

MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	: Substance
	:
EC no	: 203-851-8
CAS No	: 111-26-2
Product code	: 4054K
Formula	: C6H15N
Synonyms	: 1-Aminohexane

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/mixture : Industrial. For professional use only.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, Category 3	H226
Acute toxicity (oral), Category 3	H301
Acute toxicity (dermal), Category 3	H311
Skin corrosion/irritation, Category 1A	H314

Full text of classification categories and H statements : see section 16

n-HEXYLAMINE FOR HPLC

Safety Data Sheet

Classification according to Directive 67/548/EEC or 1999/45/EC

Xn; R21/22

C; R35

R10

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02



GHS05



GHS06

Signal word (CLP) : Danger

Hazard statements (CLP) : H226 - Flammable liquid and vapour
H301+H311 - Toxic if swallowed or in contact with skin
H314 - Causes severe skin burns and eye damage

Precautionary statements (CLP) : P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301+P310 - IF SWALLOWED: immediately call a POISON CENTER or doctor/physician
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor/physician

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Name : n-HEXYLAMINE FOR HPLC

CAS No : 111-26-2

EC no : 203-851-8

Full text of R- and H-phrases: see section 16

3.2. Mixture

Not applicable

n-HEXYLAMINE FOR HPLC

Safety Data Sheet

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
First-aid measures after skin contact	: Wash skin with plenty of water. Get medical advice/attention. Take off contaminated clothing.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
First-aid measures after ingestion	: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries	: Causes severe skin burns and eye damage.
Symptoms/injuries after inhalation	: May cause irritation to the respiratory tract, sneezing, coughing, burning sensation of throat with constricting sensation of the larynx and difficulty in breathing.
Symptoms/injuries after skin contact	: Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin.
Symptoms/injuries after eye contact	: Causes serious eye irritation.
Symptoms/injuries after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Carbon dioxide. Dry powder. Foam. Water spray.
Unsuitable extinguishing media	: Do not use extinguishing media containing water.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Flammable liquid and vapour.
Explosion hazard	: May form flammable/explosive vapour-air mixture.

5.3. Advice for firefighters

Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking.
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6.1.1. For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
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6.1.2. For emergency responders

Protective equipment	: Use personal protective equipment as required.
Emergency procedures	: Ventilate area.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: On land, sweep or shovel into suitable containers.
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6.4. Reference to other sections

No additional information available

n-HEXYLAMINE FOR HPLC

Safety Data Sheet

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed	: Handle empty containers with care because residual vapours are flammable.
Precautions for safe handling	: No naked lights. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Do not breathe vapours.
Hygiene measures	: Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/... equipment. Comply with applicable regulations.
Storage conditions	: Keep container tightly closed. Keep in fireproof place.
Incompatible materials	: Heat sources.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Hand protection	: protective gloves
Eye protection	: Chemical goggles or face shield
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: Wear respiratory protection

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Clear colourless.
Odour	: No data available
Odour threshold	: No data available
pH	: 11.6 at 10g/l at 20°C
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: -23 °C
Freezing point	: No data available
Boiling point	: 131 - 132 °C
Flash point	: 27 °C

n-HEXYLAMINE FOR HPLC

Safety Data Sheet

Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Flammable liquid and vapour Flammable liquid and vapour
Vapour pressure	: 10.6 hPa
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 0.766 g/cm ³ at 25°C
Solubility	: Water: Soluble
Log Pow	: 1.9
Viscosity, kinematic	: 1.07 mm ² /s at 23°C
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Thermal decomposition generates : Corrosive vapours.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Open flame. Heat. Sparks.

10.5. Incompatible materials

Oxidizing agent. Strong acids.

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Toxic if swallowed. Dermal: Toxic in contact with skin.

