JESTER®

HERBICIDE

JESTER PRODUCT USE

SUMMARY OF INFORMATION

FORMULATION & ACTIVE INGREDIENT: Water dispersible granule formulation containing 30 g prosulfuron, a sulfonyl-urea, and 600 g bromoxynil phenol per kg of product.
MAFF NUMBER: 08681
PACK SIZE: 1 kg box.
TARGETS: Contact and residual herbicide for control of broad-leaved weeds in maize.
WATER VOLUME AND BCPC SPRAY QUALITY:
Spray Volume: Use a water volume of 200–400 litres per hectare.
Spray Nozzles: A MEDIUM spray quality is preferred for application of JESTER (see BCPC guidelines). A spray pressure of 2–3 bar is recommended.

PRACTICAL NOTES:

CROPS	MAXIMUM INDIVIDUAL DOSE	MAXIMUM TOTAL DOSE	HARVEST INTERVAL OR LATEST TIME OF APPLICATION
Maize	0.5 kg/ha	0.5 kg/ha/crop	Before 5 leaves unfolded stage of crop

RAINFASTNESS: 2 hours.
BUFFER ZONE RESTRICTIONS: LERAP Category B.
FOR USE ONLY AS: AN AGRICULTURAL HERBICIDE.

HERBICIDE

COMPATIBILITY

The following tank mixes have been tested for physical compatibility with JESTER at recommended rates of use and will mix in the sprayer tank. No tests have been undertaken on crop safety or product performance. Use is at the user's own risk. Syngenta Crop Protection will support 2 or 3-way tank mixes of JESTER with any of the adjuvants, herbicides or insecticides listed. For further information on compatibilities contact Syngenta Crop Protection on 0800 169 6058.

ADJUVANTS

AGRAL

HERBICIDES

Alpha Bromotril P	LENTAGRAN WP	Stomp 400 SC
Atrazine	Mutiny	
GESAPRIM	Starane 2	

*Please read notes regarding specific tank mixing guidelines below.

INSECTIDES

APHOX	Mavrik

TRACE ELEMENTS

Syngenta Crop Protection will support the tank mixing of any of the named trace elements with an existing 2 or 3-way tank mix including JESTER. Syngenta Crop Protection advise that the trace element part of the tank mix is added to the sprayer tank last, with constant agitation and the mixture is sprayed without delay.

Headland Carnival	Phosyn Mantrac DF	Verdi-Crop Flowable Magnesium 200
Headland Jett	Phosyn MN/CU 321	Verdi-Crop Flowable Zinc 69
Headland Liquid Cuman	Phosyn Molytrac 250	Verdi-Crop Hu-Man 15
Headland Stag	Phosyn Phosamco	Verdi-Crop Magnor
Headland Super 80	Phosyn Photrel	Verdi-Crop Manganese Copper DF
Phosyn Coptrel	Phosyn Stopit	Verdi-Crop Manganese DF
Phosyn Croplift	Phosyn Sulphur F 3000	Verdi-Crop Manganese Magnesium DF
Phosyn Ferleaf	Phosyn Zinphos	Verdi-Crop Manganese Zinc DF
Phosyn Foliar Potash	Phosyn Zintrac 700	Verdi-Crop Phos Plus
Phosyn Hydromag 30% MG	Stefes Manic	Verdi-Crop Sulpha N
Phosyn Liq MN 15%	Stefes Regal Manganese Chelate	
Phosyn Magphos K	Verdi-Crop 4 Yield	
Phosyn Mancozin	Verdi-Crop Copter	
Phosyn Mantrac 500		

NOTES

The user should ensure that all products to be tank-mixed with JESTER are approved for use on the crops which are to be sprayed.

Always refer to other manufacturers product information when mixing to ensure correct product use.

Always use AGRAL at the recommended dilution rate when mixing with JESTER.

Do not mix JESTER with Titus.

Do not mix JESTER with Dursban 4.

Contact Syngenta Crop Protection for information regarding crops to be drilled or planted following the use of JESTER.

Always use constant agitation of the sprayer tank during mixing, transportation and application.

DIRECTIONS FOR USE

IMPORTANT: This information is approved as part of the Product Label. All instructions within this section must be carefully read in order to obtain safe and successful use of this product.

RESTRICTIONS

Do not apply to maize grown for seed production.

Do not apply with organo-phosphate insecticides.

