

# UNIVERSAL ASSAULT 700 SC

# MATERIAL SAFETY DATA SHEET

## 1. PRODUCT & COMPANY IDENTIFICATION

**Product Name:** ASSAULT 700 SC  
Herbicide

**UN No.:** 1993

**Supplier:** Universal Crop Protection (Pty) Ltd  
Co. Reg. No.: 1983/008184/07  
PO Box 801,  
Kempton Park, 1620, South Africa

**Telephone:** (011) 396 2233

**Fax:** (011) 396 4666

**Website:** [www.villacrop.co.za](http://www.villacrop.co.za)

### Emergency telephone numbers:

#### 24 Hr Transport / Spill emergency no:

Envirosure. +27 31 205 4918  
 (Hazcall24) +27 86 044 4411

(Client: Villa Crop Protection)

Griffon Poison Information Centre +27 82 446 8946

(Client: Villa Crop Protection)

### Poisoning Emergency telephone numbers:

Griffon Poison Information Centre +27 82 446 8946

Poisons Information Centre +27 861 555 777

### Villa Crop Protection Emergency number:

**National Safety, Health and Environmental Manager:**  
+27 63 698 0668

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

**Common Name:** 1) Acetochlor  
2) Ametryn

**Chemical Name:** 1) 2-chloro-*N*-ethoxymethyl-6'-ethylaceto-0-toluidide (IUPAC)  
2) *N*<sup>2</sup>-ethyl-*N*<sup>4</sup>-isopropyl-6-methylthio-1,3,5-triazine-2,4-diamine (IUPAC)

**CAS No.:** 1) [34256-82-1]  
2) [834-12-8]

**Chemical Family:** 1) chloroacetamide  
2) triazine

**Chemical Formula:** 1) C<sub>14</sub>H<sub>20</sub>ClNO<sub>2</sub> (Mol.wt.:269.8)  
2) C<sub>9</sub>H<sub>17</sub>N<sub>5</sub>S (Mol. wt.: 227.3)

**Formulation:** Acetochlor/Ametryn: 700 g/l  
Suspension concentrate

**Use / Mode of Action:** Pre-emergence herbicide, for control of certain grasses and broadleaved weeds in sugarcane.

### Hazardous ingredients of toxicological concern:

Inert:	concern:	% present:
Acetochlor	skin sensitizer	44.5 %
formaldehyde	irritant, corrosive	0.05 %
monoethylene glycol	irritant	5 %

**Symbol:** Xi, Xn, N

**Indication of danger:** Irritant, Harmful, Environmental  
**RISK-PHASE(S):** R 10, R 20/22, 36/37/38, R40, R43, R50

## 3. HAZARD IDENTIFICATION

### Toxicity class:

WHO III (a.i.). Slightly hazardous.

### Likely routes of exposure:

Ingestion, skin and eye contact.

### Eye contact:

Mild irritant to the eyes and may be corrosive, due to inert. The product may be mildly irritating, but is unlikely to cause more than mild discomfort, which should disappear once contact ceases.

### Skin contact:

Contact with the skin, may result in a mild irritation, due to inert. The product may be mildly irritating, but is unlikely to cause more than mild discomfort, which should disappear once contact ceases. May cause skin sensitisation by contact.

### Ingestion:

Harmful if swallowed. The acute toxicity to technical triazines for man is thought to be low, and no adverse health effects from exposure to these herbicides have been reported. Symptoms of acute exposure to high doses include nausea, vomiting, diarrhoea, muscle weakness and salivation.

## 4. FIRST AID MEASURES AND PRECAUTIONS

Irritant effects on skin and mucous membrane are the most common reactions. Large ingestions can cause nausea, vomiting, abdominal distress and diarrhoea.

### Inhalation:

Immediately remove source of contamination or move victim to fresh air. If breathing has stopped, perform artificial respiration and administer oxygen. Avoid mouth to mouth resuscitation. Keep person warm and at rest. Treat symptomatically and supportively as and when required. **Seek medical advice immediately.**

### Skin contact:

Remove contaminated clothing, shoes and leather goods immediately. Gently wipe of excess chemical. Wash skin gently and thoroughly with non-abrasive soap or mild detergent and large amounts of water until no evidence of chemical remains (approximately 15 to 20 minutes). Seek medical advice if necessary.

### Eye contact:

Flush eyes immediately with large amounts of gently flowing cold water or normal saline solution, occasionally lifting upper and lower lids, until no evidence of chemical remains (approximately 15 to 20 minutes). If irritation persists, get medical attention.

