

# SAFETY DATA SHEET

## MANIPULATOR 620



Version  
1.2  
PRD

Revision Date:  
01/24/2019

SDS Number:  
150000104051  
SDSCA / EN / 0331

Date of last issue: 05/12/2017  
Date of first issue: 01/12/2017

### SECTION 1. IDENTIFICATION

Product name : MANIPULATOR 620  
Product code : P5163710

#### Manufacturer or supplier's details

Company name of supplier : Taminco BVBA  
A Subsidiary of Eastman Chemical Company  
Address : Panterschipstraat 207  
Gent 9000  
Emergency telephone number : CHEMTREC: +1-800-424-9300, +1-703-527-3887 CCN7321

#### Recommended use of the chemical and restrictions on use

Recommended use : Plant growth regulator

### SECTION 2. HAZARDS IDENTIFICATION

#### GHS classification in accordance with the Hazardous Products Regulations

Acute toxicity (Oral) : Category 4

Corrosive to metals : Category 1

#### GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H302 Harmful if swallowed.  
H290 May be corrosive to metals.

Precautionary statements : **Prevention:**  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.

**Response:**  
P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.  
P390 Absorb spillage to prevent material damage.

**Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

#### Other hazards

None known.

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### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Components

Chemical name	CAS-No.	Concentration (% w/w)
C6-12-(Alkyl)alcohol,ethoxylated	68439-45-2	>= 4 - <= 7
Chloromequat chloride	999-81-5	>= 50 - <= 60

### SECTION 4. FIRST AID MEASURES

- If inhaled : Remove to fresh air.  
If not breathing, give artificial respiration.  
If breathing is difficult, give oxygen.  
Get medical attention if symptoms occur.
- In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes.  
Take off all contaminated clothing immediately.  
Get medical attention immediately if irritation persists.
- In case of eye contact : Rinse immediately with plenty of water for at least 15 minutes.  
Get medical attention if symptoms occur.
- If swallowed : Seek medical advice.
- Most important symptoms and effects, both acute and delayed : sweating  
Dizziness  
Headache
- Notes to physician : Treat symptomatically.

### SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Carbon dioxide (CO<sub>2</sub>)  
Dry chemical  
Water spray
- Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.  
Do NOT use water jet.
- Specific hazards during fire-fighting : Thermal decomposition can lead to release of irritating gases and vapours.
- Hazardous combustion products : Carbon monoxide  
Nitrogen oxides (NO<sub>x</sub>)
- Further information : None known.
- Special protective equipment for firefighters : Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Wear appropriate personal protective equipment.  
Local authorities should be advised if significant spillages cannot be contained.
- Environmental precautions : Avoid release to the environment.  
Do not contaminate water.

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Methods and materials for containment and cleaning up : Sweep up or vacuum up spillage and collect in suitable container for disposal.  
Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

### SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : None known.

Advice on safe handling : Avoid contact with skin, eyes and clothing.  
Do not swallow.  
Wash thoroughly after handling.

Conditions for safe storage : Keep tightly closed.

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

#### Personal protective equipment

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Hand protection

Remarks : Neoprene gloves Rubber gloves The data about break through time/strength of material are standard values! The exact break through time/strength of material has to be obtained from the producer of the protective glove.

Eye protection : Safety glasses

Skin and body protection : Complete suit protecting against chemicals

Protective measures : Remove respiratory and skin/eye protection only after vapours have been cleared from the area.  
Ensure that eye flushing systems and safety showers are located close to the working place.

Hygiene measures : Use personal protective equipment as required.  
Handle in accordance with good industrial hygiene and safety practice.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : gold

Odour : amine-like

Odour Threshold : not determined

pH : 4 - 5.7

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Melting point/range	:	not determined
Boiling point/boiling range	:	> 100 °C
Flash point	:	Not applicable
Evaporation rate	:	not determined
Flammability (liquids)	:	The product is not flammable.
Upper explosion limit / Upper flammability limit	:	not determined
Lower explosion limit / Lower flammability limit	:	not determined
Vapour pressure	:	< 0.00001 hPa (20 °C)
Relative vapour density	:	not determined
Relative density	:	No data available
Density	:	1.13 g/cm <sup>3</sup>
Solubility(ies) Water solubility	:	> 886 g/l
Partition coefficient: n-octanol/water	:	log Pow: -3
Auto-ignition temperature	:	> 350 °C
Decomposition temperature	:	not determined
Viscosity Viscosity, dynamic	:	42.6 mPa.s ( 20 °C)
Viscosity, kinematic	:	not determined
Explosive properties	:	Not explosive
Oxidizing properties	:	Not classified

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### SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	None reasonably foreseeable.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Hazardous decomposition products formed under fire conditions.
Conditions to avoid	:	Heat
Incompatible materials	:	Strong acids and oxidizing agents Metals

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Hazardous decomposition products : Water  
Carbon dioxide (CO<sub>2</sub>)  
Carbon monoxide  
Nitrogen oxides (NO<sub>x</sub>)

### SECTION 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity

##### Product:

Acute oral toxicity : LD50 (Rat): 300 - 2,000 mg/kg

Remarks: Harmful if swallowed.

Acute inhalation toxicity : LC50 (Rat): > 5.32 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist

Remarks: No significant adverse effects were reported

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg

Remarks: No significant adverse effects were reported

##### Components:

##### **C6-12-(Alkyl)alcohol,ethoxylated:**

Acute oral toxicity : LD50 Oral (Mouse): 528 mg/kg  
Remarks: Harmful if swallowed.

