



# SAFETY DATA SHEET

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

Revision Date 02/03/2015

Version 1.2

## SECTION 1. Identification

### Product identifier

Product number 109259  
Product name Water standard 5 mg/ml (1 ml contains 5 mg H<sub>2</sub>O) apura®

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

Identified uses Reagent for analysis

### Details of the supplier of the safety data sheet

Company EMD Millipore Corporation | 290 Concord Road, Billerica, MA 01821,  
United States of America | General Inquiries: +1-978-715-4321 |  
Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5)

Emergency telephone 800-424-9300 CHEMTREC (USA)  
+1-703-527-3887 CHEMTREC (International)  
24 Hours/day; 7 Days/week

## SECTION 2. Hazards identification

### GHS Classification

Flammable liquid, Category 3, H226  
Acute toxicity, Category 4, Inhalation, H332  
Skin irritation, Category 2, H315  
Specific target organ systemic toxicity - single exposure, Category 3, Respiratory system, H335  
For the full text of the H-Statements mentioned in this Section, see Section 16.

### GHS-Labeling

#### Hazard pictograms



Signal Word  
Warning

#### Hazard Statements

H226 Flammable liquid and vapor.  
H315 Causes skin irritation.  
H332 Harmful if inhaled.

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Version 1.2

H335 May cause respiratory irritation.

### *Precautionary Statements*

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P233 Keep container tightly closed.  
P240 Ground/bond container and receiving equipment.  
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.  
P242 Use only non-sparking tools.  
P243 Take precautionary measures against static discharge.  
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.  
P264 Wash skin thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P312 Call a POISON CENTER or doctor/ physician if you feel unwell.  
P321 Specific treatment (see supplemental first aid instructions on this label).  
P332 + P313 If skin irritation occurs: Get medical advice/ attention.  
P362 Take off contaminated clothing and wash before reuse.  
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.  
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
P403 + P235 Store in a well-ventilated place. Keep cool.  
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**

Chemical nature Water in n-amyl alcohol.

### **Hazardous ingredients**

*Chemical Name (Concentration)*

CAS-No.

*n-Amyl alcohol (>= 90 % - <= 100 % )*

71-41-0

Exact percentages are being withheld as a trade secret.

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## **SECTION 4. First aid measures**

### **Description of first-aid measures**

#### *Inhalation*

After inhalation: fresh air. If breathing stops: mouth-to-mouth breathing or artificial respiration.

Oxygen if necessary. Immediately call in physician.

#### *Skin contact*

After skin contact: wash off with plenty of water. Remove contaminated clothing.

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Product number

109259

Version 1.2

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### *Eye contact*

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

### *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**

irritant effects, Dizziness, Unconsciousness, narcosis, Diarrhea, Nausea, Vomiting, Headache, drowsiness, Coma

Drying-out effect resulting in rough and chapped skin.

### **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*

Carbon dioxide (CO<sub>2</sub>), Foam, 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 material

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air at elevated temperatures.

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

### **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*

Cool closed containers exposed to fire with water spray. 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: Avoid substance contact. Do not breathe vapors, aerosols.

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 empty into drains. Risk of explosion.

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

Cover drains. Collect, bind, and pump off spills.

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Product number 109259  
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Version 1.2

Observe possible material restrictions (see sections 7 and 10).  
Take up 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

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

#### *Advice on protection against fire and explosion*

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

### Conditions for safe storage, including any incompatibilities

Keep away from heat and sources of ignition. Keep container tightly closed in a dry and well-ventilated place.

Store at +15°C to +25°C (+59°F to +77°F).

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## SECTION 8. Exposure controls/personal protection

### Exposure limit(s)

Contains no substances with occupational exposure limit values.

### 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*

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

#### *Other protective equipment:*

Flame retardant antistatic protective clothing.

#### *Respiratory protection*

required when vapors/aerosols are generated.

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

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## SECTION 9. Physical and chemical properties

Physical state	liquid
Color	colorless
Odor	characteristic
Odor Threshold	No information available.
pH	at 68 °F (20 °C) neutral
Melting point	ca. -78 °C
Boiling point/boiling range	ca. 280 °F (138 °C) at 1,013 hPa
Flash point	ca. 120 °F (49 °C)
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	1.6 %(V) 1-Pentanol
Upper explosion limit	8.0 %(V) 1-Pentanol
Vapor pressure	2.6 hPa at 68 °F (20 °C) 1-Pentanol
Relative vapor density	No information available.
Density	0.82 g/cm <sup>3</sup> at 68 °F (20 °C)
Relative density	No information available.
Water solubility	ca.22 g/l at 68 °F (20 °C)
Partition coefficient: n-octanol/water	log Pow: 1.51 (25 °C) (experimental) (Lit.) Bioaccumulation is not expected.
Autoignition temperature	No information available.

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109259

Version 1.2

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---

Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	none
Ignition temperature	ca. 572 °F (300 °C) Method: DIN 51794

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## SECTION 10. Stability and reactivity

### Reactivity

auto-flammable

Vapor/air-mixtures are explosive at intense warming.

### Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### Possibility of hazardous reactions

Risk of ignition or formation of inflammable gases or vapors with:

Fluorine, Oxygen

Violent reactions possible with:

Oxidizing agents, Alkali metals, Alkaline earth metals, halogens, Acid chlorides, Isocyanates, lithium silicide, acids

### Conditions to avoid

Heating.

A range from approx. 15 Kelvin below the flash point is to be rated as critical.

