

MSDS ATTACHMENT

PLEASE ATTACH THIS COMPLETED SHEET TO THE MSDS FOR :

PRODUCT :

BONDERITE M-ZN 880 MU

DATE :

(MSDS date)

12.05.2022

1. Manufacturer/Supplier :

PPS Industries Limited
86 Hugo Johnston Drive, Auckland
New Zealand
P.O.Box 12823, Penrose, Auckland 1642
Phone : 64 9 579-1001
Facsimile : 64 9 579-9497
Emergency Phone : 0800 657-894
Website: www.ppsindustries.co.nz

Emergency Information :

National Poison Centre 0800 764-766
Chemcall 24/7 Emergency Response Service : 0800 243-622

13. Disposal Considerations :

Product

Recommendation - Consult local or national regulations to ensure proper disposal.

Packaging

Disposal must be made according to official regulations.

16. Other Information :

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.



Safety Data Sheet

Page 1 of 10

BONDERITE M-ZN 880 MU ZINC PHOSPHATE MAKE UP
known as Bonderite 880 Mu 35Kg

SDS No. : 429676

V001.4

Revision: 12.05.2022

printing date: 14.09.2023

SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product name:	BONDERITE M-ZN 880 MU ZINC PHOSPHATE MAKE UP known as Bonderite 880 Mu 35Kg
Intended use:	Phosphating Products for Metals
Supplier:	Henkel New Zealand Ltd 2 Allens Rd Auckland, 2013 New Zealand Phone: +64 (9) 272-6710
Emergency information:	24 HOUR EMERGENCY CONTACT NUMBER 0800 243 622

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

Classified as Dangerous Goods under the Land Transport Rule: Dangerous Goods 2005.

Classified as hazardous under the New Zealand Hazardous Substances and New Organisms Act (HSNO).

GHS Classification:

<u>Hazard Class</u>	<u>Hazard Category</u>	<u>Route of Exposure</u>
Corrosive to metals	Category 1	
Acute toxicity	Category 4	Inhalation
Skin corrosion	Sub-category 1A	
Skin corrosion/irritation	Category 1	
Serious eye damage/eye irritation	Category 1	
Serious eye damage/eye irritation	Category 1	
Acute hazards to the aquatic environment	Category 2	
Chronic hazards to the aquatic environment	Category 3	

Hazard pictogram:



Signal word:

Danger

Hazard statement(s):	H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage. H332 Harmful if inhaled. H401 Toxic to aquatic life. H412 Harmful to aquatic life with long lasting effects.
Precautionary Statement(s):	
Prevention:	P234 Keep only in original packaging. P261 Avoid breathing mist/vapours. P264 Wash hands thoroughly after handling. 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+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. P304+P340+P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. P305+P351+P338+P315 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. Get immediate medical advice/attention. P363 Wash contaminated clothing before reuse. P390 Absorb spillage to prevent material damage.
Storage:	P405 Store locked up. P406 Store in corrosive resistant container with a resistant inner liner.
Disposal:	P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

General chemical description: Mixture

Identity of ingredients:

Chemical ingredients	CAS-No.	Proportion
Nitric acid	7697-37-2	20- < 30 %
phosphoric acid	7664-38-2	10- < 20 %
Calcium dihydroxide	1305-62-0	3- < 10 %
zinc bis(dihydrogen phosphate)	13598-37-3	1- < 10 %
non hazardous ingredients~		30- <= 60 %

SECTION 4 FIRST AID MEASURES

Ingestion:	Rinse mouth, do not induce vomiting, consult a doctor.
Skin:	Remove contaminated clothing and footwear. Rinse immediately with plenty of running water (for 10 minutes), seek medical attention from a specialist.
Eyes:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get immediate medical attention.
Inhalation:	If inhaled, immediately remove the affected person to fresh air. Delayed effects possible after inhalation. Get medical attention.

First Aid facilities: Eye wash and safety shower
Normal washroom facilities

Medical attention and special treatment: Treat symptomatically.

SECTION 5. FIRE FIGHTING MEASURES

Suitable extinguishing media: Water spray (fog), foam, dry chemical or carbon dioxide.

Improper extinguishing media: High pressure waterjet.

Decomposition products in case of fire: Thermal decomposition can lead to release of irritating gases and vapors.
Carbon monoxide.
Carbon dioxide.
Oxides of phosphorus.
Oxides of nitrogen.

Particular danger in case of fire: May react with metals to form flammable hydrogen gas.

Special protective equipment for fire-fighters: Fire fighters should wear full-face, self contained breathing apparatus and impervious protective clothing. Fire fighters should avoid inhaling any combustion products.

Additional fire fighting advice: In case of fire, keep containers cool with water spray.
Collect contaminated fire fighting water separately. It must not enter drains.

Hazchem code: 2X

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Keep unprotected persons away.
Ensure adequate ventilation.
Avoid skin and eye contact.
See advice in section 8
Wear impervious gloves and chemical splash goggles.

Environmental precautions: Do not empty into drains / surface water / ground water.

