

**Sharda International Africa cc**  
**P.O. Box 82021, Southdale, 2135, South Africa**  
**Tel. 031 266 3264, Fax: 086 641 2325**  
**EMAIL: shardain@vsnl.com Website: http://www.shardaafrica.com**  
**(Co. Reg. No. 2010/002268/07)**

**MATERIAL SAFETY DATA SHEET**  
**Thiamethoxam 25% WG**

<b>1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY/UNDERTAKING</b>			
	Product name	<b>Thiamethoxam</b>	
	Supplier	<b>Sharda International Africa cc</b> <b>P.O. Box 82021,</b> <b>Southdale ,</b> <b>2135,</b> <b>South Africa</b>	
	Emergency telephone number	+2731 266 3264	
	Chemical Name	4H-1,3,5-Oxadiazin-4-imine,3-[(2-chloro-5-thiazolyl) methyl]tetrahydro-5-methyl-N-nitro-	
	Chemical Class	Neonicotinoid Insecticide	
<b>2. HAZARDS IDENTIFICATION</b>			
	<b>Health and Environmental:-</b> Irritating to eyes and skin. Harmful by inhalation. May form flammable dust-air mixture.		
	<b>Hazardous Decomposition Products:-</b> May decompose at high temperatures forming toxic gases.		
	<b>Physical Properties:-</b>		
	Appearance:	Beige to brown granules	
	Odor:	Musty	
<b>3. COMPOSITION/INFORMATION ON INGREDIENTS</b>			
	<b>Material</b>	<b>CAS no</b>	<b>Proportion</b>
	Thiamethoxam	153719-23-4	25.00%
	Other Ingredients	-	75.00%

<b>FIRST AID MEASURES</b>
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	Have the product container, label or Material Safety Data Sheet with you when calling a poison control center or doctor, or going for treatment.	
	Ingestion:	If swallowed: Call poison control center or doctor immediately for treatment advice. Have the person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so after calling poison control center or doctor. Do not give anything by mouth to an unconscious person.
	Eye Contact:	If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Poison control center or doctor for treatment advice.
	Skin Contact:	If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call poison control center or doctor for treatment advice.
	Inhalation:	If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call poison control center or doctor for further treatment advice.
	<b>Notes to Physician:-</b> There is no specific antidote if this product is ingested. Treat symptomatically.	
	<b>Medical Condition Likely to be Aggravated by Exposure:-</b> None known.	
<b>5.</b>	<b>FIRE FIGHTING MEASURES</b>	
	<b>Fire and Explosion</b>	
	Flash Point (Test Method):	Not Applicable
	Flammable Limits (% in Air):	Lower: Not Applicable      Upper: Not Applicable
	Autoignition Temperature:	Not Available
	Flammability	Not Applicable
	Unusual Fire, Explosion and Reactivity Hazards 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 vapors should be avoided.	
	During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.	

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	<p>In Case of Fire  Use appropriate extinguishing media for combustibles in the area. Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.</p>	
<b>6.</b>	<b>ACCIDENTAL RELEASE MEASURES</b>	
	<p>In Case of Spill or Leak</p>	<p>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 in Protective Equipment Section. Sweep up material and place in a compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.</p>
<b>7.</b>	<b>HANDLING AND STORAGE</b>	
	<p>This product has a minimum ignition energy between 30 and 100 millijoules. 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 284°F (140°C). Do not store or process at temperatures above 158°F (70°C). Do not store near sources of heat including steam lines.</p>	
	<p>Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.</p>	
	<b>8. EXPOSURE CONTROLS/PERSONAL PROTECTION</b>	
	<p>THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT.  FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.</p>	
	Ingestion:	Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.
	Eye Contact:	Where eye contact is likely, use chemical splash goggles.