### Incompatible materials

rubber, various plastics

### Hazardous decomposition products

no information available

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## SECTION 11. Toxicological information

### Information on toxicological effects

*Likely route of exposure*

Inhalation, Eye contact, Skin contact

*Acute oral toxicity*

absorption

*Acute inhalation toxicity*

absorption

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

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### *Skin irritation*

Drying-out effect resulting in rough and chapped skin.

Mixture causes skin irritation.

### *Specific target organ systemic toxicity - single exposure*

Mixture may cause respiratory irritation.

### *Specific target organ systemic toxicity - repeated exposure*

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

### *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 ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

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 potential carcinogen by ACGIH.

## **Further information**

Further toxicological data:

After absorption of large quantities:

Headache, drowsiness, lack of appetite, Nausea, Vomiting, Diarrhea, Dizziness, Unconsciousness, Coma

Possible damages:

Damage to:

Liver, Kidney, Lungs, Cardiac

Further data:

Handle in accordance with good industrial hygiene and safety practice.

## **Ingredients**

### *n-Amyl alcohol*

#### *Acute oral toxicity*

LD50 Rat: 3,670 mg/kg (External MSDS)

#### *Acute inhalation toxicity*

Acute toxicity estimate: 11.1 mg/l; vapor

Expert judgment

#### *Acute dermal toxicity*

LD50 Rabbit: 2,306 mg/kg (RTECS)

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### *Skin irritation*

Rabbit

Result: Irritations

(ECHA)

### *Sensitization*

Maximization Test (GPMT) Guinea pig

Result: negative

Method: OECD Test Guideline 406

### *Germ cell mutagenicity*

*Genotoxicity in vitro*

Ames test

Result: negative

(IUCLID)

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## SECTION 12. Ecological information

### Ecotoxicity

#### *Toxicity to fish*

LC50 Danio rerio (zebra fish): 530 mg/l; 96 h

OECD Test Guideline 203

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

Daphnia magna (Water flea): 341 mg/l; 48 h (IUCLID)

#### *Toxicity to algae*

IC5 Scenedesmus quadricauda (Green algae): 260 mg/l; 8 d (IUCLID)

#### *Toxicity to bacteria*

microtox test EC50 Photobacterium phosphoreum: 394 mg/l; 30 min (IUCLID)

EC20 activated sludge: > 1,000 mg/l; 30 min

ISO 8192 (IUCLID)

### Persistence and degradability

#### *Biochemical Oxygen Demand (BOD)*

1,278 mg/g (5 d)

(IUCLID)

#### *Chemical Oxygen Demand (COD)*

1,814 mg/g

(IUCLID)

#### *Ratio BOD/ThBOD*

BOD5 47 %

(IUCLID)

#### *Ratio COD/ThBOD*

67 %

(IUCLID)

### Bioaccumulative potential

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

log Pow: 1.51 (25 °C)

(experimental)

(Lit.) Bioaccumulation is not expected.

### Mobility in soil

No information available.

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## *Additional ecological information*

Further information on ecology

Discharge into the environment must be avoided.

## **Ingredients**

### *n-Amyl alcohol*

#### *Toxicity to fish*

LC50 Danio rerio (zebra fish): 530 mg/l; 96 h

OECD Test Guideline 203

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

EC50 Daphnia magna (Water flea): 341 mg/l; 48 h (IUCLID)

#### *Toxicity to algae*

IC5 Scenedesmus quadricauda (Green algae): 260 mg/l; 8 d (IUCLID)

#### *Toxicity to bacteria*

microtox test EC50 Photobacterium phosphoreum: 394 mg/l; 30 min (IUCLID)

EC20 activated sludge: > 1,000 mg/l; 30 min

ISO 8192 (IUCLID)

#### *Biodegradability*

80 - 90 %; 28 d

(External MSDS)

Readily biodegradable.

#### *Biochemical Oxygen Demand (BOD)*

1,278 mg/g (5 d)

(IUCLID)

#### *Chemical Oxygen Demand (COD)*

1,814 mg/g

(IUCLID)

#### *Ratio BOD/ThBOD*

BOD5 47 %

(IUCLID)

#### *Ratio COD/ThBOD*

67 %

(IUCLID)

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

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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)

UN number	UN 1105
Proper shipping name	PENTANOLS
Class	3
Packing group	III
Environmentally hazardous	--

### Air transport (IATA)

UN number	UN 1105
Proper shipping name	PENTANOLS
Class	3
Packing group	III
Environmentally hazardous	--
Special precautions for user	no

### Sea transport (IMDG)

UN number	UN 1105
Proper shipping name	PENTANOLS
Class	3
Packing group	III
Environmentally hazardous	--
Special precautions for user	yes
EmS	F-E S-D

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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.

## DEA List I

Not listed

## DEA List II

Not listed

## US State Regulations

### Massachusetts Right To Know

#### *Ingredients*

n-Amyl alcohol

### Pennsylvania Right To Know

#### *Ingredients*

n-Amyl alcohol

### New Jersey Right To Know

#### *Ingredients*

n-Amyl alcohol

### 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.

KOREA: Not in compliance with the inventory

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## SECTION 16. Other information

### Training advice

Provide adequate information, instruction and training for operators.

### Labeling

#### *Hazard pictograms*



#### *Signal Word*

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## Warning

### *Hazard Statements*

H226 Flammable liquid and vapor.

H315 Causes skin irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

### *Precautionary Statements*

#### Prevention

P210 Keep away from heat.

#### Response

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P313 Get medical advice/ attention.

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

H226 Flammable liquid and vapor.

H315 Causes skin irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

### **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).

Revision Date 02/03/2015

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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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