

LidoChem, Inc.
 20 Village Court
 Hazlet, NJ 07730
 Phone#:(732) 888 8000
 Fax#: (732) 264 2751

MATERIAL SAFETY DATA SHEET

MSDS#:	1085
Product Code:	ArmorTech44
Date Printed:	03/15/06
Review/Revision Date:	06/28/05

SECTION I - General Information And Chemical Product Identification

Trade Name:	ArmorTech 44
Chemical Name:	Fertilizing Compound
Chemical Formula:	Mixture
Chemical Family:	
Synonyms:	Urea Phosphonate
CAS#:	Mixture
D.O.T. Shipping Name:	Fertilizing Compound, NOI, Liquid

SECTION II - Composition/information On Ingredients

CAS#:	Common Name:	ACGIH/PPM		OSHA/PPM	
		TWA	STEL	PEL1	% by Wt.
	Proprietary Blend				

SECTION III - Hazard(s) Identification

Route(s) of Entry:	Ingestion, Inhalation and Dermal.
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Emergency Overview

Corrosive properties. Causes burns. Severely Irritating to skin and eye and respiratory tract.
 Ingestion: cause corrosion of the mouth, gullet and digestive tract.
 Possible LOSS OF CONSCIOUSNESS.
 Clear, Odorless liquid
 Firefighters should wear full-face, self contained breathing apparatus and impervious protective clothing.
 Contact with metal produces hydrogen, which may form flammable or explosive mixtures with air.

Potential Health Effects:

DANGER! Causes eye and skin burns.
 Eyes: Will cause corrosive effects (burns or irreversible damage) to the eyes.
 Skin: Will cause corrosive effects (burns or irreversible damage) to the skin.
 Ingestion: Will cause corrosive effects (burns or irreversible damage) to the mouth, throat and digestive tract.
 Inhalation: Will cause corrosive effects (burns or irreversible damage) to the lungs, upper respiratory tract and nose.

For Chemical Emergencies Call CHEMTREC - Day or Night - at 800 424 9300.

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Signs & Symptoms Of Exposure:

Eyes: Severe burning of the eyes.
Skin: Severe burning of the skin.
Ingestion: Possible nausea and/or vomiting.
Inhalation: Coughing, burning, tightness of chest and/or shortness of breath.

SECTION IV - First Aid Information

Ingestion:

If victim is conscious and alert, give 2-3 glasses of water to drink and **DO NOT INDUCE VOMITING. Never give anything to eat or drink to someone who is unconscious, having convulsions, or unable to swallow.** Seek immediate medical attention. Do not leave victim unattended. To prevent aspiration of swallowed product, lay victim on side with head lower than waist. Vomiting may occur spontaneously. If vomiting occurs and the victim is conscious, give water to further dilute the chemical. See other information.

Eyes:

Flush eyes with large quantities of running water for a minimum of 15 minutes. If victim is wearing contact lenses, remove them. Hold eyelids apart during the flushing to ensure rinsing of entire surface of the eye and lids with water. **DO NOT** let victim rub eye(s). Do not attempt to neutralize with chemical agents. Oils/ointments should not be used at this time. **GET IMMEDIATE MEDICAL ATTENTION.**

Skin:

Remove contaminated clothing including shoes and immediately wash affected area with plenty of soap and water. Seek immediate medical attention. Wash contaminated clothing and shoes before reuse.

Inhalation:

Remove from further exposure. Keep warm and at rest. If not breathing, give artificial respiration. If breathing is difficult, trained personnel should administer oxygen. Seek immediate medical attention. Keep immobile.

SECTION V - Fire And Explosion Data

NFPA Hazard Ratings:	<i>0 = minimal</i>	<i>1 = slight</i>	<i>2 = moderate</i>	<i>3 = serious</i>	<i>4 = severe</i>	<i>N/R = Not Rated</i>
Health:	Fire:	Reactivity:	Special:			

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Flash Point:	N/A	Methods Used:	N/A
Flammable Limits:	non-flammable	Lel:	N/A
Autoignition Temp:	Not Established	Uel:	N/A

Extinguisher Media
 Chemical type foam, CO2 (Carbon Dioxide), water fog. This product is a nonflammable inorganic substance. ↑
↓

Special Fire Fighting Procedures
 Firefighters should wear NIOSH/MSHA approved SCUBA and full protective clothing. Keep unnecessary people away, isolate hazard area and deny entry. Evacuate residents who are downwind of fire to avoid inhalation of irritating and/or harmful fumes and smoke. Cool exposed containers with water spray to prevent overheating. Dike area to prevent runoff. Dispose water later. ↑
↓

