

SAFETY DATA SHEET

ALPHA TRIFLURALIN 48 EC

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

Product name : ALPHA TRIFLURALIN 48 EC
Chemical name of active ingredient(s) : α,α,α -trifluoro-2,6-dinitro-N,N-dipropyl-p-toluidine
Supplier : Makhteshim-Agan (UK) Ltd.
 Unit 16, Thatcham Business Village
 Colthrop Way, Thatcham
 Berkshire RG19 9LW, U.K.
Emergency telephone number : National Chemical Emergency Centre, Tel:01865 407333.

2. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/preparation : Preparation

Information on hazardous ingredients *

Common name	CAS No.	%	EC Number	Symbol	R-Phrases
Trifluralin (ISO)	1582-09-8	43 - 48	216-428-8	Xi,N	R36-43-50/53
Aromatic C-9 solvent (Naphta)	64742-95-6	46 - 51	265-199-0	Xn	R65

* *Occupational Exposure Limit(s), if available, are listed in section 8*

3. HAZARDS IDENTIFICATION

Most important hazards : Flammable. Irritating to eyes. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Harmful: may cause lung damage if swallowed.

4. FIRST-AID MEASURES

Effects and symptoms

Inhalation : Vapours - headache, dizziness, collapse.
Ingestion : nausea, headache, cramps, vomiting.
Eye contact : May be irritating to eyes.

First-aid measures

: Remove victim from area of exposure. Wash off remaining material with plenty of water.
Inhalation : Remove victim to fresh air. If breathing is difficult: artificial respiration. Get medical attention.
Ingestion : Wash out mouth with plenty of water. Get medical attention. Never give anything by mouth to an unconscious person.
Skin contact : Remove contaminated clothing. Wash away remainder with water and soap.
Eye contact : Wash out with plenty of water with the eyelid held wide open for at least 15 minutes. Get medical attention.

Notes to a physician : There is no specific antidote. Treat symptomatically and give supportive therapy.

Protection of first-aiders : Use appropriate protection (see section 8).

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5. FIRE-FIGHTING MEASURES

Extinguishing media

- Suitable** : Dry chemical, water spray, foam, carbon dioxide.
- Unusual fire/explosion hazards** : Flashback may occur along vapour trail.
- Hazardous thermal (de)composition products** : Fluoride compounds and nitrogen oxides.
- Protection of fire-fighters** : Self-contained breathing apparatus and total protection required in enclosed areas.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions** : Wear suitable protective clothing.
- Environmental precautions** : Do not discharge into drains or the environment.
- Methods for cleaning up** : Keep away from: open flame, sparks and heat. Absorb remainder in sand or other inert material. Dispose of in an authorized waste collecting point.

7. HANDLING AND STORAGE

- Handling** : Avoid contact with skin and eyes. Ventilation required. Keep away from: sparks, open flame and direct sunlight.
- Storage** : Keep only in the original container. Keep in a cool, dry, well ventilated place away from direct sunlight.
- Packaging materials**
- Suitable** : Multi-layer high density polyethylene extrusion blow containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Engineering measures** : Ventilation required.
- Hygiene measures** : When handling do not eat, drink or smoke. Wash hands thoroughly after handling. Wash clothing separately before re-use.
- Occupational Exposure Limits**
- Common name** : **Trifluralin (ISO)**
: Not established
- Common name** : **Aromatic C-9 solvent (Naphta)**
TLV (USA) : 25 ppm
- Personal protective equipment**
- Respiratory system** : Respiratory protection is not required if good ventilation is maintained.
- Skin and body** : Wear suitable protective clothing. Chemical resistant boots.
- Hands** : Chemical resistant gloves.
- Eyes** : Safety goggles or face shield.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state** : Liquid

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Colour	: Orange
Odour	: Aromatic (solvent)
Boiling point	: 155 - 181°C (Naphta)
Density	: 1.05 ± 0.02 g/L @ 20°C
Vapour pressure	: 13.7 mPa @ 25°C (Trifluralin (ISO))
Solubility in water	: 0.2 ppm @ 25°C(Trifluralin (ISO))
Octanol/water partition coefficient	: log = 5.14 (Trifluralin (ISO))
pH	: 5 - 6 CIPAC, MT 75
Flash point	: 49°C (closed cup)
Flammability	: Flammable
Autoignition temperature	: 450°C (Naphta)
Explosion properties	: Naphta (vapours) - May form explosive mixture with air.
Lower explosion limit	: 0.8 volume %
Upper explosion limit	: 7 volume %
Oxidation properties	: Not oxidizing.

10. STABILITY AND REACTIVITY

Stability	: Not subject to polymerization.
Materials to avoid	: Oxidizing agents, acids and alkali.
Hazardous reactions	: None
Hazardous decomposition products	: Fluoride compounds and nitrogen oxides.

