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Revision Number 1

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

**Product Name** Formamide

**Product Code(s)** 0314

**Recommended Use** For Further Manufacturing Use Only  
Not for Human or Animal Drug Use

**Recommended Use** Used for denaturing nucleic acids in hybridization and DNA sequencing procedures.

**Synonyms** AMID KYSELINY MRAVENCI (CZECH) \* CARBAMALDEHYDE \* FORMAMIDE (ACGIH) \* METHANAMIDE \* METHANOIC ACID, AMIDE \*

**Company**  
AMRESKO, LLC  
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Solon, Ohio 44139

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**Company Phone Number** 1-800-448-4442  
**E-mail Address** info@amresco-inc.com

2. HAZARDS IDENTIFICATION

**GHS - Classification**

**Classification** Toxic to Reproduction 1B

**Signal Word** Danger



**Hazard Statements** H360 - May damage fertility or the unborn child

**Precautionary Statements** P201 - Obtain special instructions before use P261 - Avoid breathing dust/fume/gas/mist/vapors/spray P280 - Wear protective gloves/protective clothing/eye protection/face protection P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P311 - Call a POISON CENTRE or doctor/physician P302+ P352 - IF ON SKIN: Wash with plenty of soap and water

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	EC No.	REACH Reg. No.	CAS-No	Weight %	Classification
Formamide	EEC No. 200-842-0	Not available	75-12-7	95-100	Repr.Cat.2; R61

### 4. FIRST AID MEASURES

**Eye Contact** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician

**Skin Contact** Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes

**Inhalation** Artificial respiration and/or oxygen may be necessary. Move to fresh air in case of accidental inhalation of vapors.

**Ingestion** Clean mouth with water and afterwards drink plenty of water

**Notes to Physician** Treat symptomatically

### 5. FIRE-FIGHTING MEASURES

**Flammable Properties** Not flammable

**Flash Point** 150 °C / 302 °F

**Suitable Extinguishing Media** Dry chemical, CO2, water spray or regular foam

**Hazardous Combustion Products** Carbon oxides, Nitrogen oxides (NOx).

**Explosion Data**

<b>Sensitivity to Mechanical Impact</b>	Not sensitive
<b>Sensitivity to Static Discharge</b>	Not sensitive

**Protective Equipment and Precautions for Firefighters** As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

### 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions** Avoid contact with skin, eyes and clothing. Use personal protective equipment. Ensure adequate ventilation

**Methods for Containment** Prevent further leakage or spillage if safe to do so

**Methods for Cleaning Up** Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

**7. HANDLING AND STORAGE**

**Handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing.

**Storage** Keep containers tightly closed in a dry, cool and well-ventilated place

**Incompatible Products** Acids. Bases. Strong oxidizing agents.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Formamide 75-12-7	TWA: 10 ppm		TWA: 10 ppm TWA: 15 mg/m <sup>3</sup>

**Engineering Measures** Showers  
Eyewash stations  
Ventilation systems

**Personal Protective Equipment**

**Eye/Face Protection**

Safety glasses with side-shields. Avoid contact with eyes.

**Skin and Body Protection**

Wear protective gloves/clothing.

**Respiratory Protection**

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Colorless Slightly viscous	
<b>Odor</b>	No information available	
<b>Odor Threshold</b>	No information available	
<b>Decomposition Temperature °C</b>	No information available	
<b>Freezing Point</b>	No information available	
<b>Initial Boiling Point</b>	No information available	
<b>Physical State</b>	Liquid	
<b>pH</b>	No data available	
<b>Flash Point</b>	302 °F / 150 °C	
<b>Autoignition Temperature</b>	932 °F / 499 °C /	
<b>Boiling Point/Range</b>	210-216 °C	
<b>Melting Point/Range</b>	1-3 °C	
<b>Flammability Limits in Air</b>	<b>Upper</b> No data available	<b>Lower</b> No data available
<b>Explosive Properties</b>	No information available	
<b>Oxidizing Properties</b>	No information available	
<b>Evaporation Rate</b>	No data available	
<b>MMHG @ 37.8 C</b>	No data available	
<b>Vapor Density</b>	No data available	
<b>Specific Gravity</b>	1.133	
<b>Density</b>	1.55	
<b>Solubility</b>	No information available	
<b>Partition Coefficient (n-octanol/water)</b>	No data available	
<b>Viscosity</b>	No information available	
<b>Molecular Weight</b>	45.04	

## 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under recommended storage conditions
<b>Incompatible Products</b>	Acids. Bases. Strong oxidizing agents.
<b>Conditions to Avoid</b>	Keep way from heat,sparks,and open flames
<b>Hazardous Decomposition Products</b>	Carbon oxides. Nitrogen oxides (NOx).
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

**Product Information** Product does not present an acute toxicity hazard based on known or supplied information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Formamide	5000 mg/kg ( Rat )		3900 ppm ( Rat ) 6 h

### Chronic Toxicity

**Chronic Toxicity** Suspected teratogen.

**Target Organ Effects** Liver, Central nervous system (CNS), Blood, Kidneys.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

Harmful to aquatic organisms.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Microtox	Daphnia Magna (Water Flea)
Formamide	EC50 > 500 mg/L 96 h EC50 > 500 mg/L 72 h	LC50 4600-9300 mg/L Leuciscus idus 96 h LC50= 9135 mg/L Brachydanio rerio 96 h		EC50 > 500 mg/L 48 h

Chemical Name	Log Pow
Formamide	= -0.82 25 °C

**13. DISPOSAL CONSIDERATIONS**

**Waste Disposal Method** Dispose of material in accordance with all federal, state, and local regulations.

**Contaminated Packaging** Dispose of in accordance with all federal, state and local regulations.

**14. TRANSPORT INFORMATION**

**IATA** Not regulated

**DOT** Not regulated

**15. REGULATORY INFORMATION**

**REACH Title VII Restrictions** No information available.

Chemical Name	Dangerous Substances	Organic Solvents	Harmful Substances Whose Names Are to be Indicated on the Label	Pollution Release and Transfer Registry (Class II):	Pollution Release and Transfer Registry (Class I):	Poison and Deleterious Substances Control Law:
Formamide	>=>=1 % weight	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

Component	ISHA - Harmful Substances Prohibited for Manufacturing, Importing, Transferring, or Supplying	ISHA - Harmful Substances Requiring Permission	Toxic Chemical Classification Listing (TCCL) - Toxic Chemicals	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
Formamide 75-12-7 ( 95-100 )	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

**International Inventories**

TSCA	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Does not Comply
PICCS	Complies
AICS	Complies

**U.S. Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

Acute Health Hazard	No
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

**Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:.

Chemical Name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Formamide	75-12-7	95-100		Group II		

**CERCLA**

**U.S. State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Formamide	X	X	X		X

**International Regulations**

**Mexico - Grade**

Chemical Name	Carcinogen Status	Exposure Limits
Formamide		Mexico: TWA 20 ppm Mexico: TWA 30 mg/m <sup>3</sup>

**Canada**

**WHMIS Hazard Class**

D2A Very toxic materials



**16. OTHER INFORMATION**

**Issuing Date** 20-May-2009

**Revision Date** 15-Aug-2011

**Revision Note**  
No information available.

**Recommended Restrictions** No information available

**Disclaimer**

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of MSDS**