



Section 1: Identification of the Material and Supplier

Product Name: Prodine (ready to use)

Other Names: Iodophor teat dip and spray; dilute surfactant solution containing 0.5 % available iodine.

Proper shipping name (ADG Code): None assigned.

Recommended use: As a teat dip and spray for dairy cows.
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

Not classified as hazardous according to criteria of Worksafe Australia.

Non-dangerous goods.

Risk Phrases: None.

Safety Phrases: S: 24/25 Avoid contact with skin and eyes.
S: 36 Wear suitable protective clothing.

Section 3: Composition/Information on Ingredients

Ingredients:

Surfactant		< 10 %
Glycerol	[56-81-5]	< 10 %
Other ingredients		< 10 %
Available iodine	[7553-56-2]	0.50 %
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: Remove contaminated clothing and wash skin thoroughly.
- Eyes: Hold eyes open, flood with water for at least 15 minutes and seek medical advice.
- Inhaled: Remove from exposure.

First Aid facilities:

Recommended: Eye wash. Hand wash basin.

Advice to Doctor:

Product is a dilute aqueous solution of an iodophor, containing a low proportion of a surfactant. If swallowed, vomiting should not have been induced because of risk of aspiration into the lungs. Contact Poisons Information Centre.

Aggravated medical conditions:

Pre-existing skin disorders, thyroid dysfunction.
Pre-existing sensitivity to iodine.

Section 5: Fire Fighting Measures

- HAZCHEM Code: None assigned.
- Extinguishant: Water.
- Risk of violent reaction or explosion: No.
- Products of combustion: Iodine, hydrogen iodide, carbon dioxide, water vapour.
- Protective Equipment: Breathing apparatus and protective gloves for fire only.

Section 6: Accidental Release Measures

Emergency Procedures:

Contain.
Increase ventilation.

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:

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.
Keep away from strong oxidising agents.

Conditions for safe storage:

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

Incompatibles:

Oxidising agents, heat, light.

Section 8: Exposure Controls/Personal Protection

National Exposure Standards:

ES-TWA:	Iodine	0.1 ppm, 1 mg/m ³
	Glycerol (mist)	10 mg/m ³
ES-STEL:	None assigned.	
ES-PEAK:	Iodine	0.1 ppm, 1 mg/m ³

Notations: None.

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

Biological Limit Values: No data.

Engineering Controls:

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 TLVs.

Personal Protective Equipment:

Avoid contact with skin and eyes. Avoid inhaling aerosol or vapours. 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: Dark brown, slightly frothing liquid.
Odour: Smell of iodine.
pH: About neutral.
Vapour Pressure: No data.
Vapour Density: No data.
Boiling Point: From 100 °C
Melting Point: No data.
Volatiles: About 93 % [mostly water]
Volatile Organic Compounds (VOC): < 1 %
Evaporation Rate: No data.
Solubilities: Miscible with water.
Specific Gravity/Density: 1 g/mL
Flash Point: None.
Flammable Limits: None.
Dust Explosion: Not applicable.
Auto-ignition Temperature: No data.

Other Information:

May be sensitive to heat and light.
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, light, heat.
Incompatible Materials: Oxidising agents.
Hazardous Decomposition Products: Iodine, hydrogen iodide.
Hazardous Reactions: None known.

Section 11: Toxicological Information

Health Effects:

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

Acute:	Swallowed:	Irritating to mouth, throat and gastrointestinal system. An expectorant. Likely to cause gastric upset with nausea, vomiting and possible diarrhoea. Very large doses may be harmful, and may lead to thyroid insufficiency. An aspiration risk.
	Skin:	May be irritating to skin. May cause dermatitis. For sensitised individuals, contact may cause allergic reactions, rash, acne.
	Eyes:	Irritating to eyes. May cause redness, irritation and pain, blurred vision. Possible risk of corneal damage.
	Inhaled:	Vapours or aerosols inhaled may cause irritation, cough, shortness of breath. Iodine vapours are irritating from 0.1 ppm. Effects may be severe in sensitised individuals. Overexposure, or inhalation of aerosol, may lead to delayed onset pulmonary oedema (fluid buildup in the lungs). Aspiration into the lungs during swallowing or vomiting may cause chemical pneumonitis (irritation of lung tissues) and pulmonary oedema. Onset of symptoms may be delayed.
Chronic:		Repeated skin contact may lead to irritation and dermatitic effects. Repeated exposure to iodine may lead to thyroid insufficiency. Overexposure to iodine may also lead to sensitisation and allergy, with subsequent exposures causing skin rash, swelling of the vocal cords, a general allergic reaction, and pain and swelling in the joints. Chronic exposure to iodine has caused tremor, insomnia, rapid heart beat, weight loss and iodism (characterised by salivation, nasal discharge, sneezing, conjunctivitis, fever, laryngitis, bronchitis, stomatitis and skin rashes). Iodinated glycerol is reported as neoplastic and carcinogenic by RTECS criteria (oral: rat, mouse). (1)(2)
LD50:	Surfactant	3,000 mg/kg oral, rat. 3,000 mg/kg skin, mouse.
	Iodinated glycerol	No data found.

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:	No data.

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:	None assigned.
UN Proper shipping name:	None assigned.
Class and subsidiary risk:	None.
Packaging group:	None.
Special precautions for user:	Protect from direct sunlight.
HAZCHEM Code:	None assigned.
Material for export:	Not regulated.

Section 15: Regulatory Information

Poisons (SUSDP): Not a scheduled poison.

Dangerous Goods: Not dangerous goods.

Carcinogen:	Australia	IARC	NTP	RTECS
Iodinated glycerol	No.	No.	Yes.	Yes.

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
Updated emergency telephone numbers.

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.
HSE - Health and Safety Executive (UK).

Literature references:

- (1) *National Toxicology Program Technical Report Series
(Research Triangle Park, NC 27709) No. 206-
NTP-TR-340, 1990*

- (2) *National Technical Information Service
(Springfield, VA 22161)
Formerly U.S. Clearinghouse for Scientific & Technical
Information.
PB90-259102*

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.