

**SAFETY DATA SHEET**

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

Revision Date 01/22/2018

Version 1.3

**SECTION 1. Identification****Product identifier**

|                |               |
|----------------|---------------|
| Product number | HX0395        |
| Product name   | Hexyl Alcohol |
| CAS-No.        | 111-27-3      |

**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,<br>United States of America   General Inquiries: +1-978-715-4321  <br>Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5)<br>MilliporeSigma is a business of Merck KGaA, Darmstadt, Germany. |
|---------|---|

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

**SECTION 2. Hazards identification****GHS Classification**

Flammable liquid, Category 3, H226  
Acute toxicity, Category 4, Oral, H302  
Acute toxicity, Category 4, Dermal, H312  
Eye irritation, Category 2A, H319

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.  
H302 + H312 Harmful if swallowed or in contact with skin.  
H319 Causes serious eye irritation.

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## *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.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312 Call a POISON CENTER/doctor if you feel unwell.

P322 Specific measures (see supplemental first aid instructions on this label).

P330 Rinse mouth.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P363 Wash contaminated clothing before reuse.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

P403 + P235 Store in a well-ventilated place. Keep cool.

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  $C_6H_{14}O$  (Hill)

Molar mass 102.18 g/mol

### **Hazardous ingredients**

*Chemical name (Concentration)*

CAS-No.

*hexan-1-ol (>= 90 % - <= 100 % )*

111-27-3

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.

*Skin contact*

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

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## *Eye contact*

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

## *Ingestion*

After swallowing: caution if victim vomits. Risk of aspiration! Keep airways free. Pulmonary failure possible after aspiration of vomit. Call a physician immediately.

Never give anything by mouth to an unconscious person.

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

Cough, narcosis, Diarrhea, Nausea, Vomiting, Headache  
irritant effects

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

Laxative: Sodium sulfate (1 tablespoon/1/4 l water).

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

### **Extinguishing media**

#### *Suitable extinguishing media*

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 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*

Remove container from danger zone and cool with water. 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. Keep away from heat and sources of ignition. 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. Risk of explosion.

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

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

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

Store at room temperature.

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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*

full contact:

Glove material: butyl-rubber

Glove thickness: 0.7 mm

Break through time: > 480 min

splash contact:

Glove material: Nitrile rubber

Glove thickness: 0.40 mm

Break through time: > 30 min

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 898 Butoject® (full contact), KCL 730 Camatril® - Velours (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

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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:*

Flame retardant antistatic 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                        | characteristic  |
| Odor Threshold              | 10 ppm  |
| pH                          | No information available.                                   |
| pour point                  | -49 °F (-45 °C)   |
|                             | at ca. 1,013 hPa<br>Method: ASTM D 97-66                    |
| Boiling point/boiling range | 311 °F (155 °C)<br>at 1,015 hPa<br>Method: ASTM D 1120-72   |
| Flash point                 | 140 °F (60 °C)<br>at 1,015 hPa<br><br>Method: ASTM D 93     |
| Evaporation rate            | No information available.                                   |
| Flammability (solid, gas)   | No information available.                                   |
| Lower explosion limit       | 1.2 %(V)  |
| Upper explosion limit       | 7.7 %(V)  |
| Vapor pressure              | 3.64 hPa<br>at ca. 100 °F (38 °C)<br>Method: ASTM D 2879-86 |

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|  |   |
|--|---|
|  | 1 hPa<br>at 68 °F (20 °C)   |
| Relative vapor density                 | 3.5   |
| Density                                | 0.82 g/cm <sup>3</sup><br>at 68 °F (20 °C)                                  |
| Relative density                       | No information available.   |
| Water solubility                       | 1.3 g/l<br>at 73 °F (23 °C)<br>Method: OECD Test Guideline 105              |
| Partition coefficient: n-octanol/water | log Pow: 1.8<br>OECD Test Guideline 117<br>Bioaccumulation is not expected. |
| Autoignition temperature               | No information available.   |
| Decomposition temperature              | No information available.   |
| Viscosity, dynamic                     | 0.592 mPa.s<br>at 77 °F (25 °C)   |
| Explosive properties                   | Not classified as explosive.  |
| Oxidizing properties                   | none  |
| Ignition temperature                   | 545 °F (285 °C)<br>Method: DIN 51794  |
| Viscosity, kinematic                   | 3.64 mm <sup>2</sup> /s<br>at 104 °F (40 °C)<br>Method: ASTM D 445          |

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## SECTION 10. Stability and reactivity

### Reactivity

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

Violent reactions possible with:

Strong oxidizing agents, halogens

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

Alkali metals, Alkaline earth metals, Aluminum

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## Conditions to avoid

Heating.