### Ingestion:

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Have victim rinse mouth thoroughly with water. Do not induce vomiting. In serious cases, seek medical advice immediately. If the person is alert and respiration is not depressed, give large quantity of water to drink. Never give anything by mouth to an unconscious person. Establish and maintain airway. Treat respiratory difficulty with artificial respiration and oxygen. Administration of gastric lavage or oxygen should be performed by qualified medical personnel.

**Advice to physician:**

Due to the solvent present, if small amount of the product is aspirated into the respiratory system during ingestion or from vomiting, bronchopneumonia or pulmonary edema may be caused.

No specific antidote. Keep patient under observation and treat symptomatically as indicated by his/her condition.

## 5. FIRE FIGHTING MEASURES

**Fire/Explosion hazard:**

**Flammable.**

**Flash point:** 38°C

Combustion products are toxic and/or irritant.

Inhalation of material could be harmful.

**Extinguishing agents:**

Extinguish fires with carbon dioxide, dry powder, or alcohol-resistant foam. Water spray can be used for cooling of unaffected stock, but avoid water coming in contact with the product. Use as little water as possible. Use spray or fog. Solid stream may cause spreading. Contain water used for fire fighting for later disposal. Avoid the accumulation of polluted run-off from the site.

**Fire fighting:**

Remove spectators from surrounding area. Isolate the fire area and evacuate downwind. Use a recommended extinguishing agent for the type of surrounding fire.

Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Contain fire control agents for later disposal. Avoid inhaling hazardous vapours and fumes from burning materials. Keep upwind.

Remove container from fire area if possible and without risk. Water can be used to cool unaffected containers but must be contained for later disposal.

Dyke fire control water for later disposal. Do not scatter the material. Avoid pollution of waterways.

Do not use high volume water jet, due to contamination risk. Contain water used for fire fighting for later disposal. Avoid the accumulation of polluted run-off from the site.

**Personal protective equipment:**

Fire may produce irritating or poisonous vapours or gases (oxides of chlorine and sulphur) or other products of combustion. Fire fighters and others that may be exposed should wear full protective clothing and self-contained breathing apparatus.

## 6. ACCIDENTAL RELEASE MEASURES (Spillage)

**Personal precautions:**

Avoid contact with skin and eyes. Do not breathe in fumes. For personal protection see Section 8.

**Environmental precautions:**

**Acetochlor** is toxic to fish and very toxic to algae. Is an environmentally hazardous substance.

Do not allow entering drains or watercourses. Spillage or uncontrolled discharges into water courses (or public waters) to be reported immediately to the Police and to the Department of Water/Environmental Affairs.

**Occupational spill:**

Do not touch spilled material; stop leak if you can do it without risk. Keep out unprotected persons and animals.

**For spills:** Soak up with absorptive material such as damp earth or sand or other suitable non-combustible absorbent material. Place the material into a clean, dry container and cover for subsequent disposal. In situations where product comes in contact with water, contain contaminated water for later disposal. Prevent material from spreading by damming in with absorptive material. Do not flush spilled material into drains. Keep spectators away and upwind.

To decontaminate spill area, tools and equipment, wash with a suitable solution (i.e. organic solvent, detergent bleach or caustic). Add the solution to the drums already collected. Label drums with its content and dispose it in accordance with local regulations.

Open burning or dumping of this material is prohibited.

Do not get water inside containers.

## 7. HANDLING AND STORAGE REQUIREMENTS

**Handling:**

Harmful if swallowed. Avoid inhalation and contact with eyes and skin. Use with adequate ventilation. Do not handle broken packages without protective equipment. Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Remove clothing immediately if the product gets inside. Then wash skin thoroughly using a non-abrasive soap and put on clean clothing. Seek medical advice.

Do not apply directly to areas where surface water is present, or to intertidal areas below the mean high water mark. Water used to clean equipment must be disposed of correctly to avoid contamination.

Worker should shower at the end of each work day. Launder all clothing before it is re-used again.

**Storage:**

Store in its original container in dry, cool, well-ventilated area. Avoid excess heat. Not to be stored next to foodstuffs and water supplies.

Keep out of reach of children, uninformed persons and animals. Do not contaminate other pesticides and fertilizers.

**Storage stability:**

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Stable for a period of 2 years under normal warehouse conditions.

## 8. EXPOSURE CONTROL/PERSONAL PROTECTION

It is essential to provide adequate ventilation. The measures appropriate for a particular worksite depend on how this material is used and on the extent of exposure. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.

### PERSONAL PROTECTIVE EQUIPMENT:

#### Respirator:

An approved full-face respirator suitable for protection from spray or mists of pesticides is required. Limitations of respirator use specified by the approved agency and the manufacturer must be observed.

