

Sharda International Africa (Pty) Ltd

P.O. Box 82021, Southdale, 2135, South Africa.

Tel: 031 764 3011,

Email: rsa.regn@shardaintl.com, Website: http://www.shardaintl.com

(Co. Reg. No. 2010/002268/07)

Page 1 of 10

SAFETY DATA SHEET “FALCOR 960 EC”

1. IDENTIFICATION OF PRODUCT AND COMPANY

Name of Product: “Falcor 960 EC”

Active Ingredient: S-Metalochlor 960 EC

Product Use: Herbicides

Registration holder: Sharda International Africa(Pty)Ltd

Address: P.O. Box 82021, Southdale, 2135

Contact Tel. No.: 031-764-3011

Poison Centres: UNITAS Hospital: 0800-111-9900
Tygerberg Hospital: 021-931-6129
Netcare 911: 082911

2. Composition / information on Ingredients

Hazardous ingredients	Cas No	Conc. In %
S-metalochlor	87392-12-9	96%
Other Ingredient		4%

3. Hazardous identification:

Classification of the substance or mixture

Classification according to Regulation (EU) 1272/2008

- Skin sensitization Sub-category 1A H317
- eye irritation Category 2 H319
- Acute aquatic toxicity Category 1 H400
- Chronic aquatic toxicity Category 1 H410

For the full text of the H phrases see section 16

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Page 2 of 10

4. FIRST AID MEASURES

Description of first aid measures

General information:

Consult a physician. Show this safety data sheet to the doctor in attendance.

Inhalation:

Move the victim to fresh air. If not breathing normally or no artificial respiration. Keep warm and lying down. Call a doctor or poison control center.

Skin contact:

Remove contaminated clothing and rinse thoroughly affected body parts with water. If irritation persists consult doctor. Wash contaminated clothing before reuse.

Eye contact :

Rinse affected eyes immediately for at least 15 minutes with plenty of water with eyelids open and seek medical help immediately. Remove Contact lenses.

Ingestion:

If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting: contains petroleum distillates and / or aromatic solvents

Symptoms:

Inhalation may cause pulmonary edema and pneumonitis.

SPECIAL TREATMENT

Medical advice:

There is no specific antidote available.

Follow symptomatic treatment.

Do not induce vomiting: contains petroleum distillates and / or aromatic solvents.

5. FIRE FIGHTING

Extinguishing media suitable means

Extinguishing:

Extinguishing media Small fires: Use water spray, alcohol-resistant foam, means dry chemical or carbon dioxide. Suitable extinguishing media for large fires Alcohol resistant foam or Water droplets unsuitable measures for extinguishing purposes

Security:

Do not use a solid water stream as it may be scatter the burning material.

Special hazards arising from the substance or mixture As the product contains combustible organic components of the fire produce dense black smoke containing hazardous combustion products starting (see Chapter 10) .Ekthesi products cleavage is potentially dangerous to health.

Advice for firefighters Wear full protective clothing and self-contained breathing device.

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(Co. Reg. No. 2010/002268/07)

Page 3 of 10

6. ACCIDENTAL RELEASE MEASURES RESPONSE

Personal precautions, protective equipment and procedures

Emergency Personal precautions: Refer to protective measures listed in sections 7 and 8.

Environmental precautions

Avoid further leakage if safe. Do not discharge into drains or surface water.

Methods and materials for containment and cleaning

Contain and collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and dispose of in a suitable container according to local / national regulations

7. HANDLING AND STORAGE

Precautions for safe handling:

Special measures are not required to fire. Avoid contact with skin and eyes.

When using do not eat, drink or smoke. For personal protection see section 8.

Conditions for safe storage, including any incompatibilities.

Special storage conditions are required. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from children. Keep away from foodstuffs, beverages and feed.

