TO CAUSE A HAZARD IN THE USE, STORAGE OR DISPOSAL OF THIS SUBSTANCE IS AN OFFENCE.

PRECAUTIONS:

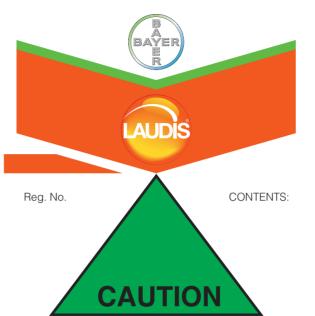
- 1. Handle with care and avoid any skin contact. Poisonous by swallowing or inhalation.
- 2. Do not eat, drink or smoke while mixing, applying, handling or before washing hands and face.
- 3. Slightly irritating to skin and eyes.
- 4. WEAR PROTECTIVE CLOTHING, i.e. overalls, rubber gloves, and rubber boots and a facemask while mixing, spraying and cleaning up.
- 5. Do not inhale fumes or spray mist.
- 6. Avoid spray drift onto other crops, grazing, rivers and dams.
- Remove protective clothing on completion of spraying, wash skin thoroughly with soap and water and dress in clean clothing and wash contaminated clothing daily.
- Clean applicator after use, dispose of wash water where it will not contaminate crops, grazing, rivers and dams.
- 9. KEEP APART FROM FOOD AND FEEDSTUFFS
- 10. KEEP OUT OF REACH OF CHILDREN, UNINFORMED PERSONS AND ANIMALS.
- 11. STORE IN A COOL, DRY PLACE IN ORIGINAL CONTAINER AND KEEP UNDER LOCK AND KEY.
- 12. TOXIC TO FISH AND WILD LIFE. DO NOT CONTAMINATE DRINKING POOLS, DAMS, RIVERS AND WATERWAYS
- 13. DO NOT GRAZE OR USE PLANTS AS FODDER FROM TREATED MAIZE WITHIN 70 DAYS OF LAST APPLICATION.
- 14. SPILLAGE Use protective clothing when dealing with spillages. Prevent entry into drains, water or soil. Soak up spilled product with absorbent material such as dry soil, sawdust or sand and place into a labeled closable container for safe disposal. Use damp cloth to clean the floor and contaminated parts. Place used cleaning materials into closable container for safe disposal.
- 15. CONTAINER DISPOSAL Triple rinse container emptying washings into spray tank and spray onto crop. Perforate and flatten rinsed container to make it unsuitable for further use or burn it and bury crushed container or ashes in a recommended disposal pit in a secure location away from water sources or arable land. Do not use empty container for any other purpose.

USE RESTRICTIONS:

- 1. To avoid damage to follow-up crops, refer to the waiting periods on the Atrazine 500 SC label.
- 2. Avoid excessive overlapping of spray swaths and double spraying.
- Over-application, application at the incorrect growth stage, or any other use not in accordance with the directions on this label may cause crop damage.

SYMPTOMS OF POISONING:

- 1. Harmful if swallowed.
- 2. May cause sensitization by skin contact.
- 3. May cause mild eye irritation.



HARMFUL IF SWALLOWED

COMPOSITION: m	ass/volum
Tembotrione	420 g/ℓ
soxadifen-ethyl (Safener)	. 210 g/ℓ
nert ingredients	. 370 g/ℓ
Chemical Group : Tembotrione – Triketo	one

LAUDIS IS A SUSPENSION CONCENTRATE POST-EMERGENCE HERBICIDE FOR THE CONTROL OF CERTAIN BROADLEAF AND GRASS WEEDS IN MAIZE.



FIRST AID:

General advice: Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely.

Inhalation: Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately.

Skin contact: In case of contact with skin wash off immediately with polyethylene glycol 400, then with plenty of water. If symptoms persist, call a physician.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical attention if irritation develops and persists.

Ingestion: Do NOT induce vomiting. Rinse mouth. Call a physician or poison control center immediately.

NOTE TO PHYSICIAN:

Treatment:

Treat symptomatically.

