



BR AGROTECH LIMITED

(AN ISO 9001:2008 & 14001:2004 CERTIFIED COMPANY)
WORKS : Industrial Area, SIDCO, Kathua - 184101 (J & K)
Phone : 01922 - 203025 • Telefax : 01922 - 232165

MATERIAL SAFETY DATA SHEET

Product Name: Thiamethoxam 30.0% FS
Company : BR Agrotech Limited
Industrial Area, SIDCO,
Railway Road Kathua-184101
Emergency No.: 09596751491

SECTION 1. CHEMICAL IDENTIFICATION

Chemical Name: Thiamethoxam 30% FS

Product Designation: Insecticides

Chemical Name of Active Ingredient: 3-[(2-chloro-5-thiazolyl) methyl] tetrahydro-5-methyl-N-nitro-4H-1, 3, 5-oxadiazin-4- imine (IUPAC)

Chemical Formula of Active Ingredient: C₈H₁₀ClN₅O₃S

CAS Number of Active Ingredient: 153719-23-4

Formulation: liquid suspension

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

Component CAS Number Content (% w/v)

Thiamethoxam 153719-23-4, 30 %

Inert ingredients non-hazardous 70%

SECTION 3. HAZARDS IDENTIFICATION

Inhalation. Harmful inhalation. May cause irritation of the nose, throat and lungs.

Eye Contact: May cause mild to moderate skin irritation due to inerts.

Skin Contact May cause mild to moderate skin irritation due to inerts.

Ingestion: Harmful if swallowed. Over exposure to the product may cause irritation, nausea, vomiting, diarrhea, headache, confusion, liver effects, lethargy, muscle tremors and convulsions.

Other Effects: Thiamethoxam has been classified as an 'unlikely' human carcinogen. Thiamethoxam has relatively low acute and chronic toxicity in mammals. There was no evidence of carcinogenicity, neurotoxicity, mutagenicity and/or endocrine disruption.

SECTION 4. FIRST AID MEASURES

Eye Contact: Flush eyes with clean water, holding eyelids apart for a minimum of 15 - 20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call doctor for treatment advice. Obtain medical attention immediately if irritation persists.

Skin Contact: Immediately remove contaminated clothing and wash skin, hair and fingernails thoroughly with soap and water. Flush skin with plenty of water for 15-20 minutes. Call doctor for treatment advice.

Inhalation. : Move victim to fresh air. If not breathing, call an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call doctor for treatment advice.

Ingestion: If swallowed, immediately contact nearest hospital for treatment advice. Have person sip a glass of water if able to swallow. Do not give anything by mouth to an unconscious person. Do not induce vomiting unless directed by a physician or a poison control center. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer water.

Note to Physician:

There is no specific antidote. Treat symptomatically.

Medical condition known to be aggravated: None known.

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SECTION 5. FIRE FIGHTING MEASURES

Flash point and method: Not applicable.

Extinguishing agents:

Extinguish fires with carbon dioxide, dry powder, or alcohol-resistant foam. Water spray as a fog can be used for cooling of unaffected stock, but avoid water coming in contact with the product. Contain water used for fire-fighting for later disposal. Avoid the accumulation of polluted run-off from the site.

Fire fighting:

Remove spectators from surrounding area. Remove container from fire area if possible without risk. Eliminate all ignition sources in immediate area. Fight fire from maximum distance. For massive fire, use unmanned hose holder or monitor nozzles. Contain fire control agents for later disposal. Use a recommended extinguishing agent for the type of surrounding fire. Avoid inhaling hazardous vapours. Keep upwind.

This product will emit toxic fumes when burned, including fumes of SO₄. May produce irritating or poisonous mists or other products of combustion.

Personal protective equipment:

Fire-fighters and others that may be exposed should wear full protective impervious clothing, including gloves and eye protection, and self-contained breathing apparatus. Contact with the fumes and vapours should be avoided by staying upwind.

Clean all clothing before re-use. Severely contaminated clothing cannot be adequately decontaminated, and must be disposed as a hazardous waste. Shower with soap and water after contact with this product.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Make sure all personnel involved in the spill cleanup follow good industrial hygiene practices. A small spill can be handled routinely. Wear suitable protective equipment and clothing as described in Section 8 and/or the product label.

