

**Complying with 1907/2006/EEC Regulation of 18 December 2006 ("REACH Regulation")****SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

Product name: TOG-STAR

**1.2 Relevant identified uses of the substance or mixture and uses advised against**Common uses: Pre-treatment solution for cut flowers.**1.3 Details of the supplier of the safety data sheet**

Gadot Agro Ltd.

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**E-mail address of person responsible for this SDS:** [info@gadotagro.com](mailto:info@gadotagro.com)**1.4 Emergency telephone number****Emergency telephone number (with hours of operation):** N/A**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture**Classification in accordance to Regulation (EC) No. 1272/2008 (CLP):

Aquatic Acute 1 H400

Aquatic Chronic 1 H410

See section 16 for the full text of the H-statements declared above.

**2.2 Label elements**Labelling in accordance with Regulation 1272/2008 (CLP)Hazard pictogram(s):Signal word: WarningHazard statement(s):

H410: Very toxic to aquatic life with long lasting effects.

Precautionary Statement(s):

P273: Avoid release to the environment.

P391: Collect spillage.

**2.3 Other hazard**

Not available

**SECTION 3: Composition/information on ingredients****3.2 Mixtures:**

Substance name	Identifiers	%	CLP Classification
Prochloraz	CAS number: 67747-09-5 EC number: 266-994-5	5-15	Acute Tox. 4 H302 Aquatic Acute 1 H400 Aquatic Chronic 1 H410
Xylene	CAS number: 1330-20-7 EC number: 215-535-7	1-7	Flam. Liq. 3 H226 Acute Tox. 4 H312, H332 Skin Irrit. 2 H315
Ethylbenzene	CAS number: 100-41-4 EC number: 202-849-4	0-1.5	Flam. Liq. 2 H225 Acute Tox. 4 H332 Asp. Tox. 1 H304 STOT RE 2 H373 (hearing organs)
Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts	CAS number: 68953-96-8 EC number: 273-234-6	0.5-1.2	Acute Tox. 4 H312 Skin Irrit. 2 H315 Eye Dam. 2 H318 Aquatic Chronic 2 H411

See section 16 for the full text of the H-statements declared above.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

**Occupational exposure limits, if available, are listed in section 8.**

**SECTION 4: First aid measures****4.1 Description of first aid measures**

**Eyes contact:** In case of contact with eyes, rinse immediately with plenty of water for at least 15 minutes. Get medical attention.

**Skin contact:** Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Get medical attention.

**Inhalation:** Remove the victim from site of exposure to fresh air. If breathing is difficult, give oxygen. If not breathing give artificial respiration. Get medical attention.

**Ingestion:** **Do not induce vomiting.** If victim is conscious, wash mouth thoroughly with plenty of water. Never give anything by mouth to an unconscious person. Get medical attention.

**4.2 Most important symptoms and effects, both acute and delayed**

See section 2.2 (Label elements) and/or section 11 (Toxicological information) for the most important known symptoms and effects.

**4.3 Indication of any immediate medical attention and special treatment needed**

Not available

**SECTION 5: Fire-fighting measures****5.1 Extinguishing media**

Suitable: Foam, carbon dioxide, dry powder or water spray.

Not suitable: Water jet.

**5.2 Special hazards arising from the substance or mixture**

Under fire conditions may emit carbon oxides, nitrogen oxides and toxic and irritating fumes.

**5.3 Advice for firefighters**

**Special protective equipment for fire fighters:** Fire fighters should wear full protective clothing and self-contained breathing apparatus in positive pressure mode.

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**SECTION 6: Accidental release measures**

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**6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Ventilate area of spill. Keep away from sources of ignition.

**6.2 Environmental precautions**

Prevent entry into waterways, sewers, basements or confined areas.

**6.3 Methods and materials for containment and cleaning up**

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations.

**6.4 Reference to other sections**

See Section 1 for emergency contact information.

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**SECTION 7: Handling and storage**

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**7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapors, mist or gas. Wash thoroughly after handling. Handle in accordance with good industrial hygiene and safety practice. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also section 8 for additional information measures.

