

# Butylamine

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830  
Date of issue: 4/2/2019 Version: 1.0

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

#### 1.1. Product identifier

Product form	: Substance
Substance name	: Butylamine
IUPAC name	: n-Butylamine
EC Index-No.	: 612-005-00-0
EC-No.	: 203-699-2
CAS-No.	: 109-73-9
Product code	: 29823840
Formula	: C <sub>4</sub> H <sub>11</sub> N
Product group	: Raw material

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

##### 1.2.1. Relevant identified uses

Main use category	: Laboratory use, Industrial use, Professional use
Industrial/Professional use spec	: 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

##### Supplier

Scaffell Organics  
Molekula Ltd  
Lingfield Way  
Darlington - England  
T +44 (0) 1949 823777 / +44 (0) 7590 545705  
[info@molekula.com](mailto:info@molekula.com) / [kbowen@molekula.com](mailto:kbowen@molekula.com) - [www.molekula.com](http://www.molekula.com)

#### 1.4. Emergency telephone number

Emergency number : +44 (0) 7590 545705

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Flammable liquids, Category 2	H225
Acute toxicity (inhal.), Category 4	H332
Acute toxicity (dermal), Category 4	H312
Acute toxicity (oral), Category 4	H302
Skin corrosion/irritation, Category 1A	H314
Full text of H statements : see section 16	
Specific concentration limits: (C >= 1)	STOT SE 3, H335

##### 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) :



Signal word (CLP) :

Danger

Hazard statements (CLP) :

H225 - Highly flammable liquid and vapour.  
H302 - Harmful if swallowed.  
H312 - Harmful in contact with skin.  
H314 - Causes severe skin burns and eye damage.  
H332 - Harmful if inhaled.

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Precautionary statements (CLP) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P260 - Do not breathe mist, spray, vapours.  
P280 - Wear protective clothing, eye protection, face protection, protective gloves.  
P301+P312 - IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

### 2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Name	Product identifier	%
Butylamine	(CAS-No.) 109-73-9 (EC-No.) 203-699-2 (EC Index-No.) 612-005-00-0	100

Full text of H-statements: see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general : If possible show this sheet, if not available show packaging or label. Never give anything by mouth to an unconscious person. Do not leave affected person unattended.

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Give oxygen or artificial respiration if necessary. If breathing difficulties persist : Get medical advice/attention.

First-aid measures after skin contact : After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Do not remove clothing if it sticks to the skin. If irritation persists, consult a doctor.

First-aid measures after eye contact : Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth out with water. Do not induce vomiting. Get medical advice/attention.

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

Symptoms/effects after inhalation : Harmful if inhaled. Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Inhalation may cause irritation (cough, short breathing, difficulty in breathing). More severe symptoms are also possible.

Symptoms/effects after skin contact : Harmful in contact with skin. Causes severe burns. May produce skin irritation, blistering, ulcers, and deep scarring. More severe symptoms are also possible.

Symptoms/effects after eye contact : Causes serious eye damage. Blurred vision. Redness, pain. stinging. Tears.

Symptoms/effects after ingestion : Swallowing this material may result in health hazard. Symptoms of ingestion include drowsiness, weakness, headache, dizziness, nausea, vomiting. More severe symptoms are also possible.

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

Get immediate medical advice/attention.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Dry powder. Sand.

Unsuitable extinguishing media : Do NOT use water jet.

### 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.

Hazardous decomposition products in case of fire : Carbon oxides (CO, CO<sub>2</sub>). Nitrogen oxides.

### 5.3. Advice for firefighters

Precautionary measures fire : Keep container tightly closed and away from heat, sparks and flame. Keep away from combustible materials.

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.

Protection during firefighting : Wear recommended personal protective equipment. Use self-contained breathing apparatus and chemically protective clothing.

Other information : Warn all persons of toxic hazard.

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### SECTION 6: Accidental release measures

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

General measures : Do not handle until all safety precautions have been read and understood. Ventilate the area thoroughly, especially low lying areas (basements, workpits etc). Keep away from combustible materials.

##### 6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.  
Emergency procedures : Evacuate unnecessary personnel. Mark out the contaminated area with signs and prevent access to unauthorized personnel. Do not touch or walk on the spilled product. Avoid contact with skin, eyes and clothing.  
Measures in case of dust release : Shelter from vapours by keeping upwind. Ventilate the area thoroughly, especially low lying areas (basements, workpits etc). Special attention should be given to low areas/pits where flammable vapours can accumulate.

##### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Use self-contained breathing apparatus and chemically protective clothing.  
Emergency procedures : Ventilate area.

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

#### 6.3. Methods and material for containment and cleaning up

For containment : Collect spillage. Contain the spilled material by bunding.  
Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Try to stop release if without risk.

#### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

### 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 : Avoid formation of vapours. Avoid contact with skin, eyes and clothing. Do not handle until all safety precautions have been read and understood. Ensure that there is a suitable ventilation system. Do not handle in a confined space.  
Hygiene measures : Take off immediately all contaminated clothing and wash it before reuse. Contaminated work clothing should not be allowed out of the workplace. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product.

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

Technical measures : Ensure adequate ventilation, especially in confined areas. Proper grounding procedures to avoid static electricity should be followed.  
Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Heat sources, Direct sunlight. Keep container closed when not in use.  
Incompatible products : Strong oxidisers. Strong acids. metals. copper.  
Incompatible materials : Sources of ignition. Direct sunlight. Heat sources. open flames. sparks.  
Heat and ignition sources : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Storage area : Keep away from combustible materials. Store below 20 °C. Store in a dry place. Store in a closed container.

#### 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

##### Appropriate engineering controls:

Handle in accordance with good industrial hygiene and safety procedures. Floors should be impervious, resistant to liquids and easy to clean.

##### Personal protective equipment:

Avoid all unnecessary exposure.

##### Hand protection:

The protective gloves to be used must comply with the specifications of the regulation 2016/425 and the resultant standard EN 374

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Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Fluoroelastomer (FKM)	6 (> 480 minutes)	0.7		EN 374

### Eye protection:

Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Use eye protection according to EN 166, designed to protect against liquid splashes.

Type	Use	Characteristics	Standard
Safety goggles, Face shield	Droplet, vapours	tightly fitting safety goggles, With side shields	EN 166

### Skin and body protection:

Emergency safety showers should be available in the immediate vicinity of any potential exposure. Keep suitable chemically resistant protective clothing readily available for emergency use

Type	Standard
Total impervious protective suits, gloves, and boots must be worn to prevent any contact with the product, Flame retardant antistatic protective clothing	EN 14605

### Respiratory protection:

Keep self contained breathing apparatus readily available for emergency use. Where exposure through inhalation may occur from use, respiratory protection equipment is recommended

Device	Filter type	Condition	Standard
Air-Purifying Respirator (APR), reusable	ABEK	Moist condition, Mist formation, Protection for Liquid particles, Vapour protection	EN 14387

### Other information:

Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear.
Molecular mass	: 73.14 g/mol
Colour	: Colourless.
Odour	: No data available.
Odour threshold	: No data available
pH	: 12.6 at 100 g/l at 20 °C
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: -49 °C lit.
Freezing point	: No data available
Boiling point	: 78 °C lit.
Flash point	: -6.99 °C closed cup.
Auto-ignition temperature	: 290 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Flammable
Vapour pressure	: 91 hPa at 20 °C
Relative vapour density at 20 °C	: 2.53
Relative density	: 0.74 g/cm <sup>3</sup> at 25 °C
Solubility	: No data available
Log Pow	: 0.81
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Lower explosive limit (LEL)	: 1.7 vol %
Upper explosive limit (UEL)	: 9.8 vol %

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### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Flammable liquid and vapour.

### 10.2. Chemical stability

Flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

Protect from sunlight. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

### 10.5. Incompatible materials

Strong oxidizers. Strong acids. Metals. copper.

### 10.6. Hazardous decomposition products

No hazardous decomposition products known at room temperature. Thermal decomposition generates : Carbon oxides (CO, CO<sub>2</sub>). Nitrogen oxides.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral) : Oral: Harmful if swallowed.  
Acute toxicity (dermal) : Dermal: Harmful in contact with skin.  
Acute toxicity (inhalation) : Inhalation: Harmful if inhaled.

Butylamine (109-73-9)	
LD50 oral rat	366 mg/kg
LD50 dermal rabbit	626 mg/kg
LC50 inhalation rat (mg/l)	4.2 mg/l/4h

Skin corrosion/irritation : Causes severe skin burns and eye damage.  
pH: 12.6 at 100 g/l at 20 °C

Additional information : Based on available data, the classification criteria are not met

Serious eye damage/irritation : Serious eye damage, category 1, implicit  
pH: 12.6 at 100 g/l at 20 °C

Additional information : Based on available data, the classification criteria are not met

Respiratory or skin sensitisation : Not classified

Additional information : Based on available data, the classification criteria are not met

Germ cell mutagenicity : Not classified

Additional information : Based on available data, the classification criteria are not met

Carcinogenicity : Not classified

Additional information : Based on available data, the classification criteria are not met

Reproductive toxicity : Not classified

Additional information : Based on available data, the classification criteria are not met

STOT-single exposure : Not classified

Additional information : Based on available data, the classification criteria are not met

STOT-repeated exposure : Not classified

Additional information : Based on available data, the classification criteria are not met

Aspiration hazard : Not classified

Additional information : Based on available data, the classification criteria are not met

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

### 12.1. Toxicity

Acute aquatic toxicity : Not classified  
Chronic aquatic toxicity : Not classified

Butylamine (109-73-9)	
LC50 fish 1	32 mg/l Freshwater fish 96hr

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### 12.2. Persistence and degradability

Butylamine (109-73-9)	
Persistence and degradability	No data available.

