

The Virtue Plus logo, featuring the word "VIRTUE" in a blue, sans-serif font, followed by a black plus sign. The background of the entire page is a low-angle photograph of a modern glass skyscraper with a grid-like structure, reaching towards a bright, hazy sky.

VIRTUE +

Ecosol Power

Safety Data Sheet

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@ Virtue Plus

Printing date 12.04.2019

Revision: 12.04.2019

1 Identification

Product Name: ECOSOL POWER

Other Means of Identification: Mixture

Recommended Use of the Chemical and Restriction on Use:

Liquid cleanser for industrial dishwashing-machines.

Details of Manufacturer or Importer:

Virtue Plus
13 Fawkner Avenue,
Kings Meadows, Tas, 7249

Phone Number: 03 6344 8400

Emergency telephone number: 1800 205 506, +64 7958 2372

2 Hazard(s) Identification

Hazardous Nature:

Classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia criteria.

Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition).



corrosion

Skin Corrosion/Irritation 1A H314 Causes severe skin burns and eye damage.

Serious Eye Damage/Irritation 1 H318 Causes serious eye damage.



STOT SE 3 H335 May cause respiratory irritation.

Aquatic Acute 2 H401 Toxic to aquatic life.

Signal Word Danger

Hazard Statements

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

H401 Toxic to aquatic life.

Precautionary Statements

P260 Do not breathe dusts or mists.

P264 Wash hands thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face 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.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

P321 Specific treatment (see on this label).

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P363	Wash contaminated clothing before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national regulations.

3 Composition and Information on Ingredients

Chemical Characterization: Mixtures
Description: Mixture of substances listed below with nonhazardous additions.

Hazardous Components:

CAS: 1310-73-2	Sodium hydroxide ⚠ Skin Corrosion/Irritation 1A, H314; ⚠ STOT SE 3, H335	25 - <50%
CAS: 1310-58-3	Potassium hydroxide ⚠ Skin Corrosion/Irritation 1A, H314; ⚠ Acute Toxicity (Oral) 4, H302	5 - <9.8%
CAS: 120313-48-6	Alcohols, C12-15-branched and linear, ethoxylated propoxylated ⚠ Serious Eye Damage/Irritation 1, H318; ⚠ Aquatic Acute 1, H400; ⚠ Skin Corrosion/Irritation 2, H315; Aquatic Chronic 3, H412	1 - <3%
CAS: 13598-36-2	Phosphonic acid ⚠ Skin Corrosion/Irritation 1A, H314; ⚠ Acute Toxicity (Oral) 4, H302	1 - <2.9%
CAS: 141-43-5	2-Aminoethanol ⚠ Skin Corrosion/Irritation 1B, H314; ⚠ Serious Eye Damage/Irritation 1, H318; ⚠ Acute Toxicity (Oral) 4, H302; ⚠ Acute Toxicity (Dermal) 4, H312; ⚠ Acute Toxicity (Inhalation) 4, H332; ⚠ Flammable Liquids 4, H227	1 - <2.6%

4 First Aid Measures

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. Seek medical attention if breathing problems develop.

Skin Contact:

In case of skin contact, immediately remove contaminated clothing and wash affected areas with water and soap. Seek medical attention if symptoms occur.

Eye Contact:

In case of eye contact, hold eyelids open and rinse with water for at least 15 minutes. Seek medical attention if symptoms occur.

Ingestion:

If swallowed, do not induce vomiting. Immediately rinse mouth with water. Give a glass of water. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

Symptoms Caused by Exposure:

Inhalation: May cause respiratory irritation, shortness of breath and coughing.

Skin Contact: Causes severe skin burns.

Eye Contact: Causes serious eye damage.

Ingestion: May cause burns or irritation to the mouth, throat and stomach. Risk of stomach perforation.

5 Fire Fighting Measures

Suitable Extinguishing Media: Water fog, foam, ABC powder or carbon dioxide. Do not use full water jet.

Specific Hazards Arising from the Chemical:

No hazardous decomposition products known.

Product is not flammable.

Containers close to fire should be removed only if safe to do so. Use water spray to cool fire exposed containers.

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Special Protective Equipment and Precautions for Fire Fighters:

When fighting a major fire wear self-contained breathing apparatus and protective equipment.

6 Accidental Release Measures**Personal Precautions, Protective Equipment and Emergency Procedures:**

Wear approved respiratory protection, chemical resistant gloves, protective clothing and safety boots. Evacuate all non-essential personnel from affected area. Do not breathe vapours. Ensure adequate ventilation. Spilt product may be slippery.

Environmental Precautions:

In the event of a major spill, prevent spillage from entering drains or water courses.

Methods and Materials for Containment and Cleaning Up:

Stop leak if safe to do so and absorb spill with sand, earth, vermiculite or some other absorbent material. Collect the spilt material and place into a suitable container for disposal.

