Material Safety Data Sheet



HG professional limescale remover

1. Product and company identification

Product name : HG professional limescale remover

> Pinnacle Home Solutions LLC 8711 E Pinnacle Peak Road

Scottsdale AZ 85255

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Tel 1.480.513.1317

Manufacturer : HG International BV

Damsluisweg 70 - NL-1332 EJ - Almere - The Netherlands

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Code : 100

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Validation date : 15-1-2013. **Print date** : 15-1-2013.

: +31 (0)36 54 94 777 In case of emergency

Product type : Liquid.

2. Hazards identification

Emergency overview

Physical state : Liquid.

Color : Colorless to light yellow.

Odor : Fragrance-like. Signal word : WARNING!

Hazard statements : COMBUSTIBLE LIQUID AND VAPOR. CAUSES EYE IRRITATION. MAY BE

HARMFUL IF SWALLOWED. MAY CAUSE SKIN IRRITATION. CONTAINS

MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.

Precautionary measures Do not breathe vapor or mist. Do not ingest. Do not eat, drink or smoke when using

this product. Avoid contact with eyes, skin and clothing. Keep away from heat and

flame. Wash thoroughly after handling.

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard

(29 CFR 1910.1200).

Potential acute health effects

Inhalation : No known significant effects or critical hazards.

: Harmful if swallowed. Ingestion : Slightly irritating to the skin. Skin

Eyes : Severely irritating to eyes. Risk of serious damage to eyes.

Potential chronic health effects

Chronic effects : Contains material that can cause target organ damage.

Carcinogenicity No known significant effects or critical hazards. Mutagenicity : No known significant effects or critical hazards. **Teratogenicity** : No known significant effects or critical hazards. **Developmental effects** : No known significant effects or critical hazards. **Fertility effects** : No known significant effects or critical hazards.

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2. Hazards identification

Target organs

: Contains material which causes damage to the following organs: eye, lens or cornea. Contains material which may cause damage to the following organs: blood, kidneys, liver, mucous membranes, spleen, gastrointestinal tract, upper respiratory tract, skin, central nervous system (CNS), nose/sinuses, throat.

Over-exposure signs/symptoms

Inhalation: No specific data.Ingestion: No specific data.

Skin : Adverse symptoms may include the following:

irritation redness

Eyes : Adverse symptoms may include the following:

pain or irritation watering redness

Medical conditions aggravated by overexposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at

risk may be aggravated by over-exposure to this product.

See toxicological information (Section 11)

3. Composition/information on ingredients

Name	CAS number	%
Phosphoric acid 2-Propanol	7664-38-2 67-63-0	20 - 30 1 - 5
Oxalic acid	144-62-7	1 - 5

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

Eye contact

: Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin contact

: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

Inhalation

Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion

: Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Protection of first-aiders

: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Notes to physician

: No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

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5. Fire-fighting measures

Flammability of the product

: Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

Extinguishing media

Suitable

: Use dry chemical, CO2, water spray (fog) or foam.

Not suitable

: Do not use water jet.

Special exposure hazards

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Hazardous thermal decomposition products

: Decomposition products may include the following materials: carbon dioxide

carbon monoxide phosphorus oxides

Special protective equipment for fire-fighters

: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions

: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions

: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up

Small spill

: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

Large spill

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. Handling and storage

Handling

Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take

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7. Handling and storage

Storage

precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container.

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from alkalis. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

