



Section 1: Identification of the Material and Supplier

Product Name: Iophos

Other Names: An iodophor in phosphoric acid solution.

Proper shipping name (ADG Code): Corrosive liquid, n.o.s.
(phosphoric acid, iodine)

Recommended use: As a dairy equipment sanitiser.
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: 36/38 Irritating to skin and eyes.

Safety Phrases: S: 1/2 Keep locked up and out of the reach of children.
S: 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
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]	10 - 30 %
Surfactant (non-ionic)		10 - 30 %
Iodine	[7553-56-2]	< 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: If 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 Center or a doctor, or for at least 15 minutes.
- Inhaled: Remove from exposure, rest and keep warm. Seek medical advice.

First Aid facilities:

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

Advice to Doctor:

Product is an iodophor in dilute phosphoric acid solution, containing a low proportion of surfactant, and more than 1.5 % of available iodine. Irritating to skin and eyes. May cause eye damage. If swallowed, vomiting should not have been induced because of risk of aspiration into the lungs of acidic froth containing iodine. Contact Poisons Information Centre.

Aggravated medical conditions:

Persons with kidney, lung or thyroid disfunction should consult a physician before using this product.

Section 5: Fire Fighting Measures

- HAZCHEM Code: 2 X
- Evacuate: No.
- Extinguishant: Water fog or fine water spray.
- Risk of violent reaction or explosion: No.
- Products of combustion: Water vapour, oxides of carbon, iodine, hydrogen iodide, oxides of phosphorus.
- Protective Equipment: Full protective clothing including breathing apparatus and protective gloves.

Section 6: Accidental Release Measures

Emergency Procedures:

Increase ventilation.
Contain.

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:

Spills may be neutralised by the liberal application of soda ash until the reaction ceases.
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 closed container and arrange removal by disposals company.

Section 7: Handling and Storage

Precautions for safe handling:

Avoid contact with skin and eyes.
Do not breathe vapours.
Keep away from alkalis, oxidising agents.

Conditions for safe storage:

Store in a cool, well ventilated place, out of reach of children. Large quantities should be stored in a bunded dangerous goods store. Store in original container. Keep container tightly closed and out of direct sunlight. Keep away from alkalis, oxidising agents, mineral acids. Protect from physical damage. Clean up all spills and splashes promptly; avoid secondary accidents.

Incompatibles:

Oxidising agents, alkalis, active metals, wood and paper products.

Section 8: Exposure Controls/Personal Protection

National Exposure Standards:

ES-TWA:	Phosphoric acid	1 mg/m ³
	Iodine	0.1 ppm, 1 mg/m ³
ES-STEL:	Phosphoric acid	1 mg/m ³
ES-PEAK:	Iodine	0.1 ppm, 1 mg/m ³
Notations:	None assigned by NOHSC, but see:	
	Iodine	Skin [Finland, Russia]

[Skin] indicates that this material may be absorbed via unbroken skin, and any such contact may invalidate the TLV.

[Peak] indicates a ceiling concentration which should not be exceeded, even momentarily.

Biological Limit Values: No data found.

Engineering Controls:

Do not use active metals, wood or wood products as materials of construction.

Ensure adequate ventilation (same as outdoors) when using.

If handling industrial quantities, or if vapour/aerosol risk exists, consider local mechanical exhaust/extraction to keep airborne contamination as low as possible, and at least below the TLVs.

Personal Protective Equipment:

Avoid contact with skin and eyes. Avoid breathing vapours or aerosols. 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:

Positive pressure air hood
Full face respirator fitted with appropriate cartridges
Face shield or safety glasses
Gloves, rubber or plastic
Plastic apron, sleeves and boots
Impervious overalls.

Section 9: Physical and Chemical Properties

Appearance: Dark brown, frothing liquid.
Odour: Characteristic smell of iodine.
pH: < 2 Very acidic.
Vapour Pressure: No data.
Vapour Density: No data.
Boiling Point: > 100 °C
Melting Point: < 0 °C
Volatiles: About 75 %
Volatile Organic Compounds (VOC): Nil.
Evaporation Rate: No data.
Solubilities: Miscible with water in all proportions.
Specific Gravity/Density: About 1.1 g/mL @ 20 °C
Flash Point: None.
Flammable Limits: None.
Dust Explosion: Not applicable.
Auto-ignition Temperature: No data.

