MATERIAL SAFETY DATA SHEET
Alfasuper 10 EC

IDENTIFICATION OF THE SUPPLIER:

AGRO CHEMICALS INDUSTRIES LTD
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PRODUCT IDENTIFICATION:

Common name: Alphacypermethrin 10% w/v
Trade Name: Alfasuper 10 EC
Type of formulation: Emulsifiable Concentrate (EC)
Chemical name: (S)-alpha-cyani-3-phenoxybenzyl (1R,3R)-3-(2,2 dichlorovinyl) -2,2 dimethyl cyclo propane carboxylate and ®- alpha-cyano-3-phenoxy benzyl (1S,3S)-(2,2-dichlorovinyl) -2,2-dimethyl cyclopropane-carboxylate**.**
Molecular formula: $C_{22}H_{19}Cl_2NO_3$
Molecular weight: 416.32

PRODUCT COMPOSITION:

Active Ingredient:	***% w/v***	***CAS #***
Alphacypermethrin	10%	*[67375-30-8]*
Inert ingredient:		
Emulsifier	8%	--
Solvent	Up to 100%	--

HAZARDS IDENTIFICATION:

Hazard classification: Hazardous according to the criteria of NOHSC.
Dangerous goods.

Risk phrases: R20 Harmful by inhalation.
R21/22 Harmful in contact with skin and if swallowed.
R65 Harmful – may cause lung damage if swallowed.
Safety phrases: S20/21 When using do not eat or drink/smoke
S23 Do no breathe spray.
S24/25 Avoid contact with skin/eyes
S29/35 Do not empty into drains/Dispose of material and container in a safe way
SUSDP Classification: S6
ADG Classification: Class 9 (Environmentally Hazardous Substance, Liquid, N.O.S.)
UN Number: 3082

FIRST AID MEASURES:

Eye contact: Flush eyes promptly with clear water for at least 15 minutes
Skin contact: Remove contaminated clothing. Wash skin thoroughly with soap and water .wash clothing with detergent before reuse. Get medical attention
Ingestion: Induce vomiting if victim is in conscious by giving salt water.
Inhalation: Remove victim to fresh air. Provide artificial respiration, if necessary, Get medical attention immediately**.**
Antidote: To control convulsions phnobarbital may be given under medical supervision. Treat symptomatically and supportively.

FIRE FIGHTING MEASURES:

Flash Point : 42 ˚C
Auto-ignition temperature: Not applicable
Thermal decomposition: Will ignite if exposed to intense heat or open flame and may cause violent rapture of package,
Fire Fighting media: Dry Chemical, carbon dioxide, halon, water spray or standard foam.
Extinguishing Procedure: Wear breathing apparatus and full protective clothing. Evacute people to safe area. Move the containers from Fire area, if possible .Fight fire from maximum distance. Stay away from storage area. Dike fire Control water for later disposal. Keep cool the Containers by spraying water. Avoid breathing of toxic Vapours

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ACCIDENTAL RELEASE MEASURES:

Soil Spill: Dike the area absorbs on sand or other absorbent and place in closed container for proper disposal
Water Spill: Absorb the material by activated carbon using suction hoses to remove trapped materials.
Occupational Spill: Do not touch spilled material. Stop leak if possible. Absorb on sand or other absorbent and put in clean container For disposal

HANDLING AND STORAGE:

Handling Procedure: Do not drop the container. Keep tightly closed; avoid breathing of vapours and bodily contact
Storing Procedures: Store in a dry cool well ventilated area away from food stuff and animal feed.

EXPOSURE CONTROLS/PERSONAL PROTECTION:

Eye/Face Protection: safety goggles or face shield.
Hand Protection: Suitable chemical resistant gloves.
Body Protection: Boots and apron and hat
Respiratory: Approved respiration
Ventilation: Provide local exhaust
Industrial hygiene: Safety shower and eye wash should be provided at work place. Do not eat, drink or smoke while working. Wash hands before meals and after work with soap.

