



# Material Safety Data Sheet

Issue Date: 28-OCT-2011  
Supersedes: 29-MAR-2010

STEAMATE NA1321

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## 1 Identification

**Identification of substance or preparation**  
STEAMATE NA1321

**Product Application Area**  
Steam condensate treatment.

**Company/Undertaking Identification**  
GE Betz, Inc.  
4636 Somerton Road  
Trevose, PA 19053  
T 215 355-3300, F 215 953 5524

**Emergency Telephone**  
(800) 877-1940

Prepared by Product Stewardship Group: T 215-355-3300    Prepared on: 28-OCT-2011

## 2 Hazard(s) identification

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**EMERGENCY OVERVIEW**

**DANGER**

Corrosive to skin. Corrosive to the eyes. Vapors, gases, mists and/or aerosols cause irritation to the upper respiratory tract.

DOT hazard: Corrosive to skin  
Odor: Strong Ammonia; Appearance: Colorless To Light Yellow, Liquid

Fire fighters should wear positive pressure self-contained breathing apparatus(full face-piece type). Proper fire-extinguishing media: dry chemical, carbon dioxide, foam or water

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**POTENTIAL HEALTH EFFECTS**

**ACUTE SKIN EFFECTS:**

Primary route of exposure; Corrosive to skin.

**ACUTE EYE EFFECTS:**

Corrosive to the eyes.

**ACUTE RESPIRATORY EFFECTS:**

Primary route of exposure;Vapors, gases, mists and/or aerosols cause irritation to the upper respiratory tract.

**INGESTION EFFECTS:**

Toxic;

May cause severe irritation or burning of mouth, throat, and gastrointestinal tract with severe chest and abdominal pain, nausea, vomiting, diarrhea, lethargy and collapse. Possible death when ingested in very large doses.

**TARGET ORGANS:**

Prolonged or repeated exposures may cause tissue necrosis.

**MEDICAL CONDITIONS AGGRAVATED:**

Not known.

**SYMPTOMS OF EXPOSURE:**

Symptoms range from headache, eye irritation, chest pain, nausea and vomiting to severe coughing, difficulty in breathing, pulmonary edema and production of pink frothy sputum.

### 3 Composition / information on ingredients

Information for specific product ingredients as required by the U.S. OSHA HAZARD COMMUNICATION STANDARD is listed. Refer to additional sections of this MSDS for our assessment of the potential hazards of this formulation. This product is subject to the Pennsylvania and New Jersey Worker and Community Right to Know Law.

**HAZARDOUS INGREDIENTS:**

Cas#	Chemical Name	Range (w/w%)
1336-21-6	AMMONIUM HYDROXIDE Corrosive; toxic (by ingestion)	30-60

**NON-HAZARDOUS INGREDIENTS:**

CAS#	CHEMICAL NAME
7732-18-5	WATER

### 4 First-aid measures

**SKIN CONTACT:**

URGENT! Wash thoroughly with soap and water. Remove contaminated clothing. Get immediate medical attention. Thoroughly wash clothing before reuse.

**EYE CONTACT:**

URGENT! Immediately flush eyes with plenty of low-pressure water for at least 20 minutes while removing contact lenses. Hold eyelids apart. Get immediate medical attention.

**INHALATION:**

Remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Get immediate medical attention.

**INGESTION:**

Do not feed anything by mouth to an unconscious or convulsive victim. Do not induce vomiting. Immediately contact physician. Rinse mouth with plenty of water. Dilute contents of stomach using 4-10 fluid ounces (120-300 mL) of milk or water.

**NOTES TO PHYSICIANS:**

Material is corrosive. It may not be advisable to induce vomiting.  
Possible mucosal damage may contraindicate the use of gastric lavage.

## 5 Fire-fighting measures

**FIRE FIGHTING INSTRUCTIONS:**

Fire fighters should wear positive pressure self-contained breathing apparatus (full face-piece type).

**EXTINGUISHING MEDIA:**

dry chemical, carbon dioxide, foam or water

**HAZARDOUS DECOMPOSITION PRODUCTS:**

oxides of nitrogen, ammonia

**FLASH POINT:**

> 200F > 93C P-M(CC)

**MISCELLANEOUS:**

Corrosive to skin  
UN 2672;Emergency Response Guide #154

## 6 Accidental release measures

**PROTECTION AND SPILL CONTAINMENT:**

Ventilate area. Use specified protective equipment. Contain and absorb on absorbent material. Place in waste disposal container. Flush area with water. Wet area may be slippery. Spread sand/grit.

**DISPOSAL INSTRUCTIONS:**

Water contaminated with this product may be sent to a sanitary sewer treatment facility, in accordance with any local agreement, a permitted waste treatment facility or discharged under a permit. Product as is - Incinerate or land dispose in an approved landfill.

## 7 Handling and storage

**HANDLING:**

Alkaline. Corrosive(Skin/eyes). Do not mix with acidic material.

**STORAGE:**

Keep containers closed when not in use. Store in cool ventilated location. Store away from oxidizers. Store away from acids.

## 8 Exposure controls / personal protection

**EXPOSURE LIMITS****CHEMICAL NAME****AMMONIUM HYDROXIDE**

PEL (OSHA): 50 PPM(35PPM-STEL)

TLV (ACGIH): 25 PPM(35PPM-STEL)

**ENGINEERING CONTROLS:**

Adequate ventilation to maintain air contaminants below exposure limits.

