SAFETY DATA SHEET

According to EC Regulation 1907/2006/EC

Barleyquat B

Revision Date *16-Dec-2010*
Revision Number *5*

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product Name	Barleyquat B
Company/Undertaking Identification	Taminco BVBA
Address	Pantserschipstraat 207 9000 GENT BELGIUM
Telephone	(+32) 9 254 14 11
Telefax	(+32) 9 254 14 10
Emergency Telephone Number	(+32) 9 254 10 36
E-mail address	MSDS_ASC@taminco.com
Use of the Substance/Preparation	growth regulator

2. HAZARDS IDENTIFICATION

Most Important Hazards

- Harmful if swallowed
- Harmful in contact with skin

3. COMPOSITION/INFORMATION ON INGREDIENTS

Haz/Non-haz

Chemical Name	CAS-No	Weight %	EINECS	Classification
Chlormequat chloride	999-81-5	35-60	213-666-4	Xn; R21/22 Acute Toxicity: Cat 4; Acute Toxicity: Cat.4 H312, H302, EUH401
Alcohol ethoxylate	68439-45-2	4-6		Xn, Xi, R22, R41 Acute toxicity: Cat. 4; Eye irritation Cat.: 1 H302, H318

4. FIRST AID MEASURES

General Advice
- If symptoms persist, call a physician
- Show this safety data sheet to the doctor in attendance

Inhalation
- Remove from exposure, lie down
- Move to fresh air
- If breathing is difficult, give oxygen
- Obtain medical attention

Eye Contact
- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes
- Immediate medical attention is required

Skin Contact
- Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes
- If skin irritation persists, call a physician

Ingestion
- Keep at rest
- Do not induce vomiting
- Clean mouth with water and afterwards drink plenty of water
- Obtain medical attention

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
- carbon dioxide (CO_2)
- water spray
- foam

Extinguishing media which must not be used for safety reasons
- high volume water jet

Specific methods
- Use water spray to cool unopened containers
- Do not allow run-off from fire fighting to enter drains or water courses
- If without risk, remove unopened packages from exposure to fire

Special protective equipment for fire-fighters
- In the event of fire, wear self contained breathing apparatus

Specific hazards
- Burning produces obnoxious and toxic fumes
- Nitrogen oxides (NO_x)
- Chlorine

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
- Avoid contact with skin, eyes and clothing
- Evacuate personnel to safe areas
- Keep people away from and upwind of spill/leak

Environmental Precautions
- Remove immediately adhering matter
- Prevent product from entering drains
- Do not flush into surface water or sanitary sewer system

Methods for Clean-up
- Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container
- Do not flush with water

7. HANDLING AND STORAGE

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Storage

Technical measures/Precautions
- In accordance with local and national regulations
- Keep container tightly closed
- Keep in a dry, cool place
- Use spark-proof tools and explosion-proof equipment
- Keep away from food, drink and animal feeding stuffs
- Keep away from children

Incompatible products
- No special storage conditions required

Specific use(s)
- Dispose of as special waste in compliance with local and national regulations

Handling

Technical measures/Precautions
- In accordance with local and national regulations
- Use only in area provided with appropriate exhaust ventilation

Safe Handling Advice
- Avoid contact with skin, eyes and clothing
- Wear personal protective equipment
- Use only in an area equipped with a safety shower
- Wash hands and face before breaks and immediately after handling the product
- Do not breathe vapours/dust

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls

Engineering Controls
- Local exhaust

Exposure limits

Chemical Name	GOEL	ACGIH TLV
Chlormequat chloride	N/A	Not listed
Alcohol ethoxylate	Not listed	Not listed

Personal Protective Equipment

Eye/face Protection
- Tightly fitting safety goggles
- Face-shield

Hand Protection
- Neoprene gloves
- Choose body protection according to the amount and concentration of the dangerous substance at the work place

Respiratory Protection
- In case of insufficient ventilation, wear suitable respiratory equipment
- Suitable mask with particle filter P3 (European Norm 143)
- self-contained breathing apparatus (EN 133)
- (in case of higher concentration)
- In accordance with local and national regulations

Skin Protection
- Wear suitable protective equipment
- Choose body protection according to the amount and concentration of the dangerous substance at the work place

