



Material Safety Data Sheet (MSDS) Acichlor 50 PH(EC)

IDENTIFICATION OF THE SUPPLIER:

AGRO CHEMICALS INDUSTRIES LTD
JORDAN AMMAN
P.O.Box 183020 Amman 11118 Jordan
Tel. +962 6 5548224/5
Fax. +962 6 5548220
E-mail info@aci.com.jo

PRODUCT IDENTIFICATION:

Common Name: Chloropyrifos 50% w/v
Trade Name: Acichlor 50 PH
Chemical Name: 0,0- Diethyl 0 – (31516 – trichloro –2- pyridinyl)
phosphorothioate
Chemical Formula: C₉H₁₁CL₃NO₃PS
Molecular Weight: 350.6

PRODUCT COMPOSITION:

<i>Active Ingredient:</i>	<i>% w/v</i>	<i>CAS #</i>
Chlorpyrifos	50%	[2921-88-2]

Inert ingredient:

Emulsifier	6 %	--
Solvent	Up to 100%	--

HAZARDS IDENTIFICATION:

Classified as hazardous according to the criteria of NOHSC
Classified as dangerous good for transport combustible C1

Risk phrases:

R24/25: toxic in contact with skin and if swallowed
R65: harmful – may cause lung damage if swallowed





R36/38: irritating to eyes and skin

R33: danger of cumulative effect

R50/53: very toxic to aquatic organisms may cause long term adverse effect in the aquatic environment

FIRE-FIGHTING MEASURES: -

Flash point: 45 °C

Flammable limits: 0.9 – 6.0 % for the solvent.

Extinguishing media: Carbon dioxide, dry chemical, foam, water fog.

Fire and explosion hazards: Vapours from this product are heavier than air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures. They may also flash back considerable distances.

Fire fighting equipment: When fighting fires involving significant quantities of this product, wear safety boots, non-flammable overalls, gloves, hat goggles and self-contained breathing apparatus. All skin should be covered.

FIRST-AID MEASURES:

Inhalation: If symptoms of poisoning become evidence, call a doctor. Remove source of contamination or move victim to fresh air. If breathing is difficult, oxygen may be beneficial if administered by trained personnel, preferably on a doctor advice. Do not allow victim to move about unnecessarily. Symptoms of pulmonary edema can be delayed up to 48 hours after exposure.

Eye contact: Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 20 minutes or until the product is removed, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. Obtain medical attention immediately. Take special care if exposed person is wearing contact lenses.

Skin contact: Flush contaminated area with lukewarm, gently flowing water at least 20-30 minutes, by the clock. Do not interrupt flushing. If necessary, keep emergency vehicle waiting. Under running water, remove contaminated clothing, shoes and lather goods. If breathing has stopped, trained personal should be beginning artificial respiration or, if the heart has stopped, cardiopulmonary resuscitation immediately

Ingestion: call a doctor, don't induce vomiting.



ACCIDENTAL RELEASE:

ACTION TO TAKE FOR SPILLS:

In case of spills it is important to take all steps necessary to:

Avoid eye and skin contact.

Avoid contamination of waterways.

1. Keep all bystanders away.
2. Wear full-length clothing and PVC gloves.
3. Reposition any leaking containers so as to minimise further leakage.
4. Dam and absorb spill with an absorbent material (e.g. sand or soil).
5. Shovel the absorbed spill into drums and top with hydrated lime.
6. Disposal of the absorbent material will depend on the extent of the spill.

For quantities up to 50L of product bury in a secure land fill site.

For quantities greater than 50L seek advice from the manufacturer before attempting disposal. Contain in a secure location until disposal method is established.

7. Decontaminate spill area with hydrate lime scattered over the spill prior to rinsing off with water

PERSONAL PROTECTION/SAFTETY:

EXPOSURE GUIDELINES:

For chlorpyrifos; 0.2 mg/m³, TWA, skin.

For Aromatic hydrocarbon, the supplier recommends an occupational exposure limit of 100 ppm (TWA) as total hydrocarbon.

ENGINEERING CONTROLS: Natural ventilation only except in confined spaces where a local exhaust fan should be provided while handling the concentrate.

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING

WORKERS: Eye washing and shower facilities available.

