

SAFETY DATA SHEET

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

Product Name: 2,4-D 240 g/L + Picloram 60g/L SL

Substance: Soluble concentrate of 2,4-D+Picloram

Chemical name of active ingredient: 2,4-D:
IUPAC Name: (2,4-dichlorophenoxy)acetic acid
CA Name: (2,4-dichlorophenoxy)acetic acid Picloram:
IUPAC Name:
4-amino-3,5,6-trichloropyridine-2-carboxylic acid;
4-amino-3,5,6-trichloropicolinic acid CA
Name:
4-amino-3,5,6-trichloro-2-pyridinecarboxylic acid

Product Use: Agricultural herbicide

Manufacturer: Spinochem Tech Co.,Ltd

Address: No.2278,Zhaochong Rd,Shanghai,China

Emergency telephone No.: + 86 21 5771 0105

2. HAZARDS IDENTIFICATION

May cause eye irritation or slight corneal injury. Prolonged or repeated exposure may cause skin irritation. Combustible. Keep away from heat and open flame.
Hydrogen chloride maybe produced during fire situations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS No.	Content
2,4-D	94-75-7	240 g/L
Picloram	1918-02-1	60 g/L

Others	Not applicable	Up to 1000 g/L
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4. FIRST AID MEASURES **General advice**

Have the product container, label or Safety Data Sheet with you when going for treatment. Tell the person contacted the complete product name, and the type and amount of exposure. Describe any symptoms and follow the advice given.

If ingested

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

If inhaled

Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest. Call for a physician or Poison Control Centre immediately.

In case of skin contact

Remove all contaminated clothing and shoes. Wash off skin immediately with soap and plenty of water. If poisoning occurs seek immediate medical attention.

In case of eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labeling (see section 2) and /or in section 11.

Note to physician

There is no specific antidote available. Treat symptomatically.

5. FIRE-FIGHTING MEASURES **Suitable Extinguishing Media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture

During a fire, smoke may contain the original material in addition to unidentified toxic and/or irritating compounds.

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NO_x), Hydrogen chloride gas.

Advice for firefighters

Wear protective clothing and self-contained breathing apparatus. Do not allow run-off from firefighting to enter drains or water courses. Cool closed containers exposed to fire with water spray

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

For personal protection see section 8.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Method and material for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Reference to other sections For disposal see section 13.

7. HANDLING AND STORAGE Precautions for safe handling

Avoid contact with eyes and skin. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Conditions for safe storage, including any incompatibilities

Keep out of reach of children. Store in the closed, original container in a cool, well ventilated area. DO NOT store for prolonged periods in direct sun light.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION Control parameters

Components with workplace control parameters.

Exposure limits 2,4-D:

Picloram:10 (mg/m³) TWA, basis USA. ACGIH Threshold Limit Values (TLV)

Acceptable Daily Intake (ADI):

2,4-D: JMPR: 0.01 mg/kg b.w. [2001, 1997]; 0.01 mg/kg b.w. [1996] (sum of 2,4-D and its salts and esters, as 2,4-D); EC: 0.05 mg/kg b.w. [2001]; EPA: aRfD 0.025, cRfD 0.005 mg/kg b.w. [2005].

Picloram: (EC) 0.3 mg/kg b.w. [2008]; (BfR) 0.2 mg/kg b.w. [2006]; (EPA) cRfD 0.2 mg/kg b.w. [1995].

No-observable-effect-level (NOEL):

2,4-D: Rats and mice 2-year, 5mg/kg b.w.; Dogs ,1-year, 1 mg/kg b.w.

Picloram: (2 y) for rats 20 mg/kg daily.

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Wash hands before breaks and at the end of workday.

Personal protection equipment

Eye Protection: Protective glasses or goggles should be worn when this product is being used. Failure to protect your eyes may cause them harm. Emergency eye wash facilities are also recommended in an area close to where this product is being used.

Skin Protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body protection Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Environmental exposure controls

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Discharge into the environment must be avoided.

