

## UNIVERSAL EXILIS®

## MATERIAL SAFETY DATA SHEET

### 1. PRODUCT & COMPANY IDENTIFICATION

**Product Name:** EXILIS®  
 Plant Growth Regulator  
**UN No.:** Not Regulated  
**Company:** 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:** 6-benzylaminopurine (JMAF)  
**Chemical Name:** 6-benzyladenine (IUPAC)  
**CAS No.:** 1214-39-7  
**Chemical Family:** Plant Growth Regulator  
**Chemical Formula:** C<sub>12</sub>H<sub>11</sub>N<sub>5</sub>  
**Use:** A water soluble concentrate plant growth regulator for fruit thinning on apples.

**Formulation:** 6-benzylaminopurine  
 (cytokinin).... 21 g/l  
 Soluble Concentrate

#### Hazardous ingredients of toxicological concern:

<u>Inert:</u>	<u>concern:</u>	<u>% present:</u>
6-benzylaminopurine	harmful	2 %

**Hazardous Identification:** None.  
**Symbol:** Xn.  
**Indication of danger:** Harmful.

### 3. HAZARD IDENTIFICATION

**Toxicity class:** WHO (a.i.) U, EPA III (active ingredient).

**Likely routes of exposure:** Ingestion, inhalation and skin contact.

**Eye contact:** Flush eyes with running water for at least 15 minutes.

**Skin contact:** Remove contaminated clothing. Wash the affected area thoroughly with soap and water. Obtain medical attention if irritation occurs.

**Ingestion:** Do not induce vomiting or give liquids. Seek medical advice.

**Inhalation:** Remove the person to a well-ventilated area. Ensure the person is warm and comfortable. Obtain immediate medical attention.

### 4. FIRST AID MEASURES AND PRECAUTIONS

Reactions are not likely to occur unless the absorbed dose is extraordinary. Ingestion of large amounts may cause cramping, vomiting and hypertension. May cause respiratory tract irritation, coughing and chest discomfort. May cause a hard to heal rash on prolonged or repeated skin contact.

**Inhalation:** Remove source of contamination or move victim to fresh air. Monitor for respiratory distress. Perform artificial respiration and administer oxygen if necessary. Keep person warm and at rest. Treat symptomatically and supportively. **Obtain medical advice if necessary.**

**Skin contact:** Remove contaminated clothing, shoes and leather goods. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap. Seek medical advice if necessary. Persons who become sensitized may require specialized medical management with anti-inflammatory agents.

**Eye contact:** Immediately flush the contaminated eyes with gently flowing lukewarm water for 15 to 20 minutes, occasionally lifting the upper and lower lids. Obtain medical attention if necessary.

**Ingestion:** Have victim rinse mouth thoroughly with water. Give water to dilute the material if victim is alert and not convulsing. **Do not induce vomiting.** If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer more water. Administration of gastric lavage or oxygen should be performed by qualified medical personnel. **Seek medical advice immediately.**

#### Advice to physician:

Treat symptomatically and supportively.

### 5. FIRE FIGHTING MEASURES

**Fire hazard and explosion hazard:**

**Fire hazard:** Auto-ignition >400 °C.

**Flash point:** 106 °C.

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**Combustion products:** At very high temperatures: will decompose to form carbon, chlorine, nitrogen and sulphur compounds.

**Extinguishing agents:** Use water mist, CO<sub>2</sub>, foam or dry powder.

**Firefighting:** Remove spectators from surrounding area. Remove container from fire area if possible without risk. Eliminate all ignition sources in immediate area. Fight fire from maximum distance. For massive fire, use unmanned hose holder or monitor nozzles. Contain fire control agents for later disposal. Use a recommended extinguishing agent for the type of surrounding fire. Avoid inhaling hazardous vapours. Keep upwind.

**Personal protective equipment:** Fire may produce irritating or poisonous vapours (toxic compounds of carbon and nitrogen), mists or other products of combustion. Fire fighters and others that may be exposed should wear full protective impervious clothing, including gloves (acid resistant gloves with a minimum 0.5 mm thickness should be worn with sleeves worn over the top of the gloves) and eye protection (glasses/goggles or facemask and self-contained breathing apparatus. Contact with the fumes and vapours should be avoided by staying upwind.

### 6. ACCIDENTAL RELEASE MEASURES (SPILLAGE)

**Personal precautions:** Avoid contact with skin and eyes. Do not inhale fumes.

**Environmental precautions:** 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 or walk through spilled material. Stop leak if possible without risk. Avoid runoff of product into sewers, water systems, basements or confined areas. Thoroughly wash body areas, which come into contact with the product.

For **spills**, contain liquid far ahead of spill. Isolate spilled material for safe disposal and collect in sealable polylined containers, clean contaminated area with water. Do not allow the product to come in contact with water systems. Do not flush spilled material into drains. Keep spectators away and upwind.