EYE / FACE PROTECTION: Face and eye protection should be worn. For help in selecting suitable equipment consult AS 1336 and AS/NZS 1337.

SKIN PROTECTION: Wear chemical resistant PVC or nitrile gloves. Wear cotton overalls and washable cotton hat. Wear boots. For help in selecting suitable gloves consult AS 2161. For help in selecting suitable clothing consult AS 2919. For help in selecting boots consult AS/NZS 2210

RESPIRATORY PROTECTION: Avoid inhaling spray mist. For help in selecting suitable equipment consult AS/NZS 1715.

APPLICATIONS AND ALL OTHER HANDLERS:





After handling this product always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

HANDLING AND STORAGE:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Store in a cool dry place away from direct sunlight. Store away from food and food stuffs for animal or human consumption. Store in its original container well sealed.

TOXICOLOGICAL INFORMATION:

Acute Toxicity: Chlorpyrifos is harmful to humans. Symptoms of acute exposure to organophosphate or cholinesterase-inhibiting compounds may include the following: numbness, tingling sensations, incoordination, headache, dizziness, tremor, nausea, abdominal cramps, sweating, blurred vision, difficulty breathing or respiratory depression, and slow heartbeat. Very high doses may result in unconsciousness, incontinence, and convulsions or fatality. Person with respiratory ailments, recent exposure to cholinesterase inhibitors, cholinesterase impairment, or liver malfunction are at increased risk from exposure to chlorpyrifos. The oral LD₅₀ for chlorpyrifos in rats is 95 to 270 mg/kg. The LD₅₀ for chlorpyrifos is 6- mg/kg in mice, 1000 mg/kg in rabbits, 32 mg/kg in chickens, 500 to 504 mg/kg in guinea pigs, and 800 mg/kg in sheep. The dermal LD₅₀ is greater than 2000 mg/kg in rats, and 1000 to 2000 mg/kg in rabbits. The 4-hour inhalation LC₅₀ for Chlopyrifos in rats is greater than 0.2 mg/L.

Chronic toxicity: Repeated or prolonged exposure to organophosphates may result in the same effects as acute exposure including the delayed symptoms. Other effect reported in worker repeatedly exposed include impaired memory and concentration, disorientation, severe depressions, irritability, confusion, headache, speech difficulties, delayed reaction times, nightmares, sleepwalking, and drowsiness or insomnia. Rats and mice given technical chlorpyrifos in the diet for 104 weeks showed no adverse effects other than cholinesterase inhibition.





ECOLOGICAL INFORMATION: -

Effect on birds: Chlorpyrifos is moderately to very highly toxic to birds.

Effect on aquatic organisms: Chlorpyrifos is very highly toxic to freshwater fish, aquatic invertebrates and estuarine and marine organisms. Cholinesterase inhibition was observed in acute toxicity tests of fish exposed to very low concentration of this pesticide.

Effect on other organisms: Aquatic and general agricultural uses of Chlorpyrifos pose a serious hazard to wildlife and honeybees.

Environmental Fate:

Breakdown in soil and groundwater: Chlorpyrifos is moderately persistent in soils. The half life of chlorpyrifos in soil is usually between 60 and 120 days, but can range from 2 weeks to over 1 year, depending on the soil type, climate, and other conditions. Chlorpyrifos adsorbs strongly to soil particle and it is not readily soluble in water. It is therefore immobile in soils and unlikely to leach or to contaminate ground water. TCP, the principle metabolite of chlorpyrifos, adsorbs weakly to soil particles and appears to be moderately mobile and persistent in soils.

Breakdown in water: The concentration and persistence of chlorpyrifos in water will vary depending on the type of formulation. The rate of hydrolysis is constant in acidic to natural waters, but increase in alkaline waters. In water at PH 7.0 and 25⁰C, it had a half life of 35 to 78 days.

Breakdown in vegetation: Chlorpyrifos may be toxic to some plants, such as lettuce. Residues remain on plant surfaces for approximately 10 to 14 days. Data indicate that this insecticide and its soil metabolites can accumulate in certain crops.

DISPOSAL CONSIDERATIONS:

Disposal: There are many pieces of legislation covering waste disposal and they differ in each state and territory, so each user must refer to laws operating in their area.

The product label will give general advice regarding disposal of small quantities, and how to cleanse containers.

