

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**1.1. Product identifier**

Product form : Mixture  
 Product name : **IO-DIS Disinfectant**  
 Product code : 3441

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

Use of the substance/mixture : Iodine-Based Sanitizer

**1.3. Details of the supplier of the safety data sheet**

Flo-Kem  
 19402 Susana Rd.  
 Rancho Dominguez, CA 90221 - USA  
 T 310-632-7124 - F 310-631-7496  
<http://www.flo-kem.com>

**1.4. Emergency telephone number**

Emergency number : CHEMTEL: 800-255-3924

**SECTION 2: Hazards identification**

**2.1. Classification of the substance or mixture**

**Classification (GHS-US)**

Skin Corr. 1C H314  
 Eye Dam. 1 H318  
 STOT RE 1 H372

Full text of H-phrases: see section 16

**2.2. Label elements**

**GHS-US labeling**

Hazard pictograms :



Signal word : Danger

Hazard statements : Causes severe skin burns and eye damage.  
 Causes serious eye damage.  
 Causes damage to organs (thyroid gland) through prolonged or repeated exposure.

Precautionary statements : Do not breathe fume, mist, vapors.  
 Wash hands and forearms thoroughly after handling.  
 Do not eat, drink or smoke when using this product.  
 Wear eye protection, face protection, protective gloves, protective clothing.  
 If swallowed: rinse mouth. Do NOT induce vomiting.  
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 If inhaled: Remove person to fresh air and keep comfortable for breathing.  
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 Immediately call a POISON CENTER or doctor/physician.  
 Get medical advice/attention if you feel unwell.  
 Wash contaminated clothing before reuse.  
 Store locked up.  
 Dispose of contents/container in accordance with Local, State, and Federal regulations.

**2.3. Hazard not otherwise classified (HNOC)**

No additional information available

**2.4. Unknown acute toxicity (GHS-US)**

No data available

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### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Not applicable

(NOTE: If component displays the \* (asterisk) symbol, the following statement applies.)

\*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

Full text of H-phrases: see section 16

#### 3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
phosphoric acid	(CAS No) 7664-38-2	15 - 20	Acute Tox. 4 (Oral), H302 Skin Corr. 1C, H314
4-nonylphenol, branched, ethoxylated	(CAS No) 127087-87-0	5 - 15	Skin Irrit. 2, H315 Eye Dam. 1, H318
iodine	(CAS No) 7553-56-2	1 - 5	Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335 STOT RE 1, H372 Aquatic Acute 1, H400

(NOTE: If component displays the \* (asterisk) symbol, the following statement applies.)

\*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
First-aid measures after skin contact	: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

#### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries	: Causes severe skin burns and eye damage.
Symptoms/injuries after skin contact	: Causes burns/corrosion of the skin.
Symptoms/injuries after eye contact	: Causes serious eye damage.
Symptoms/injuries after ingestion	: Burns to the gastric/intestinal mucosa. Abdominal pain. Gastrointestinal complaints. Nausea.

#### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media	: Alcohol-resistant foam. BC powder. Carbon dioxide. Dry chemical powder. Sand/earth.
Unsuitable extinguishing media	: Do not use a heavy water stream.

#### 5.2. Special hazards arising from the substance or mixture

Reactivity	: Reacts violently with (strong) bases. Reacts with (some) halogen compounds. Reacts with (strong) oxidizers.
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#### 5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
Other information	: No additional information available.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Isolate from fire, if possible, without unnecessary risk.
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### 6.1.1. For non-emergency personnel

Protective equipment : Protective goggles.  
Protective gloves.  
Protective clothing.  
Respiratory protection.

Emergency procedures : Evacuate unnecessary personnel.

### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

For containment : Contain released substance, pump into suitable containers. Plug the leak, cut off the supply. If reacting: dilute toxic gas/vapor with water spray.

