

## Material Safety Data Sheet

### טופ-גן - Top-Gan

Date of issue: 11.2008

Revised: 20.12.10

Version: 2

#### 1. IDENTIFICATION OF SUBSTANCE AND COMPANY

**Common name:** Top-Gan

**Use:** Herbicide

**Formulation Type:** EC

**Manufacturer:** Tapazol Chemical works ltd.

**Address:** HaSolela 1, West ind. Zone, Beit Shemesh, 99052.

**Tel:** 972-2-992-6040 **Fax:** 972-2-9926050 **e-mail:** [info@tapazol.co.il](mailto:info@tapazol.co.il)

#### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Name	CAS no.	Quantity (g/l)
Clodinafop-propargyl	105512-06-9	100
Cloquintocet-mexyl	99607-70-2	25
NMP	872-50-4	80-90
Memes 150	64742-94-5	550-600
Other non-hazardous ingredients	N/A	Til 1 L

Clodinafop-propargyl is a 2-(4-aryloxyphenoxy) propionic acid derivative;

Cloquintocetmexyl is a 5-chloroquinolin-8-yloxy derivative.

---

### 3. HAZARDS IDENTIFICATION

---

**Human hazard:** The product is harmful by ingestion and in contact with skin and may cause skin irritation and severe eye irritation. If aspirated, may cause lung damage.

**Environmental hazard:** Toxic to aquatic organisms.

---

### 4. FIRST AID MEASURES

---

**General Information:** You should call The Poisons Information Centre if you feel that you may have been poisoned or irritated by this product.

**Eyes:** Immediately flush eyes with water for 20 minutes while holding the eyelids open. Remove contact lenses. Obtain medical attention immediately.

**Skin:** Remove contaminate clothes and wash thoroughly with water. If irritation persists, repeat flushing and seek medical attention.

**Ingestion:** If swallowed, do NOT induce vomiting. Wash mouth with water and contact a Poisons Information Centre or call a doctor.

**Inhalation:** No first aid measures normally required. However, if inhalation has occurred, and irritation has developed, remove to fresh air and observe until recovered. If irritation becomes painful or persists more than about 30 minutes, seek medical advice.

**Note to physician:** Treat symptomatically, no specific antidote.

---

### 5. FIRE-FIGHTING MEASURES

---

**Flash point:** >63°C, closed cup.

**Flammable properties:** Combustible. There is a slight risk of an explosion from this product if commercial quantities are involved in a fire. Violent steam generation or eruption may occur upon application of direct water stream on hot liquids.

Vapors from this product are heavier than air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures. They may also flash back considerable distances.

**Extinguishing media:** Carbon dioxide, dry chemical, foam, water fog.

**Protective equipment:** Wear a splash suit complete with self contained breathing apparatus.

**Hazardous products of combustion:** Fire decomposition products from this product may be toxic if inhaled.

---

## 6. ACCIDENTAL RELEASE MEASURES

---

**Personal protection:** Wear personal protective equipment as prescribed in section 8 – "Exposure controls/Personal protection".

**Environmental Protection:** Prevent the material from entering sewage and water courses. If a significant quantity of material enters drains, advise emergency services.

**Procedure:** Stop leak if safe to do so, and contain spill. Absorb with absorbent material such as sand and collect into containers for disposal. Dike area in case of large spills. Report large spills.

For spills in public area, keep public away and advise local authorities.

Wash clothes, equipment and work area after cleaning.

---

## 7. HANDLING AND STORAGE

---

**Storage:** Store in tightly closed original container in a cool, dry well-ventilated area out of direct sunlight and out from the reach of children. Do not store with food, feedstuffs, fertilizers and seeds.

**Handling:** Wear personal protective equipment as prescribed in section 8 – "Exposure controls/Personal protection".

Do not eat, drink or smoke while handling.

Change clothes and wash thoroughly when finishing working with the product.

Wash working clothes in separate from household laundry and do not re-use clothes that are not washed.

See product label for further handling/storage precautions relative to the end use of this product.

---

## 8. EXPOSURE CONTROL/PERSONAL PROTECTION

---

### Exposure Limits:

Clodinafop-propargyl: 1.0 mg/m<sup>3</sup>, 8h TWA.

Cloquintocet-mexyl: 10 mg/m<sup>3</sup>, 8h TWA.

NMP: 19 ppm, 8h TWA.

Memes 150: 100 ppm, 8h TWA.

**Engineering controls:** This product should only be used where there is ventilation that is adequate to keep exposure below the TWA levels. If necessary, use local exhaust ventilation controls.

**Eye/ Face protection:** Safety goggles with side shields. Emergency eye wash facilities are also recommended in an area close to where this product is being used.

**Hand/Skin protection:** Long working clothes, closed shoes, chemical resistant gloves.

**Respiratory protection:** Usually, no respirator is necessary. If there is a significant chance that vapors are likely to build up, use respirator fitted with ABEK cartridge.

