

pH- LED

Safety Data Sheet

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

Date of issue: 29-11-2011

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Supersedes: 28-11-2013

Version: 4.0

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

1.1. Product identifier

Product form : Mixture
Name : pH- LED

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

1.2.1. Relevant identified uses

Intended for general public
Main use category : Professional use, Consumer use
Use of the substance/mixture : Liquid Fertilizer

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Hy-Pro
Postbus 1
5530 AA Bladel - The Netherlands
T +31 (0) 497 380 480 - F +31 (0) 497 381 840
info@hy-pro.nl - www.hy-pro.nl

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Remark
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Centre Hospitalier Universitaire de Constantine	Avonley Road SE14 5ER London	0870 243 2241	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Corrosive to metals, Category 1 H290

Skin corrosion/irritation, Category 1A H314

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice. May be corrosive to metals. Causes severe skin burns and eye damage.

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS05

Signal word (CLP) : Danger
Hazardous ingredients : nitric acid
Hazard statements (CLP) : H290 - May be corrosive to metals
H314 - Causes severe skin burns and eye damage

Precautionary statements (CLP) : P102 - Keep out of reach of children
P260 - Do not breathe vapours, spray, mist
P280 - Wear protective gloves, eye protection
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
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

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EUH-statements	: EUH071 - Corrosive to the respiratory tract
Security closing plug for children	: Applicable
Tactile warning	: Applicable

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. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
nitricacid (Note B)	(CAS No) 7697-37-2 (EC no) 231-714-2 (EC index no) 007-004-00-1 (REACH-no) 01-2119487297-23	25 - 50	Ox. Liq. 2, H272 Met. Corr. 1, H290 Skin Corr. 1A, H314

Specific concentration limits:

Name	Product identifier	Specific concentration limits
nitricacid	(CAS No) 7697-37-2 (EC no) 231-714-2 (EC index no) 007-004-00-1 (REACH-no) 01-2119487297-23	(5 =<C < 20) Skin Corr. 1B, H314 (C >= 20) Skin Corr. 1A, H314 (65 =<C < 99) Ox. Liq. 3, H272 (C >= 99) Ox. Liq. 2, H272

Note B : Some substances (acids, bases, etc.) are placed on the market in aqueous solutions at various concentrations and, therefore, these solutions require different classification and labelling since the hazards vary at different concentrations. In Part 3 entries with Note B have a general designation of the following type: "nitric acid ... %".

In this case the supplier must state the percentage concentration of the solution on the label. Unless otherwise stated, it is assumed that the percentage concentration is calculated on a ght/weight basis.

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). Call a physician immediately.
First-aid measures after inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell. Call a physician immediately. Take medical advice.
First-aid measures after skin contact	: Remove contaminated clothes. If skin irritation persists, take medical advice. Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Call a physician immediately.
First-aid measures after eye contact	: Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persist. Rinse cautiously with water for several minutes. Call a physician immediately.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Get medical advice/attention if you feel unwell. Do NOT induce vomiting. Call a physician immediately.

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

Symptoms/injuries	: Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/injuries after skin contact	: Burns.
Symptoms/injuries after eye contact	: Serious damage to eyes.
Symptoms/injuries after ingestion	: Burns.

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

Treat symptomatically.

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

Fire hazard	: Non flammable.
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Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: For further information, refer to section 10 : "Stability and Reactivity".

5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
Other information	: Avoid (reject) fire-fighting water to enter environment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray.
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6.1.2. For emergency responders

Protective equipment	: Equip cleanup crew with proper protection. For further information refer to section 8 : "Exposure-controls/personal protection".
Emergency procedures	: Ventilate area.

6.2. Environmental precautions

Do not allow to enter drains or water courses.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Take up liquid spill into absorbent material. Recover mechanically the product.
Other information	: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8 : "Exposure-controls/personal protection". Concerning disposal elimination after cleaning, see item 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Concerning personal protective equipment to use, see item 8. Provide good ventilation in process area to prevent formation of vapour. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray. Wear personal protective equipment.
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: Keep only in the original container in a cool well ventilated place. Keep container closed when not in use. Store in corrosive resistant container with a resistant inner liner. Keep only in original container. Store locked up.
Incompatible products	: Strong bases. Strong acids.
Incompatible materials	: Metals.
Heat and ignition sources	: Keep away from heat and direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

nitricacid (7697-37-2)		
EU	IOELV STEL (mg/m³)	2,6 mg/m³
EU	IOELV STEL (ppm)	1 ppm
United Kingdom	Local name	Nitric acid
United Kingdom	WEL STEL (mg/m³)	2,6 mg/m³
United Kingdom	WEL STEL (ppm)	1 ppm

8.2. Exposure controls

Appropriate engineering controls	: Ensure good ventilation of the work station.
Personal protective equipment	: Gloves. Safety glasses. Protective clothing.

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Hand protection	: Wear suitable gloves resistant to chemical penetration. Chemical resistant gloves (according to European standard NF EN 374 or equivalent). Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. Since the product consists of several substances, it is not possible to estimate the durability of the glove material beforehand. Thus it needs to be tested before use
Eye protection	: Safety glasses
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation. In case of inadequate ventilation wear respiratory protection



Other information	: Do not eat, drink or smoke during use.
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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless. Colourless.
Odour	: characteristic.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: < 0 °C
Freezing point	: No data available
Boiling point	: 83 °C
Flash point	: Not applicable
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: 23 hPa at 20 °C
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1,2 g/cm ³ at 20 °C
Solubility	: Water: completely miscible
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Product is not explosive.
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

VOC content	: 0 %
Water	: 62 %
Organic solvent	: 0 %

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions of use.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known.

