

## Safety data sheet

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

#### 1.1. Product identifier

Code: 0.010.0029  
Product name: DESCALER

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

Intended use: Multipurpose acid descaler

Identified Uses	Industrial	Professional	Consumer
Professional use	-	✓	-

#### Uses Advised Against

Do not use for purposes other than those listed

#### 1.3. Details of the supplier of the safety data sheet

Name: LAVORWASH SPA  
Full address: J.F. KENNEDY, 12 STREET  
District and Country: 46020 PEGOGNAGA - MANTOVA (MN)  
ITALY  
phone: 037.655.431  
fax 0376558927

E-mail address of the competent person responsible for the Safety Data Sheet: info@lavorwash.it

#### 1.4. Emergency telephone number

For urgent inquiries refer to: Poison Centre – Niguarda – Milano Hospital  
Phone. +39 02 66101029

### SECTION 2. Hazards identification.

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

The product is classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 and subsequent amendments. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

##### 2.1.1. Regulation 1272/2008 (CLP) and following amendments and adjustments.

Hazard classification and indication:

Skin corrosion, category 1B	H314	Causes severe skin burns and eye damage.
Serious eye damage, category 1	H318	Causes serious eye damage.

##### 2.1.2. 67/548/EEC and 1999/45/EC Directives and following amendments and adjustments.

Danger Symbols:

C

R phrases:

34

The full wording of the Risk (R) and hazard (H) phrases is given in section 16 of the sheet.

**2.2. Label elements.**

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:



Signal words:                    Danger

Hazard statements:

**H314**                                Causes severe skin burns and eye damage.

Precautionary statements:

**P264**                                Wash . . . thoroughly after handling.  
**P280**                                Wear protective gloves / clothing and eye / face protection.  
**P304+P340**                        IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
**P310**                                Immediately call a POISON CENTER / doctor / . . .

**Contains:**                        PHOSPHORIC ACID

**2.3. Other hazards.**

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

**SECTION 3. Composition/information on ingredients.****3.1. Substances.**

Information not relevant.

**3.2. Mixtures.**

Contains:

Identification.	Conc. %.	Classification 67/548/EEC.	Classification 1272/2008 (CLP).
<b>PHOSPHORIC ACID</b>			
CAS. 7664-38-2	30 - 32,5	C R34, Note B	Skin Corr. 1B H314, Note B
EC. 231-633-2			
INDEX. 015-011-00-6			
Reg. no. 01-2119485924-24			

Note: Upper limit is not included into the range.

The full wording of the Risk (R) and hazard (H) phrases is given in section 16 of the sheet.

T+ = Very Toxic(T+), T = Toxic(T), Xn = Harmful(Xn), C = Corrosive(C), Xi = Irritant(Xi), O = Oxidizing(O), E = Explosive(E), F+ = Extremely Flammable(F+), F = Highly Flammable(F), N = Dangerous for the Environment(N)

## SECTION 4. First aid measures.

### 4.1. Description of first aid measures.

**EYES:** Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.

**SKIN:** Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

**INGESTION:** Get medical advice/attention immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

**INHALATION:** Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

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

**INHALATION :** no symptoms or particular effect under normal conditions of use : In case of use in confined or poorly ventilated areas you may have airway disorders with drowsiness , dizziness and decrease in attention state.

**EYES :** irritation with burning, redness , tearing and blurred sense of sight

**SKIN :** irritation of the skin's surface layer dryness and chapped which, if ignored , can also determine the dermatitis

**INGESTION :** intestinal disorders with abnormal digestive symptoms and nausea , vomiting and diarrhea

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

In case of incident or complaints consult a doctor immediately (if possible show directions for use or safety data sheet ) . Special treatments : none

## SECTION 5. Firefighting measures.

### 5.1. Extinguishing media.

#### SUITABLE EXTINGUISHING EQUIPMENT

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

#### UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

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

#### HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe combustion products.

The combustion fumes contain oxides of phosphorus, oxides of carbon and azote.

### 5.3. Advice for firefighters.

#### GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

#### SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained

open circuit positive pressure compressed air breathing apparatus (BS EN 137).

