



Complying to 91/155/EC, 93/112/EC

Product Safety Data Sheet

Isocare

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name	Isocare
Product Code	XVD 703
Supplier	Animalcare Ltd, Common Road, Dunnington, York, YO19 5RU. Telephone No. +44 (0) 1904 487687 Fax No. +44 (0) 1904 487611 E-Mail: animalcare@animalcare.co.uk. Emergency Telephone +44 (0) 1904 487687 (daytime)

2. HAZARDS IDENTIFICATION

Emergency overview:	Caution! This product has reasonable odor warning properties. If personnel smell vapors, or experience dizziness or headaches, they should be moved to an area with fresh air. Concentrations of anesthetic in the air would have to reach approximately 2-3% before people would be expected to experience significant dizziness.
Principle routes of exposure:	Absorbed through skin. Eye contact. Inhalation. Ingestion.
Inhalation:	Cardiovascular effects (may include fluctuations in heart rate, changes in blood pressure, chest pain). Respiratory effects (may include shortness of breath, bronchospasms, laryngospasms, respiratory depression). Gastrointestinal effects (may include nausea, upset stomach, loss of appetite). Nervous System effects (may include ataxia, tremor, disturbance of speech, lethargy, headache, dizziness, blurred vision).



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Ingestion: Practically non-toxic if swallowed. No specific hazards other than therapeutic effects. See inhalation.

Skin contact: May cause skin irritation.

Eye contact: May cause eye irritation.

3. COMPOSITION / INFORMATION ON COMPONENTS

Ingredient	CAS No.
Isoflurane 100%	26675-46-7

4. FIRST AID MEASURES

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Skin contact: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if irritation develops.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately.

Eye contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops.

Notes to physician: See patient package insert in shipping carton for complete information.



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5. FIRE FIGHTING MEASURES

Suitable extinguishing media:	Use foam or all purpose dry chemicals to extinguish.
Special protective equipment for firefighters:	Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.
Specific methods:	No information available
Flash point:	Not determined
Autoignition temperature:	Not available
Flammable limits in air-lower (%):	Not available
Flammable limits in air-upper (%):	Not available

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Depending on local ventilation, clean-up crews may need to wear a chemical cartridge respirator, with a cartridge for organic vapors. Use suitable protective equipment. Follow all fire fighting procedures.
Environmental precautions:	No information available.
Methods for cleaning up:	<p>Small volumes of liquid anesthetic agents may evaporate readily at normal room temperatures, and may dissipate before any clean up attempts are initiated. For large spills, were one or more bottles break, ensure adequate ventilation or evacuate area.</p> <p>Large volumes of anesthetic agents may cause sedative effects. Restrict persons not wearing protective equipment from areas of spills or leaks until clean up is complete.</p> <p>Large spills should be absorbed using a sorbent that is designed for clean up of organic chemicals. Spill pillows, vermiculite, and carbon-based sorbents are some suitable materials. Keep in suitable, closed and sealed containers for disposal.</p>



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7. HANDLING AND STORAGE

Handling:

Technical measures/precautions: Wash thoroughly after handling.

Storage:

Technical measures/Storage conditions: Keep container tightly closed. Keep in a dry, cool and well-ventilated place. Store between 15-30°C (59 to 86°F).

Incompatible products: No special restrictions on storage with other products.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits: NIOSH REL: Ceiling 2 ppm (60 minutes) recommended exposure limit for halogenated waste anesthetic gas.

Engineering measures: Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. Well designed and maintained scavenging system on the anesthesia equipment (combined with a good general room ventilation) is important in limiting the exposures of all personnel.

Personal protective equipment

Respiratory protection: Personal respiratory protection equipment not typically required if engineering controls are in place. If exposure levels may exceed regulatory limits, implement a respiratory protection program including respiratory protection that is in compliance with OSHA 29 CFR1910.134 (in the US) or equivalent regulation in other regions.

Hand protection: Use chemical resistant, impervious gloves.

