

## SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Revision Date 06/26/2019

Version 1.5

### SECTION 1. Identification

#### Product identifier

Product number	D05185
Product code	4610-OP
Product name	OmniPur® Formamide Deionized
CAS-No.	75-12-7

#### Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Reagent for analysis
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#### Details of the supplier of the safety data sheet

Company	EMD Millipore Corporation   400 Summit Drive   Burlington   Massachusetts 01803   United States of America   General Inquiries: +1 800-645-5476   Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5) MilliporeSigma is a business of Merck KGaA, Darmstadt, Germany.
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<b>Emergency telephone</b>	800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week
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### SECTION 2. Hazards identification

#### GHS Classification

Carcinogenicity, Category 2, H351  
Reproductive toxicity, Category 1B, H360  
Specific target organ systemic toxicity - repeated exposure, Category 2, Blood, Cardio-vascular system, H373

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### GHS-Labeling

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## Hazard pictograms



## Signal Word

Danger

## Hazard Statements

H360 May damage fertility or the unborn child.

H351 Suspected of causing cancer.

H373 May cause damage to organs (Blood, Cardio-vascular system) through prolonged or repeated exposure.

## Precautionary Statements

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.

P281 Use personal protective equipment as required.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P405 Store locked up.

P501 Dispose of contents/ container to an approved waste disposal plant.

## Other hazards

None known.

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## SECTION 3. Composition/information on ingredients

Formula	HCONH <sub>2</sub>	CH <sub>3</sub> NO (Hill)
Molar mass	45.04 g/mol	

## Hazardous ingredients

Chemical name (Concentration)

CAS-No.

Formamide (>= 90 % - <= 100 % )

75-12-7

Exact percentages are being withheld as a trade secret.

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## SECTION 4. First aid measures

### Description of first-aid measures

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### *Inhalation*

After inhalation: fresh air. Call in physician.

### *Skin contact*

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

### *Eye contact*

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

### *Ingestion*

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

Never give anything by mouth to an unconscious person.

### **Most important symptoms and effects, both acute and delayed**

ataxia (impaired locomotor coordination)

### **Indication of any immediate medical attention and special treatment needed**

No information available.

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## **SECTION 5. Fire-fighting measures**

### **Extinguishing media**

#### *Suitable extinguishing media*

Water, Foam, Carbon dioxide (CO<sub>2</sub>), Dry powder

#### *Unsuitable extinguishing media*

For this substance/mixture no limitations of extinguishing agents are given.

### **Special hazards arising from the substance or mixture**

Combustible.

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air on intense heating.

Development of hazardous combustion gases or vapors possible in the event of fire.

Fire may cause evolution of:

Hydrogen cyanide (hydrocyanic acid), nitrogen oxides, Ammonia

### **Advice for firefighters**

#### *Special protective equipment for fire-fighters*

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

#### *Further information*

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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### SECTION 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

#### Environmental precautions

Do not let product enter drains.

#### Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

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### SECTION 7. Handling and storage

#### Precautions for safe handling

Observe label precautions.

Work under hood. Do not inhale substance/mixture. Avoid generation of vapors/aerosols.

#### Conditions for safe storage, including any incompatibilities

Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

Store at +2°C to +8°C (+36°F to +46°F).

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## SECTION 8. Exposure controls/personal protection

### Exposure limit(s)

#### Components

Basis	Value	Threshold limits	Remarks
<i>Formamide 75-12-7</i>			
ACGIH	Time Weighted Average (TWA): Skin designation:	10 ppm	Can be absorbed through the skin.
NIOSH/GUIDE	Recommended exposure limit (REL): Skin designation:	10 ppm 15 mg/m <sup>3</sup>	Can be absorbed through the skin.
Z1A	Time Weighted Average (TWA): Short Term Exposure Limit (STEL):	20 ppm 30 mg/m <sup>3</sup> 30 ppm 45 mg/m <sup>3</sup>	

### Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

### Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

### Hygiene measures

Immediately change contaminated clothing. Apply skin- protective barrier cream.  
Wash hands and face after working with substance.

