



MATERIAL SAFETY DATASHEET

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1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION & THE COMPANY/UNDERTAKING

1.1 Product Identifier					
Product Name		Garlic			
Biological Definition		Allium Sativum Bulb Oil is the oil expressed from the bulb of the Garlic, Allium sativum L., Liliaceae.			
INCI Name		<i>Allium Sativum Bulb Oil</i>			
Synonyms & Trade Names		---			
CAS-No	8000-78-0	EC No.	N/A	EINECS No.	N/A
1.2 Relative identified uses of the substance or mixture and uses advised against					
Industrial uses. Formulation [mixing] of preparations. Uses advised against: Other uses than those recommended.					
1.3 Details of the supplier of the safety data sheet					
VENKATRAMNA INDUSTRIES, Talaya Chauki, Kannauj-209725, (UP) INDIA					
1.4 Emergency Tel. No.		+91-9554075786			

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture	
Classification according to the Regulation (EC) No 1272/2008. Sensitization — Skin, Hazard Category 1; H317.	
2.2 Label Elements	
Signal Word	Warning
	
Hazard Statements	
H304: May be fatal if swallowed and enters airways.	
H317: May cause allergic skin reaction.	
H320: Causes eye irritation.	
Precautionary Statements	
P102: Keep out of the reach of children.	
P261: Avoid breathing dust/fume/gas/mist/vapours/spray.	
P280: Wear protective gloves.	
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.	

P370 + P378: In case of fire: Use dry sand, dry chemical, or alcohol-resistant foam for extinction. **P403 + P235:** Store in well-ventilated place. Keep cool.

P501: Dispose of contents/container to an approved waste disposal plant.

P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician.

P331: Do NOT induce vomiting.

P405: Store locked up.

P264: Wash hands thoroughly after handling.

P302 + P352: IF ON SKIN: Wash with plenty of water/soap.

P362 + P364 : Take off contaminated clothing and wash it before reuse.

Supplementary Precautionary Statements

2.3 Other Hazards

May cause skin irritation/allergy. Patch test recommended.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Diallyl trisulphide oxide (19 – 21 %),
diallyl disulphide oxide (57 – 63 %),
diallyl sulfide,
ajoene

4. FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation	Remove person to fresh air and keep at rest
Ingestion	If swallowed, rinse mouth with water. Seek medical advice immediately and show this container or label. Do NOT induce vomiting.
Skin Contact	Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention.
Eye Contact	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.

4.2 Most important symptoms and effects, both acute and delayed

Eye contact: May cause eye irritation and corneal damage if not immediately rinsed out.

Skin Contact: Repeated contact may cause allergic dermatitis.

Inhalation: Breathing high concentrations of vapor may cause anesthetic effects.

Ingestion: Do Not Induce vomiting.

4.3 Indication of any immediate medical attention and special treatment needed

No additional data available

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing Media

Carbon dioxide, dry chemical powder or appropriate foam. For safety reasons do not use full water jet

5.2	Special hazards arising from the product
	None known
5.3	Advice for firefighters
	In case of fire in the surrounding area, follow the recommendations below: 1-Closed containers may build up pressure at elevated temperatures. 2-Avoid inhalation of fumes or vapours. Use appropriate respiratory protection. 3-Prevent run-off from fire fighting to enter drains or water courses.

6. ACCIDENTAL RELEASE MEASURES

6.1	Personal precautions, protective equipment and emergency procedures
	Wear appropriate gloves to prevent skin exposure. Avoid contact with skin and inhalation of its vapours or smoke. Maintain adequate ventilation in the working area after spilling.
6.2	Environmental Precautions
	Avoid contaminating the environment via the sewers or water sources.
6.3	Methods and material for containment and cleaning up.
	Cover with an inert, inorganic, non-combustible absorbent material (e.g. dry-lime, sand, soda ash). Ventilate area and wash spill site after material pickup is complete. Dispose of in accordance with current laws and regulations.
6.4	Reference to other sections
	See also sections 8 and 13.