In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. **Antidote:** No specific antidote is known.

RESISTANCE WARNING:

To delay herbicide resistance:

- Avoid exclusive, repeated use of herbicides from the same herbicide Group Code.
- Alternate with products from different herbicide Group Codes.

Integrate other control methods (chemical, cultural, etc.) in weed control programmes.

DIRECTIONS FOR USE: USE ONLY AS DIRECTED.

WARRANTY: Although this remedy has been extensively tested under a large variety of conditions, the registration holder does not warrant that it will be efficacious under all conditions because the action and effect thereof may be affected by factors such as abnormal climatic and storage conditions; quality of cliution water; compatibility with other substances not indicated on the label and the occurrence of resistance of the pathogen against the remedy concerned as well as by the method, time and accuracy of application. the registration holder furthermore does not accept responsibility for damage to crops, vegetation, the environment or harm to man or animal or for lack of performance of the remedy concerned due to failure of the user to follow the label instructions or to the occurrence of conditions which could not have been foreseen in terms of the registration. Consult the supplier in the event of any uncertainty.

Packed For: Bayer Zimbabwe (Pvt) Ltd P.O. Box AY 78, Amby, Harare, Zimbabwe. Tel. 487211/487245/7 Fax. 487242 IN CASE OF POISONING PLEASE PHONE: +27 (21) 931-6129 Manufactured by Bayer CropScience AG Laudis* is a registered trademark of Bayer CropScience AG, Germany

Date of Manufacture : See on pack Batch No.: See on pack





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SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier		
Trade name	LAUDIS® HERBICIDE	
Product code (UVP)	79112912	
SDS Number	102000017388	
EPA Registration No.	264-860	
Relevant identified uses of the substance or mixture and uses advised against		
Use	Herbicide	
Restrictions on use	See product label for restrictions.	
Information on manufacturer		
	Bayer CropScience 2 T.W. Alexander Drive Research Triangle PK, NC 27709 United States	
Emergency Telephone Number (24hr/ 7 days)	1-800-334-7577	
Product Information Telephone Number	1-866-99BAYER (1-866-992-2937)	
SDS Information or Request	SDSINFO.BCS-NA@bayer.com	

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200 Eye irritation : Category 2B Acute toxicity (Oral): Category 4



Signal word: Warning

Hazard statements

Causes eye irritation. Harmful if swallowed.

Precautionary statements

Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.



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If eye irritation persists: Get medical advice/attention. IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell. Rinse mouth. Dispose of contents/container in accordance with local regulation.

Other hazards

No other hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name Tembotrione Isoxadifen-ethyl 1,2-Propanediol

CAS-No. 335104-84-2 163520-33-0 57-55-6 Average % by Weight 34.50 17.20 5.00

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.	
Inhalation	Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.	
Skin contact	Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.	
Eye contact	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.	
Ingestion	Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.	
Most important symptoms and effects, both acute and delayed		
Symptoms	To date no symptoms are known.	
Indication of any immediate medical attention and special treatment needed		
Treatment	Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote.	

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SECTION 5: FIREFIGHTING MEASURES

Extinguishing media	
Suitable	Water spray, Foam, Carbon dioxide (CO2), Dry powder
Unsuitable	None known.
Special hazards arising from the substance or mixture	Dangerous gases are evolved in the event of a fire.
Advice for firefighters	
Special protective equipment for fire-fighters	Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.
Further information	Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.
Flash point Autoignition temperature	> 93.4 °C no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Explosivity	not applicable

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures		
Precautions	Isolate hazard area. Keep unauthorized people away. Avoid contact with spilled product or contaminated surfaces.	
Methods and materials for containment and cleaning up		
Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.	
Additional advice	Use personal protective equipment. Do not allow product to contact non-target plants. Do not allow to enter soil, waterways or waste water canal.	
Reference to other sections	Information regarding safe handling, see section 7. Information regarding personal protective equipment, see section 8. Information regarding waste disposal, see section 13.	