### Eye/face protection

Safety glasses

### Hand protection

full contact:

Glove material: natural latex  
Glove thickness: 0.6 mm  
Break through time: > 480 min

splash contact:

Glove material: Nitrile rubber  
Glove thickness: 0.11 mm  
Break through time: > 240 min

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The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 706 Lapren® (full contact), KCL 741 Dermatril® L (splash contact).  
The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.  
This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

*Other protective equipment:*  
protective clothing

*Respiratory protection*  
required when vapors/aerosols are generated.  
Recommended Filter type: Filter A (acc. to DIN 3181) for vapors of organic compounds  
The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are performed according to the instructions of the producer.  
These measures have to be properly documented.

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## SECTION 9. Physical and chemical properties

Physical state	liquid
Color	colorless
Odor	ammoniacal
Odor Threshold	No information available.
pH	8 - 10 at 200 g/l 68 °F (20 °C)
Melting point	36 °F (2 °C)
Boiling point/boiling range	410 °F (210 °C) at 1,013 hPa
Flash point	347 °F (175 °C) Method: open cup

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Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	2.7 %(V)
Upper explosion limit	19.0 %(V)
Vapor pressure	0.32 hPa at 122 °F (50 °C)  0.08 hPa at 68 °F (20 °C)
Relative vapor density	1.56
Density	1.13 g/cm <sup>3</sup> at 68 °F (20 °C)
Relative density	No information available.
Water solubility	at 68 °F (20 °C) soluble
Partition coefficient: n-octanol/water	log Pow: -0.82 (25 °C) OECD Test Guideline 107 Bioaccumulation is not expected.
Autoignition temperature	No information available.
Decomposition temperature	> 356 °F (> 180 °C)
Viscosity, dynamic	3.75 mPa.s at 68 °F (20 °C)
Explosive properties	Not classified as explosive.
Oxidizing properties	none
Ignition temperature	932 °F (500 °C) Method: DIN 51794

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### SECTION 10. Stability and reactivity

#### Reactivity

Forms explosive mixtures with air on intense heating.  
A range from approx. 15 Kelvin below the flash point is to be rated as critical.

#### Chemical stability

heat-sensitive

#### Possibility of hazardous reactions

Exothermic reaction with:

Oxidizing agents, bases

Risk of explosion with:

furfuryl alcohol, Oxides of phosphorus, hydrogen peroxide

iodine, with, pyridine, and, Sulfur trioxide

A risk of explosion and/or of toxic gas formation exists with the following substances:

water separating agents

Possible formation of:

Hydrogen cyanide (hydrocyanic acid)

#### Conditions to avoid

Strong heating.

#### Incompatible materials

no information available

#### Hazardous decomposition products

in the event of fire: See section 5.

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### SECTION 11. Toxicological information

#### Information on toxicological effects

*Likely route of exposure*

Eye contact, Skin contact

*Target Organs*

reproductive system

Eyes

Skin

Respiratory system

Central nervous system

Blood

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Kidney  
Gastro-intestinal system  
Mucous membranes  
Liver

*Acute oral toxicity*

LD50 Rat: ca. 5,325 mg/kg  
OECD Test Guideline 401

*Acute inhalation toxicity*

LC50 Rat: > 21 mg/l; 4 h ; vapor  
OECD Test Guideline 403

*Acute dermal toxicity*

LD50 Rat: > 3,000 mg/kg  
(ECHA)

*Skin irritation*

Rabbit  
Result: No skin irritation  
(ECHA)

*Eye irritation*

Rabbit  
Result: slight irritation  
OECD Test Guideline 405

*Sensitization*

In animal experiments: Guinea pig  
Result: negative

(IUCLID)

*Repeated dose toxicity*

Subchronic toxicity

Subacute toxicity

Subchronic toxicity

Subacute toxicity

*Genotoxicity in vivo*

In vivo micronucleus test

Mouse

Exposure time: 90-day

Result: negative

Method: OECD Test Guideline 474

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In vivo micronucleus test  
Mouse  
Result: positive  
Method: OECD Test Guideline 474

*Genotoxicity in vitro*  
Ames test  
Escherichia coli/Salmonella typhimurium  
Result: negative  
Method: OECD Test Guideline 471

*Carcinogenicity*  
Mouse  
Number of exposures: daily  
Method: OECD Test Guideline 451

Rat  
Number of exposures: daily  
Method: OECD Test Guideline 451

*CMR effects*  
Carcinogenicity: Suspected of causing cancer.  
Teratogenicity / Reproductive toxicity: May damage fertility or the unborn child.