### 12.3. Bioaccumulative potential

Butylamine (109-73-9)	
Log Pow	0.81
Bioaccumulative potential	No data available.

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

Butylamine (109-73-9)	
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	

### 12.6. Other adverse effects

Additional information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.  
Additional information : Handle empty containers with care because residual vapours are flammable.  
Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number</b>				
1125	1125	1125	1125	1125
<b>14.2. UN proper shipping name</b>				
N-BUTYLAMINE	n-BUTYLAMINE	n-Butylamine	N-BUTYLAMINE	n-BUTYLAMINE
<b>Transport document description</b>				
UN 1125 N-BUTYLAMINE (Butylamine), 3 (8), II, (D/E)	UN 1125 n-BUTYLAMINE (Butylamine), 3 (8), II (-9°C c.c.)	UN 1125 n-Butylamine (Butylamine), 3 (8), II	UN 1125 N-BUTYLAMINE (Butylamine), 3 (8), II	UN 1125 n-BUTYLAMINE (Butylamine), 3 (8), II
<b>14.3. Transport hazard class(es)</b>				
3 (8)	3 (8)	3 (8)	3 (8)	3 (8)
<b>14.4. Packing group</b>				
II	II	II	II	II
<b>14.5. Environmental hazards</b>				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No

No supplementary information available

### 14.6. Special precautions for user

#### Overland transport

Classification code (ADR) : FC  
Limited quantities (ADR) : 1I  
Excepted quantities (ADR) : E2  
Packing instructions (ADR) : P001, IBC02

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Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T7
Portable tank and bulk container special provisions (ADR)	: TP1
Tank code (ADR)	: L4BH
Vehicle for tank carriage	: FL
Transport category (ADR)	: 2
Special provisions for carriage - Operation (ADR)	: S2, S20
Hazard identification number (Kemler No.)	: 338
Orange plates	:



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

### Transport by sea

Limited quantities (IMDG)	: 1 L
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02
Tank instructions (IMDG)	: T7
Tank special provisions (IMDG)	: TP1
EmS-No. (Fire)	: F-E
EmS-No. (Spillage)	: S-C
Stowage category (IMDG)	: B
Stowage and handling (IMDG)	: SW2
Flash point (IMDG)	: -9°C c.c.

Properties and observations (IMDG) : Flashpoint -9°C c.c. Explosive limits 1.7% to 10%. Colourless, volatile liquid with an ammonia-like odour. Miscible with water. Causes burns to skin, eyes and mucous membranes.

### Air transport

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y340
PCA limited quantity max net quantity (IATA)	: 0.5L
PCA packing instructions (IATA)	: 352
PCA max net quantity (IATA)	: 1L
CAO packing instructions (IATA)	: 363
CAO max net quantity (IATA)	: 5L
ERG code (IATA)	: 3C

### Inland waterway transport

Classification code (ADN)	: FC
Limited quantities (ADN)	: 1 L
Excepted quantities (ADN)	: E2
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EP, EX, A
Ventilation (ADN)	: VE01
Number of blue cones/lights (ADN)	: 1

### Rail transport

Classification code (RID)	: FC
Limited quantities (RID)	: 1L
Excepted quantities (RID)	: E2
Packing instructions (RID)	: P001, IBC02
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T7
Portable tank and bulk container special provisions (RID)	: TP1
Tank codes for RID tanks (RID)	: L4BH

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Transport category (RID) : 2  
Colis express (express parcels) (RID) : CE7  
Hazard identification number (RID) : 338

### 14.7. Transport in bulk according to Annex II of Marpol 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  
Butylamine is not on the REACH Candidate List  
Directive 2012/18/EU (SEVESO III)

#### 15.1.2. National regulations

##### Germany

Reference to AwSV : Water hazard class (WGK) 1, Slightly hazardous to water (Classification according to AwSV; ID No. 44)

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

##### Netherlands

SZW-lijst van kankerverwekkende stoffen : Butylamine is listed  
SZW-lijst van mutagene stoffen : The substance is not listed  
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed  
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed  
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

##### Denmark

Classification remarks : Emergency management guidelines for the storage of flammable liquids must be followed  
Danish National Regulations : 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

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out for the substance or the mixture by the supplier

## SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H- and EUH-statements:	
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Flam. Liq. 2	Flammable liquids, Category 2
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H332	Harmful if inhaled.

SDS EU (REACH Annex II)

*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.*