**PERSONAL PROTECTIVE EQUIPMENT:**

Use protective equipment in accordance with 29CFR 1910 Subpart I

**RESPIRATORY PROTECTION:**

A RESPIRATORY PROTECTION PROGRAM THAT MEETS OSHA'S 29 CFR 1910.134 AND ANSI Z88.2 REQUIREMENTS MUST BE FOLLOWED WHENEVER WORKPLACE CONDITIONS WARRANT A RESPIRATOR'S USE. USE AIR PURIFYING RESPIRATORS WITHIN USE LIMITATIONS ASSOCIATED WITH THE EQUIPMENT OR ELSE USE SUPPLIED AIR-RESPIRATORS. If air-purifying respirator use is appropriate, use a respirator with ammonia/methylamine cartridges.

**SKIN PROTECTION:**

gauntlet-type butyl or neoprene gloves, chemical resistant apron -- Wash off after each use. Replace as necessary.

**EYE PROTECTION:**

splash proof chemical goggles, face shield

## 9 Physical and chemical properties

Spec. Grav. (70F,21C)	0.932	Vapor Pressure (mmHG)	~ 280.0
Freeze Point (F)	-24	Vapor Density (air=1)	> 1.00
Freeze Point (C)	-31		
Viscosity(cps 70F,21C)	10	% Solubility (water)	100.0
Odor		Strong Ammonia	
Appearance		Colorless To Light Yellow	
Physical State		Liquid	
Flash Point	P-M(CC)	> 200F > 93C	
pH As Is (approx.)		> 13.0	
Evaporation Rate (Ether=1)		< 1.00	
Percent VOC:		0.0	

NA = not applicable ND = not determined

## 10 Stability and reactivity

**CHEMICAL STABILITY:**

Stable under normal storage conditions.

**POSSIBILITY OF HAZARDOUS REACTIONS:**

Contact with strong acids may cause a violent reaction releasing heat.

**INCOMPATIBILITIES:**

May react with acids.

**DECOMPOSITION PRODUCTS:**

oxides of nitrogen, ammonia

## 11 Toxicological information

Oral LD50 RAT: 900 mg/kg

NOTE - Calculated value according to GHS additivity formula

## 12 Ecological information

**AQUATIC TOXICOLOGY**

Ceriodaphnia 48 Hour Static Screen (pH adjusted)

100% Mortality= 300; 0% Mortality= 30 mg/L

Daphnia magna 48 Hour Static Renewal Bioassay (pH adjusted)

LC50= 525; No Effect Level= 375 mg/L  
Fathead Minnow 96 Hour Static Renewal Bioassay (pH adjusted)  
LC50= 210; No Effect Level= 150 mg/L

#### **BIODEGRADATION**

Product contains only inorganics that are not subject to typical biological degradation. Assimilation by microbes may occur in waste treatment or the environment.

## **13 Disposal considerations**

If this undiluted product is discarded as a waste, the US RCRA hazardous waste identification number is :  
D002=Corrosive(pH).

Please be advised; however, that state and local requirements for waste disposal may be more restrictive or otherwise different from federal regulations. Consult state and local regulations regarding the proper disposal of this material.

## **14 Transport information**

Transportation Hazard: Corrosive to skin

DOT: AMMONIA SOLUTION  
8, UN2672, PG III, RQ

DOT EMERGENCY RESPONSE GUIDE #: 154

Note: Some containers may be DOT exempt, please check BOL for exact container classification

IATA: AMMONIA SOLUTION  
8, UN 2672, PG III

IMDG: AMMONIA SOLUTION  
8, UN2672, PG III

## **15 Regulatory information**

#### **TSCA:**

All components of this product are included on or are in compliance with the U.S. TSCA regulations.

#### **CERCLA AND/OR SARA REPORTABLE QUANTITY (RQ):**

334 gallons due to AMMONIUM HYDROXIDE;

#### **FOOD AND DRUG ADMINISTRATION:**

ALL ingredients in this product are authorized in 21CFR173.310 for use as boiler water additives where the steam may contact food.

#### **NSF Registered and/or meets USDA (according to 1998 Guidelines):**

Registration number: 140720

Category Code(s):

- G5 Cooling and retort water treatment products - all food processing areas
- G6 Boiler treatment products - all food processing areas/food contact

#### **SARA SECTION 312 HAZARD CLASS:**

Immediate(acute);Delayed(Chronic)

#### **SARA SECTION 302 CHEMICALS:**

No regulated constituent present at OSHA thresholds

#### **SARA SECTION 313 CHEMICALS:**

CAS#  
1336-21-6

CHEMICAL NAME  
AMMONIUM HYDROXIDE

RANGE  
31.0-40.0%

**CALIFORNIA REGULATORY INFORMATION**

**CALIFORNIA SAFE DRINKING WATER AND TOXIC  
ENFORCEMENT ACT (PROPOSITION 65):**

No regulated constituents present

**MICHIGAN REGULATORY INFORMATION**

No regulated constituent present at OSHA thresholds

## 16 Other information

**HMIS vII**

**CODE TRANSLATION**

Health	3	Serious Hazard
Fire	0	Minimal Hazard
Reactivity	0	Minimal Hazard
Special	CORR	DOT corrosive
(1) Protective Equipment	D	Goggles,Face Shield,Gloves,Apron

(1) refer to section 8 of MSDS for additional protective equipment recommendations.

**CHANGE LOG**

	EFFECTIVE DATE	REVISIONS TO SECTION:	SUPERCEDES
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MSDS status:	19-NOV-1999		** NEW **
	21-JAN-2000	4	19-NOV-1999
	28-FEB-2001	4,15	21-JAN-2000
	30-AUG-2001	12	28-FEB-2001
	08-JUN-2006	8	30-AUG-2001
	17-JUN-2009	10,15	08-JUN-2006
	29-MAR-2010	4,5,7,8,10,14,15	17-JUN-2009
	28-OCT-2011	11	29-MAR-2010