Unusual Fire and Explosion Hazards
 Toxic & irritating phosphorus oxides may be formed. Contact with metals may cause formation of flammable & explosive hydrogen gas. ↑
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Hazardous Combustion Products:
 Oxides of phosphorus ↑
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Emergency Response Guidebook Information: 154

Section VI- Accidental Release Measures

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
 Construct temporary dikes of dirt, sand, or any appropriate readily available material to prevent spreading of material. Wear appropriate PPE, move leaking container to a containment area or rotate the container so that the opening is above the liquid level. Neutralize with soda ash, then absorb on diatomaceous earth or equivalent inert material. Shovel up and dispose of at an appropriate waste disposal facility according to current applicable laws and regulations, and product characteristics at time of disposal. Contain ↑
↓

Section VII- Handling and Storage

Handling and Storage
 Use appropriate personal protective equipment as specified. Handle in a well ventilated area. Handle and use in a manner consistent with good industrial/manufacturing techniques and practices. Store in unopened containers under cool and dry conditions. Do not store with, or close to oxidizers. Do not store with, or close to strong bases. ↑
↓

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Store away, or close to container. Do not store away, or close to strong bases.

Section VIII - Exposure Control and Personal Protection

Skin Protection

Where contact is likely, wear neoprene chemical resistant gloves, a chemical suit, rubber boots, chemical safety goggles and a face shield. ↑
↓

Respiratory Protection

When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the latest OSHA standard (29 CFR 1910.134) and/or ANSI Z88.2 recommendations. Always wear NIOSH approved particulate approved respirator. ↑
↓

Eye Protection

Wear chemical splash goggles and face shield when eye and face contact is possible due to splashing or spraying of material. Eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material. ↑
↓

Other Protection:

Impervious acid resistant clothing should be worn. NIOSH approved dust & mist respirator should be used when Phosphorous Acid mist exposure exceeds the OSHA standard of 1/mg/m3. ↑
↓

Ventilation Limits:

Good ventilation should be sufficient to control airborne levels of material. ↑
↓

Exposure Limits

Exposure limits represent regulated or recommended worker breathing zone concentrations measured by validated sampling and analytical methods, meeting OSHA requirements. The following limits (ACGIH, OSHA and other) apply to this material, where, if indicated, S=skin and C=ceiling limit:
 ACGH TLV/TWA PARTICULATES NOT OTHERWISE CLASSIFIED : 1mg/cubic meter(INHALABLES)
 ACGH TLV/TWA PARTICULATES NOT OTHERWISECLASSIFIED: 3mg/cubic meter (RESPIRABLE) ↑
↓

Hygienic Practices:

All food / smoking materials should be kept in a separate area away from the storage/use location. Eating, drinking and smoking should be prohibited in areas where there is a potential for significant exposure to this material. Before eating, drinking or smoking, hands and face should be thoroughly washed. Facilities storing or using this material should be equipped with an eyewash and safety shower. ↑
↓

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Section IX - Physical and Chemical Properties

Molecular Weight:	135	
Boiling Point:	N/Ap	
Melting Point:	N/Ap	
Specific Gravity:	1.35	
Vapor Pressure(mm/hg):	N/Ap	
Vapor Density(air=1):	N/Ap	
Reactivity In Water:	N/Ap	
Solubility In Water:	infinite in water and alcohol	
Appearance And Odor:	clear, concentrated, odorless liquid	
Other:	pH: 3.3 + / - 0.3	<input type="button" value="↑"/> <input type="button" value="↓"/>

Section X - Stability and Reactivity

Stability:	This product is considered stable.	
Conditions to Avoid:	Excessive temperatures.	
Incompatible Materials:	Bases, oxidizing and reducing agents.	
Hazardous Decomposition Products:	Fumes of NH ³ and CO ² are released when heated at high temperatures.	
Polymerization Conditions To Avoid:		

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Will not occur.

Section XI - Toxicological Information

Eye Effects:

This material is corrosive to the eyes.
 119 mg Rabbit

Section XI - Toxicological Information - Continued

Skin Effects:

This material is corrosive to the skin.
 595 mkg/24 hr Rabbit

Dermal Toxicity:

LD50: Dermal (Rabbit) = 2740 mg/kg

Inhalation Effects:

N/A

Sensitization:

N/A

Ingestion Effects:

LD 50 /oral/mouse = 5840 mg/kg

Carcinogenicity/Mutagenicity:

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Not listed as a carcinogen by NTP, IARC or OSHA.
 No information available for Mutagenicity.



Reproductive Effects:

No information found.



Neurotoxicity:

No information found.



Target Organs:

Can cause gastrointestinal tract, respiratory tract and circulatory system damage.