10.4. Conditions to avoid

Extremely high or low temperatures. Keep out of direct sunlight.

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10.5. Incompatible materials

Strong acids. Strong bases. metals.

10.6. Hazardous decomposition products

Combustion generates : Carbon oxides (CO, CO₂).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

nitricacid (7697-37-2)

LC50 inhalation rat (mg/l)	1,56 mg/l/4h
Skin corrosion/irritation	: Causes severe skin burns and eye damage.
Serious eye damage/irritation	: Serious eye damage, category 1, implicit
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

nitricacid (7697-37-2)

NOAEL (subacute, oral, animal/male, 28 days)	1500 mg/kg bodyweight
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Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Before neutralisation, the product may represent a danger to aquatic organisms.

nitricacid (7697-37-2)

LC50 fishes 1	> 100 mg/l
EC50 Daphnia 1	180 mg/l

12.2. Persistence and degradability

pH-

Persistence and degradability	Not established.
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12.3. Bioaccumulative potential

pH-

Bioaccumulative potential	Not established.
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nitricacid (7697-37-2)

Bioconcentration factor (BCF REACH)	< 100
Log Pow	< 3

12.4. Mobility in soil

nitricacid (7697-37-2)

Log Koc	< 1
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12.5. Results of PBT and vPvB assessment

pH-

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

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Additional information : Empty containers should be taken for recycle, recovery or waste in accordance with local regulation.

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Ecology - waste materials

: Avoid release to the environment.

SECTION 14: Transport information

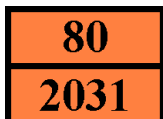
In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
2031	2031	2031	2031	2031
14.2. UN proper shipping name				
NITRIC ACID	NITRIC ACID	Nitric acid	NITRIC ACID	NITRIC ACID
Transport document description				
UN 2031 NITRIC ACID, 8, II, (E)	UN 2031 NITRIC ACID, 8, II	UN 2031 Nitric acid, 8, II	UN 2031 NITRIC ACID, 8, II	UN 2031 NITRIC ACID, 8, II
14.3. Transport hazard class(es)				
8	8	8	8	8
				
14.4. Packing group				
II	II	II	II	II
14.5. Environmental hazards				
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) : C1
Limited quantities (ADR) : 1I
Excepted quantities (ADR) : E2
Packing instructions (ADR) : P001, IBC02
Special packing provisions (ADR) : PP81, B15
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 : 2P
APP code : B

- Transport by sea

Limited quantities (IMDG) : 1 L
Excepted quantities (IMDG) : E2
Packing instructions (IMDG) : P001
Special packing provisions (IMDG) : PP81
IBC packing instructions (IMDG) : IBC02
IBC special provisions (IMDG) : B15, B20
Tank instructions (IMDG) : T8
Tank special provisions (IMDG) : TP2
EmS-No. (Fire) : F-A

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EmS-No. (Spillage)	: S-B
Stowage category (IMDG)	: D
Segregation (IMDG)	: SG6, SG16, SG17, SG19
Properties and observations (IMDG)	: Colourless liquid.Oxidant; may cause fire in contact with organic materials such as wood, cotton or straw, evolving highly toxic gases (brown fumes). Highly corrosive to most metals. Causes severe burns to skin, eyes and mucous membranes.
MFAG-No	: 157

- Air transport

PCA Excepted quantities (IATA)	: E0
PCA Limited quantities (IATA)	: Forbidden
PCA limited quantity max net quantity (IATA)	: Forbidden
PCA packing instructions (IATA)	: Forbidden
PCA max net quantity (IATA)	: Forbidden
CAO packing instructions (IATA)	: 855
CAO max net quantity (IATA)	: 30L
ERG code (IATA)	: 8L

- Inland waterway transport

Classification code (ADN)	: C1
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
Limited quantities (RID)	: 1L
Excepted quantities (RID)	: E2
Packing instructions (RID)	: P001, IBC02
Special packing provisions (RID)	: PP81, B15
Mixed packing provisions (RID)	: MP15
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

VOC content : 0 %

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

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

Indication of changes:

Revised SDS according to Commission Regulation (EU) N°2015/830.

Abbreviations and acronyms:

SDS	Safety Data Sheet
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
PBT	Persistent Bioaccumulative Toxic
vPvB	Very Persistent and Very Bioaccumulative
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
RID	Regulations concerning the International Carriage of Dangerous Goods by Rai
ICAO	ICAO - International Civil Aviation Organization
LC50	Median lethal concentration
LD50	Median lethal dose
	CAS (Chemical Abstracts Service) number
	EG-nr.: EINECS- en ELINCS-number
	EINECS: European Inventory of Existing Commercial Substances
NOEC	No-Observed Effect Concentration
	STOT: Specific Target Organ Toxicity
PNEC	Predicted No-Effect Concentration
	PEC: Predicted Environmental Concentration
	OEL: Occupational Exposure Limit

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

Other information : REACH Disclaimer:
This information is based on current knowledge. Consistency of data in the SDS with CSR is considered, as far as the information is available at the time of compilation (cfr Revision date and Version number). DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

Full text of H- and EUH-statements:

Met. Corr. 1	Corrosive to metals, Category 1
Ox. Liq. 2	Oxidising Liquids, Category 2
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
H272	May intensify fire; oxidiser
H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage
EUH071	Corrosive to the respiratory tract

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Met. Corr. 1	H290	Expert judgment
Skin Corr. 1A	H314	Calculation method

Safety Data Sheet applicable for regions : GB - United Kingdom

This Safety Data Sheet is compiled by :

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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