

Confidential: Proprietary information of Ivorychem Pte Ltd. Not to be disclosed to third parties without prior consent of Ivorychem Pte Ltd

READ THE ENTIRE LABEL BEFORE USING THIS PRODUCT.

USE ONLY IN ACCORDANCE WITH INSTRUCTIONS.

KEEP OUT OF REACH OF CHILDREN

## LASER 12 SC



### INGREDIENTS

Epoxiconazole .....12%  
Other ingredients .....88%

LASER 12 SC is an effective preventive and curative fungicide, and contains as its active ingredient, Epoxiconazole.

LASER 12 SC is a broad-spectrum fungicide, with preventive and curative action, for control of diseases caused by Ascomycetes, Basidiomycetes, and Deuteromycetes in cereals, sugar beet, peanuts, oilseed rape, and ornamentals, generally at 125 g/ha. It is an especially suitable product against leaf rust, stripe rust, and septoria nodorum blotch of wheat and leaf rust of barley.

LASER 12 SC is compatible with morpholines and MBC-derivatives.

Trade Names Of Other Firms: Trade names for products containing Epoxiconazole include Opus.

### What is LASER 12 SC and how does it work?

LASER 12 SC, a triazole, has an inhibition of C-14-demethylase in sterol biosynthesis. Triazoles are active against a wide range of cereal foliar diseases and were used alone or in mixtures with non-systemic fungicides and also with the systemic morpholine group of fungicides

### Key Benefits of LASER 12 SC:

1. Broad spectrum fungicide

### PRECAUTIONS

Harmful if inhaled or swallowed. Will irritate the eyes, nose and throat and skin. Avoid contact with eyes and skin. DO NOT inhale vapours. If product on skin, immediately wash area with soap and water. Wash hands after use. When opening the container and preparing spray, wear cotton overalls buttoned to the neck and wrist, a washable hat, elbow length PVC gloves and halfpiece respirator. When using the prepared spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and a washable hat. After each day's use, wash gloves, respirator and if rubber, wash with warm water. Wash contaminated clothing.

### SYMPTOMS OF POISONING

Irritation on skin or eyes.

### FIRST AID

If poisoning is suspected, immediately contact a physician or a poison control centre. Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

If skin contacts, wash exposed areas of skin with soap and warm water. This product may produce temporary allergic side effects characterised by redness of the eyes, mild bronchial irritation and redness or rash on exposed skin areas. Persons having allergic reaction should contact a physician immediately.

If eyes contact, flush for 15-20 minutes with large amount of water and seek medical attention immediately. If inhaled, remove patient to fresh air. In all cases, notify a physician and present this label.

CROP	DISEASE	RATE PER HA	CRITICAL COMMENTS
Wheat	Leaf rust (Puccinia recondita), stripe rust (Puccinia striiformis)	500 mL plus 200mL Chemwet per 100L of spray mix	Apply when conditions favour disease development and preferably prior to development of high levels of disease in the crop. Aim to apply between stem elongation and ear
	Septoria nodorum	500 mL plus 200mL	

	blotch (Septoria nodorum)	Chemwet per 100L of spray mix	emergence complete (ZGS 32-59). DO NOT apply later than ZGS 59. Repeat spraying may be required for stripe rust. Regularly monitor crops from 3-4 weeks after spraying for signs of reinfection and treat accordingly.
Barley	Leaf rust (Puccinia hordei)	250 to 500 mL plus 200mL Chemwet per 100L of spray mix	Apply when conditions favour disease development and preferably prior to development of high levels of disease in the crop. Aim to apply between stem elongation and ear emergence complete (ZGS 32-59). DO NOT apply later than ZGS 59. Apply the higher rate when disease is present on the top leaf or conditions are favourable for disease development at these stages of crop development.