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. Neutralize small quantities of the liquid spill with lime, sodium bicarbonate, soda (sodium carbonate) or soda ash. Wash down leftovers with plenty of water. Wash clothing and equipment after handling.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Do not get in eyes, on skin, or on clothing. Do not breathe fume, mist, vapors. Ensure good ventilation of the work station. Observe normal hygiene standards. Provide good ventilation in process area to prevent formation of vapor. Provide local exhaust or general room ventilation. Use only outdoors or in a well-ventilated area. Use personal protective equipment as required.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. Wash hands and forearms thoroughly after handling. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Provide local exhaust or general room ventilation. Comply with applicable regulations.

Incompatible products : Strong bases. Oxidizing agent. Reducing agents. Halogens.

Storage area : Store in a cool, dry well-ventilated area. Keep container tightly closed when not in use.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

iodine (7553-56-2)		
ACGIH	ACGIH TWA (ppm)	0.01 ppm
ACGIH	ACGIH STEL (ppm)	0.01 ppm

phosphoric acid (7664-38-2)		
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
ACGIH	ACGIH STEL (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
OSHA	OSHA PEL (STEL) (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>

### 8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or face shield.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. In case of insufficient ventilation, wear suitable respiratory equipment.

Other information : When using, do not eat, drink or smoke.

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Appropriate engineering controls : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state : Liquid  
Color : Dark brown  
Odor : Iodine  
Odor threshold : No data available  
pH : 1.2 - 2.2  
Melting point : No data available  
Freezing point : No data available  
Boiling point : > 212 °F  
Flash point : No data available  
Relative evaporation rate (butyl acetate=1) : No data available  
Flammability (solid, gas) : No data available  
Explosive limits : No data available  
Vapor pressure : No data available  
Vapor density : No data available  
  
Specific Gravity @ 77° F : 1.125 - 1.145  
Solubility : Soluble in water.  
Partition Coefficient n-Octanol-Water : No data available  
Auto-ignition temperature : No data available  
Decomposition temperature : No data available  
Viscosity : No data available

#### 9.2. Other information

VOC content : 0 g/l CARB VOC

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Reacts violently with (strong) bases. Reacts with (some) halogen compounds. Reacts with (strong) oxidizers.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

Reacts vigorously with strong oxidizers and bases. Contact with halogenated compounds may liberate toxic gas.

#### 10.4. Conditions to avoid

Extremely high or low temperatures.

#### 10.5. Incompatible materials

Strong bases. Oxidizers. Reducing agents. Halogens.

#### 10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide. Phosphorus oxides. Thermal decomposition generates : Corrosive vapors.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Not classified

<b>iodine (7553-56-2)</b>	
ATE US (dermal)	1100.000 mg/kg body weight
ATE US (gases)	4500.000 ppmV/4h
ATE US (vapors)	11.000 mg/l/4h
ATE US (dust, mist)	1.500 mg/l/4h
<b>4-nonylphenol, branched, ethoxylated (127087-87-0)</b>	
LD50 oral rat	16000 mg/kg (Rat)

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<b>4-nonylphenol, branched, ethoxylated (127087-87-0)</b>	
LD50 dermal rabbit	4490 mg/kg (Rabbit)
ATE US (oral)	16000.000 mg/kg body weight
ATE US (dermal)	4490.000 mg/kg body weight
<b>phosphoric acid (7664-38-2)</b>	
LD50 oral rat	1530 mg/kg (Rat)
LD50 dermal rabbit	2740 mg/kg (Rabbit)
ATE US (oral)	1530.000 mg/kg body weight
ATE US (dermal)	2740.000 mg/kg body weight
Skin corrosion/irritation	: Causes severe skin burns and eye damage. pH: 1.2 - 2.2
Serious eye damage/irritation	: Causes serious eye damage. pH: 1.2 - 2.2
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Causes damage to organs (thyroid gland) through prolonged or repeated exposure.
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met
Symptoms/injuries after skin contact	: Causes burns/corrosion of the skin.
Symptoms/injuries after eye contact	: Causes serious eye damage.
Symptoms/injuries after ingestion	: Burns to the gastric/intestinal mucosa. Abdominal pain. Gastrointestinal complaints. Nausea.