## Incompatible materials

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*

LD50 Rat: > 200 - 2,000 mg/kg

OECD Test Guideline 401

Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract., Risk of aspiration upon vomiting., Aspiration may cause pulmonary edema and pneumonitis.

#### *Acute inhalation toxicity*

Symptoms: Possible damages:, mucosal irritations, Cough

#### *Acute dermal toxicity*

LD50 Rabbit: > 1,000 - 2,000 mg/kg

OECD Test Guideline 402

#### *Skin irritation*

Rabbit

Result: slight irritation

OECD Test Guideline 404

#### *Eye irritation*

Rabbit

Result: Eye irritation

OECD Test Guideline 405

Causes serious eye irritation.

#### *Sensitization*

Sensitization test (Magnusson and Kligman):

Result: negative

Method: OECD Test Guideline 406

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### *Genotoxicity in vivo*

Micronucleus test

Mouse

Result: negative

Method: OECD Test Guideline 474

### *Genotoxicity in vitro*

Ames test

Result: negative

Method: OECD Test Guideline 471

### *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*

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 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 potential carcinogen by ACGIH.

## **Further information**

Systemic effects:

After absorption of large quantities:

Nausea, Vomiting, Diarrhea, Headache, narcosis

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*

flow-through test LC50 Pimephales promelas (fathead minnow): 97 mg/l; 96 h

Analytical monitoring: yes

US-EPA

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

EC50 Tetrahymen pyriformis: 300 mg/l; 48 h (ECOTOX Database)



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EC50 Daphnia magna (Water flea): 201 mg/l; 24 h (ECHA)

*Toxicity to algae*

static test ErC50 Pseudokirchneriella subcapitata (green algae): 79.7 mg/l; 72 h

Analytical monitoring: yes

OECD Test Guideline 201

static test NOEC Pseudokirchneriella subcapitata (green algae): 11.3 mg/l; 72 h

Analytical monitoring: yes

OECD Test Guideline 201

*Toxicity to bacteria*

EC10 Pseudomonas putida: 3,000 mg/l; 30 min

DIN 38412 (IUCLID)

## Persistence and degradability

*Biodegradability*

61.8 %; 30 d; aerobic

OECD Test Guideline 301D

Readily biodegradable.

*Ratio BOD/ThBOD*

BOD5 28 %

(Lit.)

*Ratio COD/ThBOD*

94 %

(Lit.)

## Bioaccumulative potential

*Partition coefficient: n-octanol/water*

log Pow: 1.8

OECD Test Guideline 117

Bioaccumulation is not expected.

## Mobility in soil

No information available.

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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 2282

Proper shipping name

HEXANOLS

Class

3

Packing group

III

Environmentally hazardous

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### Air transport (IATA)

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UN number UN 2282  
Proper shipping name HEXANOLS  
Class 3  
Packing group III  
Environmentally hazardous --  
Special precautions for user no

**Sea transport (IMDG)**

UN number UN 2282  
Proper shipping name HEXANOLS  
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.

**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**

Remarks

No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know**

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## *Ingredients*

hexan-1-ol

## **New Jersey Right To Know**

## *Ingredients*

hexan-1-ol

## **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*



#### *Signal Word*

Warning

#### *Hazard Statements*

H226 Flammable liquid and vapor.

H302 + H312 Harmful if swallowed or in contact with skin.

H319 Causes serious eye irritation.

#### *Precautionary Statements*

##### Prevention

P210 Keep away from heat.

##### Response

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

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

|      |                                |
|------|--------------------------------|
| H226 | Flammable liquid and vapor.    |
| H302 | Harmful if swallowed.          |
| H312 | Harmful in contact with skin.  |
| H319 | Causes serious eye 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 01/22/2018

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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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