7. HANDLING AND STORAGE

7.1	Precautions for safe handling
	Keep away from food, drink and animal feedingstuffs. Do not smoke. Avoid contact with skin and eyes. Handle in accordance with good industrial hygiene and safety practice.
7.2	Conditions for safe storage, including any incompatibilities
	Keep the product in its original container well sealed, in a dry and ventilated area, away from potential sources of ignition and protected from light. Store in accordance with local/national regulations and follow the warnings on the label.
7.3	Specific end use(s)
	No additional data available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1	Control parameters
	Declaration of substances is not required
8.2	Exposure controls
	Protective Equipment



Process Conditions	Provide eyewash station.
Engineering Measures	Provide adequate ventilation.
Respiratory Equipment	For high concentrations use respiratory equipment.
Hand Protection	Chemical resistant gloves (PVC)
Eye Protection	Wear approved safety goggles.
Other Protection	Wear appropriate clothing to prevent any possibility of skin contact.
Hygiene Measures	Good personal hygiene practices are always advisable, especially when working with chemicals / oils.
Personal Protection	Use personal protection according to Directive 89/686/EEC.
Skin Protection	Wear apron or protective clothing in case of splashes.
Environmental Exposure Controls	Avoid discharging into drainage water. Only eliminate by authorized companies.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Clear Liquid
Colour	Yellow to Orange Red
Odour	Very strong characteristic garlic odor
Relative Density	0.411 g/cm ³ (20 °C)
Flash Point (°C)	46 °C
Refractive Index	1.559 – 1.589 (20 °C)
Melting Point (°C)	No additional data available
Boiling Point (°C)	No additional data available
Vapour Pressure	No additional data available
Solubility in Water @20°C	Insoluble in water.
Auto-ignition temperature (°C)	No additional data available

9.2 Other information

No additional data available.

10. STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reactions known.

10.2 Chemical stability

Stable under normal operating conditions.

10.3 Possible hazardous reactions

Hazardous Polymerization: It does not undergo any dangerous reactions under normal conditions.

10.4 Conditions to Avoid

Heat, flames and other sources of ignition. No special precautions other than good housekeeping of chemicals.

10.5 Incompatible materials

Oxidizing mineral acids, strong reducing agents, strong oxidizing agents.

10.6 Hazardous Decomposition Products

Carbon monoxide and other unidentified organic compounds may be formed upon combustion.

11. TOXOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity	This substance does not meet the criteria for classification in accordance with Regulation (EC) No 1272/2008
Skin corrosion / irritation	May be irritating to skin
Serious eye damage / irritation	May be irritating to eyes. Prompt rinsing and removal of the substance will avoid damage.
Respiratory or skin sensitization	Breathing high concentrations of vapor may cause anesthetic effects.
Germ Cell Mutagenicity	Not listed as mutagenic
Carcinogenicity	Not listed as carcinogenic
Reproductive toxicity	Not listed as reprotoxic
STOT-single exposure	No data available
STOT-repeated exposure	No data available
Aspiration hazard	Not Specified
Photo-toxicity	Not listed as photo-toxic
Other Information	No additional data available

11.2 Information on the likely routes of exposure

Skin/scalp contact.

11.3 Symptoms related to the physical, chemical, and toxicological characteristics

None known. Irritation of the eye if exposed. Redness of the skin if irritated

11.4 Delayed and immediate effects and chronic effects from short-term and long-term exposure

No Data Available

12. ECOLOGICAL INFORMATION

12.1 Toxicity

May be toxic to aquatic organism may cause long-term adverse effects in the aquatic environment.
Avoid any pollution of ground, surface or underground water.

12.2 Persistence & degradability

No data available

12.3 Bioaccumulation Potential

No data available

12.4 Mobility in soil

Not determined

12.5 Results of PBT and vPvB Assessment
No data available
12.6 Other adverse effects
Do not allow product to enter streams, sewers or other waterways.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Containers must be disposed of as hazardous waste. Do not reuse empty containers. Dilute the remaining material and neutralise. Empty residue into a suitable disposal site. Dispose of in accordance with all state and local environmental regulations. This material and its container must be disposed of in a safe way.

14. TRANSPORT INFORMATION

14.1 UN number	
UN No. Road	1169
UN No. SEA	1169
UN No. AIR	1169
14.2 UN proper shipping name	
Extract, aromatic, liquid	
14.3 Transport hazard class(es)	
ADR/RID/ADN Not regulated for transport	
ADR/RID/ADN Class - 3	
IMDG Class -3	
ICAO Class/Division - 3	
14.4 Packing group	
ADR/RID/ADN Packing group Not regulated for transport	
IMDG Packing group - 3	
ICAO Packing group - 3	
14.5 Environmental hazards	
Do not allow to escape into environment, especially not into waterways, sewers or the sea.	
14.6 Special precautions for user	
EMS: Not allocated	
Emergency Action Code: Not allocated	
Hazard No. (ADR): Not allocated	
Tunnel Restriction Code (E) Not assigned	
14.7 Transport in bulk according to Annex II of MARPOL 73/78° and IBC Code	
N/A	

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Not available

15.2 Chemical safety assessment

No additional information available.

16. OTHER INFORMATION

Hazard and/or Precautionary Statements in Full	H317: May cause allergic skin reaction.
Other Information	None found

DISCLAIMER: This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.

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