## SECTION 12: Ecological information

### 12.1. Toxicity

<b>iodine (7553-56-2)</b>	
LC50 fish 1	0.164 mg/l (96 h; Carassius auratus)
EC50 Daphnia 1	71 mg/l (48 h; Daphnia magna; QSAR)
LC50 fish 2	0.44 mg/l (24 h; Ictalurus punctatus)
Threshold limit algae 1	48 mg/l (72 h; Algae)
<b>phosphoric acid (7664-38-2)</b>	
EC50 Daphnia 1	> 100 mg/l
ErC50 (algae)	> 100 mg/l

### 12.2. Persistence and degradability

<b>iodine (7553-56-2)</b>	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
<b>4-nonylphenol, branched, ethoxylated (127087-87-0)</b>	
Persistence and degradability	Biodegradable in water. No (test) data on mobility of the substance available.

### 12.3. Bioaccumulative potential

<b>iodine (7553-56-2)</b>	
BCF other aquatic organisms 1	0.027 (Ophiuroidea; Dry weight)
Log Pow	2.49 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

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### 4-nonylphenol, branched, ethoxylated (127087-87-0)

Bioaccumulative potential	Low potential for bioaccumulation (molecular mass $\geq 700$ g/mol).
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#### 12.4. Other adverse effects

Other information : Avoid release to the environment.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Waste disposal recommendations : Dispose of contents/container in accordance with Local, State, and Federal regulations.

Ecology - waste materials : Avoid release to the environment.

### SECTION 14: Transport information

#### 14.1. UN Number

UN-No.(DOT) : 1760

Other information : Under 49 CFR 173.154(c) and (b)(2): This product may be shipped as ORM-D or Limited Quantity if the inner packagings do not exceed 5 L (1.3 gallons) or 5.0 kg (11 lbs). This provision does not apply to transportation by vessel or aircraft, except where other means of transportation is impracticable.

#### 14.2. UN proper shipping name

DOT Proper Shipping Name : UN1760, Corrosive Liquids, N.O.S. (Phosphoric Acid, Iodine), 8, PG III

Hazard labels (DOT) : 8 - Corrosive



### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

All components of this product are listed on the Toxic Substances Control Act (TSCA) inventory

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

##### iodine (7553-56-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
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##### 4-nonylphenol, branched, ethoxylated (127087-87-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
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##### phosphoric acid (7664-38-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

RQ (Reportable quantity, section 101(14) of CERCLA as published on EPA's List of Lists) :	5000 lb
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SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
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#### 15.2. International regulations

##### CANADA

##### EU-Regulations

No additional information available

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Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

### 15.2.2. National regulations

EPA Registration Number : 4959-15-10693

EPA Comments : This chemical is a pesticide registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The pesticide label also includes other important information, including directions for use.

KEEP OUT OF REACH OF CHILDREN

DANGER

PRECAUTIONARY STATEMENTS:

Hazard to humans and domestic animals.

**CORROSIVE:** Causes irreversible eye damage. Harmful if swallowed. Do not get in eyes or on clothing. Avoid contact with skin. Wear goggles or face shield. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

ENVIRONMENTAL HAZARDS:

This product is toxic to fish and aquatic organisms. Do not contaminate water by cleaning of equipment or disposal of wastes. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other water unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

FIRST AID

IF IN EYES

- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present, after the first five minutes. Then continue rinsing.
- Call a poison control center or doctor for treatment advice.

IF SWALLOWED

- Call a poison control center or doctor immediately for treatment advice.
- Have the person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by the poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

IF ON SKIN OR CLOTHING

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.

IF INHALED

- Move person to fresh air.
- If person is not breathing call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.
- Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency treatment information.

**NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsions may be needed.

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### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

## SECTION 16: Other information

Abbreviations Legend:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Skin Corr. 1C	Skin corrosion/irritation Category 1C
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H302	Harmful if swallowed
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H372	Causes damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life

### Disclaimer

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