Skin corrosion/irritation : Causes severe skin burns and eye damage.
pH: 11.6 at 10g/l at 20°C

n-HEXYLAMINE FOR HPLC

Safety Data Sheet

Serious eye damage/irritation	: Serious eye damage, category 1, implicit pH: 11.6 at 10g/l at 20°C
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified

n-HEXYLAMINE FOR HPLC (111-26-2)	
Viscosity, kinematic	1.07 mm ² /s at 23°C

Potential adverse human health effects and symptoms : Harmful if swallowed. Harmful in contact with skin.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

n-HEXYLAMINE FOR HPLC (111-26-2)	
Log Pow	1.9

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container to ...

n-HEXYLAMINE FOR HPLC

Safety Data Sheet

Additional information : Handle empty containers with care because residual vapours are flammable.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR) : 2734
UN-No. (IMDG) : 2734
UN-No.(IATA) : 2734
UN-No.(ADN) : Not regulated
UN-No. (RID) : Not regulated

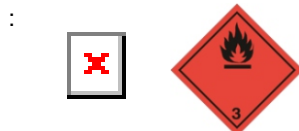
14.2. UN proper shipping name

Proper Shipping Name (ADR) : AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S.
Proper Shipping Name (IMDG) : AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S.
Proper Shipping Name (IATA) : AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S.
Proper Shipping Name (ADN) : Not regulated
Proper Shipping Name (RID) : Not regulated
Transport document description (ADR) : UN 2734 AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S., 8 (3), I, (D/E)
Transport document description (IMDG) : UN 2734 AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S., 8 (3), I
Transport document description (IATA) : UN 2734 AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S., 8 (3), I

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 8 (3)
Danger labels (ADR) : 8, 3



IMDG

Transport hazard class(es) (IMDG) : 8 (3)
Danger labels (IMDG) : 8, 3



IATA

Transport hazard class(es) (IATA) : 8 (3)
Hazard labels (IATA) : 8, 3



ADN

Transport hazard class(es) (ADN) : Not regulated

n-HEXYLAMINE FOR HPLC

Safety Data Sheet

RID

Transport hazard class(es) (RID) : Not regulated

14.4. Packing group

Packing group (ADR) : I
Packing group (IMDG) : I
Packing group (IATA) : I
Packing group (ADN) : Not regulated
Packing group (RID) : Not regulated

14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : CF1
Special provision (ADR) : 274
Limited quantities (ADR) : 0
Excepted quantities (ADR) : E0
Packing instructions (ADR) : P001
Mixed packing provisions (ADR) : MP8, MP17
Portable tank and bulk container instructions (ADR) : T14
Portable tank and bulk container special provisions (ADR) : TP2, TP27
Tank code (ADR) : L10BH
Vehicle for tank carriage : FL
Transport category (ADR) : 1
Special provisions for carriage - Operation (ADR) : S2, S14
Hazard identification number (Kemler No.) : 883
Orange plates :



Tunnel restriction code (ADR) : D/E
EAC code : •2W
APP code : A(fl)

- Transport by sea

Special provision (IMDG) : 274
Limited quantities (IMDG) : 0
Excepted quantities (IMDG) : E0
Packing instructions (IMDG) : P001
Tank instructions (IMDG) : T14
Tank special provisions (IMDG) : TP2, TP27
EmS-No. (Fire) : F-E
EmS-No. (Spillage) : S-C
Stowage category (IMDG) : A
Segregation (IMDG) : SG35
MFAG-No : 132

n-HEXYLAMINE FOR HPLC

Safety Data Sheet

- Air transport

PCA Excepted quantities (IATA)	: E0
PCA Limited quantities (IATA)	: Forbidden
PCA limited quantity max net quantity (IATA)	: Forbidden
PCA packing instructions (IATA)	: 850
PCA max net quantity (IATA)	: 0.5L
CAO packing instructions (IATA)	: 854
CAO max net quantity (IATA)	: 2.5L
ERG code (IATA)	: 8F

- Inland waterway transport

Not regulated

- Rail transport

Not regulated

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

n-HEXYLAMINE FOR HPLC is not on the REACH Candidate List

n-HEXYLAMINE FOR HPLC is not on the REACH Annex XIV List

15.1.2. National regulations

Germany

AwSV/VwVwS Annex reference : Water hazard class (WGK) 1, slightly hazardous to water (Classification according to VwVwS, Annex 2; WGK No 1615)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Denmark

Class for fire hazard : Class II-1

Store unit : 5 liter

Classification remarks : R10 <H226;H301+H311;H314>; Emergency management guidelines for the storage of flammable liquids must be followed

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product

n-HEXYLAMINE FOR HPLC

Safety Data Sheet

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of R-, H- and EUH-phrases:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Flam. Liq. 3	Flammable liquids, Category 3
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
H226	Flammable liquid and vapour
H301	Toxic if swallowed
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage
R10	Flammable
R21/22	Harmful in contact with skin and if swallowed
R35	Causes severe burns
C	Corrosive
Xn	Harmful

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product