Clean-up methods: Neutralize with lime milk
Soak up with inert absorbent.
Dispose of according to Federal, State and local governmental regulations.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling: Use only in well-ventilated areas.
Do not inhale vapors and fumes.
Avoid skin and eye contact.
Wear suitable protective clothing, gloves and eye/face protection.

Conditions for safe storage: Store only in the original container.
Keep container tightly sealed.
Store in a cool, well-ventilated place.
Isolate from incompatible substances.
Must be stored in the facility for the dangerous goods

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Workplace exposure standards:

Ingredient [Regulated substance]	form of exposure	TWA (ppm)	TWA (mg/m3)	Ceiling	STEL (ppm)	STEL (mg/m3)
NITRIC ACID 7697-37-2		2	5.2	-	-	-
NITRIC ACID		-	-	-	4	10
PHOSPHORIC ACID 7664-38-2			1	-	-	-
CALCIUM HYDROXIDE 1305-62-0			5	-	-	-

Biological Exposure Indices:

None

Engineering controls:

Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product.

Eye protection:

For eye protection, use tightly fitted safety goggles and a face-shield

Skin protection:

Wear suitable protective clothing.
Suitable protective gloves.
Use of protective coveralls and long sleeves is recommended.
Please note that in practice the working life of chemical resistant gloves may be considerably reduced as a result of many influencing factors (e.g. temperature). Suitable risk assessment should be carried out by the end user. If signs of wear and tear are noticed then the gloves should be replaced.

Respiratory protection:

If inhalation risk exists, wear a respirator or air supplied mask complying with the requirements of AS/NZS 1715 and AS/NZS 1716.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	green liquid
Odor:	sour/acid
Specific gravity:	1.47 - 1.49
Density:	1.47 - 1.49 g/cm3

SECTION 10. STABILITY AND REACTIVITY

Stability:

Stable under normal conditions of temperature and pressure.

Conditions to avoid:

Excessive heat.

Incompatible materials:

Incompatible with oxidising agents.
Reacts with metals: Heat generated and hydrogen released.
Reacts with alkalis: Heat generated.

Hazardous decomposition products:

Thermal decomposition can lead to release of irritating gases and vapors.

carbon monoxide
Carbon dioxide.
Oxides of phosphorus.
Oxides of nitrogen.

SECTION 11 TOXICOLOGICAL INFORMATION**Health Effects:****Ingestion:**

Harmful if swallowed.
May cause irritation to the gastrointestinal tract, mouth and mucous membranes.

Skin:

Corrosive to skin.
May cause severe irritation, pain and possibly chemical burns.

Eyes:

Causes serious eye damage.
Contact with the eyes may cause moderate to severe eye injury. Eye contact may result in corneal injury. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Inhalation:

Inhalation of product mist may cause irritation of the nose, throat, and respiratory tract.

Acute toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Nitric acid 7697-37-2	Acute toxicity estimate (ATE)	2.65 mg/l	inhalation			Expert judgement
phosphoric acid 7664-38-2	Acute toxicity estimate (ATE)	1,500 mg/kg	oral			Expert judgement
Calcium dihydroxide 1305-62-0	LD50 LD50	> 7,340 mg/kg > 2,500 mg/kg	oral dermal		rat rat	OECD Guideline 401 (Acute Oral Toxicity) OECD Guideline 402 (Acute Dermal Toxicity)
zinc bis(dihydrogen phosphate) 13598-37-3	Acute toxicity estimate (ATE) LD50 LD50	500 mg/kg 300 - 2,000 mg/kg > 2,000 mg/kg	oral oral dermal		rat rabbit	Expert judgement OECD Guideline 423 (Acute Oral toxicity) OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Nitric acid 7697-37-2	corrosive			not specified
phosphoric acid 7664-38-2	corrosive	24 h	rabbit	not specified
Calcium dihydroxide 1305-62-0	irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
zinc bis(dihydrogen phosphate) 13598-37-3	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Nitric acid 7697-37-2	corrosive			not specified
Calcium dihydroxide 1305-62-0	Category 1 (irreversible effects on the eye)		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
zinc bis(dihydrogen phosphate) 13598-37-3	not sensitising	Guinea pig maximisa- tion test	guinea pig	OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Nitric acid 7697-37-2	negative negative negative	bacterial reverse mutation assay (e.g Ames test) in vitro mammalian chromosome aberration test mammalian cell gene mutation assay	with and without with and without with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay) OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
phosphoric acid 7664-38-2	negative negative negative	bacterial reverse mutation assay (e.g Ames test) in vitro mammalian chromosome aberration test mammalian cell gene mutation assay	with and without with and without with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay) OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Calcium dihydroxide 1305-62-0	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
zinc bis(dihydrogen phosphate) 13598-37-3	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		EU Method B.13/14 (Mutagenicity)
zinc bis(dihydrogen phosphate) 13598-37-3	negative	intraperitoneal		mouse	Micronucleus assay

Repeated dose toxicity:

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
Nitric acid 7697-37-2	NOAEL=1,500 mg/kg	oral; gavage	28 ddaily	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
phosphoric acid 7664-38-2	NOAEL=250 mg/kg	oral; gavage	6 wdaily	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
zinc bis(dihydrogen phosphate) 13598-37-3	NOAEL=31.52 mg/kg	oral; feed	13 weeksdaily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

SDS No.: 429676
V001.4

BONDERITE M-ZN 880 MU ZINC PHOSPHATE MAKE UP
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Page 7 of 10

SECTION 12. ECOLOGICAL INFORMATION

General ecological information:

Do not empty into drains / surface water / ground water.

