


Safety Data Sheet

RIVAL SC - Reg. No: L 7363 (Act No 36 of 1947)

Date of issue: 01/07/2003

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1) IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER.	
Product name:	Rival SC
Other means of identification:	Acetochlor 150g/L, Atrazine 225 g/L, Terbutylazine 225 g/L SC
Recommended use:	Herbicide
Restrictions on use:	Agriculture
UN No:	2998
Distributed by:	MERIDIAN AGRITECH P O BOX 436 MODDERFONTEIN TEL 011 8228509 FAX 011 8223494 MOBILE: 0834006056 www.agritech.co.za
Emergency Number:	POISON CENTRE (UNITAS HOSPITAL) 012 664 1100 TYGERBERG: 021 931 6129 RED CROSS: 021 689 5227 RAPID SPILL RESPONSE 0800 775 3305 GRIFFON POISON CENTRE: 082 446 8946
Chemical Name:	Acetochlor: 2-chloro-N-ethoxymethyl-6'-ethylacetotoluidide Atrazine: 6-chloro-N-ethyl-N'-(1-methylethyl)-1,3,5-triazine-2,4-diamine Terbutylazine: 6-chloro-N-(1,1-dimethylethyl)N'-ethyl-3,5-triazine-2,4-diamine
2) CLASSIFICATION OF THE SUBSTANCE / MIXTURE:	
Classification of the product is based on the coformulants listed in section 3	N; Xn; Xi; R20/22; R36/37/38; R43: R48/22; R50/53 Full text of R-phrases; see section 15
Label Elements:	<p>Labelling in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended</p> <p>Hazardous components which must be listed on the label: ACETOCHLOR, ATRAZINE, TERBUTHYLAZINE</p> <div style="text-align: center;">    </div> <p>Signal word: WARNING</p> <p>Hazard Statement(s): H301: Toxic if swallowed. H302: Harmful if swallowed. H315: Causes skin irritation.</p>

		H317: May cause an allergic skin reaction. H332: Harmful if inhaled. H335: May cause respiratory irritation. H373: May cause damage to organs through prolonged or repeated exposure. H400: Very toxic to aquatic life. H410: Very toxic to aquatic life with long-lasting effects. H411: Toxic to aquatic life with long-lasting effects. Precautionary Statement(s): P501: Dispose of content / container to hazardous or special waste collection point.			
Health effects: eyes:		May cause irritation.			
Health effects: skin:		May cause irritation. Contact skin sensitiser			
Health effects: ingestion		Harmful if swallowed			
Health effects: inhalation		Unlikely to cause harmful effects under normal conditions and use.			
3) Composition Details:					
Chemical name	Composition (g/L)	CAS No	EC No.	CLP Classification	DSD Classification
Acetochlor	150	34256-82-1	251-899-3	Acute Tox. 4: H332 Skin Irrit. 2: H315 Skin Sens. 1: H317 STOT RE 3: H335 Aquatic acute 1: H400 Aquatic Chronic 1: H410	Xn; R20 Xi; R37/38 R43 N; R50-53
Atrazine	225	1912-24-9	217-617-8	Skin Sens. 1, H317 STOT RE 2, H373 Aquatic Acute 1: H400 Aquatic Chronic 1: H410	Xn; R48/22 R43 N; R50-53
Terbuthylazine	225	5915-41-3		Acute Tox. 4 H302/H332 Acute Tox. 3, H301 Aquatic Chronic 1, H410 Aquatic Chronic 2, H411	
Other ingredients					
4) FIRST AID MEASURES:					
Inhalation:			Remove patient to fresh air. Loosen clothing around neck. Lie down and keep warm and rested. If breathing is shallow or has stopped ensure airway is clear and apply resuscitation. Seek medical assistance if necessary.		
Skin contact:			Immediately remove contaminated clothing and flush body and clothes with large amounts of water. Wash contaminated clothing before re-use. Seek medical assistance if irritation persists. Persons providing first aid must wear gloves to avoid self-contamination.		
Eye contact:			Flush eyes with plenty of water for at least 15 minutes holding eyelids open. Remove contact lenses. Seek medical assistance immediately.		
Ingestion			Never give anything by mouth to an unconscious person.		
Advice to physician:			Do not induce vomiting. For advice, contact the National Poisons Centre. Symptoms include Diarrhoea, shortness of breath, vomiting and weakness. Seek medical assistance immediately and show this data sheet. Do not induce vomiting. To limit absorption of substance, give 30 – 60 grams activated charcoal in 200 ml water. The patient should sit up and be given plenty of water. No specific antidote is known. Symptomatic treatment and supportive therapy as indicated.		