PHYSICAL AND CHEMICAL PROPERTIES:

Appearance: Light yellow
Physical State: Liquid
Odor: Mild aromantic odour
Bulk Density: 0.91 g/ml
Type of formulation: Emulsion concentrate (EC)

STABILITY AND REACTIVITY:

Chemical Stability: Stable at normal temperature and storage condition
Decomposition: Decomposes on heating
Thermal decomposition Product: on combustion hydrochloric acid, HCN CO, CO2, NOX may be produced
Incompatibility: In compatible with alkalis

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Corrosiveness: May corrode iron
Polymerization: No hazardous polymerization has been reported to occur under normal condition

TOXICOLOGICAL INFORMATION:

Acute Oral Toxicity: Acute oral Rat LD50 :>400mg/kg
Acute Percentaneous toxicity: Acute dermal Rabbit >2000mg/kg
Acute Inhalation: Rat LC50 2.7 mg/l
Skin irritation Rabbit: Slightly irritant
Eye irritation Rabbit: Slightly irritant
Short term Oral administration: At 0.1mg/kg for 3 months in rat –No toxic effects were found.
Short term Sensitizing effects: Weak sensitizer to guinea pig
Toxic effects of metabolites: No toxic effects of Metabolites Break –down products impurities.
Metabolic: Alphacypermethrin did not induce either cytochrome P-450 or NAPH cytochrome C reductase activity in heptocytes of male Long- Evans rats following 50 mg/kg bw per day, orally for upto 12 days.
Long-term toxicity, including carcinogenicity: 2 year feeding rats Dose 1& 3 mg/kg – NOAEL= 3mg/kg/day
Neurotoxicity : Alphacypermethrin administered orally to rats and hamsters in high acuter and subacute doses produced reversible clinical sings of ataxia, behaviour changes and, histological and chemical changes consistent with Wallerian degeneration. Doses below the lethal range did not produce lesions in the sciatic and posterior tibial nerves. There was no evidence of delayed neurotoxicity in hens given 1.0 mg/kg bw doses of alphacypermethrin.
Reproduction studies: In a three-generation studying rats, at concentrations upto 500 mg/kg of diet, no effects on reproduction was noticed.
Embryo toxicity, including teratogenicity: No evidence of teratogenic potential was observed in rats and rabbits given doses of up to to 70 mg/kg bw per day from day 6 to day 15 of gestation in rats or 30 mg/kg bw per day from day 6 to day 18 of gestation in rabbits.
Mutagenicity: Alphacypermethrin (with and without rat liver microsomal activation) was not observed to be genetically active in mitotic gene converstion assay with S. cerevisiae; in a mutation rate assay with E.coli and S.Typhimurium (TA-1538) at 500 mg/plate doses;

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in a revertant gene assay with S.Typhimurium (TA-1535, 1537, 1538-98 and 100) at 1 mg/plate doses; and, in a mouse host-mediated assay with S.cerevisiae at 25 and 50 mg/kg bw given orally. It was also observed to be inactive in a Chinese hamster chromosomal damage assay at 20 and 40 mg/kg bw, given orally.

ECOLOGICAL INFORMATION:

Fate and mobility studies of toxicant:

Soil: Moderate persistence in soils.

Under laboratory conditions, Alphacypermethrin 25% EC degrates more rapidly on sandy clay and sandy loan soils than on clay soils, and more rapidly in soils low in organic material. It is more persistent under anerobic conditions. It photodegrades rapidly with a half life of 8 to 16 days. This is also subject to microbial degradation under aerobic conditions.

Water: In Pond water and in laboratory degradation studies it's concentrations decrease rapidly due to sediment, suspended particles and plants. Microbial degradation and photodegradation also occur.

Plant: When applied to strawberry plants, 40% of the applied alphacypermethrin 25 EC, remained afterone day, 12% remained three days, 0.5% remained after 7 days, with al light rain occurring on day three.

No phytotoxic when used as per field recommendation.

Animal: In rats, rapidly metabolized by hydroxylation and cleavage, with 99% being eliminated within hours. The remaining 1% becomes stored in body fat

DISPOSAL CONSIDERATIONS:

After intended use: Triple rinse containers before disposal and add rinsing to the Tank mix or dispose of in a disposal pit away from waterways. Destroy empty containers by breaking, crushing or puncturing them. Bury containers at a depth of 50 cm or more at a safe disposal site, or take them to a dump that does not burn its refuse. Do not burn empty containers or product.

After spill or accident: Disposal of sealed containers, empty container. Waste product, at an approved local waste disposal site.

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