



Section 1: Identification of the Material and Supplier

Product Name: Thermex - Acid Dairy Detergent

Other Names: Phosphoric acid solution containing surfactant.

Proper shipping name (ADG Code): Phosphoric acid 69 %

Recommended use: As a dairy detergent for removal of milkstone.
Use as directed on the product label.

Supplier: DASCO Pty. Ltd.,
ABN: 14 004 581 113
24 - 26 Helen Street, HEIDELBERG HEIGHTS VIC 3081
Tel: (03) 9459 7004 (business hours)
Fax: (03) 9459 9200

Emergency Phone Numbers:
Transport/Fire Emergency: 000 (Emergency services)
Medical Emergency: 131126 (Poisons Information Centre)

Section 2: Hazards Identification

Classified as hazardous according to criteria of Worksafe Australia.

Dangerous goods.

Risk Phrases: R: 34 Causes burns.

Safety Phrases: S: 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S: 36/37/39 Wear suitable protective clothing, gloves and eyes/face protection.
S: 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Section 3: Composition/Information on Ingredients

Ingredients:

Phosphoric acid	[7664-38-2]	> 60 %
Other ingredients deemed not to be hazardous		< 10 %
Water	[7732-18-5]	to 100 %

Section 4: First Aid Measures

For advice, contact a Poisons Information Centre (Phone 131 126) or a doctor.

Swallowed: Do not induce vomiting.

Skin: If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water.

Eyes: 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.

Inhaled: Remove from exposure.

First Aid facilities:

Mandatory: Eye wash.

Recommended: Hand wash basin.
Emergency shower if handling industrial quantities.

Advice to Doctor:

Product is a strong aqueous solution of phosphoric acid containing a low proportion of a surfactant. Causes burns to skin and eyes. Contact Poisons Information Centre.

Aggravated medical conditions:

No data.

Section 5: Fire Fighting Measures

HAZCHEM Code: 2 R

Extinguishant: Water fog or fine water spray.

Risk of violent reaction or explosion: No.

Products of combustion: Oxides of phosphorus.

Protective Equipment: Full protective clothing including breathing apparatus and protective gloves.

Section 6: Accidental Release Measures

Emergency Procedures:

Dilute with flooding quantities of water.

For large spills:

Contain spillage using sand or earth. Transfer both liquids and solids to suitable container. Treat residues as for small spillages.

For small spills:

Small spills may be first neutralised with a liberal excess of soda ash or crushed lime (if available).
If local regulations permit, mop up with plenty of water and run to waste, diluting greatly with running water. Otherwise absorb on inert absorbent, transfer to suitable container and arrange removal by disposals company.

Section 7: Handling and Storage

Precautions for safe handling:

Prevent contact with skin and eyes.
Keep away from alkalis.

Conditions for safe storage:

Store in a cool, well ventilated place, out of reach of children. Large quantities should be stored in a bonded dangerous goods store. Store in original container. Keep away from alkalis, including carbonates and bicarbonates. Protect from physical damage. Clean up all spills and splashes promptly; avoid secondary accidents.

Incompatibles:

Alkalis, active metals.

Section 8: Exposure Controls/Personal Protection

National Exposure Standards:

ES-TWA:	Phosphoric acid	1 mg/m ³
ES-STEL:	Phosphoric acid	3 mg/m ³
ES-PEAK:	None assigned.	
Notations:	None.	

Biological Limit Values: No data.

Engineering Controls:

Do not use active metals (such as aluminium, tin, zinc or galvanised iron), or wood, as materials of construction. Ensure adequate ventilation (same as outdoors) when using. If handling industrial quantities, or if aerosol risk exists, consider local mechanical exhaust/extraction to keep airborne contamination as low as possible, and at least below the TLV.

Personal Protective Equipment:

Avoid contact with skin. Prevent contact with eyes. Personal protection to be selected from those recommended below, as appropriate to mode of use, quantity handled and degree of hazard:-

Normal Use:

Eye/face protection
Gloves, rubber or plastic.

Industrial Quantities:

Face shield or safety glasses
Gloves, rubber or plastic
Plastic apron, sleeves and boots
Impervious overalls.

Section 9: Physical and Chemical Properties

Appearance: Clear, pink, mobile, frothing liquid.
Odour: Almost odourless.
pH: Very acid.
Vapour Pressure: No data.
Vapour Density: No data.
Boiling Point: Above 100 °C
Melting Point: No data.
Volatiles: < 30 % [as water]
Volatile Organic Compounds (VOC): None.
Evaporation Rate: No data.
Solubilities: Miscible with water in all proportions, with evolution of some heat.
Specific Gravity/Density: About 1.6 g/mL @ 20 °C
Flash Point: None.
Flammable Limits: None.
Dust Explosion: Not applicable.
Auto-ignition Temperature: No data.

Other Information:

Very acidic; may react vigorously or violently with alkalis, including carbonates and bicarbonates. Mildly corrosive to many metals. Contact with common metals may generate hydrogen, a flammable gas. May attack wood, paper and other wood products. May react with strong oxidising agents. Slippery when spilled.

Section 10: Stability and Reactivity

Chemical Stability: Stable under normal conditions.