## **SECTION 6. Accidental release measures.**

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

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

### **6.2. Environmental precautions.**

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

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

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Check incompatibility for container material in section 7. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

### **6.4. Reference to other sections.**

Any information on personal protection and disposal is given in sections 8 and 13.

## **SECTION 7. Handling and storage.**

### **7.1. Precautions for safe handling.**

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

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

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.

### **7.3. Specific end use(s).**

Information not available.

## **SECTION 8. Exposure controls/personal protection.**

### **8.1. Control parameters.**

## Regulatory References:

DEU	Deutschland	MAK-und BAT-Werte-Liste 2012
ESP	España	INSHT - Límites de exposición profesional para agentes químicos en España 2015
FRA	France	JORF n°0109 du 10 mai 2012 page 8773 texte n° 102
GBR	United Kingdom	EH40/2005 Workplace exposure limits
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
EU	OEL EU	Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC.
	TLV-ACGIH	ACGIH 2014

## PHOSPHORIC ACID

## Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	2		4		INHAL.
MAK	DEU	2		4		INHAL.
VLA	ESP	1		2		
VLEP	FRA	1	0,2	2	0,5	
WEL	GBR	1		2		
TLV	ITA	1		2		
OEL	EU	1		2		
TLV-ACGIH		1		3		

## Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers.			Effects on workers				
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation.			0.73 mg/m3	VND	2 mg/m3	VND	1 mg/m3	VND

## Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

## 8.2. Exposure controls.

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration. Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

## HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).

We recommend use of nitrile gloves in class at least 3 ( protection against permeation of fluids > 120 minutes) with a thickness of at least 0.15 mm .

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

## SKIN PROTECTION

Wear category II professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap

and water after removing protective clothing.

#### EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

#### RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type B filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

#### ENVIRONMENTAL EXPOSURE CONTROLS.

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

## SECTION 9. Physical and chemical properties.

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

Appearance	Liquid.
Colour	Pink.
Odour	Odourless.
Odour threshold.	Not available.
pH.	1 - 1,2 of raw sample.
Melting point / freezing point.	Not available.
Initial boiling point.	Not available.
Boiling range.	Not available.
Flash point.	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Lower inflammability limit.	Not available.
Upper inflammability limit.	Not available.
Lower explosive limit.	Not available.
Upper explosive limit.	Not available.
Vapour pressure.	23 hPa (phosphoric acid)
Vapour density	Not available.
Relative density.	1,200 (25°C) Kg/l
Solubility	Soluble in water
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature.	Not available.
Decomposition temperature.	Not available.
Viscosity	Not available.
Explosive properties	Not available.
Oxidising properties	Not available.

### 9.2. Other information.

Information not available.

## SECTION 10. Stability and reactivity.

### 10.1. Reactivity.

There are no particular risks of reaction with other substances in normal conditions of use.

**10.2. Chemical stability.**

The product is stable in normal conditions of use and storage.

**10.3. Possibility of hazardous reactions.**

Oxidizing agents, reducing agents, bases, salts of volatile acids. In contact with these substances can take place a reaction accompanied by large heat development and possible development of toxic or corrosive vapors.

**10.4. Conditions to avoid.**

Avoid exposure to heat sources.

**10.5. Incompatible materials.**

Soft metals.

**10.6. Hazardous decomposition products.**

Oxides of phosphorus.

**SECTION 11. Toxicological information.****11.1. Information on toxicological effects.**

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification. It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

This product is corrosive and causes serious burns and vesicles on the skin, which can arise even after exposure. Burns are very stinging and painful. Upon contact with eyes, it may cause serious harm, such as cornea opacity, iris lesions, irreversible eye coloration. The vapors and/or powders are caustic for the respiratory system and may cause pulmonary edema, whose symptoms sometimes arise only after some hours. Exposure symptoms may include: sting, cough, asthma, laryngitis, respiratory disorders, headache, nausea and sickness. If swallowed, it may cause mouth, throat and oesophagus burns, sickness, diarrhoea, edema, larynx swelling and, consequently, asphyxia. Perforation of the gastro-intestinal tract is also possible. This product may cause serious ocular lesions, cornea opacity, iris lesions, irreversible eye coloration.

