water the material is easily biodegradable ( 90 % ) and will not cause any disturbance in the waste water treatment plants. Due to its insolubility in water larger amounts need to be eliminated by separators typically used for fats and oils.</p> <p>Aquatic Ecotoxicity Fish LC<sub>50</sub> ( 96 hrs ) &gt; 205 mg/L</p>		
<b>13. Waste Disposal (reference: 4, 5)</b>		
Leak And Spill Procedures	:	Sweep up the liquid in dry sand and shovel into a closed container

Disposal	:	Stored waste / recovered material used for recycle along with crude oils. Any unrecoverable / recyclable materials should be disposed off in accordance with the local, state or federal regulations.
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**14. Transport Recommendations (reference: 4, 5)**

No special conditions, as it is not a regulated product. However one should observe the usual precautionary measures for transporting chemical cargo.

**15. Regulatory Requirements (reference: 4, 5)**

According to the data available the product is not a regulated product. However one should observe the prescribed Federal, State & Local measures for dealing with chemicals.

Hazard Identification	:	Irritant
Risk Phrases	:	R 36, 38
Safety Phrases	:	S 2, 24, 25

The above mentioned classification is valid for Industrial users of this product  
 The 2 major Components are listed on EINECS ( EU ), TSCA (USA), DSL (Canada), AICS (Australia) & MITI (Japan)  
 EINECS No : Oleic Acid 204-007-1 Linoleic Acid 200-470-9

**16. Other Information**

Note :- All the above data is based on only the 2 major fatty acids of this mixture.  
 Sources of information  
 1. Fatty Acids - Klare Markley (1960)  
 2. Palm Oil Developments No. 28 Page 22 - 49 (March 1998)  
 3. JAOCS 56 Page 760A - 767A (1979)  
 4. ICN Biochemicals - MSDS of Oleic Acid (31-12-1998)  
 5. Cognis Corporation – MSDS of Linoleic Acid (09/01/2001)

**Disclaimer :**  
 The information presented above is believed to be accurate and pertains only to the product when stored in a sealed condition as prescribed above. The information is given in good faith but no warranty express or implied is made. Users should make their own investigations to determine the suitability of the above mentioned safety information for their specific applications and processes. Godrej Industries Limited shall in no way be liable for any claims, losses, damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages howsoever arising, from the use of this product.