11. TOXICOLOGICAL INFORMATION

Preparation

Acute toxicity - Oral	: LD ₅₀ (rat) > 2,000 mg/kg
Acute toxicity - Dermal	: LD ₅₀ (rabbit) > 2,000 mg/kg
Acute toxicity - Inhalation	: LC ₅₀ (rat) > 5.26 mg/L (4 hours)
Skin irritation	: Slightly irritating (rabbit).
Eye irritation	: Moderately irritating (rabbit).
Sensitization	: Non sensitizer (guinea-pig)
<u>Common name</u>	: Trifluralin (ISO)
Chronic toxicity	: NOEL (rat) = 2.5 mg/kg/day (2 years). NOEL (mice) = 73 mg/kg/day (2 years).
Carcinogenicity	: EPA : Group C EU : Not classified IARC : Group 3
Mutagenicity	: Not mutagenic
Reproduction toxicity	: NOEL (rat) = 50 ppm (2 generation).
Other information	: Teratogenicity - NOAEL (rabbit): 20 mg/kg/day (Maternal) ; 50 mg/kg/day (Fetal).

12. ECOLOGICAL INFORMATION

Preparation

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Ecotoxicity	<p>: Fish LC₅₀ (96 hours) rainbow trout (oncorhynchus mykiss) = 0.24 mg/L golden orfe = 0.17 mg/L</p> <p>Daphnia magna EC₅₀ (48 hours) = 2.6 mg/L</p> <p>Algae (selenastrum capricornutum) EC₅₀ (72 hours) = 0.14 mg/L</p> <p>Birds Mallard duck (anas platyrhynchos) LD₅₀ > 2,000 mg/kg Japanese quail (coturnix coturnix japonica) LD₅₀ > 2,000 mg/kg</p> <p>Very toxic to aquatic organisms. Low toxicity: birds.</p>
Common name	: Trifluralin (ISO)
Mobility	: Soil Not mobile. Adsorbed on soils with high organic content. Koc = 6,414 - 13,414 mL/g
Persistence/degradability	: Soil Moderately persistent. Half-life time (t _{1/2}): ~ 45 days. Degradation is primarily via: microorganisms.
	: Water The product is not biodegradable. Dissipates rapidly in aquatic systems with DT ₅₀ 4.9-5.8 days. Low risk of underground water contamination.
Bioaccumulative potential	: Low bioaccumulation potential.
Ecotoxicity	: Fish LC ₅₀ (96 hours) rainbow trout (oncorhynchus mykiss) = 0.088 mg/L bluegill sunfish (lepomis macrochirus) = 0.089 mg/L NOEC (35 days) fat head minnow = 0.3 µg/L <p>Daphnia magna EC₅₀ (48 hours) = 0.245 mg/L NOEC (21 days) = 0.051 mg/L</p> <p>Algae (selenastrum capricornutum) EC₅₀ (72 hours) = 12.2 mg/L</p> <p>Birds Mallard duck (anas platyrhynchos) LD₅₀ > 2,000 mg/kg Bobwhite quail (colinus virginianus) LD₅₀ > 2,250 mg/kg Mallard duck (anas platyrhynchos) and Bobwhite quail (colinus virginianus) LC₅₀ > 5,000 ppm (5 day feeding)</p> <p>Bees Oral and Contact LD₅₀ (48 hours) > 100 µg/bee</p> <p>Toxic to aquatic organisms Low toxicity: birds and bees.</p>

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13. DISPOSAL CONSIDERATIONS

Methods of disposal : Dispose of in a pesticide approved landfill, or in a chemical incinerator equipped with scrubbers, In accordance with national and regional regulations.

14. TRANSPORT INFORMATION

International transport regulations

UN number : 1268

Land - Road/Railway

Proper shipping name : Petroleum distillate, N.O.S. (Naphta)

ADR/RID Class : 3, F1, PG III

Hazard Identification : 30

Number

Inland waterways

Proper shipping name : Petroleum distillate, N.O.S. (Naphta)

ADNR Class : 3, F1, PG III

Sea

Proper shipping name : Petroleum distillate, N.O.S. (Naphta)

IMDG Class : 3 + Marine pollutant

Packing group : III

Emergency Schedules : F-E, S-D

(EmS)

Air

Proper shipping name : Petroleum distillate, N.O.S. (Naphta)

UN/ID Number : 1268

IATA-DGR Class : 3

National transport regulations

No additional national transport regulations are known to the supplier

15. REGULATORY INFORMATION

Classification : This product is provisionally labelled by the supplier in accordance with the suppliers understanding of the EU regulations (Directives 67/548/EEC, 1999/45/EC).

Hazard symbol(s) : Xn, N



HARMFUL



DANGEROUS FOR THE ENVIRONMENT

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Risk phrases : R10: Flammable.
R36: Irritating to eyes.
R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65: Harmful: may cause lung damage if swallowed.

Safety phrases : S02: Keep out of the reach of children.
S13: Keep away from food, drink and animal feedingstuffs.
S20/21: When using do not eat, drink or smoke.
S24: Avoid contact with skin.
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37: Wear suitable protective clothing and gloves.
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 sheets.

16. OTHER INFORMATION

The information contained in the Safety Data sheet is correct to the best of our knowledge at the date of issue. It is intended as a guide for the safe use, handling, disposal, storage and transportation and is not intended as a warranty or as a specification. The information relates only to the product specified and may not be suitable for combinations with other materials or in processes other than those specifically described herein.

HISTORY

Date of printing : 21/10/2003
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Date of issue : 21/10/2003
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The version-number is made up of three parts; part 1 is a general information code, part 2 a country-specific code and part 3 a language-specific code

Prepared by : Ahmed Taya/Jennifer Ashtamkar