Specific end uses:

Authorized plant protection products: To correct and safe use of the product

Follow the instructions on the label of the product.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Components	CAS-No	exposure limit	Type
S-metolachlor	87392-12-9	5 mg / m ³	TWA
solvent naphtha (petroleum), heavy arom	64742-94-5	20 ppm 100 mg / m ³	TWA
2-methylpropan-1-ol	78-83-1	50 ppm 150 mg / m ³	TWA

CONTROLS EXPOSURE

Measures for technical processing:

The collection and / or isolation are the most reliable technical protection measure if exposure can not to be avoided. The extent of these measures depends on the actual risks in use. If airborne mists or vapors, use local exhaust ventilation. Assess exposure and use any additional measures to maintain air concentrations below the exposure limits. Where necessary, seek additional occupational hygiene advice.

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Page 4 of 10

Protection measures:

The use of technical measures is always greater priority use personal equipment protection. When selecting personal protective equipment, seek additional professional advice. The individual work equipment must have the proper certification.

Respiratory protection:

It is usually not necessary personal protective respiratory equipment. Maybe you needed a respirator with filter for particles up to have specific technical measures.

Hand protection:

Suitable material: nitrile gloves. Transit time: 480 minutes.

Glove thickness: 0,5 mm.

Needed chemical protective gloves.

Gloves should be certified. Gloves should have a minimum time of use, suitable for the duration of exposure. This time depends on the thickness, material and manufacturer. Gloves should be discarded and replaced if there is any indication of chemical degradation or penetration.

Eye protection:

Usually not necessary eye protection. Observe the local eye protection measures. And body protection skin: Assess the exposure and select resistant suit in vitro according to the possibility of contact and Saturate / penetrant material characteristics clothing. Wash with soap and water after remove the protective suit. Clean clothing before reuse, or use the available equipment (suits, aprons, sleeves, boots, etc.) Appropriate attire: impervious protective suit.

9. STABILITY AND REACTIVITY

Reactivity

- Chemical stability the product is stable when used in physiological conditions.
- Possibility of hazardous reactions Resulting not dangerous reactions when used stored under the specifications.
- Conditions to avoid it do not appear as dangerous Polymerization.
- Incompatible materials No known substances to lead to the formation of dangerous substances or thermal reactions.
- Hazardous decomposition products: Combustion or thermal decomposition evolve toxic and irritant vapors.

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(Co. Reg. No. 2010/002268/07)

Page 5 of 10

10. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Product

Acute ingestion toxicity:

LD50 Female Rat, 2,149 mg / kg The toxicological data from studies with products similar composition. LD50 Male rat, 3,937 mg / kg

The toxicological data from studies with products similar composition.

Acute inhalation toxicity:

LC50 rat (male and female), > 5.09 mg / l, 4 h

The toxicological data from studies with products similar composition.

Acute Skin Toxicity:

LD50, Rabbit (male and female) > 2,020 mg / kg

The toxicological data from studies with products similar composition.

Components

S-metolachlor:

Acute ingestion toxicity:

LD50 (Female and male rat) 2,672 mg / kg

Acute inhalation toxicity:

LC50 (Female and male rat): > 2.91 mg / l

Exposure time: 4 h Assessment: The substance or mixture does not show acute toxicity inhalation.

Acute Skin Toxicity:

LD50 (rabbit): > 2,000 mg / kg Assessment: The substance or mixture does not show acute toxicity skin

2-methylpropan-1-ol:

Acute ingestion toxicity:

LD50 (rat): 2,830 - 3,350 mg / kg

Acute inhalation toxicity:

LC50 (rat): > 18.18 mg / l Exposure time: 6 h

Acute Skin Toxicity:

LD50 (rat): > 2,000 - 2,460 mg / kg

Skin corrosion/Skin irritation:

Product Rabbit: Does not cause skin irritation the toxicological data from studies with products similar composition.

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(Co. Reg. No. 2010/002268/07)

Page 6 of 10

S-metolachlor: Rabbit: Does not cause skin irritation
calcium dodecylbenzene sulphonate: It causes skin irritation
2-methylpropan-1-ol: It causes skin irritation
Serious eye damage /

Eye irritation:

Product Rabbit: Irritating to eyes, reversible in 21 days The toxicological data from studies with products similar composition.