#### Clothing:

Employee must wear appropriate protective (impervious) clothing; boots, hat and equipment to prevent repeated or prolonged skin contact with this substance. Do not wear leather clothing.

#### Gloves:

Employee must wear appropriate chemical resistant protective gloves to prevent contact with this substance.

#### Eye protection:

The use of chemical resistant goggles or face shield.

**Emergency eye wash:** Where there is any possibility that an employee's eyes may be exposed to this substance, the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Appearance:

White suspensible liquid

#### Flammability:

Flammable. Fire risk.

#### Flash point:

38°C

#### pH:

3.81

## 10. STABILITY AND REACTIVITY

#### Stability:

Considered stable for a period of 2 years under recommended warehouse and light conditions.

#### Hazardous decomposition:

Emits toxic and irritant vapours under fire conditions.

## 11. TOXICOLOGICAL INFORMATION

### Formulation (calculated):

#### Acute oral LD<sub>50</sub>:

> 1160 mg/kg in rats.

#### Acute dermal LD<sub>50</sub>:

> 3100 mg/kg in rabbits.

#### Acute skin irritation:

May cause mild irritation.

#### Acute eye irritation:

May cause mild irritation and damage to the eyes.

#### Sensitization:

May cause skin sensitization.

#### Teratogenicity/Development (tech):

**Acetochlor** did not induce either maternal or developmental toxicity in rabbits up to 300 mg/kg/day, the highest dose tested.

#### Mutagenicity:

**Acetochlor** was weakly positive in the gene mutation assay with and without activation in the mouse lymphoma assay. However, negative in a DNA damage repair assay, Salmonella assay and chromosomal aberration studies. Positive evidence of mutagenicity was found in various studies at the mid- and high-dose levels.

Studies have showed no mutagenicity in **Ametryn**.

#### Carcinogenicity:

In various studies carcinogenicity effects were noted. Based on data, the US EPA has classified **Acetochlor** as a "probable human carcinogen". There is not adequate data to determine if **Ametryn** can increase the risk of cancer in humans.

#### ADI:

**Acetochlor:** 0.01 mg/kg b.w.

**Ametryn:** 0.051 mg/kg b.w.

## 12. ECOLOGICAL INFORMATION

**Acetochlor:** In animals: The primary routes of metabolism for **Acetochlor** are glutathione conjugation and metabolism by cytochrome P450.

**Ametryn:** Excretion of **Ametryn** is rapid. In rats, 93 to 98% is eliminated in the urine and faeces within 72 hours. Irrespective of the dose or dosing regime, most is excreted within 3 to 4 days. Conjugation with glutathione and dealkylation are the main metabolic pathways

**Acetochlor:** In plants: In maize and soya beans, **Acetochlor** is rapidly absorbed and metabolised in the germinating plant. In maize, the first metabolite is glutathione, and in soya beans homoglutathione.

**Ametryn:** **Ametryn** is metabolized by tolerant plants and, to a lesser extend, by sensitive plants, to non-toxic substances by replacement of the methylthio group by a hydroxyl group, and by dealkylation of the amino groups.

**Acetochlor:** In the soil: **Acetochlor** is adsorbed by soil colloids and leached very little. The main method of degradation is microbial breakdown. Average persistence at recommended rates is 8 to 12 weeks, but vary

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depending on soil type and climatic conditions. It is very active on heavy or high organic matter soils.

**Ametryn:** When **Ametryn** is released into soil, it will absorb moderately to soil; the average Koc being 388.4. It will slowly leach into the soil. Neither **Ametryn** nor its hydroxyl metabolite leach past 6 inch depth with normal rainfall. However, both compounds are persistent and may leach under exaggerated rainfall, flood or irrigation. In the field, **Ametryn** degraded with a half-life of 125 to 250 days. Degradation generally appears to be microbial and is more rapid in acidic soils than in neutral soils.

The long soil persistence of these compounds does create problems of soil carry over, which can damage succeeding cash crops.

If **Ametryn** is released into water, it would absorb moderately to sediment and particulate matter. **Ametryn** undergoes photolysis and photodegradation increases with decreasing pH. Half-life is 10.2 hours at pH 6.8. **Ametryn** may biodegrade in natural water.