Environmental exposure controls
- Prevent product from entering drains
- Do not contaminate surface water
- Avoid subsoil penetration

9. PHYSICAL AND CHEMICAL PROPERTIES

General Information

Physical State	Liquid
Color	Gold Brown
Odor	Amine-like

Important Health Safety and Environmental Information

Boiling Point/Range	> 100°C
Flash Point	None under normal processing
Viscosity	42.6(cps) @ 20°C
Vapor Pressure	< 1.10 exp6 @ 20 °C
Partition Coefficient (n-octanol/water)	log Pow : -3
pH	-
Water solubility	> 886 g/l
Oxidizing Properties	none
Evaporation Rate	No information available
Explosion Limits	Not explosive
Melting Point/Range	Not applicable
Density	1,123 g/mL
Flammability	The product is not flammable
Autoignition Temperature	Not combustible

10. STABILITY AND REACTIVITY

Conditions to Avoid
- Stable under normal conditions

Materials to avoid
- Decomposes by reaction with strong acids
- Corrosive in contact with metals
- Water

Hazardous Decomposition Products
- None known

11. TOXICOLOGICAL INFORMATION

Product Information

LD50/oral/rat =	520 mg/kg
LD50/dermal/rat =	> 4000 mg/kg
LC50/inhalation/4h/rat =	> 5.2 mg/l
Eye irritation	No eye irritation
Skin irritation	Non-irritating to the skin
Sensitization	negative

11. TOXICOLOGICAL INFORMATION

Mutagenic Effects	Did not show mutagenic effects in animal experiments
Reproductive toxicity	No toxicity to reproduction
Carcinogenic effects	Did not show carcinogenic effects in animal experiments

Human experience

Human experience	May cause headache and dizziness nausea muscle twitching sweating

12. ECOLOGICAL INFORMATION

Ecotoxicity

LC50/96h/Rainbow trout =	17mg/l
EC50/48h/daphnia =	27.4 mg/l
EC50/72h/algae =	156.3 mg/l
Toxicity to bacteria	- No information available

Mobility

minimum

Persistence/Degradability

Degradation half life
after 26-34 days

Bioaccumulative Potential

Not available

13. DISPOSAL CONSIDERATIONS

Waste from Residues / Unused Products	• Dispose of in accordance with local regulations • Waste codes should be assigned by the user based on the application for which the product was used • Classified as hazardous waste according to national equivalent of EC-Dir. 91/689; disposal of toxic and hazardous waste
Contaminated Packaging	• Empty containers should be taken for local recycling, recovery or waste disposal

14. TRANSPORT INFORMATION

Road transport

Class	8
UN-No	UN1760
Packing Group	III
Proper Shipping Name	Corrosive liquid, n.o.s.

14. TRANSPORT INFORMATION

Sea transport

Class	8
UN-No	UN1760
Packing Group	III
Marine pollutant	no
Proper Shipping Name	Corrosive liquid, n.o.s.

Air transport

Class	8
UN-No	UN1760
Packing Group	III
Proper Shipping Name	Corrosive liquid, n.o.s.

15. REGULATORY INFORMATION

Symbol(s)

- Xn - Harmful

R -phrase(s)
S -phrase(s)

- R21/22 - Harmful in contact with skin and if swallowed
- S 2 - Keep out of the reach of children.
- S13 - Keep away from food, drink and animal feedingstuffs.
- S20/21 - When using, do not eat, drink or smoke
- S36/37 - Wear suitable protective clothing and gloves
- S46 - If swallowed, seek medical advice immediately and show this container or label

International Inventories

Chemical Name	TSCA	EINECS	DSL	ENCS	AICS
Chlormequat chloride	Present	213-666-4	Present	N/A	Present
Alcohol ethoxylate	X		DSL - Listed		Listed.

16. OTHER INFORMATION

Text of R phrases mentioned in Section 3
R20/21 - Harmful by inhalation and in contact with skin
R21/22 - Harmful in contact with skin and if swallowed
R22 - Harmful if swallowed
R41 - Risk of serious damage to eyes
H302 - Harmful if swallowed
H318 - Causes serious eye damage
H312 - Harmful in contact with skin
EUH401 - To avoid risks to human health and the environment, comply with the instructions for use

Literary Reference -Taminco Proprietary Studies

Further information for the safety data sheet

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 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. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release.