Conditions to Avoid: Incompatible materials.
When diluting, always add this product to water, never add water to this product.

Incompatible Materials: Alkalis, carbonates and bicarbonates, metals, wood and wood products, oxidising agents.

Hazardous Decomposition Products: Oxides of phosphorus.

Hazardous Reactions: May react vigorously or violently with alkalis. Contact with metals may generate hydrogen, a flammable gas. May attack metals, wood and wood products.

Section 11: Toxicological Information

Health Effects:

No data available for the mixture. Information presented relates to individual ingredients.

Acute:	Swallowed:	Human poison by ingestion. May be fatal. Corrosive. May cause burns to mouth, throat and gastrointestinal system. Symptoms may include pain in the throat and stomach, abdominal cramps, a burning sensation, nausea, vomiting and intense thirst, blood in the urine. May cause corrosion and permanent tissue destruction of the oesophagus and digestive tract. May cause haemorrhaging of the digestive tract. Ingestion of large quantities may cause shock, clammy skin, weak and rapid pulse, shallow breathing, weakness, confusion, reduced urine output, loss of consciousness and death.
	Skin:	Severe skin irritant. May cause redness, pain, blisters and burns. Mild exposure may cause skin rash, more extensive skin contact may cause cyanosis or pale skin.
	Eyes:	Severe eye irritant. May cause redness, pain, blurred vision, severe deep burns. May cause chemical conjunctivitis and corneal damage.
	Inhaled:	Corrosive to lung tissues. Exposure levels of 1 - 5 mg/m ³ will irritate the nose and throat. Exposure levels of 4 - 11 mg/m ³ may cause coughing. Inhalation of vapour or aerosol may cause a burning sensation in the chest, cough, laboured breathing, shortness of breath, sore throat and loss of consciousness.
Chronic:		Repeated low-level skin contact may cause irritation, dermatitic effects or burns. Chronic exposure to phosphoric acid may affect the blood, liver and bone marrow.
LD50:	Phosphoric acid	1,530 mg/kg oral, rat. 2,740 mg/kg skin, rabbit.
LC50:	Phosphoric acid	> 850 mg/m ³ /1 hour, rat.
LDLo:	Phosphoric acid	220 mg/kg unreported route - man.

Section 12: Ecological Information

Ecotoxicity:	Harmful to living organisms.
Persistence and degradability:	No data.
Mobility:	Readily transported by water.
Environmental Fate:	May be slowly neutralised to inorganic phosphate in soils. Will form relatively insoluble calcium phosphate in limestone soils.
Bioaccumulative potential:	No data.
Other adverse environmental effects:	Phosphates in natural waters will contribute to algal blooms.

Section 13: Disposal Considerations

The generator of any wastes from this product is responsible for its proper classification, transport and disposal.

Consult appropriate local and State regulations.

Disposal methods and containers:

Avoid disposal to natural waters or the environment.

Special precautions for landfill or incineration:

Unsuitable for incineration.

Section 14: Transport Information

UN Number:	UN 1805
UN Proper shipping name:	Phosphoric acid 69 %
Class and subsidiary risk:	8 Corrosive.
Packaging group:	III
Special precautions for user:	Do not store or transport with UN classes 1, 4.3, 6.1, 5.1, 6 (cyanides), 7, foodstuff or foodstuff empties, alkalis.
HAZCHEM Code:	2 R
Material for export:	Dangerous goods. Refer to IMDG and IATA/ICAO .

Section 15: Regulatory Information

Poisons (SUSDP): Poison Schedule 6
(phosphoric acid > 350 g/L)

Dangerous Goods: Yes. UN 1805 8/III.

Carcinogen:	Australia	IARC	NTP	RTECS
	No.	No.	No.	No.

Agricultural and Veterinary Chemicals Act:

This product is registered with the Australian Pesticides and Veterinary Medicines Authority (**APVMA**).

Australian Inventory of Chemical Substances (AICS): Listed.

Other National/International Regulations: No data.

Section 16: Other information

Date of MSDS update: September 2009
Complete review and update.

Abbreviations:

NOHSC - National Occupational Health and Safety Commission.
ACGIH - American Conference of Governmental Industrial Hygienists.
MAK - Maximum workplace concentration - Germany,
(*maximale Arbeitsplatzkonzentration*)
IARC - International Agency for Research on Cancer (France).
NTP - National Toxicology Program (USA).
RTECS - Registry of Toxic Effects of Chemical Substances.

Literature references:

Available Sources of Data:

National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition [2011(2003)] - NOHSC.
Australian Dangerous Goods Code.
Standard for the Uniform Scheduling of Drugs and Poisons - AHMAC.
Exposure Standards for Atmospheric Contaminants in the Occupational Environment [1003]- NOHSC.
List of Designated Hazardous Substances [10005] - NOHSC.
Merck Index - Merck Inc.
Sax's Dangerous Properties of Industrial Materials - Lewis.
Handbook of Toxic and Hazardous Chemicals and Carcinogens - Sittig.
Handbook of Reactive Chemical Hazards - Bretherick.
Hawley's Condensed Chemical Dictionary - Wiley Interscience.
AUSREG's Chemical Data Package for PCs - AUSREG Consultancy.