Procedures for dealing with release or spill: Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Sections 7 and 8. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with detergent and water. Pick up wash liquid with additional absorbent and place into compatible disposal container. On soils, small amounts will naturally decompose. For large amounts, skim off the upper contaminated layer and collect for disposal. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposal. Spillages or uncontrolled discharges into watercourses must be reported to the appropriate regulatory authority.

SECTION 7. HANDLING AND STORAGE:

Handling practices: This product is a combustible powder and like all combustible powders can ignite, burn and form explosive mixtures with air if not handled correctly. Mixtures of powder in air with flammable solvent vapours should be avoided. This product has minimum ignition energy between 30 and 100 milli joules. Mechanical sparks, open flames and certain hot surfaces can serve as ignition sources for this material. Eliminate the presence of mechanical sparks and other ignition sources where dust clouds of this material could form. This product can energetically decompose at approximately 140°C (284°F). Do not store or process at temperatures above 70°C (158°F). Do not store near sources of heat including steam lines. Keep fire exposed containers cool by spraying with water.

Keep out of reach children. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Avoid breathing vapours or spray mist. Wear appropriate protective clothing and equipment (see Section 8). After work, rinse gloves and remove protective equipment, and wash hands thoroughly with soap and water after handling, and before eating, tobacco use, drinking, applying cosmetics or using the toilet. Wash contaminated clothing before re-use and separate from household laundry.



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Keep containers closed when not in use. Keep product, wash or rinse water, and contaminated materials out of water, and away from access by animals, birds or unauthorized people.

Appropriate storage practices/requirements: Store in original container only in a well-ventilated, cool, dry, secure area. Protect from heat, sparks and flame. Do not expose sealed containers to temperatures above 40°C. Keep separate from other products to prevent cross contamination. Rotate stock. Clean up spilled material immediately.

National Fire Code classification: Combustible powder.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Applicable control measures, including engineering controls: This product is intended for use outdoors where engineering controls are not necessary. If necessary, ensure work areas have ventilation, containment, and procedures sufficient to maintain airborne levels below the TLV. Warehouses, production area, parking lots and waste holding facilities must have adequate containment to prevent environmental contamination. Provide separate shower and eating facilities.

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT.

CONSULT THE PRODUCT LABEL FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS.

Personal protective equipment for each exposure route:

General: Avoid breathing dust, vapours or aerosols. Avoid contact with eye, skin and clothing. Wash thoroughly after handling and before eating, drinking, applying cosmetics or handling tobacco.

Ingestion: Do not eat, drink, handle tobacco, or apply cosmetics in areas where there is a potential for exposure to this material. Always wash thoroughly after handling.

Eyes: Where eye contact is likely, use chemical splash goggles. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Skin: Where contact is likely, wear chemical-resistant gloves (such as nitrile or butyl), coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear.

Inhalation: A respirator is not normally required when handling this substance. A combination gas/vapour/particulate respirator should be used until effective engineering controls are installed to comply with occupational exposure limits, or until exposure limits are established. Use a NIOSH certified respirator with a combination acid gas/organic vapour cartridge or canister and any N, P or R pre-filter. Use a self-contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Free flowing suspension.

Formulation Type: Liquid.

Odor: Not determined

pH: 6 -10 (1% aqueous solution).

Specific gravity or density: 1.12-1.16 g/ml @ 27°C.

Solubility in Water: 4.1 g/L @ 25°C .

SECTION 10. STABILITY AND REACTIVITY

Chemical stability: Stable under normal use and storage conditions.

Conditions to avoid: None known.

Incompatibility with other materials: None known.

Hazardous decomposition products: Can decompose at high temperatures and form toxic gases.

Hazardous polymerization: Will not occur.

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SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity/Irritation Studies (Finished Product):

Ingestion: Low Acute Toxicity
Oral (LD50 Rat): > 5,000 mg/kg body weight
Dermal: Low Acute Toxicity
Dermal (LD50 Rabbit): > 2,000 mg/kg body weight
Inhalation: Low Acute Toxicity
Inhalation (LC50 Rat): > 2.79 mg/L air - 4 hours
Eye Contact: Mildly Irritating (Rabbit)
Skin Contact: Mildly Irritating (Rabbit)
Skin Sensitization: Not a Sensitizer (Guinea Pig)

Reproductive/Developmental Effects

Thiamethoxam: Not teratogenic or a reproductive toxicant. Minor testis effects at high doses with no effect on reproduction.

