

# SAFETY DATA SHEET



Conforms to regulation (EC) no. EU 453/2010

## SECTION 1 - IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1 Product Identifier

**Product Name:** Formamide

**Product Number:** EC-608

### 1.2 Relevant Identified Uses of the Substance/Mixture and Uses Advised Against

Investigational research by professional users

### 1.3 Details of the Supplier of the Safety Data Sheet

#### Manufacturer

National Diagnostics  
305 Patton Drive  
Atlanta, GA 30036  
(404) 699-2121  
(800) 526-3867  
info@nationaldiagnostics.com

### 1.4 Emergency Telephone Number

#### ChemTel Inc.

Contract number MIS8894340  
1-800 255-3924 (United States, Canada, Puerto Rico & US Virgin Islands)  
01-800-099-0731 (Mexico)  
400-120-0751 (China)  
000-800-100-4086 (India)  
1-300-954-583 (Australia)  
0-800-591-6042 (Brazil)  
+1-813-255-3924 (All other regions)

## SECTION 2 - HAZARDS IDENTIFICATION

### 2.1 Classification of the Substance or Mixture

**Classification according to Regulation (EC) No. 1272/2008 [EU-GHS/CLP]**

H360 - Toxic to Reproduction (Category 1B)

### 2.2 Label Elements

#### GHS LABEL ELEMENTS AND CLASSIFICATION

##### GHS Label Elements



#### DANGER

H360 - May damage fertility or the unborn child.  
P201 - Obtain special instructions before use.  
P202 - Do not handle until all safety precautions have been read and understood.  
P308+P313 - IF exposed or concerned: Call a POISON CENTER or doctor/physician.

### 2.3 Other Hazards

None found.

## SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substance

#### Chemical Names/Description

Ultra-pure formamide.

#### Chemical Formula

CH<sub>3</sub>NO

#### Component List

Component	% Comp.	CAS #	EC #
Formamide	>99	75-12-7	200-842-0

## SECTION 4 - FIRST AID MEASURES

### 4.1 Description of First Aid Measures

**Inhalation**

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

**Ingestion**

DO NOT INDUCE VOMITING. If swallowed and the person is conscious, immediately give large amounts of water. Get medical attention.

**Skin**

Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

**Eyes**

Immediately flush eyes with plenty of water for at least fifteen minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

**4.2 Most Important Symptoms and Effects, Both Acute and Delayed****Inhalation**

Symptoms may include coughing, shortness of breath. Excessive inhalation of vapor may cause symptoms that parallel ingestion, ranging from headache to unconsciousness, depending upon the duration and level of the exposure.

**Ingestion**

May cause headache, dizziness, nausea, vomiting, abdominal pain, and unconsciousness. May affect the reproductive system.

**Skin**

Symptoms include redness, itching, and pain. May be absorbed through the skin with symptoms parallel to ingestion.

**Eyes**

Redness and pain.

**4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed**

Unknown/not applicable

**SECTION 5 - FIRE FIGHTING MEASURES****5.1 Extinguishing media**

Water spray, dry chemical, alcohol-resistant foam, or carbon dioxide. Water or foam may cause frothing.

**5.2 Special Hazards Arising from the Substance/Mixture****Hazardous Combustion Products**

Highly toxic gases may be involved in fires of this product.

**Hazardous Decomposition Products**

Burning may produce ammonia, carbon monoxide, carbon dioxide, nitrogen oxides. At boiling point: ammonia, carbon monoxide, and hydrogen cyanide.

**Hazardous Polymerization**

Will not occur under normal conditions of use (See Sections 10.4 & 10.5).

**5.3 Advice for Firefighters**

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

**5.4 Further Information**

No data available.

**SECTION 6 - ACCIDENTAL RELEASE MEASURES****6.1 Personal Precautions**

Wear appropriate protective equipment as specified in Section 8.

**6.2 Environmental Precautions**

Prevent discharge into the environment. Dike spills and stop leakage where practical. Do not allow material to enter drains.

**6.3 Methods and Materials for Containment and Cleaning Up**

Ventilate area. Cover with absorbent material (soda ash) to confine spill and sweep or shovel into container. Close container tightly. Avoid breathing vapors.

**6.4 References to Other Sections**

For disposal information, see Section 13. For protective clothing and equipment, see Section 8.

**SECTION 7 - HANDLING AND STORAGE****7.1 Precautions for Safe Handling**

Avoid contact and inhalation. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling. Wear special protective equipment (Sec.

8) where exposures may exceed established levels.

## 7.2 Conditions for Safe Storage (including any incompatibles)

Keep in a tightly closed container, stored in a cooled, dry, ventilated area. Protect from physical damage. Isolate from incompatible materials (section 10).

### Incompatibles

Acids, alkalines, iodine, pyridine, and sulfur trioxide. Copper, brass, lead, and rubber are attacked by formamide.

## 7.3 Specific End Uses

Investigational research by professional users

# SECTION 8 - EXPOSURE CONTROLS/PERSONAL PRECAUTIONS

## 8.1 Control Parameters

ACGIH Threshold Limit Value (TLV): 10 ppm TWA

OSHA Permissible Exposure Limit (PEL): None established

## 8.2 Exposure Controls

### Engineering Controls

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source.

### Respiratory Protection

If the exposure limit is exceeded, wear a supplied air, full-facepiece respirator, airtight hood, or full-facepiece self-contained breathing apparatus.