Components

S-metolachlor Rabbit: Not irritating to eyes
calcium dodecylbenzene sulphonate: Risk of serious damage to eyes
2-methylpropan-1-ol: Risk of serious damage to eyes

Awareness (inhalation or dermal):

Product Guinea pig (Maximisation Test): Causes sensitization in animal experiments, subcategory 1A. The toxicological data derived from studies with similar composition products

Components

S-metolachlor: Guinea pig: May cause sensitization by skin contact.
2-methylpropan-1-ol: Did not cause sensitization on animal's experiments.

Mutagenicity:

S-metolachlor: There was no mutation in animal experiments.
2-methylpropan-1-ol: There was no mutation in animal experiments.

Carcinogenicity:

S-metolachlor No carcinogenicity was observed in laboratory experiments on animals.
2-methylpropan-1-ol No carcinogenicity was observed in laboratory experiments on animals.

Toxicity

Reproduction:

S-metolachlor No toxicity was observed in reproduction in laboratory Experiments conducted in animals.

2-methylpropan-1-ol: No effect on fertility or development embryo.

STOT - Single exposure:

2-methylpropan-1-ol The substance or mixture is classified toxic to specific target organ a single exposure, category 3 with irritation the anapenystikis tract. The substance or mixture is classified in a particular organ toxic target with single exposure, category 3 with a narcotic effect.

STOT – Repeated exhibition:

S-metolachlor No adverse effects were observed in chronic toxicity tests.
Respiratory toxicity:
Solvent naphtha (petroleum),
Highly arom. May be fatal if swallowed and enters in anapenystikes roads.

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(Co. Reg. No. 2010/002268/07)

Page 7 of 10

11. ECOLOGICAL INFORMATION

Toxicity

Product Toxicity to fish:

LC50 *Oncorhynchus mykiss* (rainbow trout), 8.8 mg / l, 96 h.

Toxicity to aquatic invertebrates:

EC50 *Daphnia magna* (water fleas), 28mg / l, 48 h

Toxicity to aquatic plants:

EbC50 *Pseudokirchneriella subcapitata* (algae), 0.09 mg / l, 96 h

Components

S-metolachlor

Toxicity to fish:

LC50 *Oncorhynchus mykiss* (rainbow trout), 1.23 mg / l, 96 h

Toxicity to aquatic

Invertebrates:

EC50 *Daphnia magna* (water fleas), 11.24 mg / l, 48h

EC50 *Americamysis bahia* (shrimp), 1.4 mg / l, 96h

Toxicity to aquatic

Plants:

EbC50 *Pseudokirchneriella subcapitata* (algae), 0.077 mg / l, 96 h

NOErC *Pseudokirchneriella subcapitata* (algae): 0.016 mg / l, 96h

EC50 (*Lemna gibba* , *Lemna*): 0.023 mg / l, 14d

NOEC (*Lemna gibba* , *Lemna*): 0.0076 mg / l, 14 d

M-Factor (Acute aquatic toxicity) 10

Toxicity to fish (Chronic toxicity)

NOECs: *Pimephales promelas* 0.03 mg / l, 35 d

Toxicity to aquatic invertebrates (Chronic toxicity)

NOECs: *Americamysis bahia* 0.13 mg / l, 28 d

M-Factor (Chronic aquatic toxicity) 10

calcium dodecylbenzene

sulphonate:

Chronic aquatic toxicity

Harmful to aquatic life with long effects.

solvent naphtha (Petroleum), heavy arom .: Toxic to aquatic life with long lasting effects

2-methylpropan-1-ol:

Toxicity to fish:

LC50 (`flow-through test): *Pimephales promelas* 1.430 mg / l, 96h

Toxicity to aquatic invertebrates:

EC50 (static test) *Daphnia magna* (water fleas), 1.100 mg / l, 48h

NOEC (semi-static test): 20 mg / l, 21d

Toxicity to aquatic plants:

EC50 *Pseudokirchneriella subcapitata* (algae), 1.799 mg / l, 72 h

Persistence and degradability

Biodegradability S-metolachlor Not readily biodegradable.

Stability in water: S-metolachlor Half degradability: 53-147d

Not persistent in water.

Bioaccumulative potential

S-metolachlor does not bioaccumulate. Partition coefficient: noctanol /

Water log Pow: 3.05 (25 ° C)

Mobility in soil:

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Page 8 of 10

S-metolachlor has medium mobility in soil. Stability in soil quantitative diffusion: 50% (DT50: 12 - 46 d) It is not persistent in soil.