5) FIRE-FIGHTING MEASURES:

Flash point:

Does not flash.

Extinguishing Media:

For small fires, use foam, carbon dioxide, dry powder or halon extinguishant. For large fires, use foam or water-fog; avoid use of water jet. Water can be used for cooling of unaffected stock, but avoid the accumulation of polluted run-off from the site. Contain fire control water for later disposal.

Unsuitable extinguishing media:

Water jet, due to contamination risk.

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. Generating poisonous and corrosive fumes. Keep upwind.

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. (on small fires) If area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may increase the area contaminated. Do not scatter the material. Bund area with sand or earth to avoid pollution of waterways. Water can be used to cool containers. Dispose of extinguishing agent and spillage in a safe way at a later stage.

Special hazards arising from the substance or mixture:

Generating poisonous and corrosive fumes. Keep upwind. Fire may produce irritating or poisonous vapours, mists or other products of combustion.

Protective clothing:

Full protective clothing and self-contained breathing apparatus.

6) ACCIDENTAL RELEASE MEASURES:

Personal precautions:

Avoid contact with skin and eyes. For personal protection see Section 8.

Environmental precautions:

Do not contaminate waterways, drains and groundwater. If contamination of waterways, drains, rivers or lakes is unavoidable, warn the local authorities (Police and Department of Water/Environmental affairs) immediately.

Occupational spill:

Do not eat, drink or smoke during the clean-up process. Clear area of unprotected personnel. Wear protective gear: goggles. Half face-piece respirator with combined dust and vapour cartridge, full length clothing and PVC gloves. Keep people and animals away. Reposition leaking containers to minimize further leakage.

Soak up with absorptive material such as sand, soil, diatomaceous earth, etc. Prevent product from spreading and collect into specially marked, tightly closing containers. Treat contaminated areas with water containing soda or detergent. Collect washings to avoid any contamination of surface and ground water, water supplies and drains. Heavily contaminated soil layers should be removed and disposed of in an approved way.

Deal with spillages immediately. If contamination of drains, streams, watercourses etc. is unavoidable, then warn the local authorities.

Spilled product cannot be re-used and must be disposed of by incineration or disposal in a chemical waste disposal facility. If

	containers cannot be recycled, they should be disposed of together with the waste chemical.
7) HANDLING & STORAGE:	
Handling:	Avoid skin and eye contact as this product will irritate. Harmful if swallowed. Wash hands thoroughly with soap and water before breaks and immediately after handling the product. Do not eat, drink, smoke or apply cosmetics when there is a possibility of exposure to the product. Wash goggles or face shield and contaminated clothing thoroughly after each day's use. When opening, the container wear the following protection: Elbow length PVC gloves. Wash gloves after each day's use. Wash hands after use.
Storage:	Store in the original containers under lock and key in a cool place. Store away from food, feed, fertilizer and other agricultural products. Keep out of reach of children, uninformed persons and animals.
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.	
<u>PERSONAL PROTECTIVE EQUIPMENT:</u>	
Clothing:	Consult supplier to confirm that the equipment is suitable. Chemically resistant overalls and boots per operator safety.
Respiratory protection:	Not normally required. If inhalation is likely, an approved respirator should be worn
Gloves:	Elbow length PVC gloves.
Eye protection:	Safety 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 & CHEMICAL PROPERTIES:	
Form:	Liquid
Colour:	Creamy
Odour:	Characteristic
Solubility:	Suspends in water
pH:	NA
Melting point / Freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flash point:	Not flammable
Evaporation rate:	No data available
Flammability (solid, gas)	Not flammable
Upper / lower flammability or explosive limits:	NA
Vapour pressure:	No data available
Vapour density:	No data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature:	No data available
Viscosity	No data available