7 Handling and Storage**Precautions for Safe Handling:**

Use of safe work practices are recommended to avoid eye or skin contact and inhalation of vapours. Use only outdoors or in a well-ventilated area.

Food, beverages and tobacco products should not be stored or consumed where this material is in use. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. Provide eyewash fountains and safety showers in close proximity to points of potential exposure.

Conditions for Safe Storage:

Store in a cool, dry and well ventilated area. Keep container tightly closed when not in use. Protect from extreme temperatures. Do not store below -5°C. Keep away from oxidising agents and acids.

Recommended storage temperature: 5 - 25 °C.

Storage life: 3 years

8 Exposure Controls and Personal Protection**Exposure Standards:****CAS: 1310-73-2 Sodium hydroxide**NES Peak limitation: 2 mg/m³WES Peak limitation: 2 mg/m³**CAS: 1310-58-3 Potassium hydroxide**NES Peak limitation: 2 mg/m³WES Peak limitation: 2 mg/m³**CAS: 141-43-5 2-Aminoethanol**NES STEL: 15 mg/m³, 6 ppmTWA: 7.5 mg/m³, 3 ppmWES STEL: 15 mg/m³, 6 ppmTWA: 7.5 mg/m³, 3 ppm**Engineering Controls:**

Maintain air concentration below occupational exposure standards, providing adequate ventilation.

Respiratory Protection:

Respiratory protection is not required under normal use conditions.

Use an approved respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapour, inadequate ventilation, development of respiratory tract irritation) and engineering controls are not feasible. See Australian Standards AS/NZS 1715 and 1716 for more information.

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Skin Protection:

Nitrile or neoprene gloves. See Australian/New Zealand Standard AS/NZS 2161 for more information. When selecting gloves for use against certain chemicals, the degradation resistance, permeation rate and permeation breakthrough time should be considered.

Occupational protective clothing (depending on conditions in which it has to be used, in particular as regards the period for which it is worn, which shall be determined on the basis of the seriousness of the risk, the frequency of exposure to the risk, the characteristics of the workstation of each worker and the performance of the protective clothing). See Australian/New Zealand Standard AS/NZS 4501 for more information.

Eye and Face Protection:

Eye and face protectors for protection against splashing materials or liquids. See Australian/New Zealand Standard AS/NZS 1337 for more information.

9 Physical and Chemical Properties

Appearance:

Form:	Liquid
Colour:	Cream coloured
Odour:	Product specific
Odour Threshold:	No information available
pH-Value at 20 °C:	>14 (100%)
Melting point/freezing point:	~ -4 - +4 °C
Initial Boiling Point/Boiling Range:	~100 °C
Flash Point:	>100 °C
Flammability:	Not applicable.
Decomposition Temperature:	Not determined.
Explosion Limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapour Pressure:	No information available
Density at 20 °C:	1.47 g/cm ³
Relative Density:	No information available
Vapour Density:	No information available
Evaporation Rate:	No information available
Solubility in Water:	Completely miscible
Partition Coefficient (n-octanol/water):	No information available
Viscosity:	No information available

10 Stability and Reactivity

Possibility of Hazardous Reactions: Hazardous polymerisation will not occur.

Chemical Stability: Stable at ambient temperature and under normal conditions of use.

Conditions to Avoid: Extreme temperatures.

Incompatible Materials: Oxidising agents and acids.

Hazardous Decomposition Products: No hazardous decomposition products known.

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11 Toxicological Information

Toxicity:

LD₅₀/LC₅₀ Values Relevant for Classification:

CAS: 1310-73-2 Sodium hydroxide

Oral	LD ₅₀	2,000 mg/kg (rat)
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CAS: 1310-58-3 Potassium hydroxide

Oral	LD ₅₀	273 mg/kg (rat)
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CAS: 120313-48-6 Alcohols, C12-15-branched and linear, ethoxylated propoxylated

Oral	LD ₅₀	>2,000 mg/kg (rat)
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Dermal	LD ₅₀	>2,000 mg/kg (rat)
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CAS: 141-43-5 2-Aminoethanol

Oral	LD ₅₀	2,050 mg/kg (rat)
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Dermal	LD ₅₀	1,000 mg/kg (rabbit)
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Inhalation	LC ₅₀	>1.3 ppm (rat)
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Acute Health Effects

Inhalation: May cause respiratory irritation, shortness of breath and coughing.

Skin: Causes severe skin burns.

Eye: Causes serious eye damage.

Ingestion: May cause burns or irritation to the mouth, throat and stomach. Risk of stomach perforation.

Skin Corrosion / Irritation: Causes severe skin burns.

Serious Eye Damage / Irritation: Causes serious eye damage.

Respiratory or Skin Sensitisation: Based on classification principles, the classification criteria are not met.

Germ Cell Mutagenicity: Based on classification principles, the classification criteria are not met.

Carcinogenicity: This product does NOT contain any IARC listed chemicals.

