Version	Revision Date:	SDS Number:	Date of last issue: 2015/03/20
1.9	2015/04/21	100000001046	Date of first issue: 2014/08/27

SECTION 1. IDENTIFICATION

Substance name : Sodium-PYRION™ 40%

Manufacturer or supplier's details

Company name of supplier : Janssen Preservation&Material Protection
Division of Janssen Pharmaceutica NV

Address : 1125 Trenton-Harbourton Rd
Titusville NJ 08560
US

Telephone : (609) 730-2000

Emergency telephone number : +32 14 60 24 44

E-mail address Responsible/issuing person : SDSJanssen@its.jnj.com

Recommended use of the chemical and restrictions on use

Recommended use : Biocidal product
Technical concentrate used in the manufacture of biocidal products.

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity (Oral) : Category 4

Acute toxicity (Dermal) : Category 4

Skin irritation : Category 2

Eye irritation : Category 2A

Acute toxicity (Inhalation) : Category 4

Acute aquatic toxicity : Category 1

Chronic aquatic toxicity : Category 1

GHS Label element

Hazard pictograms :

Signal word : Warning

Hazard statements : H302 + H312 + H332 Harmful if swallowed, in contact with skin

or if inhaled
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
P261 Avoid breathing vapours.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P302 + P352 + P312 IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/ physician if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312 Call a POISON CENTER or doctor/ physician if you feel unwell.
P362 Take off contaminated clothing and wash before reuse.
P391 Collect spillage.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity: 40 %

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Liquid

Hazardous components

Chemical Name	CAS-No.	Concentration (%)
pyridine-2-thiol 1-oxide, natrium salt	3811-73-2	>= 30 - < 50

SECTION 4. FIRST AID MEASURES

General advice	:	Symptoms of poisoning may appear several hours later.
If inhaled	:	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.
In case of skin contact	:	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.
In case of eye contact	:	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
If swallowed	:	Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
Most important symptoms and effects, both acute and delayed	:	Irritating to skin. Severe eye irritation
Notes to physician	:	Treat symptomatically. Probable mucosal damage may contraindicate the use of gastric lavage. Convulsions, if persistent, may be controlled by careful intravenous use of short-acting barbiturates. Probable mucosol damage may contraindicate the use of gastric lavage.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	:	Water spray jet
Specific hazards during firefighting	:	Heating can release hazardous gases. Not combustible. Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	Carbon oxides Nitrogen oxides (NOx)
Further information	:	In the event of fire, cool tanks with water spray.

Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus. Firefighters must wear fire resistant personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Evacuate personnel to safe areas. Refer to protective measures listed in sections 7 and 8. Ensure adequate ventilation.
Environmental precautions	:	Should not be released into the environment. Do not flush into surface water or sanitary sewer system.
Methods and materials for containment and cleaning up	:	Dam up. Prevent product from entering drains. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Shovel into suitable container for disposal. Keep in suitable, closed containers for disposal. Keep in properly labelled containers. Treat recovered material as described in the section "Disposal considerations".

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	No special protective measures against fire required.
Advice on safe handling	:	Handle and open container with care. Avoid formation of aerosol. For personal protection see section 8.
Conditions for safe storage	:	Keep containers tightly closed in a dry, cool and well-ventilated place. To maintain product quality, do not store in heat or direct sunlight. Store at room temperature in the original container. Protect against light. To avoid thermal decomposition, do not overheat. Unsuitable materials for containers Unlined steel Keep away from food, drink and animal feedingstuffs.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures	:	Engineering controls should be used as the primary means to

control possible exposures. Use process enclosures, local exhaust ventilation or other engineering controls to keep exposure levels below recommended exposure limits.

Personal protective equipment

Respiratory protection	:	Respirator with a vapour filter (EN 141) ABEK Use only respiratory protection that conforms to international/ national standards. Engineering controls should always be the primary method of controlling exposures. If respiratory protective equipment is needed for certain activities, the type as well as the corresponding protection factor will depend upon the risk assessment and air concentrations, hazards, physical and warning properties of substances present.
Hand protection		
Material	:	Nitrile rubber
Remarks	:	Impervious gloves Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
Eye protection	:	Tightly fitting safety goggles
Skin and body protection	:	closed work clothing If splashes are likely to occur, wear: impervious clothing
Protective measures	:	The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	dark yellow
Odour	:	none
Odour Threshold	:	No data available
pH	:	9.5 - 11.5, Concentration: ca. 400 g/l