Do not use during periods of frosty weather, when frost is imminent, or onto crops under stress from frost, waterlogging, insect attack or drought.

Special care should be taken to avoid damage by drift to broad-leaved plants outside the target area or land intended for cropping.

Do not apply JESTER in sequence or in tank mix with a product containing any other sulfonyl-urea.

Ensure spraying equipment is thoroughly washed out according to specific instructions after use. Do not allow washings-out to drain onto land intended for cropping or growing crops.

WEEDS CONTROLLED

JESTER is a selective herbicide containing prosulfuron, a sulfonyl-urea herbicide, and bromoxynil as the phenol. Prosulfuron has contact and residual activity. Bromoxynil is a contact herbicide.

JESTER is used post-emergence of the crop to control a wide range of annual broad-leaved weeds in maize which are controlled up to the 4 true leaf stage.

WEED SPECIES	JESTER + AGRAL	WEED SPECIES	JESTER + AGRAL	WEED SPECIES	JESTER + AGRAL
Amaranth, Common	S	Fat hen	S	Penny-cress, Field	S
Bindweed, Black	S	Hempnettle	S	Persicaria, Pale	S
Charlock	S	Knotgrass	S	Redshank	S
Chickweed	S	Mayweeds	S	Shepherds Purse	S
Dead-nettle, Henbit	S	Mercury, Annual *	S	Speedwell, Common Field	S
Dead-nettle, Red	S	Nightshade, Black	S		
Dead-nettle, White	S	Orache, Common	S		

* Qualified recommendation, based on limited data

HERBICIDE

CROP SPECIFIC INFORMATION

Crops

Apply to maize crops, but excluding crops grown for seed production.

On crops intended for processing, consult processor before use.

Timing

Application should be made post-emergence up to the crop four leaf unfolded stage.

To avoid scorch, apply JESTER under cool conditions. If the weather during application turns hot, spray in the evening when temperatures have fallen.

Rates of Use

Apply JESTER at 0.5 kg product per hectare. Use only in combination with AGRAL (authorisation number 0421) at 0.1% of application volume.

FOLLOWING CROPS

Succeeding-crop Restrictions

Following normal harvest, sow any of the listed crops:

Winter or spring cereals	Spring-sown peas and beans
Winter beans	Spring-sown oilseed rape*

For crops marked (*), it is good practice for successful crop establishment to mould-board plough to a depth of 20 cm prior to drilling.

Persistence of JESTER is increased under prolonged dry conditions.

Resistance Strategy

Do not rely on sulfonyl-urea herbicides as the sole means of weed control. The use of mixtures or sequences with other herbicides with different modes of action, active against the same target weeds, is desirable. This will minimise the possible development of resistant weeds. Contact your distributor or Syngenta Crop Protection UK Limited for further information.

MIXING AND SPRAYING

Spray Volume

Use a water volume of 200–400 litres per hectare.

Spray Nozzles

A MEDIUM spray quality is preferred for application of JESTER (see BCPC guidelines).

A spray pressure of 2–3 bar is recommended.

Make sure the sprayer is set to give an even application at the correct volume.

Dry Mixing – Sprayers with Induction Hoppers

Fill sprayer to 15% of tank capacity with water and start agitation. Pour JESTER into the induction hopper and open valve in bottom of hopper to suck the granules into the circulating spray mix. Continue adding JESTER until loading is complete. Wash down any granules on the hopper wall and close valve. Add the non-ionic surfactant and continue agitation whilst adding the rest of the water.

Note for Old Sprayers with Indirect Venturi Induction Hoppers

In the unlikely event of problems occurring during dry induction of the granules (blocked venturi), open the rinse ring and add water to the hopper. As soon as product induction continues, carry on adding product until the required amount is reached.

Sprayers Without Induction Hoppers

Fill sprayer with a minimum of 15 cm of water in the bottom and agitate vigorously. Pour JESTER through the sprayer lid. Add the non-ionic surfactant and continue agitation whilst adding the rest of the water.

Agitate the mixture thoroughly before use and continue agitation during spraying.

Take particular care to avoid overlapping spray swathes.

Thoroughly wash all spray and measuring equipment with water according to the directions below immediately after use.