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	Skin Contact:	Where contact is likely, wear chemical-resistant gloves (such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyvinyl chloride [PVC] or Viton), coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear.
	Inhalation:	A respirator is not normally required when handling this substance. Use effective engineering controls to comply with occupational exposure limits.
		In case of emergency spills, use a NIOSH approved respirator with any N, R, or P or HE filter.
<b>9.</b>	<b>PHYSICAL AND CHEMICAL PROPERTIES</b>	
	Appearance:	Beige to brown granules
	Odor:	Musty
	Melting Point:	Not Available
	Boiling Point:	Not Applicable
	Specific Gravity/Density:	0.47 g/cm <sup>3</sup> @ 68°F (20°C)
	pH:	9.4 (1% aqueous dispersion)
	Solubility in H <sub>2</sub> O	
	Thiamethoxam:	4.1g/l @ 77°F (25°C)
	Vapor Pressure	
	Thiamethoxam:	2 x 10 <sup>(-11)</sup> mmHg @ 68°F (20°C)
<b>10.</b>	<b>STABILITY AND REACTIVITY</b>	
	Stability:	Stable under normal use and storage conditions.
	Hazardous Polymerization	Will not occur.
	Conditions to Avoid:	None known.
	Materials to Avoid:	None known.
	Hazardous Decomposition Products:	May decompose at high temperatures forming toxic gases.
<b>11.</b>	<b>TOXICOLOGICAL INFORMATION</b>	
	Acute Toxicity/Irritation Studies (Finished Product)	

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Ingestion:	Practically Non-Toxic
Oral (LD50 Rat)	> 5000 mg/kg body weight
Dermal:	Slightly Toxic
Dermal (LD50 Rat)	> 2000 mg/kg body weight
Inhalation:	Practically Non-Toxic Inhalation (LC50 Rat) : > 2.79 mg/l air - 4 hours
Eye Contact:	Mildly Irritating (Rabbit)
Skin Contact:	Slightly Irritating (Rabbit)
Skin Sensitization:	Not a Sensitizer (Guinea Pig)
Reproductive/Developmental Effects	Thiamethoxam: Developmental: Not teratogenic. Developmental delays at maternally toxic doses. Reproductive: No biologically important reproductive effects. Minor testis effects at high doses with no effect on reproduction.
Chronic/Subchronic Toxicity Studies	
Thiamethoxam: Subchronic:	Predominantly liver and kidney effects at high doses. Not neurotoxic.
Chronic:	Predominantly liver and kidney effects at high doses.
Acute:	Transient clinical signs at high doses. No changes to nervous tissue.
Carcinogenicity	
Thiamethoxam:	Liver tumors at high doses noted in mice that are not relevant to humans. No treatment-related tumors in rats.
Other Toxicity Information	None
Toxicity of Other Components	

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	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	Test results reported in Section 11 for the final product take into account any acute hazards related to the starch in the formulation.
	Target Organs	Active Ingredients
	Thiamethoxam	Liver, kidney
	Inert Ingredients	
	Diatomaceous Earth:	Respiratory tract
	Starch:	Not Applicable
<b>12.</b>	<b>ECOLOGICAL INFORMATION</b>	
	<p>Summary of Effects  Eco-Acute Toxicity  Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.  Thiamethoxam:  Fish (Rainbow Trout) 96-hour LC50 &gt; 100 ppm  Fish (Bluegill Sunfish) 96-hour LC50 &gt; 114 ppm  Bird (Mallard Duck) LD50 Oral 576 mg/kg  Invertebrate (Daphnia Magna) 48-hour EC50 &gt; 106 ppm  Bird (Bobwhite Quail) 8-day dietary LC50 &gt; 5200 ppm  Bee (Contact) LD50 0.024 ug/bee  Environmental Fate  Eco-Chronic Toxicity  The information presented here is for the active ingredient, thiamethoxam.  Not persistent in soil. Stable in water. Moderate mobility in soil. Floats in water (after 24 h).  Thiamethoxam:  Bird (Mallard Duck) 8-day dietary LC50 &gt; 5200 ppm  Green Algae 4-day EC50 &gt; 97 ppm  Thiamethoxam:  Invertebrate (Water Flea) 21-day LOEC 101 ppm  Fish (Fathead Minnow) LOEC 900 ppm</p>	

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<b>13.</b>	<b>DISPOSAL CONSIDERATIONS</b>	
	Disposal	Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.
	Characteristic Waste	Not Applicable
	Listed Waste	Not Applicable
<b>14.</b>	<b>TRANSPORT INFORMATION</b>	
	UN Number	2902
	Class	6.1 : toxic substances.
<b>15.</b>	<b>REGULATORY INFORMATION</b>	
	Symbol (s)	Xn – Harmful
	R-phrases	E20/21/22: Harmful by inhalation, in contact with skin and if swallowed.
	S-phrases	S13: Keep away from food, drink and animal feedin stuffs. S22: Do not breathe dust.
<b>16.</b>	<b><u>OTHER INFORMATION</u></b>	
	Disclaimer	The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of 1 <sup>st</sup> publication. It is not intended as a specification.