Melting point/range	:	No data available
Boiling point/boiling range	:	100 °C (1,013 hPa)
Flash point	:	No data available
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Upper explosion limit	:	Not applicable
Lower explosion limit	:	Not applicable
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Relative density	:	1.22 (20 °C)
Density	:	1.22 g/cm3 (20 °C)
Solubility(ies)		
Water solubility	:	completely miscible
Solubility in other solvents	:	completely miscible
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	The product is not flammable.
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	7.8 mPa.s (20 °C) 3.9 mPa.s (40 °C)
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive (not expected to be explosive based on components)
Oxidizing properties	:	Not oxidising (not expected to be oxidising based on components)
Conductivity	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	None reasonably foreseeable.
Chemical stability	:	Stable under recommended storage conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	To avoid thermal decomposition, do not overheat.
Incompatible materials	:	Acids
Hazardous decomposition products	:	Carbon monoxide Nitrogen oxides (NOx)

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity	:	LD50 (Rat): 1,500 mg/kg
Acute dermal toxicity	:	LD50 (Rabbit): 1,800 mg/kg

Components:

pyridine-2-thiol 1-oxide, natrium salt

Acute oral toxicity	:	LD50 (Rat): 1,208 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 1.08 mg/l Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity	:	LD50 (Rabbit, male and female): 1,800 mg/kg

Skin corrosion/irritation

Product:

Result: Skin irritation

Components:

pyridine-2-thiol 1-oxide, natrium salt
Species: Rabbit
Exposure time: 4 h
Method: OECD Test Guideline 404
Result: Skin irritation

Serious eye damage/eye irritation

Product:

Species: Rabbit
Result: Eye irritation

Components:

pyridine-2-thiol 1-oxide, natrium salt
Species: Rabbit
Result: Eye irritation
Exposure time: 24 h
Assessment: Irritating to eyes.
Method: Draize Test

Respiratory or skin sensitisation

Product:

Method: Guinea pig maximization assay (GPMT) (OECD 406)
Result: Does not cause skin sensitisation.

Assessment: Harmful in contact with skin or if inhaled

Components:

pyridine-2-thiol 1-oxide, natrium salt
Test Type: Maximisation Test (GPMT)
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.

Assessment: Harmful if swallowed, in contact with skin or if inhaled

Germ cell mutagenicity

Product:

Genotoxicity in vitro : Test Type: in vitro assay
Species: Mutagenicity (Salmonella typhimurium - reverse mutation assay)
Metabolic activation: with and without metabolic activation
Result: negative

Components:

pyridine-2-thiol 1-oxide, natrium salt

Genotoxicity in vitro : Test Type: Ames test
Species: Mutagenicity (Salmonella typhimurium - reverse mutation assay)
Metabolic activation: with and without metabolic activation
Result: negative

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Species: Mouse (male and female)
Cell type: Bone marrow
Application Route: Oral
Method: Mutagenicity (micronucleus test)
Result: negative

Carcinogenicity

Components:

pyridine-2-thiol 1-oxide, natrium salt
Species: Rat, (male and female)
Application Route: Oral
NOAEL: 0.5 mg/kg bw/day

IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Components:

pyridine-2-thiol 1-oxide, natrium salt

Effects on fertility	:	Species: Rat Sex: male Application Route: Oral NOAEL: 1.4 mg/kg, NOAEL F1: 1.4 mg/kg
Effects on foetal development	:	Species: Rat, female Application Route: Oral NOAEL Teratogenic effects 2 mg/kg

STOT - single exposure

No data available

STOT - repeated exposure

No data available

Repeated dose toxicity

No data available

Product:

Repeated dose toxicity - Assessment	:	Harmful in contact with skin or if inhaled

Components:

pyridine-2-thiol 1-oxide, natrium salt

Repeated dose toxicity -	:	Harmful if swallowed, in contact with skin or if inhaled

Assessment

Aspiration toxicity

No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

pyridine-2-thiol 1-oxide, natrium salt

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 0.0066 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.022 mg/l Exposure time: 48 h
Toxicity to algae	:	EC50 (Selenastrum capricornutum (green algae)): 0.46 mg/l
M-Factor (Acute aquatic toxicity)	:	100
M-Factor (Chronic aquatic toxicity)	:	10

Persistence and degradability

Product:

Biodegradability	:	Result: Readily biodegradable

Components:

pyridine-2-thiol 1-oxide, natrium salt

Biodegradability	:	Result: Readily biodegradable

Bioaccumulative potential

Product:

Bioaccumulation	:	Remarks: Does not bioaccumulate.

