



## MATERIAL SAFETY DATASHEET

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

<b>1.1 Product Identifier</b>					
Product Name		<i>Crocus Sativus L.</i>			
Biological Definition		Saffron Oil			
INCI Name		Crocus Sativus Stigma Oil			
Description		Crocus Sativus Stigma Oil is the volatile oil obtained from the stigmas of <i>Crocus sativus</i>			
Synonyms & Trade Names		-			
CAS-No	84604-17-1	EC No.	---	EINECS No.	---
<b>1.2 Relative identified uses of the substance or mixture and uses advised against</b>					
Aromatherapy, natural perfumery Food and food supplements, Pharmaceutical products, Cosmetics, as recommended.					
<b>1.3 Details of the supplier of the safety data sheet</b>					
VENKATRAMNA INDUSTRIES, Talaya Chauki, Kannauj-209725, (UP) INDIA					
<b>1.4 Emergency Tel. No.</b>		+91-9554075786			

## 2. HAZARDS IDENTIFICATION

<b>2.1 Classification of the substance or mixture</b>	
Directive 1272/2008/EC Not classified as a dangerous good	
<b>2.2 Label Elements</b>	
Signal Word	N/A
Hazard Statements	
N/A	
Precautionary Statements	
P262: Avoid contact with eyes, skin or clothes	
P270: Do not eat, drink or smoke when using this product	
P280: Wear protective gloves, protective clothing and eye protection while handling	
P305 + P351 + P338: If in the eyes, rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.	
P314: Get medical attention if you feel unwell.	
P302 + P352: If on skin: Wash with plenty of soap and water.	
P402 + P404: Store in a dry place. Store in a closed container.	

P410: Protect from sunlight
Supplementary Precautionary Statements
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2.3 Other Hazards
Not Known

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances			
Ingredients	Strength (%)	CAS #	EINECS #
Safranal	49.3-62.1	116-26-7	204-133-7
α-crocin	-----	----	----
crocetin	-----	504-39-2,27876-94-4	248-708-0
α-isophorone	10.0-16.3	-----	----
<b>Other Ingredients</b>			
Hexadecanoic acid	0.8-3.3	57-10-3	----
Octadecadienoic acid	0.1-2.7	6144-28-1 / 26085-09-6	----
<b>EU Allergens</b>			
NA	NA	NA	NA

### 4. FIRST AID MEASURES

4.1 Description of first aid measures	
Inhalation	Not likely to occur under normal conditions of use. If symptoms occur, move to fresh air and obtain medical advice.
Ingestion	Not an expected route of exposure. In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with milk or water and consult a doctor. Keep the exposed person at rest. Do NOT force vomiting unless directed to do so by medical personnel. Seek immediate medical attention and show the Substance's label to medical personnel.
Skin Contact	No harmful effect with normal skin. If skin irritation does occur, wash with water and soap and rinse thoroughly. If skin irritation continues, consult a doctor.
Eye Contact	Check for and remove any contact lenses. Flush with water for 15 minutes. If symptoms persist get medical attention.
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: Not an expected route of exposure	
4.3 Indication of any immediate medical attention and special treatment needed	
No additional data available	

### 5. FIRE-FIGHTING MEASURES

<b>5.1</b>	<b>Extinguishing Media</b>
	Suitable extinguishing media: sprayed water or water mist, alcohol-resistant foam, multipurpose ABC powder, BC powder, carbon dioxide (CO <sub>2</sub> ) Unsuitable extinguishing media: water jet (straight stream).
<b>5.2</b>	<b>Special hazards arising from the product</b>
	None known
<b>5.3</b>	<b>Advice for firefighters</b>
	Use self-contained breathing apparatus and protective clothing

## 6. ACCIDENTAL RELEASE MEASURES


<b>6.1</b>	<b>Personal precautions, protective equipment and emergency procedures</b>
	Stop leak if you can do so without risk. Consult safety measures listed under Sections 7 and 8. For fire-fighters: Fire-fighters will be equipped with suitable personal protective equipment (See Section 8). High temperature may increase the pressure inside the container—cool the container by sprinkling water. Avoid breathing emitted vapors.
<b>6.2</b>	<b>Environmental Precautions</b>
	Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, or diatomaceous earth in drums for waste disposal. Avoid allowing product to reach sewage system or any waterways. Inform respective authorities in case of seepage into sewage system or waterways.
<b>6.3</b>	<b>Methods and material for containment and cleaning up.</b>
	Absorb spill with non-combustible matter (such as detergent--do not use solvents) and transfer to containers.
<b>6.4</b>	<b>Reference to other sections</b>
	Wear protective clothing as described in Section 8 of this safety data sheet.