Ingredient	Exposure limits
Phosphoric acid	ACGIH TLV (United States, 1/2011). STEL: 3 mg/m³ 15 minutes. TWA: 1 mg/m³ 8 hours. NIOSH REL (United States, 6/2009). STEL: 3 mg/m³ 15 minutes. TWA: 1 mg/m³ 10 hours. OSHA PEL (United States, 6/2010). TWA: 1 mg/m³ 8 hours. OSHA PEL 1989 (United States, 3/1989). STEL: 3 mg/m³ 15 minutes. TWA: 1 mg/m³ 8 hours.
2-Propanol	ACGIH TLV (United States, 3/2012). TWA: 200 ppm 8 hours. STEL: 400 ppm 15 minutes. OSHA PEL 1989 (United States, 3/1989). TWA: 400 ppm 8 hours. TWA: 980 mg/m³ 8 hours. STEL: 500 ppm 15 minutes. STEL: 1225 mg/m³ 15 minutes. NIOSH REL (United States, 6/2009). TWA: 400 ppm 10 hours. TWA: 980 mg/m³ 10 hours. STEL: 500 ppm 15 minutes. STEL: 1225 mg/m³ 15 minutes. OSHA PEL (United States, 6/2010). TWA: 400 ppm 8 hours. TWA: 980 mg/m³ 8 hours.
Oxalic acid	ACGIH TLV (United States, 1/2011). STEL: 2 mg/m³ 15 minutes. TWA: 1 mg/m³ 8 hours. NIOSH REL (United States, 6/2009). STEL: 2 mg/m³ 15 minutes. TWA: 1 mg/m³ 10 hours. OSHA PEL (United States, 6/2010). TWA: 1 mg/m³ 8 hours. OSHA PEL 1989 (United States, 3/1989). STEL: 2 mg/m³ 15 minutes. TWA: 1 mg/m³ 8 hours.

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8. Exposure controls/personal protection

Recommended monitoring procedures

: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Engineering measures

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Respiratory

: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Eyes

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

Physical state : Liquid.

Flash point : Closed cup: 62°C (143,6°F) [Product does not sustain combustion.]

Color : Colorless to light yellow.

Odor : Fragrance-like.

pH : <1 [Conc. (% w/w): 100%]

Boiling/condensation point: 100°C (212°F)

Relative density : 1,135

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10. Stability and reactivity

Chemical stability

: The product is stable.

Conditions to avoid

Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Incompatible materials

: Attacks many metals producing extremely flammable hydrogen gas which can form

explosive mixtures with air.

Reactive or incompatible with the following materials:

oxidizing materials

Hazardous decomposition

products

: Under normal conditions of storage and use, hazardous decomposition products should

not be produced.

Possibility of hazardous reactions

: Under normal conditions of storage and use, hazardous reactions will not occur.

11. Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Phosphoric acid 2-Propanol	LD50 Oral LD50 Dermal LD50 Oral		1,25 g/kg 12800 mg/kg 5000 mg/kg	-

Conclusion/Summary

: Not available.

Chronic toxicity

Conclusion/Summary

: Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
2-Propanol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	_	10 milligrams	-
	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
Oxalic acid	Eyes - Severe irritant	Rabbit	-	24 hours 250 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	0,066666667 minutes 100	-
	Skin - Mild irritant	Rabbit	-	milligrams 24 hours 500 milligrams	-

Conclusion/Summary

: Not available.

Sensitizer

Conclusion/Summary

: Not available.

Carcinogenicity

Conclusion/Summary

: Not available.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
2-Propanol	A4	3	-	-	-	-

Mutagenicity

Conclusion/Summary

: Not available.

Teratogenicity

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11. Toxicological information

Conclusion/Summary

: Not available.

Reproductive toxicity

Conclusion/Summary: Not available.

12. Ecological information

Ecotoxicity

: No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
2-Propanol	Acute LC50 1400000 µg/l Marine water Acute LC50 4200000 µg/l Fresh water	Crustaceans - Crangon crangon Fish - Rasbora heteromorpha	48 hours 96 hours
Oxalic acid	Acute EC50 136900 to 150000 µg/l Fresh water	Daphnia - Daphnia magna - Larvae	48 hours

Conclusion/Summary

: Not available.

Persistence/degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Oxalic acid	-	>70 % - 28 days	-	-

Conclusion/Summary: Not available.