Washing-out Instructions
To avoid subsequent injury to crops, immediately after spraying thoroughly clean the application equipment and protective clothing. Ensure that all traces of product are removed. The following recommendations are to be strictly followed:

1. Drain spray system completely. Rinse tank, spray boom and nozzles with clean water for several minutes and spray out.
2. Half fill the spray tank with clean water and add to it sodium hypochlorite (5.2%) (commercial chlorine bleach) at a dose of 1 litre for every 200 litres of full spray tank capacity and continue filling with clean water until sprayer is completely full.

   Agitate for 15 minutes and spray out cleaning solution through spray nozzles.
3. To remove traces of chlorine bleach, rinse the tank thoroughly with clean water and flush out through hoses and boom.
4. Nozzles and filters should be removed and cleaned separately along with protective equipment.

SAFETY PRECAUTIONS

(a) Operator protection

* Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment.
* WEAR SUITABLE PROTECTIVE GLOVES AND FACE PROTECTION (FACE SHIELD) when handling the concentrate.
* WEAR SUITABLE PROTECTIVE GLOVES when handling the spray boom or adjusting nozzles.

  AVOID ALL CONTACT WITH EYES.
* However, engineering controls may replace personal protective equipment if a COSHH assessment shows that they provide an equal or higher standard of protection.

  IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY with plenty of water and seek medical advice.

  WASH HANDS before meals and after work.

(b) Environmental Protection

Do not contaminate surface waters or ditches with chemical or used container.

* DO NOT APPLY by knapsack sprayer. DO NOT APPLY in less than recommended water volumes.
* DO NOT ALLOW DIRECT SPRAY from ground crop sprayers to fall within 5 m of the top of the bank of a static or flowing waterbody unless a Local Environmental Risk Assessment for Pesticides (LERAP) permits a narrower buffer zone, or within 1 m of the top of a ditch which is dry at the time of application. Direct spray away from water.

HERBICIDE

* This product qualifies for inclusion within the Local Environmental Risk Assessment for Pesticides (LERAP) scheme. A LERAP must be carried out in accordance with PSD published guidance before each spraying operation from a ground crop sprayer. The results of the LERAP must be recorded and the records kept available for inspection for three years.

(c) Storage and disposal

KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.

RINSE OUT CONTAINER THOROUGHLY, preferably using an integrated pressure rinsing device or by manually rinsing three times. Add washings to sprayer at time of filling and dispose of safely.

JESTER

DANGEROUS FOR THE ENVIRONMENT

TOXIC

Water dispersible granule formulation containing 30 g prosulfuron, a sulfonyl-urea, and 600 g bromoxynil phenol per kg of product.

TOXIC BY INHALATION.

HARMFUL IF SWALLOWED.

IRRITATING TO EYES.

POSSIBLE RISK OF HARM TO THE UNBORN CHILD.

TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.

Keep out of reach of children.

When using do not eat, drink or smoke.

Keep away from food, drink and animal feeding stuffs.

Wear suitable protective clothing and gloves.

In case of accident or if you feel unwell seek medical advice immediately (show the label where possible).

This material and its container must be disposed of in a safe way.

Use appropriate containment to avoid environmental contamination.

To avoid risks to man and the environment, comply with the instructions.

HERBICIDE

THE (COSHH) CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH REGULATIONS MAY APPLY TO THE USE OF THIS PRODUCT AT WORK

COMPLIANCE WITH THE FOLLOWING CONDITIONS OF USE AND ALL PRECAUTIONS MARKED * IS A LEGAL REQUIREMENT

FOR USE ONLY AS AN AGRICULTURAL HERBICIDE

For use on maize

Maximum Individual Dose:	0.5 kg product per hectare
Maximum Total Dose:	0.5 kg product per hectare per crop
Latest Time of Application:	Before 5 leaves unfolded stage of crop

READ ALL OTHER SAFETY PRECAUTIONS AND DIRECTIONS BEFORE USE.