**NOT TO BE USED FOR ANY PURPOSE, OR IN ANY MANNER, CONTRARY TO THIS LABEL UNLESS  
AUTHORISED UNDER APPROPRIATE LEGISLATION.**

**WITHHOLDING PERIODS:**

**DO NOT HARVEST FOR 6 WEEKS AFTER APPLICATION.**

**DO NOT GRAZE OR CUT FOR STOCKFOOD FOR 6 WEEKS AFTER APPLICATION.**

#### GENERAL INSTRUCTIONS

LASER 12 SC is a broad spectrum contact and systemic fungicide. It is taken up via the stem and foliage and is translocated upwards and outwards to provide protection to new growth. Thorough coverage of the crop is necessary for best results. Check the crop regularly for any symptoms of disease infection. Apply as soon as disease is present on the flag leaf or flag-2. Application beyond flag leaf emergence (ZGS 39) may not provide any yield benefit, particularly under dry seasonal conditions.

#### MIXING

LASER 12 SC is a suspension concentrate formulation. Add the product to the half filled spray vat while agitating. Continue to agitate while topping up the tank and during spraying.

#### APPLICATION

##### Ground

Apply in a water volume of between 50 and 100L/ha, using flat fan nozzles operating at around 50 cm above the top of the crop. Use the higher water volume in crops with heavier canopies.

##### Aerial

Apply with suitable aircraft, set up and operated to apply fungicides to cereal crops in a minimum water volume of 20L/ha.

#### FUNGICIDE RESISTANCE WARNING

LASER 12 SC is a member of the DMI group of fungicides. For fungicide resistance management the product is a Group C fungicide. Some naturally occurring individual fungi resistant to the product and other Group C fungicides may exist through normal genetic variability in any fungal population. The resistant individuals can eventually dominate the fungal population if these fungicides are used repeatedly. These resistant fungi will not be controlled by this product or other Group C fungicides, thus resulting in a reduction in efficacy and possible yield loss. Since the occurrence of resistant fungi is difficult to detect prior to use, Nufarm Australia Limited accepts no liability for any losses that may result from the failure of this product to control resistant fungi.

#### PRECAUTIONS

Re-entry period: DO NOT allow entry into treated areas until the spray has dried.

#### CAUTION

##### Export of treated cereals

Growers should note that Maximum Residue Limits (MRLs) or import tolerances do not exist in all markets for cereals treated with LASER 12 SC Fungicide. Additionally, some export markets have established MRLs different to those in

Australia. If you are growing cereals for export, please check with Nufarm Australia Ltd or your grain exporter for the latest information on MRLs and import tolerances BEFORE using LASER 12 SC Fungicide.

#### LIVESTOCK DESTINED FOR EXPORT MARKETS

The grazing withholding period only applies to stock slaughtered for the domestic market. Some export markets apply different standards. To meet these standards, ensure that in addition to complying with the grazing withholding period, the Export Slaughter Interval is observed before stock are sold or slaughtered.

EXPORT SLAUGHTER INTERVAL (ESI): AFTER OBSERVING THE WITHHOLDING PERIOD FOR GRAZING OR CUTTING FOR STOCKFOOD, LIVESTOCK THAT HAVE BEEN GRAZED ON OR FED TREATED CROPS SHOULD BE PLACED ON CLEAN FEED FOR 3 DAYS PRIOR TO SLAUGHTER.

#### PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET CROPS

DO NOT apply under weather conditions, or from spraying equipment, that may cause spray to drift onto nearby susceptible plants/crops, cropping lands or pastures.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT  
Highly toxic to aquatic organisms. DO NOT apply LASER 12 SC aerially if waterbodies, watercourses or wetlands are within 30 metres downwind of the application area. DO NOT contaminate streams, rivers or waterways with the chemical or used containers.

#### DISPOSAL METHODS

Do not contaminate water, food or feed by storage or disposal. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, completely empty bag into application equipment. Dispose of empty bag and box in a sanitary landfill or by incineration, or if allowed by state or local authorities, by burning. Stay out of smoke from burning containers.