##### **Chloromequat chloride:**

Acute oral toxicity : LD50 Oral (Rat): 520 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.2 mg/l  
Exposure time: 4 h  
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 Dermal (Rabbit): 1,250 mg/kg

LD50 Dermal (Rat): > 2,000 mg/kg

#### Skin corrosion/irritation

##### Product:

Result : No skin irritation

##### Components:

##### **Chloromequat chloride:**

Species : Rabbit

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Exposure time : 24 h  
Result : No skin irritation

### Serious eye damage/eye irritation

#### Product:

Result : No eye irritation  
Remarks : No data available

#### Components:

##### **C6-12-(Alkyl)alcohol,ethoxylated:**

Result : Corrosive  
Assessment : Causes serious eye damage.

##### **Chloromequat chloride:**

Species : Rabbit  
Result : No eye irritation

### Respiratory or skin sensitisation

#### Product:

Result : Did not cause sensitisation on laboratory animals.

#### Components:

##### **Chloromequat chloride:**

Result : Did not cause sensitisation on laboratory animals.

### Germ cell mutagenicity

#### Product:

Germ cell mutagenicity - Assessment : Did not show mutagenic effects in animal experiments.

#### Components:

##### **Chloromequat chloride:**

Germ cell mutagenicity - Assessment : Did not show mutagenic effects in animal experiments.

### Carcinogenicity

#### Product:

Remarks : This information is not available.

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### Components:

#### **Chloromequat chloride:**

Carcinogenicity - Assessment : Did not show carcinogenic effects in animal experiments.

#### **Reproductive toxicity**

#### Product:

Effects on fertility : Remarks: No data available

Reproductive toxicity - Assessment : No toxicity to reproduction

### Components:

#### **Chloromequat chloride:**

Reproductive toxicity - Assessment : No toxicity to reproduction  
Did not show teratogenic effects in animal experiments.

#### **STOT - single exposure**

#### Product:

Remarks : No data available

#### **STOT - repeated exposure**

#### Product:

Remarks : No data available

#### **Aspiration toxicity**

#### Product:

No aspiration toxicity classification

#### **Further information**

#### Product:

Remarks : None known.

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## SECTION 12. ECOLOGICAL INFORMATION

### **Ecotoxicity**

#### Product:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 31.7 mg/l  
Exposure time: 48 h

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- Toxicity to algae : EC50 (Chlorella pyrenoidosa (aglae)): > 100 mg/l  
Exposure time: 72 h
- NOEC (Lemna gibba (gibbous duckweed)): 0.295 mg/l  
Exposure time: 7 d
- Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 43.1 mg/l  
Exposure time: 21 d
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 2.4 mg/l  
Exposure time: 21 d

### Components:

#### **Chloromequat chloride:**

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia (water flea)): 31.7 mg/l  
Exposure time: 48 h
- Toxicity to algae : ErC50 (Lemna gibba (gibbous duckweed)): 28 mg/l  
Exposure time: 7 d
- EbC50 (Lemna gibba (gibbous duckweed)): 5.3 mg/l  
Exposure time: 7 d
- NOEC (Lemna gibba (gibbous duckweed)): 0.1 mg/l  
Exposure time:
- Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 43.1 mg/l  
Exposure time: 21 d
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 2.4 mg/l  
Exposure time: 21 d
- Toxicity to microorganisms : IC50 (Bacteria): 43 mg/l  
Exposure time: 3 h

### **Persistence and degradability**

#### Product:

- Biodegradability : Biodegradation: 50 %  
Exposure time: 26 - 34 d

### Components:

#### **Chloromequat chloride:**

- Biodegradability : Result: Readily biodegradable.



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### Bioaccumulative potential

#### Product:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

### Mobility in soil

#### Product:

Stability in soil : Remarks: Not expected to adsorb on soil.

### Other adverse effects

No data available

## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues : Dispose of in accordance with local regulations.  
Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

## SECTION 14. TRANSPORT INFORMATION

### International Regulations

#### **IATA-DGR**

UN/ID No. : UN 1760  
Proper shipping name : Corrosive liquid, n.o.s.  
(Chlormequat chloride)  
Class : 8  
Packing group : III  
Labels : Corrosive  
Packing instruction (cargo aircraft) : 856  
Packing instruction (passenger aircraft) : 852

#### **IMDG-Code**

UN number : UN 1760  
Proper shipping name : CORROSIVE LIQUID, N.O.S.  
(Chlormequat chloride)  
Class : 8  
Packing group : III  
Labels : 8  
EmS Code : F-A, S-B  
Marine pollutant : no

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

### National Regulations

#### **TDG**

UN number : UN 1760  
Proper shipping name : CORROSIVE LIQUID, N.O.S.

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(Chlormequat chloride)

Class	:	8
Packing group	:	III
Labels	:	8
Marine pollutant	:	no

### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

## SECTION 15. REGULATORY INFORMATION

### The components of this product are reported in the following inventories:

TSCA	:	On TSCA Inventory
DSL	:	All components of this product are on the Canadian DSL
AICS	:	On the inventory, or in compliance with the inventory
ENCS	:	Not in compliance with the inventory
ISHL	:	On the inventory, or in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	Not in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory
TCSI	:	On the inventory, or in compliance with the inventory

### Canadian lists

No substances are subject to a Significant New Activity Notification.

## SECTION 16. OTHER INFORMATION

### Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk;

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IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.

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