**7.2 Conditions for safe storage, including any incompatibilities**

**Storage:** Keep container tightly closed in a dark, dry, cool and well-ventilated place. Keep away from sources of ignition and direct sunlight.

**7.3 Specific end use(s):** N/A

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**SECTION 8: Exposure control/personal protection**

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**8.1 Control parameters**

Occupational exposure limit values:

<b>Substance name</b>	<b>Occupational exposure limits</b>
Xylene	ACGIH-TLV 100 ppm (TWA), 150 ppm (STEL)
Ethylbenzene	ACGIH-TLV 20 ppm (TWA)

## **8.2 Exposure controls**

### Engineering measures

Use process enclosures, local exhaust ventilation, or others engineering controls to keep airborne levels below recommend exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

### Person Protective measures

Respiratory protection: Suitable respirator. Be sure to use an approved/certified equipment or equivalent equipment. Wear appropriate respirator when ventilation is inadequate.

Hand protection: Wear protective gloves to prevent skin exposure.

Eye protection: Wear protective safety glasses.

Skin protection: Wear appropriate long-sleeved clothing to minimize skin contact.

Environmental exposure controls: Not available

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## **SECTION 9: Physical and chemical properties**

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### **9.1 Information on basic physical and chemical properties**

Appearance: White liquid

Odour: Mild aromatic

Odour threshold: N/A

pH: 7.7±0.0 at 25.3°C (of 1% w/v aqueous solution)

Melting point/Freezing point: N/A

Initial boiling point/boiling range: N/A

Flash point: 63.6°C.±0.1°C at 682.7 mmHg

Evaporation rate: N/A

Flammability: N/A

Upper/lower flammability or explosive limits: N/A

Vapor pressure: N/A

Vapor density: N/A

Relative density: 1.023±0.00 g/ml at 20.2°C

Solubility(ies): N/A

Partition coefficient Octanol/Water: N/A

Auto-ignition temperature: N/A

Decomposition temperature: N/A

Viscosity: 8.24±0.51 cP at 20°C ±0.5°C;

6.20±0.51 cP at 40°C ±0.5°C

Explosive properties: N/A

Oxidizing properties: N/A

### **9.2 Other information**

Surface tension: 42.314 dynes/cm at 20.2°C±0.2°C

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## **SECTION 10: Stability and reactivity**

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### **10.1 Reactivity**

Not available

### **10.2 Chemical stability**

The product is stable under normal handling and storage conditions described in Section 7.

Low temperature stability: Stable after 7 days of storage at 0±2°C. Not-corrosive to metals.

### **10.3 Possibility of hazardous reactions**

Hazardous reactions are not expected, under normal conditions of storage and use.

**10.4 Conditions to avoid**

Heat, sparks, open flames and ignition sources. Direct sunlight.

**10.5 Incompatible materials**

Strong oxidizing agents.

**10.6 Hazardous decomposition products**

Other decomposition products: not available  
In the event of fire: see section 5.

**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

Acute toxicity:

Product/substance name	Test	Species	Dose
TOG-STAR	LD50, Oral	Rat	5000 mg/kg
	LD50, Administration onto the skin	Rat	>2000 mg/kg
	LC50, Inhalation	Rat	>3.71 mg/L/4H
Prochloraz	LD50, Oral	Rat	1023 mg/kg
	LD50, Administration onto the skin	Rat	> 2100 mg/kg
	LC50, Inhalation	Rat	> 2.16 mg/l/4h

Skin corrosion/irritation: Non-irritant

Serious eye damage/irritation: Non-irritant

Respiratory or skin sensitization: Non-sensitizer

Germ cell mutagenicity: Prochloraz have no mutagenic effects.

Carcinogenicity: Not available

Reproductive toxicity: No effects on fertility and no developmental effects are found for prochloraz at maternal non-toxic dose levels, but several effects were observed at dose levels which also caused other effects (method OECD 416).