HERBICIDE

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

IDENTIFICATION OF THE SUBSTANCE OR PREPARATION

Tradename **JESTER**
Design Code **A8987A**
AGI Code **114741/101745**

COMPANY IDENTIFICATION

Company Syngenta Crop Protection UK Ltd
Whittlesford, CAMBRIDGE, CB2 4QT
Phone (01223) 833621
Fax (01223) 493700
Website www.syngenta-crop.co.uk
Emergency Phone 0044 (0)1484 538444 (24h)

2. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL CHARACTERISTIC

Formulation type Water dispersible granules

Use Herbicide

Active ingredient(s) 60% w/w bromoxynil ASF60
3% w/w prosulfuron (ISO draft) CGA152005

HAZARDOUS COMPONENTS

CAS-NO.	HAZARDOUS INGREDIENTS	CONCENTRATION (%WW)	HAZARD SYMBOLS	RISK PHRASES
1689-84-5	bromoxynil	60	T	25, 63
25417-20-3	naphthalene sulphonic acid, dibutyl-, sodium salt	5.2	Xn	20/22, 36/38
94125-34-5	prosulfuron (ISO draft) tech.	3.0	N, Xn	22, 50/53

3. HAZARDS IDENTIFICATION

Harmful if swallowed. Irritating to eyes. Toxic by inhalation. Possible risk of harm to the unborn child.

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. FIRST-AID MEASURES

FIRST-AID MEASURES

General: Remove the affected person from the danger zone to a well-ventilated room or to fresh air, and protect from undercooling. IN CASE OF SUSPECTED POISONING: Immediately call a physician.

Eye Contact: Rinse eyes with clean water for several minutes and immediately call a physician.

Ingestion: Repeatedly administer medicinal charcoal in a large quantity of water. NOTE: Never give anything by mouth to an unconscious person. Do not induce vomiting.

Skin Contact: Remove contaminated clothing and thoroughly wash the affected parts of the body with soap and water.

Inhalation: Administer artificial respiration or oxygen to maintain breathing.

MEDICAL INSTRUCTIONS

Antidote: No specific antidote is known! Apply symptomatic therapy.

Experiences Specific to Man: No case of human poisoning is on record.

5. FIRE-FIGHTING MEASURES

Combustibility: Yes

Suitable Extinguishing Media: Dry chemical extinguisher, foam, carbon dioxide or waterspray (do not use direct jet of water).

Special Hazards during Fire Fighting: Combustion products are toxic and/or irritant. Measures have to be taken to prevent the contaminated extinguishing agent from seeping into the ground or from spreading uncontrollably.

Protective Equipment for Fire Fighting: Use self contained breathing apparatus. Wear protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Environmental Protection Measures following Accidents: Collect product in containers for safe disposal. Dampen solid material carefully to prevent it being blown away. Collect material in specially marked, tightly closing containers. Spilled product cannot be used further and must be disposed of. If safe disposal is not possible, contact the manufacturer, the dealer or the local representative. Do not contaminate waters and sewers.

7. HANDLING AND STORAGE

General Handling information: Avoid contact with skin, eyes and clothing. Avoid inhalation of dust. Do not eat, drink or smoke while working. In addition to the measures usually taken in chemical works like dustproof filling and measuring equipment (including dust extraction), further personal protection measures may have to be implemented to avoid possible contact with the product.

Special Instructions for Storage: Store the product in closed original containers. Protect from light and humidity.

Storage Compatibility with other Products: Store separately from feed, food and stimulants.

Maximum Storage Temperature: 35 °C
Minimum Storage Temperature: -10 °C

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT

When using this product refer to the label for details. In all other cases, use the following Personal Protective Equipment:

In General: Change working clothes daily.

Breathing Protection: Heavy dust mask or face-shield.

Eye Protection: Goggles.

Hand Protection: Chemical-resistant gloves.

Body Protection: Heavy duty cotton or synthetic fabric working clothes (e.g. overalls).

Precautionary measures after work: Wash thoroughly (shower, bathe, wash hair). Change clothing. Thoroughly clean protective gear. Thoroughly clean contaminated equipment with soap or soda solution.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	fine granules	
Colour:	tan to brownish	
Physical State:	solid	
Flash-Point:	not applicable	
Flammability:	not highly flammable (0.9 %)	EEC A 10
Oxidizing Properties:	not oxidizing	EEC A 17
Explosive Properties		EEC A 14
Assessment:	not explosive	
Friction Sensitivity:	not friction sensitive	
Shock Sensitivity:	not shock sensitive	
Shock Sensitivity Test:	no detonation	
Spontaneous Decomposition:	may be excluded due to the nature of the thermal decomposition	
Bulk Density:	0.60 g/ml (50 taps)	CIPAC MT 169
pH Value:	5 (1 %)	CIPAC MT 75
Miscibility with water:	miscible	

10. STABILITY AND REACTIVITY

Chemical Stability Assessment: Stable under standard conditions.

