Version	Revision Date:	SDS Number:	Date of last issue: 2017/05/31
1.40	2017/07/23	100000003618	Date of first issue: 2014/08/27

SECTION 1. IDENTIFICATION

Substance name : Zinc-PYRION Technical
ZINC PYRION™ POWDER INDUSTRIAL MICROBIOSTAT / ZINC PYRION™ POWDER AF / ZINC PYRION™ POWDER MP

Substance No. : 13463-41-7

Manufacturer or supplier's details

Company name of supplier : Janssen Research & Development, LLC

Address : 920 US Route 202
Raritan, NJ 08869
US

Telephone : (908) 218-7325
E-mail address Responsible/issuing person : SDSJanssen@its.jnj.com

Emergency telephone number : CHEMTREC US: 1-800-424-9300
CHEMTREC International: +1 703-527-3887

Recommended use of the chemical and restrictions on use

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

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity (Oral) : Category 3

Acute toxicity (Inhalation) : Category 3

Serious eye damage : Category 1

Acute aquatic toxicity : Category 1

Chronic aquatic toxicity : Category 1

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H301 + H331 Toxic if swallowed or if inhaled
H318 Causes serious eye damage.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
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 eye protection/ face protection.
Response:
P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth.
P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor.
P305 + P351 + P338 + P310 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/doctor.
P391 Collect spillage.
Storage:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Chemical nature : Solid

Hazardous components

Chemical name	CAS-No.	Concentration (%)
pyrithione zinc	13463-41-7	>= 90 - <= 100

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 immediately 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 immediately for treatment advice.

In case of eye contact : Hold eye open and rinse slowly and gently with water for 15-20 minutes.
Call a poison control center or doctor immediately 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 : May cause permanent eye injury.

Notes to physician : Treat symptomatically.

Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Dry powder
Water spray
Foam
Carbon dioxide (CO2)
Sand
Aqueous film forming foam (AFFF).

Unsuitable extinguishing media : Water spray jet

Specific hazards during firefighting : Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
Do not allow run-off from fire fighting to enter drains or water courses.
Exposure to decomposition products may be a hazard to health.

Hazardous combustion products : Carbon oxides
Nitrogen oxides (NOx)
Sulphur oxides

Further information : Cool containers/tanks with water spray.
Avoid dust formation.

Special protective equipment : In the event of fire, wear self-contained breathing apparatus.

for firefighters	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. Avoid dust formation. Keep away from open flames, hot surfaces and sources of ignition.
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	:	Sweep up and shovel into suitable containers for disposal. Avoid dust formation. Keep in suitable, closed containers for disposal. Keep in properly labelled containers. Treat recovered material as described in the section "Disposal considerations". Prevent product from entering drains.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Avoid dust formation. During processing, dust may form explosive mixture in air.
Advice on safe handling	:	Handle in accordance with good industrial hygiene and safety practice. Avoid formation of dust and aerosols. To avoid thermal decomposition, do not overheat. Use personal protective equipment as required.
Conditions for safe storage	:	Keep containers tightly closed in a dry, cool and well-ventilated place. Store in original container. To maintain product quality, do not store in heat or direct sunlight. Avoid dust formation. Keep away from fire, sparks and heated surfaces. Keep locked up. Keep away from food, drink and animal feedingstuffs.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
pyrithione zinc	13463-41-7	TWA	2.5 mg/m3	J&J OEL/PBOEL

				HHC
		PBOEL-HHC	1 A	J&J OEL/PBOEL HHC
	Further information: J&J has a hazard banding notation: PBOEL HHC. This substance is classified by J&J as being PBOEL HHC 1A.			

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 : 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.
Use only respiratory protection that conforms to international/ national standards.
Wear NIOSH approved full face respirator equipped with a combination organic vapor / P-100 pre-filter.

Hand protection

Material : Nitrile rubber

Material : Polyethylene

Material : PVC

Material : Neoprene

Material : Natural Rubber

Material : butyl-rubber

Material : Viton (R)

Remarks : Long sleeve 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
Ensure that eyewash stations and safety showers are close to the workstation location.