10) STABILITY & REACTIVITY:	
Chemical stability: Hazardous decomposition product(s): Conditions to avoid: Incompatible materials:	When stored appropriately this product should show no significant degradation for 2 years from the date of manufacture. Generating poisonous and corrosive fumes. Keep upwind. Protect from direct sunlight. Strong bases, strong acids and strong oxidizing agents.
11) TOXICOLOGICAL INFORMATION:	
Acute Oral : LD ₅₀ 3762 mg/kg Dermal : LD ₅₀ 7092 mg/kg. Inhalation : LC ₅₀ 1.91 mg/l/hr. Skin irritation: Slight irritant, rabbit. Eye irritation : Slight irritant, rabbit. Sensitization : Contact skin sensitizer. Other :	
12) ECOLOGICAL INFORMATION: Information below based on active ingredient	
<p>Bees : <u>Acetochlor</u>: LD₅₀ (48 h) (contact) >200 µg/bee; (oral) >100 µg/bee. <u>Atrazine</u>: LD₅₀ (oral) >97 µg/bee; (contact) >100 µg/bee. <u>Terbuthylazine</u>: LD₅₀ (oral and contact) >100 µg/bee.</p> <p>Birds : <u>Acetochlor</u>: Acute oral LD₅₀ for bobwhite quail 928, mallard ducks >2000 mg/kg. Dietary LC₅₀ (5 d) for bobwhite quail and mallard ducks >5620 mg/kg. <u>Atrazine</u>: Acute oral LD₅₀ varies from 940 mg/kg for bobwhite quail to >2000 mg/kg for mallard ducks and 4237 mg/kg for adult Japanese quail. Dietary LC₅₀ (8 d) for Japanese quail (chicks) >5000, (adults) >1000 mg/kg. <u>Terbuthylazine</u>: Acute oral LD₅₀ for ducks and quail >1000 mg/kg. Dietary LC₅₀ (8 d) for ducks and quail >5620 ppm.</p> <p>Fish : <u>Acetochlor</u>: Acute LC₅₀ (96 h) for rainbow trout 0.36, bluegill sunfish 1.3, sheepshead minnow 2.4 mg/l. <u>Atrazine</u>: LC₅₀ (96 h) for rainbow trout 4.5–11.0, bluegill sunfish 16, carp 76, catfish 7.6, guppies 4.3 mg/l <u>Terbuthylazine</u>: LC₅₀ (96 h) for rainbow trout 3.8–4.6, bluegill sunfish 7.5, carp and catfish 7.0 mg/l.</p> <p>Daphnia : <u>Acetochlor</u>: LC₅₀ (48 h) 8.6 mg/l. <u>Atrazine</u>: LC₅₀ (48 h) 6.9 mg/l. <u>Terbuthylazine</u>: LC₅₀ (48 h) 21–50.9 mg/l.</p> <p>Worms : <u>Acetochlor</u>: LC₅₀ (14 d) for earthworms (<i>Eisenia foetida</i>) 211 mg/kg. <u>Atrazine</u>: LC₅₀ (14 d) for <i>Eisenia foetida</i> 78 mg/kg soil. <u>Terbuthylazine</u>: LC₅₀ (7 d) for earthworms >200 mg/kg soil.</p> <p>Acetochlor: Adsorbed by soil, with little leaching. Microbial degradation accounts for most loss from soil; DT₅₀ 8–18 d. The major metabolites are water-soluble acids resulting from oxidative displacement of the chlorine (oxanilic acid), or from glutathione conjugation followed by catabolism to sulfur-containing acids, such as sulfonic and sulfinylacetic acids (<i>Metab. Pathways</i>, Vol. 1, pp. 184–185).</p> <p>Atrazine: Major metabolites under all conditions are desethylatrazine and hydroxyatrazine. Field DT₅₀ 16–77 d (median 41 d), the longer values being from cold or dry conditions. In natural waters, DT₅₀ 10–105 d (mean 55 d). DT₅₀ under groundwater conditions 105–>200 d, depending on test system (M. J. Wood <i>et al.</i> (1991) In: A Walker (ed.), <i>Pesticides in soils and water: current perspectives</i>, BCPC Monograph no. 47, pp. 175–182). K_d 0.2–18 ml/g, K_{oc} 39–173 ml/g; desalkylated metabolites had values similar to those of atrazine, while hydroxyatrazine was much more strongly adsorbed.</p> <p>Terbuthylazine: Adsorption on soils is strong: K_{oc} 162–278, K_d 2.2–25 are typical values for light agricultural soils. Terbuthylazine is only slightly mobile. Microbial degradation proceeds mainly by de-ethylation and hydroxylation, with eventual ring cleavage. DT₅₀ 30–60 d in biologically active soil.</p>	