Thermal Sensitivity: Thermally not sensitive.

11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity:	LD_{50}: 254 mg/kg (rat)	OECD 401
Acute Dermal Toxicity:	LD_{50}: > 2000 mg/kg (rat)	OECD 402
Acute Inhalation Toxicity	LC_{50}: 607 mg/m^3 (rat; 4 h)	OECD 403
Acute Skin Irritation:	non irritant (rabbit)	OECD 404
Acute Eye Irritation:	irritant (rabbit)	OECD 405
Skin Sensitisation:	not sensitising (guinea pig)	OECD 406

12. ECOLOGICAL INFORMATION

Acute Toxicity to Fish	LC_{50}: 24.0 mg/l (*Salmo trutta* (trout); 96 h)	OECD 203
Growth Inhibition, Algae	EbC_{50}: 6.5 mg/l (*Scenedesmus subspicatus* (green algae); 72 h)	OECD 201
Growth Inhibition, Algae	ErC_{50}: 0.077 mg/l (*Lemna gibba* (duckweed); 168 h; Static conditions)	OECD (DRAFT) PROPOSAL 07/96

Toxicity to Aquatic Invertebrates	LC_{50}: 24.7 mg/l (*Daphnia magna* (water flea); 48 h)
Toxicity to Bees	LC_{50}: > 104.5 µg/bee (*Apis mellifera* (honey bee); 48 h)
	LD_{50}: 61.7 µg/bee (*Apis mellifera* (honey bee); 48 h)
Toxicity to Soil Dwelling Organisms	LC_{50}: 64 mg/kg (earthworm; 14 day(s))
Toxicity to Birds	LD_{50}: 105 mg/kg (mallard duck; 7 day(s))

13. DISPOSAL CONSIDERATIONS

Product Disposal: Pay attention to protective clothing and measures. Cover up product with absorptive material such as sand, soil, diatomaceous earth, etc. Collect material in specially marked, tightly closing containers. Clean dirty areas with water and detergent. Put washing water in containers too, to avoid any contamination of surface and ground water, water supplies and drains. Hose down the area for a prolonged period. Heavily contaminated soil layers have to be dug out down to clean soil. Spilled product cannot be used further and must be disposed of. If safe disposal is not possible, contact the manufacturer, the dealer or the local representative and dispose of in an incinerator approved for chemicals.

Container Disposal: Dispose of empty containers in an incinerator approved for chemicals. Damaged containers: Place original containers in specially marked larger ones. Check possibilities of recycling large empty containers, drums and barrels.

14. TRANSPORT INFORMATION

Special Information: Use unbreakable containers, make sure they cannot fall, and label in accordance with regulations.

RAIL / ROAD (RID / ADR)	Class 9	UN number 3077	Packaging Group III	Kemmler Index 90	
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.,				
Additional Information	(BROMOXYNIL)				
SEA (IMDG-CODE)	Class 9	UN number 3077	Packaging Group III	EMS NONE	MFAG NONE
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.,				
Additional Information	(BROMOXYNIL 60%, MARINE POLLUTANT)				
Marine pollutant	yes				
AIR (ICAO / IATA)	Class 9	UN number 3077	Packaging Group III		
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.,				
Additional Information	(BROMOXYNIL)				

15. REGULATORY INFORMATION

Hazard symbols/	**T**	**TOXIC**
Classifications:	N	DANGEROUS FOR THE ENVIRONMENT
Risk phrases (R)	22	Harmful if swallowed.
	23	Toxic by inhalation.
	36	Irritating to eyes.
	51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
	63	Possible risk of harm to the unborn child.
Safety phrases (S)	2	Keep out of the reach of children.
	13	Keep away from food, drink and animal feeding stuffs.
	20/21	When using do not eat, drink or smoke.
	26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	35	This material and its container must be disposed of in a safe way.
	36/37	Wear suitable protective clothing and gloves.
	45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
	57	Use appropriate containment to avoid environmental contamination.
Special label		To avoid risks to man and the environment, comply with the instructions for use.

16. OTHER INFORMATION

Based upon SDS release date 24-Jun-2001 with DPD update. Revision to sections 3 & 15.

Always read the label. Use pesticides safely.

Product registration number: MAFF 08681.

The information contained herein is based on the present state of our knowledge as is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.