Additional Toxicological Information:

None



Section XII- Ecological Information

Biodegradability:	Not biodegradable
Ecotoxicity:	May be harmful to aquatic organisms (pH). Eutrophication.
Biological Oxygen Demand(BOD5):	No data found for this product.
Chemical Oxygen Demand:	No data found for this product.
Activated Sludge Respiration Inhibition Test:	No data found for this product.

Additional Ecological Information:

High concentration in receiving waters, will injure aquatic life by the effect on pH. In the water the acid is hydrolysed to orthophosphate, which may act as plant nutrient (causing eutrofication) or precipitate heavy metals. Bioaccumulation: Does not bioaccumulate.



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Mobility: Soluble in water. Forms phosphoric acid and urea. ↕

SECTION XIII - Disposal Considerations

Waste Disposal Methods:

In case of spill, contain material and call local authorities for emergency assistance. Neutralize the spilled acid with soda ash or lime. Collect in appropriate containers. Dispose of waste at an appropriate waste disposal facility according to current applicable laws and regulations, and product characteristics at time of disposal. Chemical additions, processing or otherwise altering this material may make the waste management information presented incomplete, inaccurate or otherwise inappropriate. ↕

Container Disposal Information:

Consult an expert on the disposal of container. Ensure disposal is in compliance with government requirements and ensure conformity of local disposal regulations. Notify the appropriate authorities immediately. ↕

Section XIV - Transport Information

Proper Shipping Name:	Fertilizing Compound, NOI, Liquid		
D. O. T. Hazard Class:	Not regulated by D.O.T.	UN:	N/A
Label Requirement:	None	RQ:	N/Ap
Placard:	None		
Packing Group:	N/Ap	CAS1	Mixture

Section XV - Regulatory Information

State Right To Know Laws:

The following ingredients are disclosed for compliance with State Right to Know Laws:

CAS#	Chemical Name	State RTK

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SARA Title III Hazard Classes Sections 311/312:

Immediate (acute) health hazard

OSHA Status:

This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910,1200.

SARA Title III Hazard Classes Section 302 - EXTREMELY HAZARDOUS SUBSTANCES:

This product does NOT contain ingredients listed in Appendix A and B as Extremely Hazardous substances.

TSCA Status:

Listed/Non-reportable

SARA Section 313 :

This product contains the following toxic chemical subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right to Know Act:

CAS#	Chemical Name:
	None

Cercla, 40 Cfr 117, 302:

This product does NOT contain ingredients specified in the List of Extremely Hazardous Substances.

Cercla Listed Substances Are:

Phosphorous Acid	10294-56-1	RQ: 5000 lbs
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SARA Superfund Section 110:

This product does NOT contain ingredients listed as hazardous substances on the Priority List of CERCLA Hazardous substances.

California Proposition 65:

This product contains a chemical (or chemicals) known to the State of California to cause cancer and birth defects or other reproductive harm.

Michigan Critical Materials:

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Review/Revision Date:	06/28/05

Page: 10 of 8

This product does NOT contain ingredients listed on the Michigan Critical Materials Register.

CAA:	None known
CWA:	None Known
RCRA:	Not considered a hazardous waste.
Canada CEPA:	All intentional ingredients listed on the DSL
Canada WHMIS:	Not listed

SECTION XVI- Other Information



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Key Legend Information:

- N/Av: Not Available
- N/Ap: Not Applicable
- N/R: Not Rated
- ND: Not Determined
- ACGIH: American Conference of Gov'ntal Industrial Hygienists
- OSHA: Occupational Safety and Health Administration
- TLV: Threshold Limit Value
- PEL: Permissible Exposure Limit
- TWA: Time Weighted Average
- STEL: Short Term Exposure Limit
- NTP: National Toxicology Program
- IARC: International Agency for Research on Cancer
- SARA Title III: Superfund Amendments and Reauthorization Act
- CERCLA: Comprehensive Response, Compensation and Liability Act
- TSCA: Toxic Substance Control Act

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind expressed or implied is made with respect to the information contained herein. This Material Safety Data Sheet was prepared to comply with OSHA Hazard Communication standard. (29 CFR 1910.1200). This supersedes any previous information. All LidoChem, Inc. MSDS's are reviewed every three years or sooner if necessary. Please check the Review Date on Page 1 for most current version. Please request a new MSDS from LidoChem, Inc. if the date is older than 3 years.

NOTICE: OSHA STANDARD 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of a Hazard Communication Program including training, labeling, Material Safety Data Sheets, and access to written records. We request that you, and it is your legal duty, make all information in this Material Safety Data Sheet available to your employees.

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