Ecotoxicity:

Toxic to aquatic life with long lasting effects.

Toxicity:

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Nitric acid 7697-37-2	LC50	12.5 mg/l	Fish	96 h	Salmo gairdneri (new name: Oncorhynchus mykiss)	OECD Guideline 203 (Fish, Acute Toxicity Test) other guideline:
Nitric acid 7697-37-2	EC50	4.6 mg/l	Daphnia	48 h	Ceriodaphnia dubia	
Nitric acid 7697-37-2	EC50	> 1,000 mg/l	Bacteria	3 h	activated sludge	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
phosphoric acid 7664-38-2	LC50	> 100 mg/l	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
phosphoric acid 7664-38-2	EC50	> 100 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
phosphoric acid 7664-38-2	EC50	> 100 mg/l	Algae	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
phosphoric acid 7664-38-2	NOEC	100 mg/l	Algae	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
phosphoric acid 7664-38-2	IC50	270 mg/l	Bacteria	3 h	activated sludge	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Calcium dihydroxide 1305-62-0	LC50	50.6 mg/l	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Calcium dihydroxide 1305-62-0	EC50	49.1 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Calcium dihydroxide 1305-62-0	EC50	184.57 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Calcium dihydroxide 1305-62-0	NOEC	48 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Calcium dihydroxide 1305-62-0	EC20	229.2 mg/l	Bacteria	3 h	activated sludge of a predominantly domestic sewage	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) not specified
zinc bis(dihydrogen phosphate) 13598-37-3	LC50	780 µg/l	Fish	96 h	Pimephales promelas	
zinc bis(dihydrogen phosphate) 13598-37-3	EC50	> 330 - 660 µg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
zinc bis(dihydrogen phosphate) 13598-37-3	NOEC	24 µg/l	Algae	3 d	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
zinc bis(dihydrogen phosphate) 13598-37-3	IC50	136 µg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
zinc bis(dihydrogen phosphate) 13598-37-3	EC0	0.69 mg/l	Bacteria	30 min		not specified

SECTION 13. DISPOSAL CONSIDERATIONS

- Waste disposal of product:** In consultation with the responsible local authority, must be subjected to special treatment: Neutralisation
- Recommended cleanser:** Clean the packaging with water.
- Disposal for uncleaned package:** Use packages for recycling only when totally empty.
Dispose of in accordance with local and national regulations.

SECTION 14. TRANSPORT INFORMATION

Dangerous Goods information:

Land Transport:

Classified as Dangerous Goods under the Land Transport Rule: Dangerous Goods 2005.

Land Transport:

UN no.: 3264
Proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Phosphoric acid,Nitric acid)
Class or division: 8
Packing group: II
Hazchem code: 2X

Marine transport IMDG:

UN no.: 3264
Proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Phosphoric acid,Nitric acid)
Class or division: 8
Packing group: II
EmS: F-A ,S-B
Seawater pollutant: -

Air transport IATA:

UN no.: 3264
Proper shipping name: Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric acid,Nitric acid)
Class or division: 8
Packing group: II
Packing instructions (passenger) 851
Packing instructions (cargo) 855

SECTION 15. REGULATORY INFORMATION

New Zealand regulatory information:

Classified as hazardous under the New Zealand Hazardous Substances and New Organisms Act (HSNO).

HSNO Approval Number: HSR002609

Site and Storage: Refer to the site and storage requirements for this Group Standard.
Refer to the HSNO controls for approved hazardous substances.

NZIoC: Compliant for NZIOC

SECTION 16. OTHER INFORMATION

Abbreviations/acronyms:

IMDG: International Maritime Dangerous Goods code
STEL - Short term exposure limit
IATA-DGR: International Air Transport Association – Dangerous Goods Regulations
TWA - Time weighted average
HSNO - Hazardous Substances and New Organisms
GHS: Globally Harmonized System
CAS: Chemical Abstracts Service
LD 50: Lethal Dose 50%
LC 50: Lethal Concentration 50%

Reason for issue:

Reviewed SDS. Reissued with new date. involved chapters: 1 - 16

Date of previous issue:

01.06.2017

Disclaimer:

The percentage weight (% w/w) of ingredients is not to be taken as a specification guaranteed by Henkel New Zealand Limited, but only as an approximate guide to the content of hazardous ingredients in the material. The information contained herein does not constitute a guarantee by Henkel New Zealand Limited concerning the properties of the material.

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