**PHOSPHORIC ACID**

LD50 (Oral).1530 mg/kg Rat

LD50 (Dermal).2740 mg/kg Rabbit

LC50 (Inhalation).> 0,85 mg/l/1h Rat

**SECTION 12. Ecological information.**

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

**12.1. Toxicity.**

**PHOSPHORIC ACID**

LC50 - for Fish.	751 mg/l/96h <i>Oryzias latipes</i>
EC50 - for Crustacea.	> 100 mg/l/48h <i>Daphnia magna</i>
EC50 - for Algae / Aquatic Plants.	> 100 mg/l/72h <i>Desmodesmus subspicatus</i>

**12.2. Persistence and degradability.****PHOSPHORIC ACID**

Solubility in water. > 850000 mg/l

Biodegradability: Information not available.

**12.3. Bioaccumulative potential.**

Information not available.

**12.4. Mobility in soil.**

Information not available.

**12.5. Results of PBT and vPvB assessment.**

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

**12.6. Other adverse effects.**

Information not available.

**SECTION 13. Disposal considerations.****13.1. Waste treatment methods.**

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to ADR restrictions.

**CONTAMINATED PACKAGING**

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

**SECTION 14. Transport information.****14.1. UN number.**

ADR / RID, IMDG, 1805  
IATA:

**14.2. UN proper shipping name.**



ADR / RID: PHOSPHORIC  
ACID,  
SOLUTION  
IMDG: PHOSPHORIC  
ACID,  
SOLUTION  
IATA: PHOSPHORIC  
ACID,  
SOLUTION

**14.3. Transport hazard class(es).**

ADR / RID: Class: 8 Label: 8  
IMDG: Class: 8 Label: 8  
IATA: Class: 8 Label: 8

**14.4. Packing group.**

ADR / RID, IMDG, III  
IATA:

**14.5. Environmental hazards.**

ADR / RID: NO  
IMDG: NO  
IATA: NO

**14.6. Special precautions for user.**

ADR / RID:	HIN - Kemler: 80	Limited Quantities: 5 L	Tunnel restriction code: (E)
	Special Provision: -		
IMDG:	EMS: F-A, S-B	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 60 L	Packaging instructions: 856
	Pass.:	Maximum quantity: 5 L	Packaging instructions: 852
	Special Instructions:	A3, A803	

**14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code.**

Information not relevant.

**SECTION 15. Regulatory information.**

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

Seveso category. None.

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006.

Product.  
Point. 3

Substances in Candidate List (Art. 59 REACH).

None.

Substances subject to authorisation (Annex XIV REACH).

None.

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None.

Substances subject to the Rotterdam Convention:

None.

Substances subject to the Stockholm Convention:

None.

Healthcare controls.

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

Ingredients according to Regulation (EC) No. 648/2004

Less than 5%	non-ionic surfactants
Less than 30%	Phosphoric acid

**15.2. Chemical safety assessment.**

No chemical safety assessment has been processed for the mixture and the substances it contains.

**SECTION 16. Other information.**

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

<b>Skin Corr. 1B</b>	Skin corrosion, category 1B
<b>Eye Dam. 1</b>	Serious eye damage, category 1
<b>H314</b>	Causes severe skin burns and eye damage.
<b>H318</b>	Causes serious eye damage.

Text of risk (R) phrases mentioned in section 2-3 of the sheet:

**R34** CAUSES BURNS.

**LEGEND:**

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

**GENERAL BIBLIOGRAPHY**

1. Directive 1999/45/EC and following amendments
  2. Directive 67/548/EEC and following amendments and adjustments
  3. Regulation (EU) 1907/2006 (REACH) of the European Parliament
  4. Regulation (EU) 1272/2008 (CLP) of the European Parliament
  5. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
  6. Regulation (EU) 453/2010 of the European Parliament
  7. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
  8. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
  9. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
  10. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
  11. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
- The Merck Index. - 10th Edition
  - Handling Chemical Safety
  - Niosh - Registry of Toxic Effects of Chemical Substances
  - INRS - Fiche Toxicologique (toxicological sheet)
  - Patty - Industrial Hygiene and Toxicology
  - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
  - ECHA website

**Note for users:**

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.