

MATERIAL SAFETY DATA SHEET

Section 1. Company Identification and Product Information			
Product Name or Identity:	Agri-Screen® Ticket Pesticide Detectors AT-10 Kit, 10 Samples (8920), AT-25 Kit, 25 Samples (8921) Bulk Tickets and Ampoules (8924), Activator Ampoules (8951, 8956, 8910)		
Manufacturer's Name:	Neogen Corporation	Emergency Phone No.:	517/372-9200
	620 Leshar Place	Fax No.:	517/372-0108
	Lansing, MI 48912	e-mail:	foodsafety@neogen.com
Date Prepared or Revised:	August 2009	Chemtrec: (800) 424-9300	Outside US and Canada: (703) 527-3887

Section 2. Composition / Information on Hazardous Ingredients			
This product is a mixture of the substances listed below with the addition of nonhazardous materials.			
Hazardous Components Specific Chemical Identity:	CAS-No.	% Concentration*	Hazard Symbol
† Bromine	7726-95-6	2%	T (Toxic)
Water	7732-18-5	98%	N/A

*All concentrations are percent by weight.

† This chemical is hazardous according to OSHA / WHMIS criteria.

Section 3. Health Hazard Identification	
Health Hazards: <i>(Acute and Chronic)</i>	Information pertaining to particular dangers for man and environment. R 20, 21, 22, Harmful if contact with skin, by inhalation, and if swallowed. R 26, Very toxic by inhalation R 35, Causes severe burns. R 41, Risk of serious damage to eyes. R 50, Very toxic to aquatic organisms

Section 4. First Aid Measures	
Emergency / First Aid Procedures:	Ingestion: DO NOT induce vomiting. Show physician product label or MSDS. Seek medical attention immediately. Never give anything by mouth to an unconscious person. Inhalation: If inhaled, supply fresh air or oxygen at rest. Seek medical attention immediately. If not breathing, apply artificial respiration. If breathing is difficult, oxygen may be necessary. Eye Contact: Immediately rinse opened eye for at least 15 minutes under running water, lifting lower and upper eyelids occasionally. Remove contact lenses if able. Seek medical attention immediately. Skin Contact: Immediately wash with plenty of soap and water for at least 15 minutes while removing contaminated clothing. Seek medical attention. Wash clothing before reuse.

Section 5. Fire and Explosion Hazard Data	
Flash Point (Method Used): N/A	Flammable Limits: LEL – N/A, UEL – N/A
Extinguishing Media: Use water spray, dry powder, or carbon dioxide.	
Protective Equipment: Firefighters should wear full protective equipment and self-contained breathing apparatus.	
Unusual Fire and Explosion Hazards: Not Applicable	
Hazardous Combustion Products: Not Applicable	

Section 6. Accidental Release Measures	
Personal Precautions: Avoid inhalation of vapors and contact with skin and eyes. Wear suitable protective clothing, gloves, and eye protection.	
Environmental Precautions: Prevent dispersion of material. Avoid discharge into drains, water courses or into the ground. Inform authorities if large amounts are involved.	

Clean-up Methods: Absorb spillage with non-combustible, absorbent material. Collect and dispose of spillage as indicated in Section 13, Disposal information. Contact safety officer if questions arise and ventilate area. Place contaminated material in a chemical waste container.

Section 7. Handling and Storage

Handling: Avoid inhalation of vapors and contact with skin and eyes. Wear appropriate personal protective equipment. Protect against physical damage. Ensure good ventilation / exhaustion. Avoid prolonged or repeated exposure. Do not use if skin is cut or scratched.

Storage: Keep container tightly closed in a well-ventilated place. Store in closed original container in a dry place.

Other Precautions: Keep respiratory protective device available.

Section 8. Exposure Controls / Personal Protection

Components with limit values that require monitoring: Bromine (7726-95-6)

Chemical Name	Source	Type	Exposure Limits
Bromine	US ACGIH TLV	TWA	0.1 ppm
Bromine	US ACGIH TLV	STEL	0.2 ppm

Engineering Controls: Provide adequate ventilation. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist.

Respiratory Protection: Respiratory protection must be used if air contamination exceeds acceptable level. In the US, if respirators are used a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Use a NIOSH-approved respirator (See 29 CFR 1910.134, respiratory protection standard). Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.

Personal Protective Equipment: Personal Protection listed below are general requirements for laboratory personnel. Follow the usual precautionary measures for handling chemicals / powder. Avoid contact with eyes, skin, and clothing. Proper ventilation required. Safety shower and eye bath required.

Keep away from food, beverages, and feed.

Wash hands before and after entering laboratory.

Breathing Equipment: In case of brief exposure, use a chemical fume hood or a NIOSH / MSHA-approved respiratory.

Hand Protection: Use chemical resistant gloves. Be aware that the liquid may penetrate gloves.

Eye Protection: Wear approved safety goggles.

Body Protection: Wear lab coat or other protective work clothing.

Environmental Exposure Controls: Environmental manage must be informed of all major spillages.

Section 9. Physical and Chemical Properties

Appearance and Odor: Amber liquid, characteristic Bromine odor.	Evaporation Rate: No data available.
Boiling Point: Not determined	Vapor Pressure: No data available.
Melting Point: Not determined	Vapor Density (Air=1): No data available.
Solubility in Water: Completely soluble	Viscosity: No data available.

Section 10. Stability and Reactivity

Stability:	Unstable		
	Stable	X	Conditions to Avoid: Stable under normal temperature conditions.
Incompatibility (Materials to Avoid): Incompatible with reducing agents and organic materials			
Hazardous Decomposition or Byproducts: Corrosive in the presence of aluminum and zinc.			
Hazardous Polymerization:	May Occur		Conditions to Avoid: Heat and incompatible materials.
	Will Not Occur	X	

Section 11. Toxicological Information**LD/LC50 values that are relevant:** LD₅₀: ORL-RAT, 1700 mg/kg, BromineLC₅₀: Inhalation-Rat, 2700 mg/m³**Carcinogenicity Classification:****IARC (International Agency for Research on Cancer) – Not Listed****NTP (National Toxicology Program) - Not Listed****Eye:** Produces eye irritation. Exposed individuals may experience eye tearing, redness, and discomfort.**Ingestion:** May be harmful if swallowed.**Inhalation:** Lung sensitizer.**Skin:** Causes skin irritation, chronic exposure may produce burns.**Chronic:** Repeated or prolonged exposure to the substance can produce target organ damage. Repeat contact to spray mist may produce chronic eye, skin, and respiratory tract irritation leading to frequent attacks of bronchial infection.**Target Organs:** Eye, Skin, and Lungs.**Section 12. Ecological Information****Ecotoxicity Tests:** This product contains a substance which is very toxic to aquatic organisms.**Bromine:** LC₅₀ - Fish, 0.31 mg/L, 24 hours.**Section 13. Disposal Considerations****Waste Disposal Method:** Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal. Contact safety officer if questions arise and ventilate area. Dispose in accordance with all applicable federal (40 CFR 261.3), state, and local environmental regulations.**RCRA P-Series:** None listed.**RCRA U-Series:** None listed.

Contact a licensed professional waste disposal service to dispose of this material if questions arise.

Container Information: Do not remove labels from containers until they have been cleaned. Since emptied containers retain product residue, follow label warnings even after container is emptied.**Section 14. Transport Information****DOT Regulations:**

UN No. UN 1744

Proper Shipping name: Bromine Solution, 2%

Class: 8, 6.1

Packing Group: I

Label: 8 Corrosive 6 Toxic

Land Transport ADR/RID/TDG (cross-border):

Hazard Class: 8 (6.1)

Identification Number: UN 1744

Packing Group: I

Proper Shipping Name: Bromine Solution, 2%

Maritime Transport IMDG:

Un No: UN 1744

Hazard Class: 8 (6.1)

Packing Group: I

Proper Shipping Name: Bromine Solution, 2%

EmS No: F-A, S-B

Marine Pollutant: No**Air Transport ICAO-TI and IATA-DGR:**

Forbidden.

Section 15. Regulatory Information

EU Regulations, Hazard Symbol(s):
Bromine Solution: T (Toxic)
Risk Phrases:

R 20, 21, 22, Harmful if contact with skin, by inhalation, and if swallowed.

R 41, Risk of serious damage to eyes

Safety Phrases:

2 26, In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 28, After contact with skin, wash immediately with plenty of soap and water.

S 36, Wear suitable protective clothing.

Canadian Controlled Products Regulations:

This product has been classified according to the hazard criteria of the Canadian Controlled Products Regulations, Section 33, and the MSDS contains all required information.

WHMIS Classification: D1A, D2A, D2B

Mexican Dangerous Statement: This product is dangerous according to Mexican regulations.

Inventory Status: This product or all components are listed or exempt from listing on the following inventory: TSDA, DSL.

US Regulations: CERCLA Hazardous Substance List (40 CFR 302.4): Not regulated.

SARA Title III
Section 302 Extremely Hazardous Substances (40 CFR 355, Appendix A):

Chemical Name	RQ
Bromine	500 lbs.

Section 311/312 (40 CFR 370):
 Acute (Immediate), Chronic (Delayed)

Section 313 Toxic Release Inventory (40 CFR 372):

Chemical Name	CAS No.	Reporting threshold for other users	Reporting threshold for manufacturing and processing
Bromine	7726-95-6	10000 lbs.	25000 lbs.

For reporting purposes: the De Minimis Concentration for a toxic chemical in a mixture is 0.1% for carcinogens as defined in 29 CFR 1910.12009d(4) or 1% for others.

Clean Air Act (CAA) Section 112 (r) Accidental Release Prevention (40 CFR 68.130): Bromine

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3): Not regulated.

Drug Enforcement Act: Not regulated.



Section 15. Regulatory Information, continued:

TSCA

TSCA Section 4(a) Final Test Rules & Testing Consent Orders: Not regulated.

TSCA Section 5(a)(2) Final Significant New Use Rules (SNURs) (40CFR 721, Subpt. E): Not regulated.

TSCA Section 5(e) PMN- Substance Consent Orders: Not regulated.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D): Not regulated.

State Regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): Not regulated.

Massachusetts Right-To-Know List: Bromine

Michigan Critical Materials List (Michigan Natural Resources and Environmental Protection Act (Act 451 or 1994):
Not regulated.

Minnesota Hazardous Substances List: Bromine

New Jersey Right-To-Know: Bromine

Pennsylvania Right-To-Know: Bromine

Rhode Island Right-To-Know: Bromine

Section 16. Other Information

Hazard Ratings

NFPA	Health Hazard	Fire Hazard	Instability	Special Hazard
	2	0	0	0

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

HMIS	Health Hazard	Flammability	Physical Hazard	Personal Protection
	2*	0	0	B

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

*Chronic Health Effect

Personal Protection Codes: B- Safety Glasses, Gloves

This document is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. Neogen Corporation shall not be held liable for any damage resulting from handling or from contact with the above product. These suggestions should not be confused with state, municipal or insurance requirements, and constitute NO WARRANTY.