Skin and body protection: Work uniform or laboratory coat. Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable suits).



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Eye protection: Eye protection not required for normal final product use. Safety glasses with sideshields are recommended for laboratory and manufacturing use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid

Appearance: Aqueous solution

Color: Clear, Colorless.

Odour: Pungent. Ethereal. Musty.

pH: Not applicable.

Molecular weight: 184.5 g/mole

Boiling point/range: 48.5°C (119.3°F)

Melting point/range: Not available.

Density: 1.3002 g/cm³ at 20°C (68°F)

Vapor pressure: 238 mmHg at 20°C (68°F)

Evaporation rate: Not available.

Solubility: 0.275% in water.

**Partition coefficient (noctanol/
water):** Not available.

Viscosity: Not available.

% Volatile by Volume: 100% (w/w)

10. STABILITY AND REACTIVITY

Stability: Stable under recommended storage conditions.

Polymerization: Not applicable



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Hazardous decomposition

products: These products are halogenated compounds (hydrochloric and hydrofluoric acids). Phosgene.

Materials to avoid: Peroxides.

11. TOXICOLOGICAL INFORMATION

Oral LD50 Mouse: 5080 µL/kg

Oral LD50 Rat: 4770 µL/kg

Inhalation LC50 Rat: 15300 ppm

Inhalation LC50 Mouse: 16800 ppm

Acute toxicity: Cardiovascular effects (may include fluctuations in heart rate, changes in blood pressure, chest pain). Respiratory effects (may include shortness of breath, bronchospasms, laryngospasms, respiratory depression). Gastrointestinal effects (may include nausea, upset stomach, loss of appetite). Nervous System effects (may include ataxia, tremor, disturbance of speech, lethargy, headache, dizziness, blurred vision).

Chronic toxicity: Target Organs: Nervous system. Heart. Liver.

Carcinogenic effects: Not classified or listed by IARC, NTP, OSHA, EU and ACGIH. No drug related carcinogenic/tumorigenic effects based on animal data.

Mutagenic effects: No data is available on the product itself.

Reproductive toxicity: No impairment to fertility based on animal data. May be fetotoxic at high doses based on animal data. Epidemiological studies suggest higher than normal incidences of problem pregnancies (particularly spontaneous abortions) among exposed personnel.

FDA Pregnancy Category C



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12. ECOLOGICAL INFORMATION

Ecotoxicity effects: No data available

Bioaccumulation: No data available

13. DISPOSAL CONSIDERATIONS

Waste Classification: Due to volatility, recommend disposing as a hazardous waste.

Waste from residues / unused

products: In accordance with local and national regulations.

14. TRANSPORT INFORMATION

DOT:

DOT shipping name: Aviation regulated liquid n.o.s. (Isoflurane)

UN Number: UN3334

DOT Packing Group: None

DOT Hazard class: 9

TDG (Canada):

TDG Proper shipping name: Not Available.

TDG UN/NA Number: Not Available.

TDG Packing Group: Not Available.

TDG Hazard class: Not Available.

ADR/RID:

ADR Official Transport Name: Not Available.

ADR Proper shipping name: Not Available.

ADR UN/NA number: Not Available.



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ADR Hazard Class:	Not Available.
<u>ICAO / IATA:</u>	
IATA Proper shipping name:	Aviation regulated liquid n.o.s. (Isoflurane)
IATA UN NUMBER	UN3334
IATA Primary Hazard	9
IATA Packing group:	None
ICAO ERG Code:	None
<u>IMO / IMDG:</u>	
IMDG Proper Shipping Name:	Not Available.
IMDG Hazard Class and Division:	Not Available.
IMDG Packing Group:	Not Available.
IMDG Subsidiary Risks:	Not Available.
<u>EU EINECS List</u>	This product complies with EINECS
Risk Phrases:	Not determined
Safety Phrases:	Not Determined

15. OTHER INFORMATION

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind, express or implied, and we assume no responsibility for any loss, damage or expense, direct or consequential, arising out of their use.