User safety recommendations:

Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing immediately after handling this product. Wash outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Brown to yellow liquid

Vapor Pressure: Not applicable for the end-use product, Refer to the active substance, 8×10^{-11} mPa (25°C, picloram); 1.86×10^{-2} mPa (25 °C) (OECD 104, 2,4-D)

Water Solubility: SL is soluble in water.

pH 6-8

Partition coefficient: Not applicable for the end-use product, Refer to the active substance, $K_{ow} \log P = 1.9$ (20°C, picloram); $K_{ow} \log P = 2.58-2.83$ (pH 1), $0.04-0.33$ (pH 5); -0.75 (pH 7) (EPA RED, 2,4-D)

10. STABILITY AND REACTIVITY Reactivity

No data available.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions No

data available.

Conditions to avoid

Avoid extremes of temperature

Incompatible materials

Strong oxidizing agents, Strong acids, Acid chlorides, Acid anhydrides, Strong bases.

Hazardous decomposition products

Other decomposition products - No data available.

In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

There is no data available for the formulation type, so the technical information is listed for the reference.

2,4-D:
Acute Oral Rats: LD₅₀ 949mg /kg
Inhalation Rats: LC₅₀ (4 h) >3.5mg/L air
Skin and Eye Rats: Acute percutaneous LD₅₀>2000mg/kg
Rabbits: Not a skin irritant; severe irritant to eyes.

Picloram:
Acute Oral Rats: LD₅₀ >5000mg/kg(male); mice 2000-4000mg/kg
Sheep: LD₅₀ >1000mg/kg
Cattle: LD₅₀ >750mg/kg
Guinea pigs: LD₅₀ =3000mg/kg
Rabbits: LD₅₀ =2000mg/kg
Inhalation Rats:LC₅₀ >0.035 mg/L air
Skin and Eye Rabbits: Acute percutaneous LD₅₀>2000mg/kg.
Moderate eye irritant; mild skin irritant(rabbits).
STOT-single exposure No data available.
STOT-repeated exposure No data available.
Aspiration hazard No data available.

12. ECOLOGICAL INFORMATION

Eco-toxicity(e-Pesticide Manual) 2,4-D:
Bird Bobwhite quail: Acute oral LD₅₀ 500mg/kg
Mallard ducks: Acute oral(5 d) LD₅₀>5620mg/L
Fish Rainbow trout: LC₅₀ (96-hour) 100mg/L
Algae Selenastrum
capricornutum: EC₅₀ 51.2mg/L

		Navicula pelliculosa: EC ₅₀ 4.67mg/L
Bees		LD ₅₀ (contact) >100µg/bee; LD ₅₀ (oral) 94µg/bee
Other aquatic spp	Lemna gibba	EC ₅₀ 0.58mg/L. NOEC 0.27 mg/l.

Picloram:

Bird	Chicks	LC ₅₀ >6000mg/kg
	Mallard ducks	LC ₅₀ >5000mg/kg(diet)
	Bobwhite quail	LC ₅₀ >5000mg/kg(diet)
Fish	Rainbow trout:	LC ₅₀ (96h) =5.5mg/L
	Bluegill sunfish:	LC ₅₀ (96h) =14.5mg/L
Daphnia	Daphnia	LC ₅₀ =63.8mg/L
Algae	<i>Selenastrum</i> :	EC ₂₅ = 52.6mg/L
Bees	Bee	LD ₅₀ >100µg/bee

13. DISPOSAL CONSIDERATIONS

Triple or preferably pressure rinse containers before disposal. Add rinsing to spray tank. DO NOT dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill available, bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt. Dispose of washings, contaminated materials, used absorbents and other waste materials as directed by local regulations

14. TRANSPORT INFORMATION

UN Number: UN3082

Proper Shipping Name: Environmentally hazardous substance, liquid, N.O.S.
(contains 2,4-D Acid and Picloram)

Transport Hazard Class: 9

Packing Group: III

Hazard Zone: A

Marine Pollutant: Yes

15. REGULATORY INFORMATION Safety, health and environmental regulations/legislation specific for the substance or mixture

No data available

Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

16. OTHER INFORMATION Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall we be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if we have been advised of the possibility of such damages.