



Material Safety Data Sheet

Issue Date: 11-MAY-2012
Supersedes: 03-MAY-2012

STEAMATE NA0560

1 Identification

Identification of substance or preparation
STEAMATE NA0560

Product Application Area
Neutralizing amine.

Company/Undertaking Identification
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Prepared by Product Stewardship Group: T 215-355-3300 Prepared on: 11-MAY-2012

2 Hazard(s) identification

EMERGENCY OVERVIEW

DANGER

Corrosive to skin. Absorbed by skin. Potential skin sensitizer.
Corrosive to the eyes. Vapors, gases, mists and/or aerosols cause irritation to the upper respiratory tract. Prolonged exposure may cause dizziness and headache.

DOT hazard: Corrosive to skin, Flammable
Odor: Amine; Appearance: Colorless To 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; Vapors, gases, mists and/or aerosols cause irritation to the upper respiratory tract. Prolonged exposure may cause dizziness and headache.

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 and/or toxicity to the liver and kidney.

MEDICAL CONDITIONS AGGRAVATED:

Not known.

SYMPTOMS OF EXPOSURE:

Inhalation may cause lightheadedness, slurred speech, nausea, and/or vomiting (pulmonary edema may result). Skin contact can cause 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. 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%)
110-91-8	MORPHOLINE Flammable liquid; corrosive; toxic (by skin absorption); potential liver and kidney toxin; IARC=3 (carcinogen status not classifiable)	15-40
108-91-8	CYCLOHEXYLAMINE Flammable; corrosive; toxic (by ingestion and skin absorption); skin sensitizer; CNS depressant; blood toxin (methemoglobinemia)	15-40

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. Dilute contents of stomach using 3-4 glasses 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, or foam--Water spray should be used only to cool fire-exposed containers and disperse vapors.

HAZARDOUS DECOMPOSITION PRODUCTS:

elemental oxides

FLASH POINT:

133F 56C P-M(CC)

MISCELLANEOUS:

Corrosive to skin, Flammable
UN 2734;Emergency Response Guide #132

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. Do not use near sparks, flames or sources of ignition.

STORAGE:

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

8 Exposure controls / personal protection

EXPOSURE LIMITS

CHEMICAL NAME

MORPHOLINE

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

CYCLOHEXYLAMINE

PEL (OSHA): LIMITS HAVE NOT BEEN ESTABLISHED BY US OSHA.
TLV (ACGIH): TWA = 10 PPM; A4
MISC: NIOSH REL = 10 PPM/40 MG/M3

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 organic vapor cartridges.

SKIN PROTECTION:

gauntlet-type 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)	0.988	Vapor Pressure (mmHG)	~ 18.0
Freeze Point (F)	< -30	Vapor Density (air=1)	< 1.00
Freeze Point (C)	< -34		
Viscosity(cps 70F,21C)	22	% Solubility (water)	100.0
Odor		Amine	
Appearance		Colorless To Yellow	
Physical State		Liquid	
Flash Point	P-M(CC)	133F 56C	
pH As Is (approx.)		13.1	
Evaporation Rate (Ether=1)		< 1.00	
Percent VOC:		60.0	

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. 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.

INCOMPATIBILITIES:

May react with acids.

DECOMPOSITION PRODUCTS:

elemental oxides

11 Toxicological information

Oral LD50 RAT: 450 mg/kg
NOTE - Estimated value
Dermal LD50 RABBIT: 595 mg/kg
NOTE - Estimated value
Skin Irritation Score RABBIT: >6.3
NOTE - Based on similar product; EPA# I:corrosive; DOT corrosive:60 minutes, not 3 min.
Eye Irritation Score RABBIT: CORROSIVE
NOTE - 15% Cyclohexylamine score:101, +/-rinsing, constant irritation, nonreversible

12 Ecological information

AQUATIC TOXICOLOGY

Daphnia magna 48 Hour Static Renewal Bioassay (pH adjusted)
LC50= 54; No Effect Level= 8 mg/L
Fathead Minnow 96 Hour Static Renewal Bioassay (pH adjusted)
LC50= 104; No Effect Level= 50 mg/L

BIODEGRADATION

BOD-28 (mg/g): 296
BOD-5 (mg/g): 1
COD (mg/g): 1443
TOC (mg/g): 354

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, Flammable
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):

No regulated constituent present at OSHA thresholds

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: 146005

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);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.

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 -----
MSDS status:	03-MAY-2012		** NEW **
	11-MAY-2012	15	03-MAY-2012