



Material Safety Data Sheet

Issue Date: 29-OCT-2012
Supersedes: 27-JUL-2011

STEAMATE PAS6074

1 Identification

Identification of substance or preparation
STEAMATE PAS6074

Product Application Area
Steam condensate treatment.

Company/Undertaking Identification
GE Betz, Inc.
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Prepared by Product Stewardship Group: T 215-355-3300 Prepared on: 29-OCT-2012

2 Hazard(s) identification

EMERGENCY OVERVIEW

DANGER

Corrosive to skin. Absorbed by skin. Potential skin sensitizer.
Corrosive to the eyes. Irritation of the upper respiratory tract.
Prolonged exposure may cause dizziness and headache.

DOT hazard: Corrosive to skin, Combustible
Odor: Amine; 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, or foam--Water spray should be used only to cool fire-exposed containers and disperse vapors.

POTENTIAL HEALTH EFFECTS

ACUTE SKIN EFFECTS:

Primary route of exposure; Toxic; Corrosive to skin. Absorbed by skin. Potential skin sensitizer.

ACUTE EYE EFFECTS:

Corrosive to the eyes.

ACUTE RESPIRATORY EFFECTS:

Primary route of exposure;Irritation of the upper respiratory tract. Prolonged exposure may cause dizziness and headache.

INGESTION EFFECTS:

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 large doses or aspirated.

TARGET ORGANS:

Prolonged or repeated exposures may cause toxicity to the liver, kidney, nervous system, and blood, CNS depression and tissue necrosis.

MEDICAL CONDITIONS AGGRAVATED:

Pre-existing skin disorders and chronic respiratory disease.

SYMPTOMS OF EXPOSURE:

Inhalation may cause irritation of mucous membranes and respiratory tract. Skin contact causes severe irritation or burns.

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.

HAZARDOUS INGREDIENTS:

Cas#	Chemical Name	Range (w/w%)
108-91-8	CYCLOHEXYLAMINE Flammable; corrosive; Category 2 suspected reproductive toxicant	15-40
110-91-8	MORPHOLINE Flammable liquid; Cat-1B skin corrosive; IARC=3 (carcinogen status not classifiable)	7-13
141-43-5	MONOETHANOLAMINE Combustible; Cat-1B skin corrosive	7-13
7173-62-8	N-9-OCTADECENYL-1,3-PROPANEDIAMINE Corrosive (skin and eyes)	7-13
112-90-3	9-OCTADECEN-1-AMINE, (Z)- Corrosive (skin)	1-5

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 water for 30 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. Aspiration into the lungs will result in chemical pneumonia and may be fatal.

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, or foam--Water spray should be used only to cool fire-exposed containers and disperse vapors.

HAZARDOUS DECOMPOSITION PRODUCTS:

oxides of carbon and nitrogen, ammonia and volatile amines

FLASH POINT:

131F 55C P-M(CC)

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. Remove ignition sources. Flush area with water. 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:

Flammable. Corrosive to skin and eyes. Corrosive to metal.

STORAGE:

Store between 40 and 100F (4 and 38C). Keep containers closed when not in use. Store in cool ventilated location. Store away from oxidizers. Keep away from flames or sparks. Protect from freezing. If frozen, thaw completely and mix thoroughly prior to use. Avoid atmospheric exposure. Store away from acids.

8 Exposure controls / personal protection

EXPOSURE LIMITS

CHEMICAL NAME

CYCLOHEXYLAMINE

PEL (OSHA): LIMITS HAVE NOT BEEN ESTABLISHED BY US OSHA.
TLV (ACGIH): TWA = 10 PPM; A4

MORPHOLINE

PEL (OSHA): 20 PPM (30PPM-STEL)-SKIN
TLV (ACGIH): 20 PPM (30PPM-STEL)-SKIN-A4

MONOETHANOLAMINE

PEL (OSHA): 3 PPM (6 MG/M3)
TLV (ACGIH): TWA = 3 PPM; STEL = 6 PPM

N-9-OCTADECENYL-1,3-PROPANEDIAMINE

PEL (OSHA): LIMITS HAVE NOT BEEN ESTABLISHED BY US OSHA.
TLV (ACGIH): LIMITS HAVE NOT BEEN ESTABLISHED BY ACGIH.

9-OCTADECEN-1-AMINE, (Z)-

PEL (OSHA): LIMITS HAVE NOT BEEN ESTABLISHED BY US OSHA.
TLV (ACGIH): LIMITS HAVE NOT BEEN ESTABLISHED BY ACGIH.

8) EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

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 organic vapor cartridges and any of the following particulate respirators: N95, N99, N100, R95, R99, R100, P95, P99 or P100.

SKIN PROTECTION:

gauntlet-type butyl 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)	0.976	Vapor Pressure (mmHG)	~ 18.0
Freeze Point (F)	-4	Vapor Density (air=1)	< 1.00
Freeze Point (C)	-20		
Viscosity (cps 70F, 21C)	24	% Solubility (water)	100.0

Odor	Amine
Appearance	Colorless To Light Yellow
Physical State	Liquid
Flash Point	P-M(CC) 131F 55C
pH As Is (approx.)	> 13.0
Evaporation Rate (Ether=1)	< 1.00

Percent VOC: 40.0

NA = not applicable ND = not determined

10 Stability and reactivity

CHEMICAL STABILITY:

Stable under normal storage conditions.

POSSIBILITY OF HAZARDOUS REACTIONS:

Friction, heat or other sources of ignition may cause a violent reaction releasing heat and toxic fumes. Contact with oxidizers may cause fire or explosion. Contact with strong acids may cause a violent reaction releasing heat.

INCOMPATIBILITIES:

May react with acids or strong oxidizers.

DECOMPOSITION PRODUCTS:

oxides of carbon and nitrogen, ammonia and volatile amines

11 Toxicological information

Oral LD50 RAT: 560 mg/kg

NOTE - Calculated value

Dermal LD50 RABBIT: 890 mg/kg

NOTE - Calculated value

12 Ecological information

AQUATIC TOXICOLOGY

Daphnia magna 48 Hour Static Renewal Bioassay

LC50= 1.8; No Effect Level= 1 mg/L

Fathead Minnow 96 Hour Static Renewal Bioassay

LC50= 1.3; No Effect Level= 1 mg/L

Rainbow Trout 96 Hour Static Renewal Bioassay

LC50= 1.4; No Effect Level= 1 mg/L

BIODEGRADATION

No Data Available.

13 Disposal considerations

If this undiluted product is discarded as a waste, the US RCRA hazardous waste identification number is :
D001=Ignitable;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, Combustible

DOT: AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S. (CYCLOHEXYLAMINE, MORPHOLINE)

8(3), UN2734, PG II
 DOT EMERGENCY RESPONSE GUIDE #: 132
 Note: Some containers may be DOT exempt, please check BOL for exact container classification
 IATA: AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S.(CYCLOHEXYLAMINE, MORPHOLINE)
 8(3), UN2734, PG II
 IMDG: AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S.(CYCLOHEXYLAMINE, MORPHOLINE)
 8(3), UN2734, PG II

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):

6,185 gallons due to CYCLOHEXYLAMINE;

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

Registration number: Not Registered

SARA SECTION 312 HAZARD CLASS:

Immediate(acute);Delayed(Chronic);Fire

SARA SECTION 302 CHEMICALS:

CAS#	CHEMICAL NAME
108-91-8	CYCLOHEXYLAMINE

SARA SECTION 313 CHEMICALS:

No regulated constituent present at OSHA thresholds

CALIFORNIA REGULATORY INFORMATION

CALIFORNIA SAFE DRINKING WATER AND TOXIC

ENFORCEMENT ACT (PROPOSITION 65):

This product contains one or more ingredients known to the state of California to cause cancer and reproductive toxicity.

MICHIGAN REGULATORY INFORMATION

No regulated constituent present at OSHA thresholds

16 Other information

HMIS vII		CODE TRANSLATION
Health	3	Serious Hazard
Fire	2	Moderate 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: 24-MAR-2011
27-JUL-2011 14
29-OCT-2012 12

** NEW **
24-MAR-2011
27-JUL-2011