Skin and body protection : closed work clothing
Long sleeved clothing
Chemical resistant apron when mixing and loading or clean-

ing equipment.
Footwear protecting against chemicals

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 : When using do not eat, drink or smoke.
Wash hands before eating, drinking, or smoking.
Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	powder
Colour	:	off-white, to, tan
Odour	:	odourless
Odour Threshold	:	No data available
pH	:	Not applicable
Melting point/range	:	> 240 °C
Boiling point/boiling range	:	No data available
Flash point	:	Not applicable
Evaporation rate	:	Not applicable
Flammability (solid, gas)	:	Not highly flammable
Upper explosion limit	:	No data available
Lower explosion limit	:	60 g/m3
Vapour pressure	:	< 0.000001 Pa
Relative vapour density	:	Not applicable
Relative density	:	1.76 - 1.81
Density	:	1.76 - 1.81 g/cm3
Solubility(ies)		
Water solubility	:	0.00611 g/l (30 °C) pH: 7.2 - 7.4

Partition coefficient: n-octanol/water	:	log Pow: 0.883
Auto-ignition temperature	:	254 °C
Decomposition temperature	:	No data available
Viscosity Viscosity, dynamic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Molecular weight	:	317.7 g/mol

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. Heat, flames and sparks.
Incompatible materials	:	Oxidizing agents
Hazardous decomposition products	:	Carbon oxides Nitrogen oxides (NOx) Sulphur oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity	:	LD50 Oral (Rat): 269 mg/kg
Acute inhalation toxicity	:	LC50 (Rat, male): 0.83 mg/l Exposure time: 4 h Test atmosphere: dust/mist LC50 (Rat, female): 1.34 mg/l Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity	:	LD50 (Rat): > 2,000 mg/kg

LD50 (Rabbit): > 2,000 mg/kg

Skin corrosion/irritation

Product:

Species: Rabbit
Exposure time: 4 h
Method: OECD Test Guideline 404
Result: No skin irritation

Serious eye damage/eye irritation

Product:

Species: Rabbit
Result: Corrosive to eyes

Respiratory or skin sensitisation

Product:

Test Type: Maximisation Test
Species: Guinea pig
Result: Not a sensitizer

Germ cell mutagenicity

Product:

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

Carcinogenicity

Product:

Carcinogenicity - Assessment : Animal testing did not show any carcinogenic effects.

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.

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.

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.

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

Product:

Reproductive toxicity - Assessment : In animal testing, risk of impaired fertility was shown only after administration of very high doses of this substance.

Teratogenicity - Assessment : No evidence of adverse effects on development.

STOT - single exposure

No data available

STOT - repeated exposure

No data available

Repeated dose toxicity

Product:

Species: Rat, male and female
NOAEL: 0.5 mg/kg
Application Route: Oral
Exposure time: 104 W

Species: Rat, male and female
NOAEL: 0.002 mg/l
Application Route: Inhalation
Exposure time: 21 d

Aspiration toxicity

No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 0.0026 mg/l

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.0082 mg/l

Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): 0.028 mg/l
NOEC (Skeletonema costatum (marine diatom)): 0.00046 mg/lExposure time: 120 h

M-Factor (Acute aquatic : 100

toxicity)
M-Factor (Chronic aquatic toxicity) : 10

Ecotoxicology Assessment
Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Persistence and degradability

Product:
Biodegradability : Result: Biodegradable

Bioaccumulative potential

Product:
Bioaccumulation : Remarks: Does not bioaccumulate.

Mobility in soil

Product:
Stability in soil : Remarks: Adsorbs on soil.

Other adverse effects

Product:
Environmental fate and pathways : Remarks: No data available

Results of PBT and vPvB assessment : This substance is not 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).

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.

