

## Tagetes

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MATERIAL SAFETY DATA SHEET  
ACCORDING TO EC LEGISLATION 91/155/E EC  
Date created: August 2002

Date revised: June 2005

### 1. Identification:

Commercial name: Tagetes essential oil.  
Botanical Nomenclature: Tagetes erecta.  
INCI name: Tagetes erecta.  
CAS number: 8016-84-0  
EINECS CAS number: 91770-75-1  
EEC Number: 294-862-7

### 2. Composition:

Main components: D-pinene, z- $\beta$ -ocimene, E- $\beta$ -ocimene, E-Tagetone, Tagetenone.  
Additives (e.g. carriers, preservatives, antioxidants): Nil.

### 3. Potential Health Hazards:

Inhalation: None identified.  
Skin: Concentrated liquid and vapours irritating to skin by prolonged exposure.  
Eyes: Irritating to eyes with possible damage.  
Ingestion: Harmful if swallowed.

### 4. First aid:

Inhalation: If discomfort is felt, remove person to a well ventilated area with plenty of fresh air.  
Skin: Remove contaminated clothing. Wash affected area with plenty of soap and water.  
Eyes: Flush immediately with plenty of cool water for 10 to 20 minutes. Seek medical advice from a Medical Doctor.  
Ingestion: Seek immediate medical care.

### 5. In case of fire:

Extinguishing Media: Foam, Carbon dioxide.  
Do not use: Water.  
Special precautions: wear breathing apparatus as toxic vapours may be released during fire.

### 6. Spill and Leak Procedure:

Individual precautions: Eliminate sources of ignition. Keep area well ventilated and isolate the spill.  
Environmental protection: Prevent the liquid from entering the drains and sewers.  
Cleaning methods: Soak up the spill using inert absorbents. For large spills use pumps.

### 7. Handling and storage:

Store in a cool, dry and dark place in suitable containers (aluminium cans or lacquer lined steel drums).  
Handle in a well ventilated area.  
Keep away from sources of heat and ignition.

### 8. Personal Protection / Exposure control:

Respiratory protection: wear breathing apparatus when working in an area of high vapour concentration.  
Skin protection: Use protective gloves. Wear protective clothing when possibility exists of contact.

Eye protection: Goggles should be worn.  
General precautions: Use good industrial hygiene practise.

## Tagetes

Yellow mobile liquid

### 9. Physiochemical properties:

Appearance:

Odour:

Neutral

Strong, warm, floral, citrusy, typical of the  
flower

pH:

Not available

Boiling point:

Between 45 ? 60°C

Flash point:

Autoignition Temperature:

Not available

Not available

Explosion Limits:

Vapour pressure (25°C):

Not available

>1 (air=1)

Vapour Density:

Specific Gravity (20°C):

0.9170 to 0.9270

Optical Rotation (25°C):

+9° to 15°

Refractive Index (20°C):

1.490 to 1.500

Solubility in water (20°):

Negligible

Partition Coefficient log P o/w:

Not available

Evaporation rate:

<1 (Butyl Acetate=1)

### 10. Stability and Reactivity:

Chemical Stability: Stable.

Conditions to avoid: Normally stable. Not reactive with water.

Hazardous Decomposition Products: Not available.

### 11. Sensitisers:

Tagetes

Eugenol 0.2%, Citronellol 3%, Limonene 9%, Linalool 0.5%, total 12.7%

5 g/kg in rabbits.

12. Toxicological Information:

According to RIFM- Monograph:

Acute Toxicity: Oral LD50: 3.7 g/kg in rats.

Dermal LD50:

Irritation:

Tested without irritation at 2%.

Sensitisation:

Tested without sensitisation at 2%.

Phototoxicity:

No phototoxic reaction reported.

13. Ecotoxicological information:

Fish Toxicity: LCO/EC50: Not available.

Bacteriotoxicity: ECO/EC50: Not available.

14. Disposal Method:

Check Federal, State and Local Regulations.

15. Transport Information:

UN Number 1993: Proper shipping name: Flammable Liquid N.O.S.

Hazard Class: 3.3 Packing group: III

Transport Safety: Air (ATA/ICAO)

2/PAX309/CA310/III

Sea (IMDG-Code): 3.3/III

Rail (RID): 3.31c

Road (ADR): 3.31c

16. Regulatory Information

The British Essential Oil Association Chip Regulations 2002

Hazard Symbols: Xn

Risk Phrases: R10, 38, 65

H/C %: 50

Safety Phrases: S62

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FOR AND ON BEHALF OF SHIRLEY PRICE AROMATHERAPY LTD:  
P.I Brealey..... (MANAGING DIRECTOR)  
DATE: