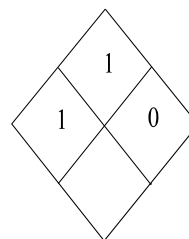


MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION



PRODUCT NAME: HINDER®; HINDER® TECHNICAL
GENERAL USE: Deer and Rabbit Repellant
PRODUCT DESCRIPTION: Brown liquid, with an ammonia odor
EPA Registration Number: 5481-508
HEALTH CANADA REG. NO.: 26626
MSDS No.: 307_4
Current Revision Date: 5 November, 2008

MANUFACTURER:
AMVAC CHEMICAL CORPORATION
4100 E. Washington Blvd.
Los Angeles, CA 90023-4406
Ph: 323-264-3910
FAX: 323-268-1028

EMERGENCY TELEPHONE NUMBERS:
MANUFACTURER: 323-264-3910
TRANSPORTATION (24 HOURS)
CHEMTREC: 800-424-9300
OTHER (24 HOURS)
AMVAC: 323-264-3910

2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	WT %	CAS No.
Ammonium salts of higher fatty acids	13.8	Mixture
Inert Ingredients	86.2	
(includes small amount of ammonia)	~ 1.0	7664-41-7

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)

COMPONENT	HAZARD	OSHA PEL*	ACGIH TLV*	NIOSH PEL*
Ammonia (7664-41-7)	Inhalation, skin & eye Irritant	50 ppm	25 ppm	25 ppm

* Exposure Limits 8 hrs. TWA

HINDER is a Registered Trademark of AMVAC Chemical Corporation.

3. **HAZARDS IDENTIFICATION**

EMERGENCY OVERVIEW:

DANGER! Causes irreversible eye damage. Harmful if inhaled. Do not get in eyes or on clothing. Avoid breathing vapor or spray mist. Wear safety glasses when handling. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

KEEP out of reach of children.

POTENTIAL HEALTH EFFECTS

ROUTE(S) OF ENTRY: This product may be contacted by inhalation, skin contact, eye contact, and ingestion.

SIGNS OF ACUTE OVEREXPOSURE: Acute overexposure to this product may irritate the skin, eyes, and mucous membranes. Ingestion may cause inebriation, headache, nausea, vomiting, and abdominal pains.

SIGNS OF CHRONIC OVEREXPOSURE: None known.

OTHER POTENTIAL EFFECTS: None known.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Preexisting skin or respiratory disorders may be aggravated by exposure to components of this product.

4. **FIRST AID MEASURES**

EYES: Immediately flush the eyes with copious amounts of clear, cool running water for a minimum of 15 minutes. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eyes and lids with water. Contact a physician immediately. If there will be a delay in getting medical attention, rinse the eyes for at least another 15 minutes.

INHALATION: Remove victim to fresh air. If breathing has ceased, clear the victim's airway and start mouth-to-mouth artificial respiration. If breathing is difficult, give oxygen. Contact a physician immediately.

INGESTION: Immediately dilute the swallowed product by giving large quantities of water. Induce vomiting by using Syrup of Ipecac according to bottle directions, or, if necessary, by touching the back of the throat with a finger. Never give anything by mouth to an unconscious or convulsing person. Contact a physician immediately.

4. FIRST AID MEASURES, cont'd

SKIN: Immediately flush all affected areas with large amounts of clear water for at least 15 minutes. Remove contaminated clothing. Do not attempt to neutralize with chemical agents. Wash clothing before reuse. If skin irritation develops, contact a physician immediately.

NOTE TO PHYSICIANS: Treat symptomatically. This product contains small amounts of ammonia, so caustic burns may result. Further information on this product can be obtained from AMVAC Chemical Corporation. (See Section 1).

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

Flash Point:	Not applicable
Autoignition Temperature:	Not applicable
Flammable Limits:	
Lower flammable limit:	Not applicable
Upper flammable limit:	Not applicable
Flammability:	This product may give off fumes that will ignite under the current temperature constraints for a rating of 1 (NFPA rating = 1)

EXPLOSIVITY

Mechanical Impact:	Not explosive
Static Discharge:	Has not been tested, but should not occur.

HAZARDOUS COMBUSTION PRODUCTS: May emit hazardous fumes of ammonia when heated excessively. Wear self-contained breathing apparatus.

EXTINGUISHING MEDIA: Nonflammable. Base decision on surrounding materials in fire.

FIRE FIGHTING INSTRUCTIONS: Stay upwind or wear full firefighting gear when this product is exposed to high heat. Ammonia fumes and unknown mists and fumes may result.

6. ACCIDENTAL RELEASE MEASURES

GENERAL: Use adequate ventilation and personal protective equipment (PPE, see Section 8), in order to prevent skin, respiratory, and eye contact. Keep bystanders upwind and away from the spill.

SMALL SPILL: Cover with absorbent (clay, sawdust, straw, kitty litter, etc.), to absorb the liquid. Sweep into an open drum. Close the drum and dispose of properly.

LARGE SPILL: Dike the spill to prevent contamination of local water sources. Siphon the majority of the liquid into drums for use or disposal, depending on the circumstances. Clean the area as described for a small spill.

7. HANDLING AND STORAGE

HANDLING: Avoid contact with the skin and eyes. Keep this product away from food and drink. Keep it away from children and pets. Do not cross-contaminate this product with pesticides.

STORAGE: Store the product in its original container in a cool (not in direct sunlight), dry, locked place out of reach of children. Do not allow product to freeze.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Ventilation should be provided to keep exposures below the limits for ammonia (see Section 2).

RESPIRATORY PROTECTION: A properly FIT-TESTED NIOSH/MSHA approved respirator fitted with ammonia vapor cartridges may be required when working with this product if there is insufficient ventilation to keep exposures below the exposure limits.

SKIN PROTECTION: The minimum protective clothing required is full-body covering clothing, such as slacks and long-sleeved shirt or coveralls, shoes or boots, and gloves. Reading the label will aid in determining if certain states require further protection. Your State Department of Agriculture should be consulted for the most current requirements.

EYE PROTECTION: Safety glasses are required whenever a person is working with chemicals. Safety goggles should be worn if there is a chance of exposure to ammonia fumes and mists.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	Liquid
APPEARANCE:	Brown liquid
ODOR:	Ammonia odor
ODOR THRESHOLD:	Not established
BOILING POINT:	101 °C/214 °F
FREEZING/MELTING POINT:	-1 °C/30 °F
SPECIFIC GRAVITY:	0.98 g/cm ³ @ 20 °C/4 °C
DENSITY:	8.2 lb/gal
VAPOR PRESSURE :	17 mm/Hg @ 20 °C
VAPOR DENSITY:	Not determined
PERCENT VOLATILE BY VOL:	Approx 80%
SOLUBILITY IN WATER:	Disperses
SOLUBILITY (OTHER):	Soluble in alcohols
PARTITION COEFFICIENT (O/W):	Not available
pH (as is):	9 - 10
EVAPORATION RATE:	1.0 as compared to water

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable under normal use conditions.

INCOMPATIBILITY: Addition of acids to the product will cause the higher fatty acids to separate from the solution. Addition of strong bases will cause ammonia to be released.

HAZARDOUS DECOMPOSITION PRODUCTS: When the product is heated to decomposition, acrid smoke and fumes may be given off.

HAZARDOUS POLYMERIZATION: This product will not polymerize.

11. TOXICOLOGICAL INFORMATION

This formulation has not been tested. The following information is from information on the MSDS's for the main active ingredients, ammonia and higher fatty acids.

INGESTION:	Oral LD ₅₀ (rat):	Not available
INHALATION:	Inhalation LC ₅₀ (rat):	Not available
DERMAL:	Skin LD ₅₀ (rabbit):	Not available
IRRITATION:	Eye irritation:	May cause irreversible eye damage
	Skin irritation:	May cause irritation
SENSITIZATION:	Skin Sensitization	No evidence of sensitization

TERATOGENICITY: No information available
MUTAGENICITY: No information available
CARCINOGENICITY: Not listed by IARC, NTP, or OSHA.
REPRODUCTIVE TOXICITY: No information available.
TOXICOLOGICALLY SYNERGISTIC PRODUCTS: No data available.

12. ECOLOGICAL INFORMATION

GENERAL: This product is used to keep animals from feeding on plants. Keep out of all water supplies.

13. DISPOSAL CONSIDERATIONS

PESTICIDE DISPOSAL: If wastes from this product cannot be disposed by use according to label instructions, they should be disposed as a hazardous waste at a regulated disposal facility. Contact your nearest State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA regional office for guidance. Open dumping is prohibited.

13. DISPOSAL CONSIDERATIONS, cont'd

CONTAINER DISPOSAL: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose in a sanitary landfill, or incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke. Contact your nearest State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA regional office for guidance. Open dumping is prohibited.

14. TRANSPORTATION INFORMATION

DOT CLASS:	Not regulated
UN NUMBER:	Not regulated
IMDG CLASS (sea):	Not regulated
IATA CLASS (air):	Not regulated
MARINE POLLUTANT:	Not regulated
PACKING GROUP:	Not regulated
HAZARD LABEL(S):	None
PROPER SHIPPING NAME(S):	Not regulated
REPORTABLE QUANTITY: (DOT, 172.101, Appendix A)	None

PACKAGING

GENERAL DESCRIPTION: 1 gallon bottle (4 per case)

15. REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: This product is registered under EPA/FIFRA Regulations. It is a violation of Federal Law to use this product in any manner inconsistent with its labeling. Read and follow all label directions. This product is excluded from listing requirements under EPA/TSCA.

CANADIAN REGULATIONS: This product is registered under the Pest Control Product Act of Canada. It is a violation of Canadian Law to use this product in any manner inconsistent with its labeling. Read and follow all label directions. This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

SARA TITLE III DATA

Section 311 & 312 Hazard Categories:

Immediate Health Hazard:	Yes
Delayed Health Hazard:	No
Fire Hazard:	No
Reactive Hazard:	No
Sudden Pressure Release Hazard:	No

15. REGULATORY INFORMATION, cont'd

Section 302 Extremely Hazardous Substances: Ammonia (CAS No. 7664-41-7)

TPQ 500 lbs (Product contains ~ 1.0% ammonia)

Section 313 Toxic Chemicals: Ammonia (CAS No. 7664-41-7, ~ 1.0%)

CERCLA Reportable Quantity (RQ): Ammonia - 100 lbs (Product contains ~ 1.0% ammonia)

STATE REGULATIONS:

CALIFORNIA (Proposition 65): None

16. OTHER INFORMATION

MSDS STATUS:

Date This Revision: 5 November, 2008

Date Previous Revision: 28 September, 2006

Person Responsible for Preparation: Gary A. Braden

REASONS FOR REVISION: Annual Review. Information on hazardous ingredients has been updated in sections 2 and 15 to reflect current knowledge of the product.

DISCLAIMER: This information is provided for the limited guidance to the user. While AMVAC believes that the information is, as of the date hereof, reliable, it is the user's responsibility to determine the suitability of the information for its purposes. The user is advised not to construe the information as absolutely complete since additional information may be necessary or desirable when particular, exceptional, or variable conditions or circumstances exist (like combinations with other materials), or because of applicable regulations. No express or implied warranty of merchantability or fitness for a particular purpose or otherwise is made hereunder with respect to the information or the product to which the information relates.

ABBREVIATIONS:

ACGIH	-	American Conference of Governmental Industrial Hygienists
CERCLA	-	Comprehensive Environmental Response, Compensation, and Liability Act
EPA	-	Environmental Protection Agency
FIFRA	-	Federal Insecticide, Fungicide, and Rodenticide Act
IARC	-	International Agency for Research on Cancer
IMDG	-	International Maritime Dangerous Goods
IATA	-	International Air Transport Association
NTP	-	National Toxicology Program
OSHA	-	Occupational Safety and Health Administration
SARA	-	Superfund Amendments and Reauthorization Act
TSCA	-	Toxic Substances Control Act