#### STORAGE CONDITION

Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight. Store in a locked room or place away from children, animals, food, feedstuffs, seed and fertilizers. Triple or preferably pressure rinse containers before disposal. Add rinsing to spray tank.

For More Details including effects on environment email [contact@ivorychem.com](mailto:contact@ivorychem.com) with Subject "LASER 12 SC DETAILS"

More Details:

#### TOXICOLOGICAL EFFECTS

- **Reproductive Toxicity:** Regarded as causing developmental toxicity in humans based on strong presumption from studies on rats and rabbits. Possible risk of impaired fertility based on small but significant effects on reproduction in a 2nd generation study of rats.
- **Carcinogenicity:** Worksafe Australia has classified epoxiconazole in the occupational environment as a Carcinogen Category 3 substance. This means that the substance is not classifiable as to carcinogenicity to humans.
- **Acute Toxicity – Oral:** LD50 (rat) >2200 mg/kg for the formulated product
- **Acute Toxicity –Dermal:** LD50 (rat) >2000 mg/kg for the formulated product
- **Acute Toxicity – Inhalation:** LC50 (rat) (4hr) >3.26 mg/l for the formulated product
- **Eye Irritation:** Mild eye irritant.
- **Skin Irritation:** Mild skin irritant.
- **Skin Sensitisation:** Product is not a skin sensitiser.
- **Other Information:** The Australian Acceptable Daily Intake (ADI) for epoxiconazole for a human is 0.01 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 1 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species. (Ref: Comm. Dept. of Health and Ageing, 'ADI List', TGA, June 2004).

#### ECOLOGICAL EFFECTS

- **Known Harmful Effects on the Environment:** The product is a marine pollutant for sea transport.
- **Other Precautions:** Do not contaminate dams, waterways or sewers with this product or the containers which have held this product.
- **Environ. Protection:** Spray drift can cause damage, read the label for more information.
- **Acute Toxicity – Fish:** The following is data for a similar product. Toxic to fish.

- LC50 (96hr) for rainbow trout is 0.5 mg/l.
- **Acute Toxicity – Daphnia:** LC50 (48 hr) for daphnia is 1.8 mg/l for the formulated product.
- **Acute Toxicity – Other Organisms:**  
The following data is for the active ingredient, epoxiconazole. Birds: Not toxic to birds. LD50 for quail is >2000 mg/kg. Bees: Not toxic to bees. LD50 >100 µg/bee.

Tel: +65 63377765  
 Fax: +65 63377730  
 contact@ivorychem.com  
 www.ivorychem.com

Company Registration No 200405572W

#### ENVIRONMENTAL FATE

- **Animals:** A.i. is readily excreted via faeces. There are no major metabolites, but a high number of minor metabolites was identified. The important metabolic reactions were cleavage of the oxirane ring, hydroxylation of the phenyl rings and conjugation.
- **Plants:** There is extensive degradation.
- **Soil/Environment:** Degradation in soil is by microbial activity, DT50 c. 2-3 mo. Koc 957-2647.

#### PHYSICAL PROPERTIES AND GUIDELINES

##### Physical Properties:

- **FORM:** liquid
- **COLOUR:** pale beige
- **ODOUR:** faintly aromatic
- **PH VALUE:** 6 – 8 (20 °C)
- **CRYSTALLIZATION TEMPERATURE:** -11,5 °C
- **FLASH POINT:** > 100 °C
- **DENSITY:** 1,02 - 1,08 g/cm<sup>3</sup> (20 °C)
- **SOLUBILITY IN WATER:** dispersible
- **SURFACE TENSION:** approx. 35,1 mN/m (20 °C; 2,0 %) approx. 35,3 mN/m (20 °C; 1,0 %)
- **VISCOSITY, DYNAMIC:** approx. 140 mPa (20 °C)



IVORYCHEM PTE LIMITED  
 15 Beach Road #02-09  
 Beach Centre  
 Singapore 189677

Company Registration No: 200405572W  
 Incorporated in the Republic of Singapore Under the Companies Act (Cap 50)