### Eye Protection

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

### Skin Protection

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

# SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

## 9.1 Information on Basic Physical & Chemical Properties

a. Appearance	Clear, colorless liquid	b. Odor	None
c. Odor Threshold	N.A.	d. pH	7.1
e. Melting/Freezing Point (°C)	2-3	f. Boiling point (°C)	210
g. Flash Point (°C)	154	h. Evaporation Rate	< 1 (BuAc = 1)
i. Flammability	N.A.	j. Upper/Lower Flammability or Explosive Limits	No Data
k. Vapor Pressure	1 @ 71C	l. Vapor Density (Air = 1)	1.55 (air = 1)
m. Relative Density	1.13 @20C	n. Water Solubility	Infinitely soluble
o. Partition Coefficient n-octanol/water	log Pow -0.82	p. Autoignition Temperature (°C)	No Data
q. Decomposition Temperature (°C)	140C	r. Viscosity	No data available.
s. Explosive Properties	N.A.	t. Oxidizing Properties	Not an oxidizer

# SECTION 10 - STABILITY AND REACTIVITY

## 10.1 Reactivity

Stable under normal conditions of use.

## 10.2 Chemical Stability

Stable under ordinary conditions of use and storage. Absorbs moisture from the air.

## 10.3 Possibility of Hazardous Reactions

Will not occur under normal conditions of use (See Sections 10.4 & 10.5).

## 10.4 Conditions to Avoid

Heat, flames, ignition sources, and incompatibles.

## 10.5 Incompatible Materials

Acids, alkalines, iodine, pyridine, and sulfur trioxide. Copper, brass, lead, and rubber are attacked by formamide.

## 10.6 Hazardous Decomposition Products

Burning may produce ammonia, carbon monoxide, carbon dioxide, nitrogen oxides. At boiling point: ammonia, carbon monoxide, and hydrogen cyanide.

## SECTION 11 - TOXICOLOGICAL INFORMATION

### Product LD50 Values

#### Oral Rat LD50 (mg/kg)

5570

#### Dermal Rabbit LD50 (mg/kg)

No Data

### Component Cancer List Status

	NTP Carcinogen		IARC Category
	Known	Anticipated	
Formamide	No	No	None

### Potential Health Effects

#### Inhalation

Causes irritation to the respiratory tract.

#### Ingestion

Causes irritation to the gastrointestinal tract. Affects the central nervous system. May affect the reproductive system.

#### Skin

Causes irritation to the skin. May be absorbed through the skin.

#### Eyes

Causes irritation to the eyes.

### Carcinogenicity

Not listed as a known or anticipated carcinogen by NTP or IARC.

### Mutagenicity

No information found.

### Reproductive Toxicity

May cause congenital malformation of the fetus.

### Teratogenic Effects

May cause congenital malformation of the fetus.

### Routes of Entry

Ingestion, inhalation, and absorption through the skin.

### Target Organ Statement

No information found.

## SECTION 12 - ECOLOGICAL INFORMATION

### 12.1 Toxicity

	Vertebrates	Invertebrates	Algae	Microorganisms
Aquatic Toxicity (ppm unless otherwise noted)	6569 @ 96 hrs	>500 @ 48 hrs	>500 @ 96 hrs	>1000 @ 30min
	Birds	Arthropods	Plants	Microorganisms
Terrestrial Environment Toxicity (ppm unless otherwise noted)	no data	no data	no data	no data

### 12.2 Persistence and Degradability

Readily biodegradable (99% degradation at 28 days)

### 12.3 Bioaccumulative Potential

low expected bioaccumulation log BCF 0.5

### 12.4 Mobility in Soil

log Koc: 0.93

### 12.5 Results of PBT and vPvB Assessment

No Data

### 12.6 Other Adverse Effects

No data

## SECTION 13 - DISPOSAL CONSIDERATIONS

### 13.1 Waste Treatment Methods

Offer surplus or non-recyclable product to licensed disposal company. Disposal is subject to user compliance with applicable law and product characteristics at time of disposal. Dispose of packaging as product.

## SECTION 14 - TRANSPORT INFORMATION

	ADR/RID	IATA	IMO	DOT
14.1 UN Number	N.A.	N.A.	N.A.	N.A.
14.2 Shipping Name	Not regulated	Not regulated	Not regulated	Not regulated
14.3 Hazard Class	N.A.	N.A.	N.A.	N.A.
14.4 Packing Group	N.A.	N.A.	N.A.	N.A.
14.5 Environmental Hazards	N.A.	N.A.	N.A.	N.A.
14.6 Special Precautions	N.A.	N.A.	N.A.	N.A.

## SECTION 15 - REGULATORY INFORMATION

### 15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance/Mixture

#### United States

##### TSCA Regulatory Statement

All intentional ingredients are listed on the TSCA Inventory.

##### SARA 311/312 Hazard Categories

Component	Fire	Pressure	Reactivity	Acute	Chronic
Formamide	No	No	No	Yes	Yes

#### Europe

##### EEC Regulatory

All intentional ingredients are listed on the European EINECS Inventory.

## SECTION 16 - OTHER INFORMATION

### Revisional Updates

4/26/2019 - Updated Section 1.4

5/29/2015 - Updated Sections 2.1 and 3.1

8/13/2013 - Released Version 1.0

### NFPA Codes

Health 2 Flammability 1 Reactivity 0

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