Safety Data Sheet

Iodosurf LF-8

1. IDENTIFICATION

Product Identifier: Iodosurf LF-8
Canadian TDG: Not regulated
Synonyms: None
Chemical Family: Not known
Recommended Use: Dishwashing
Restrictions on Use: None

Manufacturer / Supplier:
Genesis Chemicals
602 – 13th St SE
Medicine Hat, AB
T1A 1X3

Prepared by: The Environmental, Health and Safety Department of Genesis Chemicals Ltd
Preparation Date of SDS: February 9, 2017
Telephone number of preparer: 403-528-4220

24-Hour Emergency Telephone Number (CANUTEC): (613) 996-6666

2. HAZARDS IDENTIFICATION

GHS Classification
Skin irritation – Category 2; Eye irritation – Category 2A;

Signal Word: Warning

Hazard Statements(s):
Causes skin irritation.
Causes serious eye irritation.

Precautionary Statement(s):
General:
Keep out of reach of children.
Read label before use.

Prevention:
Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
IF ON SKIN: Wash with plenty of soap and water.
Specific treatment (see supplemental first aid instructions on this label).
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
If eye irritation persists: Get medical advice/attention.

Disposal:
Dispose of contents and container in accordance with local, regional, national and international regulations.

Other Hazards:
None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical Name	CAS No.	Concentration %
Ethoxylated Polyoxypropylene	9003-11-6	5 – 15
Iodine Complex	7553-56-2	<10
Isopropyl Alcohol	67-63-0	3 – 7

Notes
If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First-aid Measures

General
Move out of dangerous area. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended.

Inhalation
Move to fresh air. Keep at rest in a position comfortable for breathing. Call a Poison Centre or doctor if you feel unwell or are concerned.

Skin Contact
Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Immediately rinse with lukewarm, gently flowing water for 15-20 minutes. If skin irritation or a rash occurs, get medical advice/attention. Thoroughly clean clothing, shoes and leather goods before reuse or dispose of safely.

Eye Contact
Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. Remove contact lenses, if present and easy to do. If eye irritation persists, get medical advice/attention.

Ingestion
Immediately call a Poison Centre or doctor. Do not induce vomiting.

Most Important Symptoms and Effects, Acute and Delayed
Symptoms may include stinging. tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

Immediate Medical Attention and Special Treatment

Special Instructions

Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Carbon dioxide, appropriate dry chemical powder, alcohol foa or water spray.

Unsuitable Extinguishing Media

High volume water jet.

Specific Hazards Arising from the Chemical

Do not allow run-off from fire fighting to enter drains or water courses.

Special Protective Equipment and Precautions for Fire-fighters

Evacuate area. Approach fire from upwind to avoid hazardous vapours or gases. Stop leak before attempting to put out the fire. Before entry, especially into confined areas, use an appropriate monitor to check for: toxic gases or vapours, flammable or explosive atmosphere. Dike and recover contaminated water for appropriate disposal. Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn. If there is potential for skin contact with concentrated cleaner: chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary. See Skin Protection in Section 8 (Exposure Controls/Personal Protection) for advice on suitable chemical protective materials.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Concentrated product: evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Eliminate all ignition sources. Use grounded, explosion-proof equipment. Distant ignition and flashback are possible.

Increase ventilation to area or move leaking container to a well-ventilated and secure area. Do not touch damaged containers or spilled product unless wearing appropriate protective equipment. Use the personal protective equipment recommended in Section 8 of this safety data sheet.

Review Section 7 (Handling) of this safety data sheet before proceeding with clean-up.

Before entry, especially into confined areas, check atmosphere with an appropriate monitor. Monitor area for flammable or explosive atmosphere.

Product (diluted as directed): use the personal protective equipment recommended in Section 8 of this safety data sheet. No other special precautions are necessary.

Environmental Precautions

Concentrated product: do not allow into any sewer, on the ground or into any waterway. If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas.

Methods and Materials for Containment and Cleaning Up

Concentrated product: small spills or leaks: contain and soak up spill with absorbent that does not react with spilled product. Do NOT use combustible materials such as sawdust. Place used absorbent into suitable, covered, labelled containers for disposal.

Concentrated product: large spills or leaks: cover the spill surface with the appropriate type of foam to reduce the release of vapour. Dike spilled product to prevent runoff. Remove or recover liquid using pumps or vacuum equipment. Dike and recover contaminated water for appropriate disposal. Store recovered product in suitable containers that are: tightly-covered.

Product (diluted as directed): no special clean-up methods are necessary.

Other Information

Report spills to local health, safety and environmental authorities, as required.

