

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

#### 1.1. Product identifier

Product form	: Mixture
Product name	: Hydrochloric acid 36% (12M)
EC-No.	: 231-595-7
CAS-No.	: 7647-01-0
Product code	: 30959716
Formula	: HCl
Product group	: Blend

#### 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

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]

Skin corrosion/irritation, Category 1	H314
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation	H335
Full text of H statements : 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)



GHS05

GHS07

Signal word (CLP)

: Danger

Hazard statements (CLP)

: H314 - Causes severe skin burns and eye damage.  
H335 - May cause respiratory irritation.

Precautionary statements (CLP)

: P261 - Avoid breathing mist, spray, vapours.  
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

Not applicable

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
WATER	(CAS-No.) 7732-18-5	64 - 69	Not classified
HYDROGEN CHLORIDE	(CAS-No.) 7647-01-0 (EC-No.) 231-595-7 (EC Index-No.) 017-002-00-2	31 - 36	Press. Gas Acute Tox. 3 (Inhalation), H331 Skin Corr. 1A, H314

Full text of H-statements: see section 16

## 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	: Material is destructive to tissue of the mucuous membranes and upper respiratory tract. Cough, shortness of breath, headache, nausea. Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. May be harmful if inhaled.
Symptoms/effects after skin contact	: Causes severe burns. May produce skin irritation, blistering, ulcers, and deep scarring. Cracking of the skin. Redness, pain.
Symptoms/effects after eye contact	: Causes serious eye burns. redness, itching, tears. stinging. More severe symptoms are also possible.
Symptoms/effects after ingestion	: Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Symptoms of ingestion include drowsiness, weakness, headache, dizziness, nausea, vomiting. Ingestion may cause nausea, vomiting and diarrhea.

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

Immediately call a POISON CENTER/doctor.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	: Hydrogen chloride gas.
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### 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	: Do not enter fire area without proper protective equipment, including respiratory protection.
Other information	: Warn all persons of toxic hazard.

## SECTION 6: Accidental release measures

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

General measures	: Isolate from fire, if possible, without unnecessary risk. Do not breathe gas, fumes, vapour or spray. No flames, no sparks. Eliminate all sources of ignition.
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#### 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).

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### 6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection. 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

- Precautions for safe handling : Avoid formation of vapours. Provide local exhaust or general room ventilation.
- Hygiene measures : Take off immediately all contaminated clothing and wash it before reuse. 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.
- 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 : Bases. Amines. Alkali metals. metals. fluorine. Sulphuric acid. Hexalithium disilicide. Metal acetylides  
. Permanganates.
- Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.
- Heat and ignition sources : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Storage area : Store below 20 °C. Store in dry protected location to prevent any moisture contact.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Hydrochloric acid 36% (12M) (7647-01-0)		
United Kingdom	Local name	Hydrogen chloride
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup> gas and aerosol mists
United Kingdom	WEL TWA (ppm)	1 ppm gas and aerosol mists
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup> gas and aerosol mists
United Kingdom	WEL STEL (ppm)	5 ppm gas and aerosol mists
United Kingdom	Regulatory reference	EH40/2005 (Third edition, 2018). HSE
HYDROGEN CHLORIDE (7647-01-0)		
United Kingdom	Local name	Hydrogen chloride
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup> gas and aerosol mists
United Kingdom	WEL TWA (ppm)	1 ppm gas and aerosol mists
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup> gas and aerosol mists
United Kingdom	WEL STEL (ppm)	5 ppm gas and aerosol mists
United Kingdom	Regulatory reference	EH40. HSE

### 8.2. Exposure controls

#### Appropriate engineering controls:

Handle in accordance with good industrial hygiene and safety procedures. Ensure exposure is below occupational exposure limits (where available). Floors should be impervious, resistant to liquids and easy to clean.

#### Personal protective equipment:

Avoid all unnecessary exposure. Wear recommended personal protective equipment.

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<b>Hand protection:</b>					
The protective gloves to be used must comply with the specifications of the regulation 2016/425 and the resultant standard EN 374. Always wash hands after handling the product					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Butyl rubber	6 (> 480 minutes)	0.3		EN 374
<b>Eye protection:</b>					
Chemical goggles or face shield. 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		
<b>Skin and body protection:</b>					
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	EN 14605				
<b>Respiratory protection:</b>					
Keep self contained breathing apparatus readily available for emergency use. Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Wear appropriate mask					
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 when using this product. 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
Molecular mass	: 36.46 g/mol
Colour	: Clear colourless-pale yellow.
Odour	: No data available.
Odour threshold	: No data available
pH	: < 1
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: -31 - -35 °C
Freezing point	: No data available
Boiling point	: 57 °C
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 1.1 g/cm <sup>3</sup> at 20 °C
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

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### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7).

### 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

Bases. Amines. Alkali metals. Metals. Permanganates. fluorine. Sulphuric acid. Hexalithium disilicide. Metal acetylides.