*Specific target organ systemic toxicity - single exposure*  
The substance or mixture is not classified as specific target organ toxicant, single exposure.

*Specific target organ systemic toxicity - repeated exposure*  
May cause damage to organs through prolonged or repeated exposure.  
Target Organs: Blood, Cardio-vascular system

*Aspiration hazard*  
Regarding the available data the classification criteria are not fulfilled.

## **Carcinogenicity**

IARC	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
ACGIH	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or

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potential carcinogen by ACGIH.

### Further information

Possible effect after contact with substance:

ataxia (impaired locomotor coordination)

Absorption may result in damage of the following:

Liver, Kidney

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

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## SECTION 12. Ecological information

### Ecotoxicity

#### *Toxicity to fish*

LC50 *Leuciscus idus* (Golden orfe): 4,600 - 9,300 mg/l; 96 h

DIN 38412 part 15

#### *Toxicity to daphnia and other aquatic invertebrates*

EC50 *Daphnia magna* (Water flea): > 500 mg/l; 48 h (IUCLID)

#### *Toxicity to algae*

static test EC50 *Desmodesmus subspicatus* (green algae): > 500 mg/l; 96 h

DIN 38412

#### *Toxicity to bacteria*

EC50 *Pseudomonas putida*: > 10,000 mg/l; 17 h (IUCLID)

static test EC50 activated sludge: > 1,000 mg/l; 30 min

OECD Test Guideline 209

### Persistence and degradability

#### *Biodegradability*

99 %; 28 d; aerobic

OECD Test Guideline 301A

Readily biodegradable.

### Bioaccumulative potential

#### *Partition coefficient: n-octanol/water*

log Pow: -0.82 (25 °C)

OECD Test Guideline 107

Bioaccumulation is not expected.

### Mobility in soil

#### *Distribution among environmental compartments*

log Koc: 1.101

(calculated)

(IUCLID) Mobile in soils

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### *Additional ecological information*

When discharged properly, no impairments in the function of adapted biological wastewater treatment plants are to be expected.  
Discharge into the environment must be avoided.

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## **SECTION 13. Disposal considerations**

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

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## **SECTION 14. Transport information**

### **Land transport (DOT)**

Not classified as dangerous in the meaning of transport regulations.

### **Air transport (IATA)**

Not classified as dangerous in the meaning of transport regulations.

### **Sea transport (IMDG)**

Not classified as dangerous in the meaning of transport regulations.

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## **SECTION 15. Regulatory information**

### **United States of America**

#### **SARA 313**

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

#### **SARA 302**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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## Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

## DEA List I

Not listed

## DEA List II

Not listed

## US State Regulations

### Massachusetts Right To Know

*Components*

Formamide

### Pennsylvania Right To Know

*Components*

Formamide

### New Jersey Right To Know

*Components*

Formamide

### California Prop 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

## Notification status

TSCA: All components of the product are listed in the TSCA-inventory.

DSL: All components of this product are on the Canadian DSL

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## SECTION 16. Other information

### Training advice

Provide adequate information, instruction and training for operators.

### Labeling

*Hazard pictograms*



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## *Signal Word*

Danger

## *Hazard Statements*

H351 Suspected of causing cancer.

H360 May damage fertility or the unborn child.

H373 May cause damage to organs (Blood, Cardio-vascular system) through prolonged or repeated exposure.

## *Precautionary Statements*

Prevention

P201 Obtain special instructions before use.

Response

P314 Get medical advice/ attention if you feel unwell.

Restricted to professional users.

## **Full text of H-Statements referred to under sections 2 and 3.**

H351	Suspected of causing cancer.
H360	May damage fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.

## **Key or legend to abbreviations and acronyms used in the safety data sheet**

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

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The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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