7. HANDLING AND STORAGE

Precautions for Safe Handling

When handling diluted product: no special handling precautions are necessary.

When handling concentrated product: only use where there is adequate ventilation. Avoid generating vapours or mists. Keep containers tightly closed when not in use or empty. Wear personal protective equipment to avoid direct contact with this chemical.

Do NOT smoke in work areas. Wash hands thoroughly after handling this material. Immediately remove contaminated clothing using the method that minimizes exposure. Keep contaminated clothing under water, in closed containers. Launder clothes before rewearing. Inform laundry personnel of product hazard(s). Do not take contaminated clothing home.

Conditions for Safe Storage

Concentrated product: store in an area that is: temperature-controlled, well-ventilated, out of direct sunlight and separate from incompatible materials (see Section 10: Stability and Reactivity). Store in a closed container. Protect from conditions listed in Conditions to Avoid in Section 10 (Stability and Reactivity). Keep amount in storage to a minimum. Comply with all applicable health and safety regulations, fire and building codes.

Materials to Avoid

Oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Occupational exposure limits

Ingredients	Exposure Limit – ACGIH	Exposure Limit – OSHA	Immediately Dangerous to Life or Health - IDLH
Iodine Complex	0.1 ppm (ceiling) as iodine	Not Available	Not Available
Ethoxylated Polyoxypropylene	Not Available	Not Available	Not Available
Isopropyl Alcohol	400 ppm STEL 200 ppm TWA	400 ppm TWA 980 mg/m3 TWA 500 ppm STEL 1225 mg/m3 STEL	2000 ppm

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate Engineering Controls
General ventilation is usually adequate. Provide eyewash and safety shower if contact or splash hazard exists.
When handling large quantities of concentrated product: use a local exhaust ventilation and enclosure, if necessary, to control amount in the air. Use non-sparking ventilation systems, approved explosion-proof equipment and intrinsically safe electrical systems in areas where this product is used and stored.

Individual Protection Measures

Eye/Face Protection
Do not get in eyes. Wear chemical safety goggles.

Skin Protection
Prevent all skin contact. Wear chemical protective clothing e.g. gloves, aprons, boots.
Suitable materials are: Barrier® (PE/PA/PE), Silver Shield/4H® (PE/EVAL/PE), Tychem® Responder, Tychem® TK.
The following materials should NOT be used: neoprene rubber, nitrile rubber, polyvinyl alcohol.

Respiratory Protection
Not normally required if product is used as directed.
Concentrated product: wear a NIOSH approved air-purifying respirator with an organic vapour cartridge.
For non-routine or emergency situations: wear a NIOSH approved air-purifying respirator with an organic vapour Cartridge, or, wear a NIOSH approved self-contained breathing apparatus (SCBA) or supplied air respirator.

Other Personal Protection Data: Ensure that eyewash stations and safety showers are proximal to the work-station location.

9. CHEMICAL AND PHYSICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Dark brown liquid
Odour	Iodine
Odour Threshold	Not available
pH	Not available
Melting Point/Freezing Point	<0ºC / 32ºF
Initial Boiling Point/Range	>100ºC / >212ºF
Flash Point	>100 ^{o}C / >212 ^{o}F (PMCC)
Evaporation Rate	Not available
Flammability (solid, gas)	Not applicable (liquid).
Upper/Lower Flammability or Explosive Limit	Not available (upper); Not available (lower)
Vapour Pressure	Not determined or unknown
Vapour Density (air = 1)	Not available
Relative Density (specific gravity)	1.02 – 1.07 @ 20ºC
Solubility	Completely miscible
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	Not available
Other Information	None available
Physical State:	Liquid

10. STABILITY AND REACTIVITY

Reactivity
Not reactive. Not sensitive to mechanical impact.

Chemical Stability
Normally stable.

Possibility of Hazardous Reactions
None expected under normal conditions of storage and use.

Conditions to Avoid
Contact with incompatible materials.

Incompatible Materials
Oxidizing agents (e.g. peroxides).

Hazardous Decomposition Products
No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure
Inhalation; skin contact; eye contact; ingestion.

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Iodine Complex	Not available	Not available	Not available
Ethoxylated Polyoxypropylene	Not available	Not available	Not available
Isopropyl Alcohol	Rat = 16970 ppm/4H	Mouse = 3600 mg/kg Rat = 5045 mg/kg	Rabbit = 12800 mg/kg

Information on toxicological effects

Acute toxicity
Harmful if swallowed.

Skin Corrosion/Irritation
Cause skin irritation.

Serious Eye Damage/Irritation
Causes serious eye irritation.

STOT (Specific Target Organ Toxicity) - Single Exposure
Inhalation
No data available.