Results of assessment of PBT and vPvB assessment.

Product Substance / The mixture does not contain active ingredients that can be considered persistent, bioaccumulative and toxic. (PBT) or very persistent and very bioaccumulative (vPvB). S-metolachlor This substance is not considered to be a persistent, bioaccumulative and toxic. (PBT).

This substance is not considered very persistent and very bioaccumulative (vPvB). 2-methylpropan-1-ol: This substance is not considered to be a persistent, bioaccumulative and toxic. (PBT). This substance is not considered very persistent and very bioaccumulative (vPvB).

Other adverse effects

No data available.

12.DISPOSAL

Waste treatment methods product : Do not contaminate ponds, waterways or ditches with chemical or used containers. Do not discharge into drains.

Where possible, prefer recycling from disposal or incineration. If recycling is not practicable, the material should be allocated in accordance with national legislation Contaminated packaging : Empty remaining contents.

Triple rinse containers. Empty containers should be offered for recycling or rejection. Do not re-use empty containers.

13.INFORMATION ON TRANSPORT

Land transport (ADR / RID):

Number UN:

ADN UN 3082

ADR UN 3082

RID UN 3082

IMDG UN 3082

IATA UN 3082

UN proper shipping name:

AND ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
LIQUID, NOS (S-METOLACHLOR)

ADR ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
LIQUID, NOS (S-METOLACHLOR)

RID ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
LIQUID, NOS
(S-METOLACHLOR)

IMDG ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
LIQUID, NOS
(S-METOLACHLOR)

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(Co. Reg. No. 2010/002268/07)

Page 9 of 10

Class / hazard class

transport:

AND 9

ADR 9

RID 9

IMDG 9

IATA 9

14.4 Packing group:

ADN

packing group III

classification code M6

Hazard identification number 90

marking 9

ADR

packing group III

classification code M6

Hazard identification number 90

marking 9

Restriction Code tunnel (E)

RID III

packing group M6

classification code 90

Hazard identification number 9

IMDG

packing group III

marking 9

EmS code FA, SF

IATA

Packing instruction (aeroskafoscargo) 964

Packing instruction (passenger aircraft) 964

Packing instruction (LQ) Y964

packing group III

marking Various

Environmental hazards

AND Dangerous for the environment

ADR Dangerous for the environment

RID Dangerous for the environment

IMDG marine pollutant

Not applicable

Regulations / legislation on safety, health and the environment to the substance or mixture.

According to Regulation (EU) No. 1272/2008 and No. Marketing Authorization 7708 in Greece.

Chemical Safety Assessment

Not required for this substance

OTHER INFORMATION

APPENDIX: EXPOSURE SCENARIOS

further information

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Page 10 of 10

H phrases referred to in sections 2 and 3:

H226 Flammable liquid and vapor.

H304 May be fatal if swallowed and enters airways.

H315 It causes skin irritation.

H317 May cause allergic skin reaction.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H336 May cause drowsiness or dizziness.

H400 Very toxic to aquatic organisms.

H410 Very toxic to aquatic life with long lasting effects.

H411 Toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

The full text of other abbreviations

ADR: European Agreement concerning the International Carriage of Dangerous Goods

RID: Regulations concerning the International Carriage of Dangerous Goods

IMDG: International Maritime Dangerous Goods

IATA-Class: International Association of Air Transport of Dangerous goods

LC50: Lethal concentration, 50% LD50: Lethal dose, 50%

EC50: Effective dose, 50% GHS: Globally Harmonized Classification System and labeling of chemicals (GHS).

The information provided in this Safety Data Sheet is based on maximum our knowledge at the date of issuance. Information provided are guidelines for safe handling, use, processing, storage, transportation, disposal and release and is not a guarantee or quality standards. The information relates only to the specific product designated and may not applicable for the combination with other materials or in any process, not mentioned in the text

Any changes are indicated by vertical lines to the left margin and replace all previous versions. Trademarks are patented by Syngenta Group Company.

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS 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 on receipt of this MSDS 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 the product. If the recipient subsequently produces formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.