### 7. HANDLING AND STORAGE REQUIREMENTS

**Handling:** Harmful if swallowed. Avoid contact with eyes, prolonged contact with skin, and inhalation of fumes. Use with adequate ventilation. 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. 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.

**Storage:** Keep out of reach of unauthorized persons, children and animals. Store in its original labeled container in shaded, well-ventilated area, away from heat, sparks and other sources of ignition. Store in dry area. Not to be stored next to foodstuffs and water supplies. Local regulations should be complied with.

### 8. EXPOSURE CONTROL / PERSONAL PROTECTION

It is essential to provide adequate ventilation. The measures appropriate for a particular work site 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:** If engineering controls and work practices are not effective in controlling exposure to this material, employees persons that may be exposed should wear full protective impervious clothing, including gloves (acid resistant gloves with a minimum 0.5 mm thickness should be worn with sleeves worn over the top of the gloves) and eye protection (glasses/goggles or facemask and self-contained breathing apparatus.

**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 acid resistant gloves with a minimum 0.5 mm thickness with sleeves worn over the top of the gloves.

**Eye protection:** The use of glasses/goggles or facemask is recommended.

**Emergency eyewash:** 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. Irrigate eyes with running water for at least 15 minutes.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** A colourless liquid.

**Odour:** Alcoholic.

**Flash point:** 106 °C closed cup.

**pH:** 6 - 7 (1 % solution in water).

**Solubility:** Soluble in water at 20 °C (all concentrations).

**Boiling point:** 185 to 189°C.

**Decomposition Temperature:** Will decompose only at very high temperatures to form carbon, chlorine, nitrogen and sulphur compounds.

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### 10. STABILITY AND REACTIVITY

**Stability:** Stable under normal, dry storage conditions. Stable for at least 2 years at ambient temperatures when stored in unopened packaging. Product is decomposed by strong oxidizing agents.

**Incompatibility:** Incompatible with strong oxidizing agents.

**Thermal decomposition:** When heated to decomposition it emits acrid smoke and fumes.

### 11. TOXICOLOGICAL INFORMATION

**Acute oral LD<sub>50</sub>:** 4 000 mg/kg in mouse.

**Acute dermal LD<sub>50</sub>:** >10 000 mg/kg in rabbits.

**Acute inhalation LC<sub>50</sub>:** >2.1 mg/kg.

**Acute skin and eye irritation:** Non-eye irritant and non-skin irritant.

**Dermal sensitization:** Non-sensitizing.

**NOEL:** (2 years) for male rats 5.2, female rats 6.5, male mice 11.6, female mice 15.1 mg/kg b.w. Daily.

**Carcinogenicity, Teratogenicity, Mutagenicity:** Not listed by IARC, NTP or OSHA as a carcinogen, mutagen, teratogen or neurotoxin. No long term effects.

### 12. ECOLOGICAL INFORMATION

**Biodegradation:** 16 Days after application to soil at 22 °C, **6-benzylaminopurine** had degraded to 5.3 % (sandy loam) and 7.85 % (clay loam soil) of applied dose. Other studies indicate DT<sub>50</sub> 7 – 9 w.

**ECOTOXICOLOGY:** No risks to the environment. The product acts as a plant growth regulator. Persistence and degradability: >99.5% in aqueous media, half-life in 5 days.

### 13. DISPOSAL CONSIDERATION

**Pesticide disposal:** Open dumping or burning of this pesticide is prohibited. Waste resulting from the use of this product that cannot be reused or reprocessed should be disposed of in a landfill approved for pesticide disposal. Do not contaminate rivers, dams or any other water sources with the product or used containers.

**Package product wastes:** Emptied containers retain vapour and product residues. Observe all labeled 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 draining 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 rinsing 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 NUMBER:** Not Regulated  
 Not classed i.e. considered non-hazardous material according to UN Orange Book and international transport codes e.g. RID (rail), ADR (road) and IMDG (sea)

### 15. REGULATORY INFORMATION

**Symbol:** Xn  
**Indication of danger:** Harmful  
**Risk phrases:**  
**R 22** Harmful if swallowed.  
**Safety phrases:**  
**S 1/2** Keep locked up and out of reach of children.  
**S 13** Keep away from food, drink and animal feeding stuffs.  
**S 20/21** When using do not eat, drink or smoke.  
**S 24/25** Avoid contact with skin and eyes.  
**S 36/37/39** Wear suitable protective clothing, gloves and eye/face protection.  
**S 46** If swallowed seek medical advice immediately and show this container and label.

### 16. OTHER INFORMATION

**Packing and Labeling:** Packed in plastic fluorinated containers (1, 5, 10, 20 & 25 litres) and labeled according to 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 neither 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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**Revision no.:** (3)  
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For detailed information on revisions, contact the Registration holder.