SECTION 7: HANDLING AND STORAGE

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Precautions for safe handling

Advice on safe handling	Handle and open container in a manner as to prevent spillage. Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.	
Hygiene measures	Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing. Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Wash thoroughly and put on clean clothing.	
Conditions for safe storage, including any incompatibilities		
Requirements for storage areas and containers	Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.	

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Tembotrione	335104-84-2	0.15 mg/m3 (TWA)		OES BCS*
Isoxadifen-ethyl	163520-33-0	1 mg/m3 (TWA)		OES BCS*
1,2-Propanediol (Vapor.)	57-55-6	1000ug/m3 (ST ESL)	02 2013	TX ESL
1,2-Propanediol (Vapor.)	57-55-6	50ppb (AN ESL)	02 2013	TX ESL
1,2-Propanediol (Vapor.)	57-55-6	500ppb (ST ESL)	02 2013	TX ESL
1,2-Propanediol (Vapor.)	57-55-6	100ug/m3 (AN ESL)	02 2013	TX ESL
1,2-Propanediol (Aerosol.)	57-55-6	10 mg/m3 (TWA)	2010	WEEL

*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

Exposure controls

Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory protection





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	based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.
Hand protection	Chemical resistant nitrile rubber gloves
Eye protection	Safety glasses with side-shields
Skin and body protection	Wear long-sleeved shirt and long pants and shoes plus socks.
General protective measures	Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	white to light yellow
Physical State	suspension
Odor	characteristic
Odour Threshold	no data available
рН	ca. 3.0 at 10 % (23 °C)
Vapor Pressure	no data available
Vapor Density (Air = 1)	no data available
Density	1.22 g/cm ³ at 20 °C
Evapouration rate	no data available
Boiling Point Melting / Freezing Point	no data available no data available
Water solubility	no data available
Minimum Ignition Energy	not applicable
Decomposition temperature	not applicable
Partition coefficient: n- octanol/water	no data available
Viscosity	800 - 1,200 mPa.s at 20 °C
Flash point Autoignition temperature	> 93.4 °C no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Explosivity	not applicable
Other information	Further safety related physical-chemical data are not known.



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SECTION 10: STABILITY AND REACTIVITY

Reactivity	
Thermal decomposition	not applicable
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	No hazardous reactions when stored and handled according to prescribed instructions.
Conditions to avoid	Extremes of temperature and direct sunlight.
Incompatible materials	no data available
Hazardous decomposition products	No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes	Ingestion, Eye contact, Skin contact
Immediate Effects Eye	Moderate eye irritation.
Ingestion	Harmful if swallowed.
Information on toxicological	effects
Acute oral toxicity	LD50 (female rat) 1,750 mg/kg
Acute inhalation toxicity	LC50 (rat) > 2.1 mg/l Exposure time: 4 h Determined in the form of liquid aerosol. Highest attainable concentration. No deaths
	LC50 (rat) > 8.4 mg/l Exposure time: 1 h Determined in the form of liquid aerosol. Extrapolated from the 4 hr LC50.
Acute dermal toxicity	LD50 (rat) > 5,000 mg/kg
Skin irritation	Slight irritation (rabbit)
Eye irritation	Mild eye irritation. (rabbit)
Sensitisation	Non-sensitizing. (guinea pig)

Assessment repeated dose toxicity

Tembotrione did not cause specific target organ toxicity in experimental animal studies. Isoxadifen-ethyl did not cause specific target organ toxicity in experimental animal studies.

Assessment Mutagenicity



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Tembotrione was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

Isoxadifen-ethyl was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment Carcinogenicity

Tembotrione caused at high dose levels an increased incidence of tumours in rats in the following organ(s): cornea. The mechanism that triggers tumours in rodents and the type of tumours observed are not relevant to humans.

Isoxadifen-ethyl was not carcinogenic in lifetime feeding studies in rats and mice.

ACGIH

None.

NTP

None.

IARC

None.

OSHA

None.