13) DISPOSAL CONSIDERATIONS:

Waste Disposal: In accordance with local and national regulations. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities. Do not contaminate water, food or feed by disposal. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: Refer to the product label for instructions. Triple rinse empty containers before disposal in the following manner: Invert the container over the spray or mixing tank and allow to drain for at least 30 seconds after the flow has slowed to a drip. Thereafter, rinse the container three times with a volume of water equal to a third of that of the container volume. Add rinsing to the contents of the spray tank before destroying the container in the prescribed manner. Empty containers should not be burnt; puncture and flatten containers and dispose at a licensed landfill site according to local regulations. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Prevent contamination of water sources, food or feed by disposal. **DO NO REUSE THE CONTAINER FOR ANY OTHER PURPOSE.** If recycling, replace cap and take containers to the designated recycling point. If containers cannot be recycled, they should be disposed of together with the waste chemical according to local regulations.

14) TRANSPORTATION INFORMATION:

UN NUMBER: 2998

Road Transport ADR/ RID:

Class: 9 Miscellaneous Dangerous Goods

Packaging group: III

Shipping name: Triazine pesticides, liquid, toxic (Acetochlor, Atrazine, terbuthylazine)

Maritime Transport IMDG / IMO:

Class: 9 Miscellaneous Dangerous Goods

Packaging group: III

Shipping name: Triazine pesticides, liquid, toxic (Acetochlor, Atrazine, terbuthylazine)

15) REGULATORY INFORMATION:

Labelling according to EC directives:

Hazardous components which must be listed on the label: ACETOCHLOR, ATRAZINE, TERBUTHYLAZINE

Symbol(s): N – Dangerous for the environment
Xn – Harmful
Xi - Irritant

R-phrases(s):

R20/22 - Harmful by inhalation and if swallowed.

R36/37/38 – Irritating to eyes, respiratory system and skin.

R43 – May cause sensitisation by skin contact.

R48/22 – Harmful: danger of serious damage to health by prolonged exposure of swallowed.

R50/53 – Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrases(s):

S2 - Keep out of reach of children.

S7 – Keep container tightly closed.

S13 – Keep away from food, drink and animal feeding stuffs.

S20/21 – When using, do not eat drink or smoke.

S23 - Do not breathe fumes/vapour/spray.

S24/25 - Avoid contact with skin and eyes.

S35 - This material and its container must be disposed of in a safe way.

S36/37 – Wear suitable protective clothing and gloves.

S46 – If swallowed, seek medical advice immediately and show this container.

S57 - Use appropriate containment to avoid environmental contamination.

S60 – This material and its container must be disposed of as hazardous waste.

S61 – Avoid release to the environment. Refer to special instructions/Safety data sheet.

16. Other Information

All information and instructions provided in this Safety Data Sheet (SDS) are based on the current state of scientific and technical knowledge at the date indicated on the present SDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear.

It is the responsibility of persons in receipt of this SDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with this product. If the recipient

subsequently produces formulation(s) containing this product, it is the recipient's sole responsibility to ensure the transfer of all relevant information from this SDS to their own SDS.

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