Other Information:

Acidic mixture. May react vigorously or violently with alkalis. Contact with carbonates or bicarbonates will generate carbon dioxide, a simple asphyxiant. Mixture with strong mineral acids may generate iodine vapour. Mildly corrosive to common metals. Will attack wood and paper products. Very slippery when spilled.

Section 10: Stability and Reactivity

Chemical Stability: Stable under normal conditions.

Conditions to Avoid: Incompatible materials, heat.

Incompatible Materials: Metals, wood and wood products, alkalis (including carbonates and bicarbonates), mineral acids, oxidising agents.

Hazardous Decomposition Products: Iodine, hydrogen iodide, oxides of phosphorus.

Hazardous Reactions: Will react vigorously or violently with alkalis. Contact with carbonates and bicarbonates will generate carbon dioxide. Reaction with other mineral acids may generate iodine vapours. Corrosive to many common metals.

Section 11: Toxicological Information

Health Effects:

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

Acute:	Swallowed:	Harmful if swallowed. Small quantities of iodine may cause salivation, excessive tearing, swelling of the eyelids, soreness and swelling of the salivary glands, metallic taste, skin rash, fever and enlarged lymph glands. May cause thyroid hyper function. Larger doses may cause severe vomiting, diarrhoea, abdominal pain, thirst, a burning sensation, shock, fever, suppression of urine, delirium, stupor, death from circulatory failure. An aspiration risk.
	Skin:	Will stain the skin. May cause redness, pain and serious skin burns. Iodine absorbed through the skin may lead to symptoms similar to when swallowed.
	Eyes:	Iodine vapour may stain the eyes. Liquid splashes into the eyes will cause severe irritation, redness, pain and blurred vision. May cause severe, deep burns.
	Inhaled:	Inhalation of iodine vapour may cause irritation of the nose and throat, irritation and burning of the eyes, lachrymation, coughing, shortness of breath. Aspiration of acidic froth containing available iodine into the lungs may cause severe lung irritation, chemical pneumonitis (inflammation of lung tissues), pulmonary oedema (fluid build-up in the lungs) which may become a medical emergency. Onset of symptoms may be delayed.
Chronic:		Chronic exposure to iodine vapour may cause tremor, insomnia, rapid heart beat, weight loss, and iodism - characterised by salivation, nasal discharge, sneezing, conjunctivitis, fever, laryngitis, bronchitis, stomatitis and skin rashes. Iodine is a sensitiser, and for some individuals a subsequent exposure may cause a rash, swelling of the vocal chords, general allergic reaction and pain and swelling in the joints.
LD50:	Phosphoric acid	1,530 mg/kg oral, rat. 2,740 mg/kg skin, rabbit.
	Iodine	14,000 mg/kg oral, rat.
LDLo:	Iodine	28 mg/kg oral, human.
TDLo:	Iodine	26 mg/kg/1 year oral, woman - evidence of thyroid hyperfunction.

Section 12: Ecological Information

Ecotoxicity:	Harmful to aquatic organisms.
Persistence and degradability:	The surfactant used in this product is not considered to be readily biodegradable.
Mobility:	Readily transported by water.
Environmental Fate:	No data.
Bioaccumulative potential:	No data.
Other adverse environmental effects:	Contains surfactant. Local concentrations will be harmful to aquatic organisms, including fish. Contains inorganic phosphate. Will contribute to the development of algal blooms in natural waters.

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 drains, natural waters or the environment.
Do not use metal containers.

Special precautions for landfill or incineration:

Unsuitable for incineration.
May not be suitable for some landfill sites.

Section 14: Transport Information

UN Number:	UN 1760
UN Proper shipping name:	Corrosive liquid, n.o.s. (phosphoric acid, iodine)
Class and subsidiary risk:	8 Corrosive.
Packaging group:	III
Special precautions for user:	Do not store or transport with dangerous goods of classes 1, 4.3, 5.1, 5.2, 6 (cyanides), 7, 8 (alkalis), foodstuffs or foodstuff empties. Contain spillages.
HAZCHEM Code:	2 X
Material for export:	Regulated. Refer to IMO\IMDG and IATA\ICAO .

Section 15: Regulatory Information

Poisons (SUSDP): Schedule 6
Iodophor containing > 1.5 % available iodine.

Dangerous Goods: Yes. UN 1760 8/III 2 X.

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 found.

Section 16: Other information

Date of MSDS update: September 2009
Complete review and re-write of all sections.

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.