

# Safety Data Sheet

## Section 1: IDENTIFICATION

### SCALE OFF

**Recommended Use:** Descaling Agent  
**Product Code:** See Manufacturers Code

Company:	MICHALIS GROUP PTY LTD TRADING AS ALL-PRO CHEMICAL AND CLEANING SUPPLIES
Address:	3/7 AYRSHIRE CRESCENT, SANDGATE N.S.W 2304
Telephone Number:	(02) 4968 2000
Emergency Telephone Number:	Poisons Information Centre: Westmead NSW Australia 131126

**Manufacturers Product Code:** SCALEOFF (1L)  
SCALEOFF (5L)  
SCALEOFF (25L)  
SCALEOFF (205L)

## Section 2: HAZARDS

Classified as hazardous according to the criteria of the NOHSC.

### Irritant

**R36/38:** Irritating to eyes and skin.  
**S24/25:** Avoid contact with skin and eyes.

## Section 3: COMPOSITION INFORMATION

Ingredient	CAS No	Proportion
Ingredients deemed not to be hazardous	Not Applicable	To 100%
Citric Acid	77-92-9	10-30%
Sulfamic Acid	5329-14-6	<10%
Oxalic Acid	144-62-7	<10%

## Section 4: FIRST AID

<b>Eye (contact)</b>	If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a Doctor, or for at least 15 minutes.
<b>Skin (contact)</b>	Remove contaminated clothing and flush skin and hair with running water.
<b>Inhalation (Breathing)</b>	Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
<b>Ingestion (Swallowing)</b>	DO NOT induce vomiting. Give large quantities of water. Never give anything by mouth to unconscious person. For advice, contact a Poisons Information Centre (Phone: 13 11 26) or a doctor.
<b>Advice to Doctor</b>	Treat symptomatically
<b>First Aid Facilities</b>	Ensure an eye bath and safety shower are available and ready for use.
<b>Additional Information</b>	No aggravated medical conditions are known to be caused by exposure to this product.

## Section 5: FIREFIGHTING MEASURE

<b>Suitable Extinguishing Media</b>	Use extinguishing media suited to the materials that are burning. e.g. Dry chemical, CO(2) or water spray.
<b>Hazards from Combustion Products</b>	Carbon dioxide, carbon monoxide and other toxic gases may be produced in the case of fire.
<b>Precautions for Fire Fighters and Special Protective Equipment</b>	Firefighters should wear full protective clothing including self contained breathing apparatus and chemical splash suit. Ensure that no spillage enters drains or water courses. Remove from the Vicinity containers not involved in the fire.
<b>Additional Information</b>	<b>Hazchem Code-</b> Not Applicable

## Section 6: ACCIDENTAL RELEASE MEASURES

<b>Emergency Procedure</b>	SAA/SNZ HB76: Dangerous Goods – Initial Emergency Response Guide - Not Applicable
<b>Spills / Clean up</b>	Clean up personnel should wear personal protective equipment. Restrict access to area until completion of cleanup. Stop leak if safe to do so. Contain spill with absorbent material, such as sand, vermiculite or other inert material. Prevent spill entering sewers or waterways. Collect and dispose of spilled material according to local regulations. Wash away remnants with copious amounts of cold water. Clean area by working from the periphery to the centre of spill or from the edge of the room to the centre.

## Section 7: HANDLING AND STORAGE

<b>Precautions for Safe Handling</b>	Contact ALL-PRO sales representative for advice when using this product for any application other than that outlined on the label. Any non-authorised use of this product may result in personal injury or damage to equipment. Wash hands and face thoroughly after handling and before work breaks, eating, drinking, smoking and using toilet facilities.
<b>Conditions for Safe Storage</b>	Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Store away from incompatible materials including hypochlorites, oxidizing agents, acids, caustics, zinc, aluminium, mild steel and sources of ignition. Citric acid solutions are corrosive and will slowly corrode mild steel. Protect from direct sunlight and moisture. This product is not classified dangerous for transport according to The Australian Code for the Transport of Dangerous Goods By Road and Rail.

## Section 8: EXPOSURE CONTROL/ PERSONAL PROTECTION

**National Exposure Standards – Source:** National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC: 1003].

<u>Ingredient</u>	<u>CAS No</u>	<u>ES-TWA</u>	<u>ES-STEL</u>
None Available	-	-	-
<b>Biological Limit Values</b>	Not Available		
<b>Engineering Controls</b>	Not Normally Required		