13. Disposal considerations

Waste disposal

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

UN number	Proper shipping name	Classes	PG*	Label	Additional information
	ON number				

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14. Transport information

DOT Classification	UN1760	CORROSIVE LIQUID, N.O.S. (Phosphoric acid, mixture) RQ (Fosforzuur)	8	III	CORROBER 8	Reportable quantity 24027,6 lbs / 10908,5 kg [2539 gal / 9611 L] Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.
TDG Classification	UN1760	CORROSIVE LIQUID, N.O.S. (Phosphoric acid , mixture)	8	III		-
Mexico Classification	UN1760	CORROSIVE LIQUID, N.O.S. mixture	8	Ш		-
ADR/RID Class	UN1760	CORROSIVE LIQUID, N.O.S. (Phosphoric acid, mixture)	8	III		Hazard identification number 80 Limited quantity 5 L Tunnel code (E)
IMDG Class	UN1760	CORROSIVE LIQUID, N.O.S. (Phosphoric acid, mixture)	8	III	8	Emergency schedules (EmS) F-A, S-B
IATA-DGR Class	UN1760	CORROSIVE LIQUID, N.O.S. (Phosphoric acid, mixture)	8	Ш		-

PG* : Packing group

15. Regulatory information

HCS Classification : Combustible liquid

Irritating material Target organ effects

U.S. Federal regulations : TSCA 4(a) final test rules: Oxalic acid

TSCA 8(a) PAIR: Benzenepropanal, 4-(1,1-dimethylethyl)-.alpha.-methyl-; Dodecanal

TSCA 8(a) IUR Exempt/Partial exemption: Not determined

TSCA 8(d) H and S data reporting: Benzenepropanal, 4-(1,1-dimethylethyl)-.alpha.-

methyl-; Dodecanal

TSCA 12(b) one-time export: Oxalic acid

United States inventory (TSCA 8b): Not determined.

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15. Regulatory information

SARA 302/304/311/312 extremely hazardous substances: No products were found. SARA 302/304 emergency planning and notification: No products were found. SARA 302/304/311/312 hazardous chemicals: Phosphoric acid 75%; 2-Propanol;

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Phosphoric acid 75%: Immediate (acute) health hazard: 2-Propanol: Fire hazard. Immediate (acute) health hazard, Delayed (chronic) health hazard; Oxalic acid: Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Water Act (CWA) 311: Phosphoric acid 75%

Clean Air Act Section 112 : Not listed

(b) Hazardous Air **Pollutants (HAPs)**

Clean Air Act Section 602 : Not listed

Class I Substances

Clean Air Act Section 602 : Not listed

Class II Substances

DEA List I Chemicals

(Precursor Chemicals)

: Not listed

DEA List II Chemicals

(Essential Chemicals)

: Not listed

SARA 313

	Product name	CAS number	Concentration
Form R - Reporting requirements	2-Propanol	67-63-0	1 - 5
Supplier notification	2-Propanol	67-63-0	1 - 5

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: PHOSPHORIC ACID; ISOPROPYL ALCOHOL;

OXALIC ACID

New York The following components are listed: Phosphoric acid

New Jersey : The following components are listed: PHOSPHORIC ACID; ISOPROPYL ALCOHOL;

2-PROPANOL; OXALIC ACID; ETHANEDIOIC ACID

Pennsylvania : The following components are listed: PHOSPHORIC ACID; 2-PROPANOL;

ETHANEDIOIC ACID

Canada inventory

International regulations

: Not determined.

International lists : Australia inventory (AICS): Not determined.

China inventory (IECSC): Not determined.

Japan inventory: Not determined. Korea inventory: Not determined.

Malaysia Inventory (EHS Register): Not determined.

New Zealand Inventory of Chemicals (NZIoC): Not determined.

Philippines inventory (PICCS): Not determined. Taiwan inventory (CSNN): Not determined.

Chemical Weapons Convention List Schedule

I Chemicals

: Not listed

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15. Regulatory information

Chemical Weapons

Convention List Schedule

II Chemicals

Chemical Weapons

Convention List Schedule

III Chemicals

: Not listed

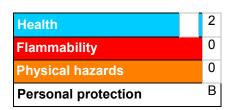
: Not listed

16. Other information

Label requirements

COMBUSTIBLE LIQUID AND VAPOR. CAUSES EYE IRRITATION. MAY BE HARMFUL IF SWALLOWED. MAY CAUSE SKIN IRRITATION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Date of printing : **15-1-2013**. **□ate of issue** : 15-1-2013.

Date of previous issue : No previous validation.

Version : 1

Prepared by : Not available.

Indicates information that has changed from previously issued version.

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HG professional limescale remover

16. Other information

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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