For fiber drums or paperboard containers with plastic liners, triple rinse directions do not apply. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into formulation/application equipment. Then dispose of liner in a sanitary landfill or by incineration if allowed by State and local authorities. If drum is contaminated and cannot be reused, dispose of in the same manner.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number	:	UN 2811
Proper shipping name	:	TOXIC SOLID, ORGANIC, N.O.S. (pyrithione zinc)
Class	:	6.1
Packing group	:	III
Labels	:	6.1

IATA-DGR

UN/ID No.	:	UN 2811
Proper shipping name	:	Toxic solid, organic, n.o.s. (pyrithione zinc)
Class	:	6.1
Packing group	:	III
Labels	:	6.1
Packing instruction (cargo aircraft)	:	677
Packing instruction (LQ)	:	Y645
Packing instruction (EQ)	:	E1
Packing instruction (passenger aircraft)	:	670
Packing instruction (LQ)	:	Y645
Remarks	:	This substance can be shipped under 'de minimi's quantities' provisions if the net quantity per inner package <= 1mL for liquids or <= 1g for solids and the net quantity per outer package does not exceed 100mL for liquids or 100g for solids and provided packaging provisions of IATA DGR §2.6.10 are met.

IMDG-Code

UN number	:	UN 2811
Proper shipping name	:	TOXIC SOLID, ORGANIC, N.O.S. (pyrithione zinc)
Class	:	6.1
Packing group	:	III
Labels	:	6.1
EmS Code	:	F-A, S-A
Marine pollutant	:	yes
Remarks	:	This substance can be shipped under 'de minimi's quantities' provisions if the net quantity per inner package <= 1mL for liquids or <= 1g for solids and the net quantity per outer package does not exceed 100mL for liquids or 100g for solids and provided packaging provisions of ADR/RID/ADN/IMDG

§3.5.1.4 are met.

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

Not applicable for product as supplied.

National Regulations

49 CFR

UN/ID/NA number	:	UN 2811
Proper shipping name	:	Toxic solids, organic, n.o.s. (pyrithione zinc)
Class	:	6.1
Packing group	:	III
Labels	:	6.1
ERG Code	:	154
Marine pollutant	:	no
Remarks	:	This substance can be shipped under 'de minimi's quantities' provisions if the net quantity per inner package <= 1mL for liquids or <= 1g for solids and the net quantity per outer package does not exceed 100mL for liquids or 100g for solids and provided packaging provisions of 49 CFR 173.4b are met.

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 : The following components are subject to reporting levels established by SARA Title III, Section 313:

pyrithione zinc	13463-41-7	100 %

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 112 (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 contains the following toxic pollutants listed under the U.S. Clean Water Act Section 307

pyrithione zinc	13463-41-7	100 %

Massachusetts Right To Know

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

Pennsylvania Right To Know

pyrithione zinc	13463-41-7	90 - 100 %

New Jersey Right To Know

pyrithione zinc	13463-41-7	90 - 100 %

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

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

REACH	: On the inventory, or in compliance with the inventory
	: pyrithione zinc
EINECS	: On the inventory, or in compliance with the inventory
CH INV	: On the inventory, or in compliance with the inventory
TSCA	: On TSCA Inventory
DSL	: All components of this product are on the Canadian DSL
AICS	: On the inventory, or in compliance with the inventory
NZIoC	: On the inventory, or in compliance with the inventory
ENCS	: On the inventory, or in compliance with the inventory
ISHL	: On the inventory, or in compliance with the inventory
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
	: 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:
	: Danger

: Corrosive

: Causes irreversible eye damage.

: May be fatal if swallowed.

: Harmful if absorbed through the skin or inhaled.

: Toxic to aquatic organisms.

: Do not get into eyes, on skin, or on clothing.

: Do not breath dust.

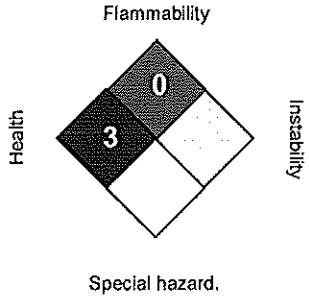
Inventories

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

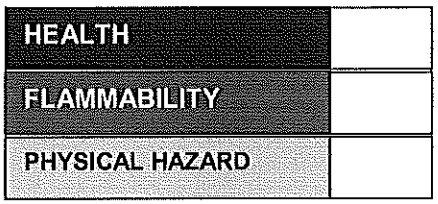
SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:



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

Revision Date : 2017/07/23

Date and Number Formats

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

Date:	Dec 31th, 2012	as	2012/12/31
Numbers:	123456,78	as	123,456.78

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1.40	2017/07/23	100000003618	Date of first issue: 2014/08/27

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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