Chronic/Subchronic Toxicity Studies

Thiamethoxam: Liver and kidney effects at high doses in animal models. Not neurotoxic in animal models.

Carcinogenicity

Thiamethoxam : Liver tumors, at high doses in mice, that are not relevant to humans.

Other Toxicity Information:

None.

Toxicity of Other Components

The acute toxicity test results reported in Section 11, above, for the finished product take into account any acute hazards related to the "other components" in the formulation.

Crystalline Silica, Quartz and Cristobalite

Chronic inhalation exposure to crystalline silica is known to cause silicosis and pulmonary fibrosis in humans.

Experimental animals exposed to crystalline silica developed respiratory tract cancers.

Diatomaceous Earth:

The carrier in this product is naturally occurring diatomaceous earth. Natural diatomaceous earth contains a small percentage of naturally occurring crystalline silica, which is considered a probable human carcinogen. Chronic inhalation exposure to crystalline silica is known to cause silicosis and pulmonary fibrosis in humans. The amount of crystalline silica in this product is minimal and the potential for overexposure in manufacturing operations is low.

Starch:

May cause eye and skin irritation. May cause respiratory tract irritation. Low hazard for usual industrial handling. Prolonged contact can cause chemical pneumonitis.

Other materials that show synergistic toxic effects together with the product: None known.

Target Organs

Active Ingredients

Thiamethoxam : Liver, kidney.

Inert Ingredients

Crystalline Silica, Quartz and Cristobalite: Respiratory tract

Diatomaceous Earth: Respiratory tract.

SECTION 12. ECOLOGICAL INFORMATION

Summary of Effects

The active ingredient, thiamethoxam, is slightly to practically non-toxic to fish, birds and aquatic invertebrates (water flea).

Eco-Acute Toxicity

Thiamethoxam :

Green Algae 5-Day EC50 > 100 ppm

Invertebrate (Water Flea) 48-hour EC50 > 106 ppm

Fish (Rainbow Trout) 96-hour LC50 > 100 ppm



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Bird (Bobwhite Quail) 8-day Dietary LC50 > 5,200 mg/kg

Environmental Fate

The active ingredient, thiamethoxam, has a moderate bioaccumulation potential, low mobility, and moderate persistence in soil and water

SECTION 13. DISPOSAL CONSIDERATIONS

Waste disposal information: Do not reuse empty containers unless they are specifically designed to be re-filled. Empty container retains product residue. Dispose of empty containers in accordance with local regulations. Consult provincial environment ministry for advice on waste disposal. Industrial/commercial waste may be handled at licensed facilities only. Waste shipments must be securely packaged and properly labelled. Only licensed carriers may be used, and proper documents must accompany the shipment.

SECTION 14. TRANSPORT INFORMATION

UN No.: Not Shipping information such as shipping classification:

TRANSPORTATION OF DANGEROUS GOODS CLASSIFICATION - ROAD/RAIL

Not regulated

SECTION 15. REGULATOR INFORMATION

Hazard symbol	N	Dangerous for the environment
Special Risks (R – Phase)	R22 R50/53	Harmful if swallowed Very toxic to aquatic organism. May cause long – Adverse effects in the aquatic environment.
Safety advice (s – phrases)	S2 S13 S20/21 S35 S57	Keep out of the reach of children Keep away from food , drink & animal feeding Stuffs When using do not eat , drink or smoke This material & container must be disposed in a Safe way Use appropriate container to avoid Environmental contamination
International WHO Toxicity Classification	III	Slightly hazardous.

SECTION 16. OTHER INFORMATION

The information contained herein is offered only as a guide to the handling of this specific material and has been prepared in good faith by technically knowledgeable personnel. It is not intended to be all-inclusive and the manner and conditions of use and handling may involve other and additional considerations. No warranty of any kind is given or implied and BR Agrotech Ltd. will not be liable for any damages, losses, injuries or consequential damages which may result from the use of or reliance on any information contained herein. This Material Safety Data Sheet is valid for three years. This product is under the jurisdiction of the Pest Control Products Act and is exempt from the requirements for a WHMIS compliant MSDS. Hazardous properties of all ingredients have been considered in the preparation of this MSDS. Read the entire MSDS for the complete hazard evaluation of this product.

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