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

**Appearance** Colourless Liquid

**Formula** C<sub>2</sub>HCl<sub>3</sub>

**Odour** Sweet, Ether-like, Chloroform-like

**Vapour Pressure** 57.8mmHg (20°C)

**Vapour Density** 4.53

**Boiling Point** 86-88°C deg C

**Melting Point** -73- -86.5°C deg C

**Solubility in Water** 0.11g/100g (20°C)

**Specific Gravity** 1.465g/cm<sup>3</sup> (Water = 1)

**Flash Point** No data available.

**pH** No data available.

**Lower Explosion Limit** 12.5 (as percentage volume in air)

**Upper Explosion Limit** 90 (as percentage volume in air)

**Ignition Temperature** 410

**Specific Heat Value** No data available.

**Particle Size** No data available.

**Volatile Organic Compounds (VOC) Content** No data available.

**Evaporation Rate** 4.9

**Viscosity** No data available.

**Percent Volatile** 6.39%

**Octanol/Water partition coefficient** Log P<sub>oct</sub> = 2.42

**Saturated Vapour Concentration** 7.9% (20°C)

## Section 10: STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable under normal ambient storage conditions.
<b>Conditions to avoid</b>	Avoid high temperatures (store below 30°C). Protect against physical damage.
<b>Incompatible materials</b>	Incompatible with hypochlorites, oxidizing agents, acids, bases, caustics, zinc, aluminium, mild steel and sources of ignition.
<b>Hazardous decomposition products</b>	None known.
<b>Hazardous reactions</b>	None known.

## Section 11: TOXICOLOGICAL INFORMATION

### Health Effects

#### Acute

<b>Swallowed</b>	Although not expected to be a route of exposure, this material may cause irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting, sore throat, abdominal pain and diarrhea.
<b>Eye</b>	Splashes and mists cause severe irritation and possible burns. Symptoms include stinging, tearing, redness and in severe cases, eye damage due to burns.
<b>Inhaled</b>	None known
<b>Skin</b>	Causes moderate irritation. Symptoms include redness, itching and swelling.

#### Chronic

<b>Swallowed</b>	No effects known.
<b>Eye</b>	No effects known.
<b>Inhaled</b>	No effects known.
<b>Skin</b>	No effects known.

### TOXICITY DATA

Animal toxicology based on 100% Citric acid (dry) Oral LD50 11.7 g/kg (rat) Irritation Moderate irritant, 500 mg/24 hr, to skin (rabbit) Severe irritant, 750 microgram/24 hrs, to eyes (rabbit) Carcinogenicity: Citric acid is not listed NTP, IARC, OSHA, EPA or any other authority as a carcinogen. NTP: National Toxicology Program. IARC: International Agency for Research On Cancer. OSHA: Occupational Safety and Health Administration.

## Section 12: ECOLOGICAL INFORMATION

<b>Ecotoxicity</b>	Not available.
<b>Persistence and degradability</b>	Not available.
<b>Mobility</b>	Not available.

## Section 13: DISPOSAL CONSIDERATIONS

<b>Disposable method</b>	Refer to State/ Territory Land Waste Management Authority. Dispose of material through a licensed waste contractor. Rinse empty containers thoroughly before recycling or disposing to an authorized landfill.
<b>Special precautions</b>	Normally suitable for incineration by approved agent.

## Section 14: TRANSPORT INFORMATION

Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (AICS).

<b>UN Number:</b>	Not applicable
<b>UN Proper Shipping Name:</b>	Not applicable
<b>Class and subsidiary risk:</b>	Not applicable
<b>Packing Group:</b>	Not applicable
<b>Special Precautions for user:</b>	Not applicable
<b>Hazchem code:</b>	Not applicable

## Section 15: REGULATORY INFORMATION

<b>Poisons Schedule (SUSDP):</b>	Not applicable
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All ingredients are listed in the Australia Inventory of Chemical Substances (AICS).

## Section 16: OTHER INFORMATION

**Prepared By:** Ian Barkley  
**Position:** Managing Director

**Date of preparation:** 1<sup>st</sup> July 2014

### Legend to Abbreviations and Acronyms

< less than

> greater than

**AICS** Australian Inventory of Chemical Substances

**CAS** Chemical Abstracts Service (Registry Number)

**cm** centimetre

**CO<sub>2</sub>** Carbon Dioxide

**deg C ( °C )** degrees Celsius

**EPA** Environmental Protection Authority

**ES-STEL** Exposure Standard – Short Term Exposure Limit

**ES-TWA** Exposure Standard – Time Weighted Average

**G** gram

**g/cm<sup>3</sup>** grams per cubic centimetre

**g/kg** milligrams per kilogram

**g/l** grams per litre

**IARC** The International Agency for Research on Cancer

**Kg** kilogram

**LD<sub>50</sub>** LD stands for Lethal Dose. LD<sub>50</sub> is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals

**Ltr (L)** Litre

**m<sup>3</sup>** cubic metre

**mg** milligram

**mg/24H** milligrams per 24 hours

**mg/m<sup>3</sup>** milligrams per cubic metre

**Mm** millimetre

**N/A** Not Applicable

**NTP** National toxicology program

**NOHSC** National Occupational Health and Safety Commission

**OSHA** Occupational Safety and Health Administration.

**SUSDP** Standard for the Uniform Scheduling of Drugs and Poisons

**ug/24H** micrograms per 24 hours

**UN** United Nations (number)

**VOC** Volatile Organic Compounds