---

## 9. PHYSICAL AND CHEMICAL PROPERTIES

---

**Appearance:** Light to dark brown liquid.

**Odor:** Aromatic solvent odor.

**Water solubility:** Emulsifiable.

**Specific Gravity:** 0.95 g/ml.

**Flash point:** >63°C, Closed cup.

**pH:** 4-8 (1% in water).

---

## 10. STABILITY AND REACTIVITY

---

**Reactivity:** This product is unlikely to react under normal storage conditions.

**Chemical stability:** Stable under ordinary conditions of use and storage.

**Conditions to avoid:** Heat, flame, ignition sources, dusting and incompatibles.

**Incompatibilities:** Strong acids and bases, strong oxidizing agents.

**Hazardous decomposition products:** Carbon dioxide, carbon monoxide, smoke, Nitrogen, oxides of nitrogen, hydrogen cyanide gas, Oxides of sulfur and other sulfur compounds. Most will have a foul odor.

**Hazardous polymerization:** Will not occur.

---

## 11. TOXICOLOGICAL INFORMATION

---

**Acute toxicity:**

**Oral:** LD50 for rat: >2000 mg/kg.

Significant oral exposure is considered to be unlikely. Because of the low viscosity of this product, it may directly enter the lungs if swallowed, or if subsequently vomited. Once in the lungs, it is very difficult to remove and can cause severe injury or death. This product is also likely to be an oral irritant. Symptoms may include burning sensation and reddening of skin in mouth and throat. Other symptoms may also become evident.

**Dermal:** LD50 for rat: >2000 mg/kg.

**Inhalation:** Available data indicates that this product is not harmful. However, product may be mildly irritating, although unlikely to cause anything more than mild transient discomfort.

**Skin irritation:** Moderate irritant (rabbit).

**Eye irritation:** May cause severe ocular irritation (rabbit).

**Skin sensitization:** Non-sensitizer (mouse).

### **Chronic toxicity:**

Clodinafop-propargyl: No evidence of mutagenic, teratogenic or reproductive effects was obtained. It induced liver toxicity and benign and malignant liver tumors in mice fed high daily doses over their whole lifetime.

Rats fed high doses showed mild liver toxicity but did not develop tumors while no liver effects were observed for dogs fed high doses. The liver tumor finding occurring at high doses is believed due to clodinafop-propargyl inducing proliferative effects genetically pre-existing in mice and has no relevance to humans because the cellular changes which underlie it are rodent-specific and have been shown experimentally not to occur in primates.

The ADI is 0.004mg/kg/day and it is corresponding to NOEL of 0.37mg/kg/day.

Cloquintocet-mexyl has been extensively tested and no evidence of mutagenic, carcinogenic, teratogenic, or reproductive effects was obtained.

The ADI is 0.04 mg/kg/day and it is corresponding to NOEL of 4 mg/kg/day.

---

## **12. ECOLOGICAL INFORMATION**

---

This product is toxic to fish and aquatic organisms.

For AI Clodinafop-Propargyl:

**Fish:** LC50 (96h) for rainbow trout: 0.39 mg/l, for carp: 0.46 mg/l.

**Daphnia:** LC50 (48h): >74 mg/l.

**Birds:** LD50 (8d) for mallard duck: >2000mg/kg, for bobwhite quail: >1455 mg/kg.

**Bees:** LD50 (48h, oral and contact): >100 microgram/bee.

For AI Clodinafop-Propargyl:

**Birds:** LD50 for mallard duck and bobwhite quail: >2000 mg/kg.

**Fish:** LC50 (96h) for rainbow trout and carp: >76 mg/l, for bluegill sunfish: >51 mg/l, for catfish: 14 mg/l.

**Daphnia:** LC50 (48h): >100 mg/l.

**Bees:** LD50 (48h, oral and contact): >100 microgram/bee.

---

### 13. DISPOSAL CONSIDERATIONS

---

Dispose of according to local regulations. Avoid entry of product into sewer system or water surfaces.

---

### 14. TRANSPORT INFORMATION

---

**UN no.:** 3082 (Environmentally hazardous substance, liquid, N.O.S)

**Class:** 9

**Packaging group:** III

**Marine pollutant:** Yes.

---

### 15. REGULATORY INFORMATION

---

**R phrases:**

R22: Harmful if swallowed

R36/38: Irritating to eyes and skin

R51/53: Toxic to aquatic organisms, May cause long-term adverse effects in the aquatic environment

R65: Harmful: may cause lung damage if swallowed

R66: Repeated exposure may cause skin dryness or cracking

---

### 16. OTHER INFORMATION

---

**Disclaimer:** The information provided by TAPAZOL CHEMICAL WORKS Ltd. In the above document is given in good faith and to the best of our knowledge. However, no warranty is expressed or implied.