Components:

pyridine-2-thiol 1-oxide, natrium salt

Bioaccumulation	:	Remarks: Bioaccumulation is unlikely.
Partition coefficient: n-octanol/water	:	log Pow: -2.64 (20 °C) pH: 8.5 - 8.6

Mobility in soil

Product:

Stability in soil	:	Test substance: read-across Remarks: Adsorbs on soil.

Other adverse effects

Product:

Results of PBT and vPvB assessment	:	This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT).
Ozone-Depletion Potential	:	Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
Additional ecological information	:	No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance. Triple rinse container promptly after emptying. Triple rinse as follows.Container disposal: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal Repeat this procedure two more times.

SECTION 14. TRANSPORT INFORMATION

International transport regulations

DOT

UN number	:	3082
Description of the goods	:	Environmentally hazardous substance, liquid, n.o.s. (pyridine-2-thiol 1-oxide, natrium salt)
Class	:	9
Packing group	:	III
Labels	:	9
Emergency Response Guidebook Number	:	171
Environmentally hazardous	:	no

IATA

UN number	:	3082
Description of the goods	:	Environmentally hazardous substance, liquid, n.o.s. (pyridine-2-thiol 1-oxide, natrium salt)
Class	:	9
Packing group	:	III
Labels	:	9
Packing instruction (CAO)	:	964
Packing instruction (PAX and CAO)	:	964
Packing instruction (LQ)	:	Y964
Packing instruction (EQ)	:	E1
Environmentally hazardous	:	no

IMDG

UN number	:	3082
Description of the goods	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (pyridine-2-thiol 1-oxide, natrium salt)
Class	:	9
Packing group	:	III
Labels	:	9
EmS Number 1	:	F-A
EmS Number 2	:	S-F
Marine pollutant	:	yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Pollution category	:
Ship type	:

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.
This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.
This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

Massachusetts Right To Know

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

water	7732-18-5	50 - 70 %
pyridine-2-thiol 1-oxide, natrium salt	3811-73-2	30 - 50 %

New Jersey Right To Know

water	7732-18-5	50 - 70 %
pyridine-2-thiol 1-oxide, natrium salt	3811-73-2	30 - 50 %

California Prop 65 This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Other regulations : Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.
Take note of Directive 96/82/EC on the control of major-accident hazards involving dangerous substances.

The components of this product are reported in the following inventories:

REACH : Not in compliance with the inventory

: sodium dithionite

	:	pyridine-2-thiol 1-oxide, natrium salt
	:	water
	:	This chemical is a pesticide product registered by the 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, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:
CH INV	:	The formulation contains substances listed on the Swiss Inventory
	:	sodium dithionite
	:	pyridine-2-thiol 1-oxide, natrium salt
	:	water
	:	Warning
TSCA	:	On TSCA Inventory
	:	May be fatal if absorbed through the skin or inhaled.
DSL	:	All components of this product are on the Canadian DSL.
	:	Causes substantial but temporary eye irritation.
AICS	:	On the inventory, or in compliance with the inventory
	:	Harmful if swallowed.
NZIoC	:	On the inventory, or in compliance with the inventory
	:	Do not get into eyes, on skin, or on clothing.
ENCS	:	Not in compliance with the inventory
	:	pyridine-2-thiol 1-oxide, natrium salt
	:	water
	:	Do not breath spray mist.
ISHL	:	Not in compliance with the inventory
	:	pyridine-2-thiol 1-oxide, natrium salt
	:	water
KECI	:	On the inventory, or in compliance with the inventory

PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory

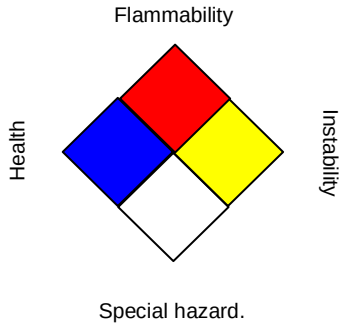
Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

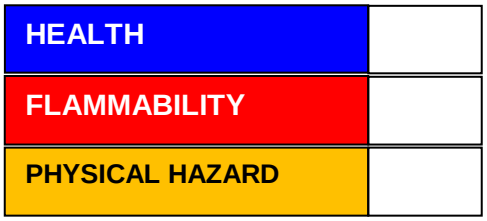
SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:



0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Use biocides safely. Always read the label and product information before use.
Revision Date : 2015/04/21

Date and Number Formats

This document uses the following notation for printing dates and numbers:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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