### 10.6. Hazardous decomposition products

No hazardous decomposition products known at room temperature. Thermal decomposition generates : Hydrogen chloride gas.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

HYDROGEN CHLORIDE (7647-01-0)	
LC50 inhalation rat (mg/l)	8.3 mg/l 30 mins
LC50 inhalation rat (ppm)	4701 ppm 30 mins

Skin corrosion/irritation : Causes severe skin burns and eye damage.

pH: < 1

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

Serious eye damage/irritation : Serious eye damage, category 1, implicit

pH: < 1

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 : May cause respiratory irritation.

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

HYDROGEN CHLORIDE (7647-01-0)	
LC50 fish 1	3.25 - 3.5 mg/l
EC50 Daphnia 1	4.92 mg/l Daphnia magna
EC50 72h algae (1)	4.7 mg/l

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### 12.2. Persistence and degradability

#### Hydrochloric acid 36% (12M) (7647-01-0)

Persistence and degradability	No data available.
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#### HYDROGEN CHLORIDE (7647-01-0)

Persistence and degradability	Not applicable for inorganic gases.
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### 12.3. Bioaccumulative potential

#### Hydrochloric acid 36% (12M) (7647-01-0)

Bioaccumulative potential	No data available.
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#### HYDROGEN CHLORIDE (7647-01-0)

Bioaccumulative potential	No data available.
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### 12.4. Mobility in soil

#### HYDROGEN CHLORIDE (7647-01-0)

Ecology - soil	No data available.
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### 12.5. Results of PBT and vPvB assessment

#### Hydrochloric acid 36% (12M) (7647-01-0)

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.

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>				
1789	1789	1789	1789	1789
<b>14.2. UN proper shipping name</b>				
HYDROCHLORIC ACID	HYDROCHLORIC ACID	Hydrochloric acid	HYDROCHLORIC ACID	HYDROCHLORIC ACID
<b>Transport document description</b>				
UN 1789 HYDROCHLORIC ACID (Hydrochloric acid 36% (12M)), 8, II, (E)	UN 1789 HYDROCHLORIC ACID (Hydrochloric acid 36% (12M)), 8, II	UN 1789 Hydrochloric acid (Hydrochloric acid 36% (12M)), 8, II	UN 1789 HYDROCHLORIC ACID (Hydrochloric acid 36% (12M)), 8, II	UN 1789 HYDROCHLORIC ACID (Hydrochloric acid 36% (12M)), 8, II
<b>14.3. Transport hazard class(es)</b>				
8	8	8	8	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				

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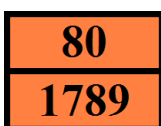
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### 14.6. Special precautions for user

#### Overland transport

Classification code (ADR)	: C1
Special provisions (ADR)	: 520
Limited quantities (ADR)	: 1I
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P001, IBC02
Mixed packing provisions (ADR)	: MP15
Portable tank and bulk container instructions (ADR)	: T8
Portable tank and bulk container special provisions (ADR)	: TP2
Tank code (ADR)	: L4BN
Vehicle for tank carriage	: AT
Transport category (ADR)	: 2
Hazard identification number (Kemler No.)	: 80
Orange plates	:



Tunnel restriction code (ADR)	: E
EAC code	: 2R

#### Transport by sea

Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02
IBC special provisions (IMDG)	: B20
Tank instructions (IMDG)	: T8
Tank special provisions (IMDG)	: TP2
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-B
Stowage category (IMDG)	: C

Properties and observations (IMDG) : Colourless liquid. An aqueous solution of the gas hydrogen chloride. Highly corrosive to most metals. Causes burns to skin, eyes and mucous membranes.

#### Air transport

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y840
PCA limited quantity max net quantity (IATA)	: 0.5L
PCA packing instructions (IATA)	: 851
PCA max net quantity (IATA)	: 1L
CAO packing instructions (IATA)	: 855
CAO max net quantity (IATA)	: 30L
Special provisions (IATA)	: A3
ERG code (IATA)	: 8L

#### Inland waterway transport

Classification code (ADN)	: C1
Special provisions (ADN)	: 520
Limited quantities (ADN)	: 1 L
Excepted quantities (ADN)	: E2
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EP
Number of blue cones/lights (ADN)	: 0

#### Rail transport

Classification code (RID)	: C1
Special provisions (RID)	: 520
Limited quantities (RID)	: 1L
Excepted quantities (RID)	: E2
Packing instructions (RID)	: P001, IBC02
Mixed packing provisions (RID)	: MP15

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Portable tank and bulk container instructions (RID)	: T8
Portable tank and bulk container special provisions (RID)	: TP2
Tank codes for RID tanks (RID)	: L4BN
Transport category (RID)	: 2
Colis express (express parcels) (RID)	: CE6
Hazard identification number (RID)	: 80

### 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

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

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, Annex 1)

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 : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

##### Denmark

Danish National Regulations : Young people below the age of 18 years are not allowed to use 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. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Press. Gas	Gases under pressure
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
H314	Causes severe skin burns and eye damage.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.

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.*