## 7. HANDLING AND STORAGE

<b>7.1</b>	<b>Precautions for safe handling</b>
	Handle in accordance with good industrial hygiene and safety practice. Avoid unintentional contact with skin surfaces. Wear suitable protective clothing. Avoid inhalation. Ensure good ventilation or exhaust in workplace. Do not allow contact with eyes. Always wash hands after handling. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.
<b>7.2</b>	<b>Conditions for safe storage, including any incompatibilities</b>
	Store in closed glass containers, away from heat, light and other sources of ignition. Store in cool area.
<b>7.3</b>	<b>Specific end use(s)</b>
	No additional data available.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>8.1</b>	<b>Control parameters</b>
	OSHA TWA: None established OSHA STEL: None established ACGIH TWA: None established ACGIH STEL: None established NOHSC TWA: None established NOHSC STEL: None established

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 authorised companies.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties	
Appearance	Reddish Yellow to Orange Viscous liquid
Colour	Red to pale yellow
Odour	Herbal Sweet Slightly Spicy and Typical Saffron
Relative Density	Not specified
Flash Point (°C)	≥ 100°C
Refractive Index	No Data Available
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	Soluble in Water, Partially soluble in alcohol & fixed/carrier oils
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	
This substance is stable under the recommended handling and storage conditions in Section 7.	
10.3 Possible hazardous reactions	

When exposed to high temperatures, the substance may release hazardous decomposition products, such as carbon monoxide, carbon dioxide, fumes, and nitrogen oxide.

#### 10.4 Conditions to Avoid

None known.

#### 10.5 Incompatible materials

Alkali metals, ammonia, oxidizing agents, peroxides strong inorganic acids.

#### 10.6 Hazardous Decomposition Products

The thermal decomposition may release/form carbon monoxide (CO) and carbon dioxide (CO<sub>2</sub>).

## 11. TOXOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

Acute Toxicity	Not determined
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

Exposure to vapors from this solvent more than the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver, and central nervous system. Repeated or prolonged contact with the substance may cause removal of natural oil from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. Splashes in the eyes may cause irritation and reversible damage.

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

Acute fish toxicity:

LC50 / 96 HOUR – No data available

Toxicity to aquatic plants – No data available

Toxicity to microorganisms – No data available

Toxicity threshold – No data available

12.2 Persistence & degradability
Biodegradation is expected
12.3 Bioaccumulation Potential
Bioaccumulation is unlikely
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

<b>13.1 Waste treatment methods</b>
Do not pour into drains or waterways. Observe all federal, state, and local environmental regulations. Member State-specific and Community specific provisions must be considered. Considering the relevant known environmental and human health hazards of the materials, review and implement appropriate technical and procedural wastewater and waste disposal measures to prevent occupational exposure and environmental release. It is recommended that waste minimization be practiced. The best available technology should be utilized to prevent environmental release. This may include destructive techniques for waste and wastewater. In extreme situations, contact a licensed professional waste disposal service to dispose of this material.

## 14. TRANSPORT INFORMATION

<b>14.1 UN number</b>	
UN No. Road	Not regulated for transport
UN No. SEA	Not regulated for transport
UN No. AIR	Not regulated for transport
<b>14.2 UN proper shipping name</b>	
Not classified	
<b>14.3 Transport hazard class(es)</b>	
ADR/RID/ADN Not regulated for transport	
ADR/RID/ADN Class - - -	
IMDG Class - - -	
ICAO Class/Division - - -	
<b>14.4 Packing group</b>	
ADR/RID/ADN Packing group Not regulated for transport	
IMDG Packing group - - -	
ICAO Packing group - - -	
<b>14.5 Environmental hazards</b>	
Do not allow to escape into environment, especially not into waterways, sewers or the sea.	
<b>14.6 Special precautions for user</b>	

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

Canada: Not regulated

EU: See EU Allergens in Section 3

Hong Kong: Not regulated

Singapore: Not regulated

USA: Not regulated by Federal or State Regulations California Prop. 65 Components This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

### 15.2 Chemical safety assessment

No additional information available.

## 16. OTHER INFORMATION

Hazard and/or Precautionary Statements in Full	<p>P262: Avoid contact with eyes, skin or clothes          P270: Do not eat, drink or smoke when using this product          P280: Wear protective gloves, protective clothing and eye protection while handling          P305 + P351 + P338: If in the eyes, rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.          P314: Get medical attention if you feel unwell.          P302 + P352: If on skin: Wash with plenty of soap and water.          P402 + P404: Store in a dry place. Store in a closed container.          P410: Protect from sunlight</p>
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.