## ECOTOXICOLOGY:

### Acetochlor

**Birds:** moderately toxic to birds.

LD <sub>50</sub> :	Bobwhite quail:	> 1260 mg/kg
LC <sub>50</sub> 5-day diet:	Mallard ducks:	> 5620 mg/kg
	Quail:	> 5620 mg/kg

### AMETRYN

**Birds:** slightly toxic to birds.

LC <sub>50</sub> 8-day diet:	Mallard ducks:	23 000 mg/kg
	Bobwhite quail:	30 000 mg/kg
LC <sub>50</sub> 5-day diet:	Mallard ducks:	> 5620 mg/kg
	Bobwhite quail:	> 2250 mg/kg

### ACETOCHLOR

**Fish:** very toxic to fish.

LC <sub>50</sub> (96 hours):	Bluegill sunfish:	1.5 mg/l
	Rainbow trout:	0.36 mg/l

### AMETRYN

**Fish:** moderately toxic to fish.

LC <sub>50</sub> (96 hours):	Bluegill sunfish:	8.5 mg/l
	Rainbow trout:	3.6 mg/l

### ACETOCHLOR

**Daphnia:** very toxic to Daphnia.

<i>Daphnia magna</i> :	96-hour LC <sub>50</sub> :	28 mg/l
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### AMETRYN

**Daphnia:** very toxic to Daphnia.

<i>Daphnia magna</i> :	96-hour LC <sub>50</sub> :	28 mg/l
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### ACETOCHLOR

**Bees:** moderately toxic to bees.

LD <sub>50</sub> (oral):	> 100 µg/bee
LD <sub>50</sub> (contact, 24 hours):	> 200 µg/bee

### AMETRYN

**Bees:** slightly toxic to bees.

LD <sub>50</sub> (oral):	> 100 mg/bee (contact)
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## ACETOCHLOR

### Earthworms:

LC <sub>50</sub> (14 days):	211 mg/kg soil
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### AMETRYN

### Earthworms:

LC <sub>50</sub> (14 days):	166 mg/kg soil
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## 13. DISPOSAL CONSIDERATION

### Pesticide disposal:

Open dumping or burning of this pesticide is prohibited. Waste resulting from the use of this product cannot be reused or reprocessed. Never pour untreated waste or surplus products into public sewers or where there is any danger of run-off or seepage into water systems. Do not contaminate rivers, dams or any other water sources with the product or used containers.

Comply with local legislation applying to waste disposal.

### Container disposal:

Emptied containers retain vapour and product residues. Observe all labelled safeguards until container is destroyed.

### TRIPLE RINSE empty containers in the following manner:

Invert the empty container over the spray or mixing tank and allow to drain for at least 30 seconds after the flow has slowed down to a drip. Thereafter rinse the container three times with a volume of water equal to a minimum of one third of that of the container. Add the rinsings to the contents of the spray tank before destroying the container in the prescribed manner.

Do not re-use the empty container for any other purpose but destroy it by perforation and flattening and bury in an approved dumpsite. Prevent contamination of food, feedstuffs, drinking water and eating utensils.

Comply with local legislation applying to waste disposal.

## 14. TRANSPORT INFORMATION

**UN No.:** 1993

### Road Transport ADR/IRD:

Class:	3
Packing group:	III
Shipping name:	Flammable liquid, N.O.S. (Acetochlor/Ametryn 700 g/l)

### Maritime Transport IMDG/IMO:

Class:	3
Packing group:	III
Shipping name:	Flammable liquid, N.O.S. (Acetochlor/Ametryn 700 g/l)

## 15. REGULATORY INFORMATION

**Symbol:** Xi, Xn, N

**Indication of danger:** Irritant, Harmful, Environmentally Hazardous Substance

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### Risk phrases:

- R 10**  
**R 20/22** Harmful by inhalation and if swallowed.  
**R 36/37/38** Irritation to eyes, respiratory system and skin.  
**R 40** Limited evidence of a carcinogen.  
**R 41** Risk of serious damage to eyes.  
**R 43** May cause skin sensitisation by skin contact.  
**R 50** Very toxic to aquatic organisms.

### Safety phrases:

- S 1/2** Keep locked up and out of the reach of children.  
**S 24/25** Avoid contact with skin and eyes.  
**S 36/37/39** Wear suitable protective clothing, gloves and eye/face protection.  
**S 60** This material and its container must be disposed of as hazardous waste.

## 16. OTHER INFORMATION

### Packing and Labelling:

Packed in 1, 5, 10, 20, and 25 litres plastic containers and labelled according to the South African regulations and guidelines.

### Disclaimer:

The information on this sheet is not a specification; it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage use of the product. It is not applicable to unusual or non-standard uses of the product nor where instructions or recommendations are not followed.

All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors and omissions or the consequence thereof.

## END OF DOCUMENT

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For detailed information on revisions, contact the Registration holder.