Aspiration Hazard

No data available.

STOT (Specific Target Organ Toxicity) - Repeated Exposure
No data available.

Respiratory and/or Skin Sensitization
No data available.

Acute Test of Product:
Acute Oral LD50: Not available.
Acute Dermal LD50: Not available.
Acute Inhalation LC50: Not Available.

Carcinogenicity

Chemical Name	IARC	ACGIH
Iodine Complex	Not Listed	Not Listed
Ethoxylated Polyoxypropylene	Not Listed	Not Listed
Isopropyl Alcohol	Group 3	A4

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not listed.

Reproductive Toxicity/ Teratogenicity/ Embryotoxicity/ Mutagenicity
There is no human information available for this product. However, Isopropanol is considered teratogenic/embryotoxic based on animal information. One inhalation rat study has shown that 2-propanol is fetotoxic (caused reduced fetal weight gain) in the absence of maternal toxicity. Other studies have shown no effects or effects in the presence of maternal toxicity. Positive and negative mutagenic results have been obtained in mammalian cells in vitro and negative results in bacteria.

Interactive Effects
No information was located.

Chronic Effects
Prolonged inhalation may be harmful.

Additional Information:
No data.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information:

Ingredients	Ecotoxicity – Fish Species Data	Acute Crustaceans Toxicity:	Ecotoxicity – Freshwater Algae Data
Iodine Complex	Not Available	Not Available	Not Available
Ethoxylated Polyoxypropylene	Not Available	Not Available	Not Available
Isopropyl Alcohol	11130 mg/L LC50 (Pimephales promelas) 96 h static 9640 mg/L LC50 (Pimephales	Not Available	1000 mg/L EC50 Desmodesmus subspicatus 72 h

	promelas) 96 h flow-through 1400000 µg/L LC50 (Lepomis macrochirus) 96 h		1000 mg/L EC50 Desmodesmus subspicatus 96 h

Other Information:
Do not allow product or runoff from fire control to enter storm or sanitary sewers, lakes, rivers, streams or public waterways. Block off drains and ditches. Spill areas must be cleaned and restored to original condition or to the satisfaction of authorities. May be harmful to aquatic life. Biodegrades (slow). Rapid volatilization. Not expected to bioconcentrate.

13. DISPOSAL CONSIDERATIONS

Disposal Methods
Recommended disposal methods are for the product, as sold. (Used material may contain other hazardous contaminants). The required hazard evaluation of the waste and compliance with the applicable hazardous waste laws are the responsibility of the user.

Burn in an approved incinerator according to federal, provincial/state, and local regulations.
Empty containers retain product residue. Follow label warnings even if container appears to be empty. The container for this product can present explosion or fire hazards, even when emptied. Do not cut, puncture, or weld on or near this container.

14. TRANSPORT INFORMATION

DOT (U.S.):
DOT Shipping Name: Not Regulated.
DOT Hazardous Class Not Applicable.
DOT UN Number: Not Applicable.
DOT Packing Group: Not Applicable.
DOT Reportable Quantity (lbs): Not Available.
Marine Pollutant: No.

TDG (Canada):
TDG Shipping Name: Not Regulated.
Hazard Class: Not Applicable.
UN Number: Not Applicable.
Packing Group: Not Applicable.
Marine Pollutant: No.

Special Precautions for User
Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code
Not applicable

15. REGULATORY INFORMATION

Canada

WHMIS Classification
D2B TOXIC MATERIALS
E CORROSIVE MATERIALS

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by the Controlled Products Regulations.

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)
All components of this product are either on the Domestic Substances List (DSL), the Non-Domestic Substances List (NDSL) or exempt.
Note: Not available.

16. OTHER INFORMATION

Additional Information: This product has been classified in accordance with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) and the SDS contains all the information required by the Hazardous Products Regulations (HPR).

Prepared by: The Environmental, Health and Safety Department of Genesis Chemicals Ltd

Date of Latest Revision: February 9, 2017

Key to Abbreviations: IARC = International Agency for Research on Cancer. Group 3 = Not classifiable as to its carcinogenicity to humans. ACGIH® = American Conference of Governmental Industrial Hygienists. A4 = Not classifiable as a human carcinogen. NTP = National Toxicology Program. OSHA = US Occupational Safety and Health Administration. ACGIH® = American Conference of Governmental Industrial Hygienists. TLV® = Threshold Limit Value. TWA = Time-Weighted Average. STEL = Short-term Exposure Limit. A4 = Not classifiable as a human carcinogen. OSHA = US Occupational Safety and Health Administration. PEL = Permissible Exposure Limits. IDLH = Immediately Dangerous to Life and Health.

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*****END OF SDS*****