Specific target organ toxicity (single exposure): Not available

Specific target organ toxicity (repeated exposure): Not available

Aspiration hazard: Not available

**SECTION 12: Ecological information**

**12.1 Toxicity**

Product/ingredient name	Toxicity to algae	Toxicity to fish	Toxicity to crustaceans
Prochloraz	ErC50/72h Green algae (Desmodesmus subspicatus) > 0.032 mg/l	LC50/96h Fish Sheepshead minnow (Cyprinodon variegatus) 1.2 mg/l  NOEC/36d Fathead minnow (Pimephales promelas) 0.0485 mg/l	EC50/48h Invertebrates Daphnids (Daphnia magna) 4.3 mg/l  NOEC/21d Invertebrates Daphnids (Daphnia magna): 0.0222 mg/l

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts	EC50/72h – Danio rerio (zebra fish) – 10-100 mg/l NOEC/72d - Oncorhynchus mykiss (rainbow trout) - 0.23 mg/L	LC50/96h – Selenastrum capricornutum (green algae) – 29 mg/L NOEC/96h – Selenastrum capricornutum (green algae) – 0.5 mg/L	EC50/48h - Daphnia magna – 56-100 mg/L NOEC/72d - Oncorhynchus mykiss (rainbow trout) - 0.23 mg/L
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**12.2 Persistence and Degradability**

Prochloraz does not meet the criteria for being readily biodegradable, but it is degraded in the environment. Primary degradation half-lives vary very much with circumstances, from a few days to more than a year in aerobic soil and water.

**12.3 Bioaccumulative potential**

Bioaccumulation of prochloraz must be considered possible, Log Kow = 4.12 at 25°C.

**12.4 Mobility in soil**

Under normal conditions prochloraz is not mobile in soil.

**12.5 Results of PBT and vPvB assessment**

Not available

**12.6 Other adverse effects**

Very toxic to aquatic life with long lasting effects. Prochloraz is considered non-toxic to birds, insects and soil micro- and macro-organisms.

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

**Product**

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

**Packing**

Empty containers should be taken for local recycling, recovery or waste disposal.

**SECTION 14: Transport information**

**14.1 Un number**

ADR/RID: 3082

IMDG: 3082

IATA: 3082

**14.2 Proper shipping name**

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Prochloraz)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Prochloraz)

IATA: Environmentally hazardous substance, liquid, n.o.s. (Prochloraz)

**14.3 Transport hazard class(es)**

ADR/RID: 9

IMDG: 9

IATA: 9

**14.4 Packing group**

ADR/RID: III

IMDG: III

IATA: III

**14.5 Environmental hazard**

Marine Pollutant: Yes

**14.6 Special precautions for user**

Not available

**14.7 Transport to bulk according to Annex II of MARPOL 79/78 and the IBC Code**

Not available

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**SECTION 15: Regulatory information**

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This SDS complies with the following requirements of:  
EU Regulation (EC) No.1907/2006 (REACH) including amendments  
Regulation (EC) No.1272/2008 (CLP)

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Not available

**15.2 Chemical safety assessment**

Not available

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**SECTION 16: Other information**

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**Full text of Hazards Statements referred to in sections 2 and 3:**

Eye Dam. - Serious eye damage

Flam. Liq. - Flammable liquid

Skin Irrit.-Skin irritation

Acute Tox. - Acute toxicity

STOT RE - Specific target organ toxicity - repeated exposure

Aquatic Acute - Hazardous to the aquatic environment

Aquatic Chronic - Hazardous to the aquatic environment

H302: Harmful if swallowed.

H304: May be fatal if swallowed and enters airways.

H312: Harmful in contact with skin.

H315: Causes skin irritation.

H318: Causes serious eye damage.

H225: Highly flammable liquid and vapour.

H226: Flammable liquid and vapour.

H332: Harmful if inhaled.

H373: May cause damage to organs through prolonged or repeated exposure.

H315: Causes skin irritation.

H410: Very toxic to aquatic life with long lasting effects.

H411: Toxic to aquatic life with long lasting effects.

Training advice: Before using/handling the product one must read carefully present SDS.

**Key Legend Information:**

CAS - Chemical Abstract Service

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NTP - National Toxicology program

IARC - International Agency for Research on Cancer

N/A - Not available

H - statements- Hazard statements

TLV - Threshold Limit Value

TWA - Time-weighted average  
STEL - Short-Term Exposure Limit  
CSA - Chemical safety assessment

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