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### **PRODUCT DATA SHEET**

**Product:** MINT OIL

**Identification:**

Type of product: raw material extracted from natural spear mint.  
Technical name: essential oil, containing between 50 and 55% of L-carvone.

**Description:**

Organic anti sprouting agent.

**Protected crops:**

Post-harvest treatment of potatoes and onions against sprouting.

**Purpose:**

Mint oil is an effective anti sprouting agent on potatoes and onions, at the rate of 300 g/ton during 6 months storage at a temperature comprised between 7 and 10°C

**Physical-Chemical Characteristic of the mint oil:**

Appearance:           pale yellow liquid  
Specific gravity:       0.944-0.954  
Vapor pressure:       comprised between 175 KPA and 300 KPA  
Refractive index:      1.492-1.496  
Miscibility:  
                            With water: insoluble  
                            With ethanol: soluble  
Flash point:            94°C-closed cup.  
Others properties:     Fresh, candy, characteristic odor

**Active ingredient:**

L-Carvone

**Physical-Chemical characteristic of the active ingredient:**

Appearance:           pale yellow liquid  
Formula:                C<sub>10</sub>H<sub>14</sub>O  
Mw                        150.21  
Chemical name:        6,8 paramenthadiène-2-one  
Specific gravity:       0.965  
Boiling point:         230-231°C  
Insoluble in water  
Miscible with ethyl alcohol  
nD 20°C:                1.4938

**Principle of the Method:**

In this process the MINT OIL is heated up to 185-190°C during a very short time in a fast flow of air, and is dispersed as a fog made of the finest particles.

**Date of treatment and application rate:**

First application between 6 and 15 days after harvesting at a rate of 90g/ton. Then repeat application every 3 weeks at a rate of 30 g/ton

**Application Method:**

-For better anti-sprouting treatment of potatoes, whatever the volume of treatment maybe, the storage room must be able to obtain (through circulation of forced and recycled air) product penetration of the tubers heaps. It is particularly necessary to verify that the sprouting of tubers has not occurred before treatment, that the potatoes are ripe, correctly de-earthed, and at temperatures comprised between 8°C and 10°C at the moment of treatment. Refer to XEDA'S instructions n° 50.

-Put into the treatment apparatus.

Once the storage room is full:

.Introduce the ELECTROFOG tube into the technical corridor and beyond the ventilators, as far away from them as possible. It is possible to place the tube well into the room by a hole made in the wall or in the door of the room if in the event it is beyond the heaps of potatoes . If not, protect the top of the heaps around the fog tube to avoid overdosing. The treatment is a circulating fog, and there should be 1 or more ventilators adjacent to the fogger working at the same time, for 5 to 10 minutes, and then alternatively the other fans when the first group stops. The functioning time of each group of ventilators must be calculated so that no one group works more than 6 times during treatment.

. In order to start the use of XEDA'S ELECTROFOG, follow the technical sheets n°20 and regulate the temperature of the machine between 185°C and 190°C.

. After treatment stop ventilation to allow the fog to act. After approximately two hours, ventilate normally.

**IMPORTANT:** Follow the treatment conditions written in XEDA'S instructions "Recommendations for Thermal Fogging, Anti-Sprouting Treatment" and instructions "Electrofog Xeda" (Ref 50 and 20).

**Specific Risks:**

Harmful R 65 S 60-62

**Fire hazards and recommended means of extinction:**

CO<sub>2</sub>, powder, foam, halogen, extinguishers.

Avoid Water

**Emergency Treatment:** See overleaf.

**Administrative Situation:**

FEMA: 3032

FDA: 182.20

CEE: 285

Conformity I.F.R.A

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CAS: 8008-79-5

**Complementary Information:**

Shelf-life: 12 months from delivery date.