Assessment toxicity to reproduction

Tembotrione did not cause reproductive toxicity in a two-generation study in rats. Isoxadifen-ethyl did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity

Tembotrione caused developmental toxicity only at dose levels toxic to the dams. Tembotrione caused a delayed ossification of foetuses, an increased incidence of variations. The developmental effects seen with Tembotrione are related to maternal toxicity.

Isoxadifen-ethyl did not cause developmental toxicity in rats and rabbits.

Further information

Only acute toxicity studies have been performed on the formulated product. The non-acute information pertains to the active ingredient(s).

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)) 5.41 mg/l Exposure time: 96 h
Toxicity to aquatic invertebrates	EC50 (Water flea (Daphnia magna)) 33.5 mg/l Exposure time: 48 h
Toxicity to aquatic plants	EC50 (Pseudokirchneriella subcapitata) 15.4 mg/l Growth rate; Exposure time: 72 h
Biodegradability	Not applicable for this mixture.
Biodegradability	Isoxadifen-ethyl: ; not rapidly biodegradable

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Кос	Isoxadifen-ethyl: Koc: 2512		
Bioaccumulation	Not applicable for this mixture.		
Bioaccumulation	Isoxadifen-ethyl: ; Does not bioaccumulate.		
Mobility in soil	Not applicable for this mixture.		
Mobility in soil	Isoxadifen-ethyl: Slightly mobile in soils		
Additional ecological information	No other effects to be mentioned.		
Environmental precautions	Do not allow to get into surface water, drains and ground water.		

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods		
Product	It is best to use all of the product in accordance with label directions. If is necessary to dispose of unused product, please follow container labe instructions and applicable local guidelines. Never place unused product down any indoor or outdoor drain.	
Contaminated packaging	Do not re-use empty containers. Triple rinse containers. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State/Provincial and local authorities, by burning. If burned, stay out of smoke. Follow advice on product label and/or leaflet.	
RCRA Information	Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.	

SECTION 14: TRANSPORT INFORMATION

49CFR	Not dangerous goods / not hazardous material		
IMDG UN number Class Packaging group Marine pollutant Proper shipping name	3082 9 III YES ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEMBOTRIONE, ISOXADIFEN-ETHYL SOLUTION)		
IATA UN number Class Packaging group Environm. Hazardous Mark	3082 9 III YES		



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Proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEMBOTRIONE, ISOXADIFEN-ETHYL SOLUTION)

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

Freight Classification:

COMPOUNDS, TREE OR WEED KILLING, N.O.I. other than poison, HAVING A DENSITY OF 20 LBS OR GREATER PER CUBIC FOOT

SECTION 15: REGULATORY INFORMATION

EPA Registration No. 264-860 **US Federal Regulations TSCA** list Isoxadifen-ethvl 163520-33-0 1,2-Propanediol 57-55-6 US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D) Isoxadifen-ethyl 163520-33-0 SARA Title III - Section 302 - Notification and Information None. SARA Title III - Section 313 - Toxic Chemical Release Reporting None. **US States Regulatory Reporting** CA Prop65 This product does not contain any substances known to the State of California to cause cancer. This product does not contain any substances known to the State of California to cause reproductive harm. **US State Right-To-Know Ingredients** 1,2-Propanediol 57-55-6 MN **Canadian Regulations Canadian Domestic Substance List** None. Environmental CERCLA None. **Clean Water Section 307 Priority Pollutants** None. Safe Drinking Water Act Maximum Contaminant Levels None.

EPA/FIFRA Information:



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This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information required on the pesticide label:

Signal word: Caution!

Hazard statements: Harmful if swallowed. Moderate eye irritation. Avoid contact with skin, eyes and clothing.

SECTION 16: OTHER INFORMATION

•	Il Fire Protection Ass Flammability - 1	•	Others - none		
HMIS (Hazardous I	Materials Identificatio		Third Edition Ratings Guide)		
0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard					

Reason for Revision: Revised according to the current OSHA Hazard Communication Standard (29CFR1910.1200)

Revision Date: 06/16/2014

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions. The product names are registered trademarks of Bayer.