Reproductive Toxicity: Based on classification principles, the classification criteria are not met.

Specific Target Organ Toxicity (STOT) - Single Exposure: May cause respiratory irritation.

Specific Target Organ Toxicity (STOT) - Repeated Exposure:

Based on classification principles, the classification criteria are not met.

Aspiration Hazard: Based on classification principles, the classification criteria are not met.

Chronic Health Effects: No information available

Existing Conditions Aggravated by Exposure: No information available

Additional toxicological information: No information available

12 Ecological Information

Ecotoxicity:

Aquatic toxicity:

Toxic to aquatic life with long lasting effects.

CAS: 1310-73-2 Sodium hydroxide

EC ₅₀ /48 h	40.38 mg/l (daphnia)
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LC ₅₀ /96 h	125 mg/l (mosquito fish)
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	45.4 mg/l (rainbow trout)
CAS: 1310-58-3 Potassium hydroxide	
EC ₅₀ /15 minutes	22 mg/l (bacterial)
LC ₅₀ /96 h	45.4 mg/l (rainbow trout)
LC ₅₀ /48 h	40 mg/l (daphnia)
CAS: 120313-48-6 Alcohols, C12-15-branched and linear, ethoxylated propoxylated	
EC ₅₀ /72 h	0.1-<1 mg/l (scenedesmus subspicatus)
LC ₅₀ /96 h	0.1-<1 mg/l (brachydanio rerio)
CAS: 141-43-5 2-Aminoethanol	
EC ₅₀	>1,000 mg/l (activated sludge inhibition)
EC ₅₀ /48 h	65 mg/l (daphnia)
LC ₅₀ /96 h	349 mg/l (carp)
	33-93 mg/l (daphnia)
	125-2,070 mg/l (fathead minnow)
	170 mg/l (goldfish)

Persistence and Degradability: No further relevant information available.**Bioaccumulative Potential:** No further relevant information available.**Mobility in Soil:** No further relevant information available.**Other adverse effects:** No further relevant information available.

13 Disposal Considerations

Disposal Methods and Containers: Dispose according to applicable local and state government regulations.**Special Precautions for Landfill or Incineration:**

Please consult your state Land Waste Management Authority for more information.

14 Transport Information

UN Number	
ADG, IMDG, IATA	UN1719
Proper Shipping Name	
ADG, IMDG, IATA	CAUSTIC ALKALI LIQUID, N.O.S. (Sodium hydroxide, potassium hydroxide)
Dangerous Goods Class	
ADG Class:	8 Corrosive substances.
Packing Group:	
ADG, IMDG, IATA	II
EMS Number:	F-A,S-B
Hazchem Code:	2R
Special Provisions:	274
Limited Quantities:	1L
Packagings & IBCs - Packing Instruction:	P001, IBC02

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Portable Tanks & Bulk Containers - Instructions: T11**Portable Tanks & Bulk Containers - Special Provisions:**

TP2, TP27

15 Regulatory Information

Australian Inventory of Chemical Substances:

CAS: 1310-73-2	Sodium hydroxide
CAS: 1310-58-3	Potassium hydroxide
CAS: 120313-48-6	Alcohols, C12-15-branched and linear, ethoxylated propoxylated
CAS: 13598-36-2	Phosphonic acid
CAS: 141-43-5	2-Aminoethanol

Standard for the Uniform Scheduling of Drugs and Poisons (SUSMP) - Poison Schedule:

Poisons Schedule: 6

16 Other Information

Date of Preparation or Last Revision: 12.04.2019**Prepared by:** MSDS.COM.AU Pty Ltdwww.msds.com.au

Abbreviations and acronyms:

ADG: Australian Dangerous Goods
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 LC₅₀: Lethal concentration, 50 percent
 LD₅₀: Lethal dose, 50 percent
 IARC: International Agency for Research on Cancer
 STEL: Short Term Exposure Limit
 TWA: Time Weighted Average
 NES: National Exposure Standard (Safe Work Australia - Workplace Exposure Standards For Airborne Contaminants)
 Flammable Liquids 4: Flammable liquids – Category 4
 Acute Toxicity (Oral) 4: Acute toxicity – Category 4
 Skin Corrosion/Irritation 1A: Skin corrosion/irritation – Category 1A
 Skin Corrosion/Irritation 1B: Skin corrosion/irritation – Category 1B
 Skin Corrosion/Irritation 2: Skin corrosion/irritation – Category 2
 Serious Eye Damage/Irritation 1: Serious eye damage/eye irritation – Category 1
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
 Aquatic Acute 1: Hazardous to the aquatic environment, short-term (Acute). Category 1
 Aquatic Acute 2: Hazardous to the aquatic environment, short-term (Acute). Category 2
 Aquatic Chronic 3: Hazardous to the aquatic environment, long-term (Chronic). Category 3

Disclaimer

This SDS is prepared in accord with the Safe Work Australia document "Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals - February 2016"

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