SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product Name:	**Prodder FH Mk2 Red Power Pack only**
Product Use:	Replacement battery pack for Farmhand Red Rechargeable Prodder
Ag Category:	Farm – Dairy and Beef – Cattle Handling – Prodder – Farmhand - Battery
Bar Code:	9417027305642
Product Weight:	0.400
Product Volume:	0.058
Restriction of Use in NZ:	Refer to Section 15
New Zealand Supplier:	**Shoof International Ltd**
Address:	224 Laurent Road Cambridge 3493, New Zealand
Telephone:	+64 7 827 3902
Emergency No:	**0800 764 766 (National Poison Centre)**
Australian Supplier:	**Shoof International PTY Ltd** 1 International Square Tullamarine VIC 3043, Australia
Tel:	+61 3 9907 3000
Australian Emergency No	**13 11 26 (National Poison Centre)**
Date of SDS Preparation:	18 December 2023

Section 2. Hazards Identification

Australia:
NOT Classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia

New Zealand:
This substance is NOT hazardous according to the EPA Hazardous Substances (Classification) Notice 2020 - This product is considered as a Manufactured Article.

IMPORTANT NOTE: The battery cells should not be opened or exposed to heat because exposure to the above
ingredients contained within could be harmful under some circumstances. May be fatal if swallowed, inhaled or absorbed through skin.

Inhalation: During Normal use inhalation is an unlikely route of exposure due to containment of hazardous materials within the battery case. However, should the batteries be exposed to extreme heat or pressure causing a breach in the battery cell case, cadmium dusts and fumes may be emitted. Inhalation of cadmium dusts or fumes may cause throat dryness, respiratory irritation, headache, nausea, vomiting, chest pain, extreme restlessness and irritability, pneumonitis, and bronchopneumonia. In the case high concentration exposure (e.g., above 1 to 5 mg/m^3 during an eight-hour period) death may occur within several days after the exposure.

Ingestion: If the battery case is breached in the digestive tract, the electrolyte may cause localized burns. Ingestion of cadmium compounds may result in increased salivation, choking, nausea, persistent vomiting, diarrhea, abdominal pain, anemia, tenesmus, and kidney dysfunction.
Skin Absorption: No evidence of adverse effects from available data.
Skin Contact: Exposure to the electrolyte contained inside the battery may result in chemical burns. Exposure to nickel may cause dermatitis in some sensitive individuals.
Eye Contact: Exposure to the electrolyte contained inside the battery may result in severe irritation and chemical burns.

Section 3. Composition / Information on Hazardous Ingredients

Ingredients	Wt%	CAS NUMBER.
Cadmium	12 - 28	7440-43-9
Cadmium hydroxide	12 - 28	21041-95-2
Nickel (powder)	9 - 18	7440-02-0
Nickel hydroxide	7 - 13	12054-48-7
Potassium	<4	1310-58-3
Nylon	<3	N/A
Steel	13 - 14	N/A
Other	<2	N/A

Section 4. First Aid Measures

Under normal operating condition, contents of the cells are in sealed (polymer pouch/metal can or cylinder) condition and pose no threat to the user.
Exposure to the cell internal content happens under abusive conditions.

If in Eyes — Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

If on Skin — In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse.
Get medical attention immediately

If Swallowed — Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person.

If Inhaled — If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do not give mouth to mouth resuscitation. CALL A PHYSICIAN IMMEDIATELY.

Most important symptoms and effects, both acute and delayed
Symptoms: None known under normal conditions.

Section 5. Fire Fighting Measures

Hazard Type	Non Flammable.
Hazards from decomposition products	Burning may produce carbon monoxide, carbon dioxide, nitrogen oxides.
Suitable Extinguishing media	Any class of extinguishing medium may be used on the batteries or their packing material.
Precautions for firefighters and special protective clothing	Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion or decomposition. Exposure to temperatures of above 100^0C can cause evaporation of the liquid content of the potassium hydroxide electrolyte resulting in the rupture of the cell. Potential for

	exposure to cadmium fumes during fire; use self-contained breathing apparatus.
HAZCHEM CODE	**2Y**

Section 6. Accidental Release Measures

Personal precautions:
Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

Environmental precautions:
Do not flush to sewer

Spill and Disposal procedures:
Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Dispose of waste safely, refer to Section 13.

Section 7. Handling and Storage

Precautions for Handling:
Accidental short circuit will bring high temperature elevation to the battery as well as shorten the battery life. Be sure to avoid prolonged short circuit since the heat can burn attendant skin and even rupture of the battery cell case. Batteries packaged in bulk containers should not be shaken. Metal covered tables or belts used for assembly of batteries into devices can be the source of short circuits; apply insulating material to assembly work surface.

Precautions for Soldering/Welding:
If soldering or welding to the case of the battery is required, consult LND Battery Industrial Co., Ltd. for proper precautions to prevent seal damage or external short circuit.

Precautions for Charging:
This battery is designed for recharging. A loss of voltage and capacity of batteries due to self-discharge during prolonged storage is unavoidable. Charge battery before use. Observe the specified charge rate since higher rates can cause a rise in internal gas pressure, which may result in damaging heat generation or cell rupture and/or venting.

Precautions for Storage:
Store in a cool place, but prevent condensation on cell or battery terminals. Elevated temperatures may result in reduced battery life. Optimum storage temperatures are between –0.55^{0}C and 35^{0}C.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance		**TWA ppm**	**TWA mg/m³**	**STEL ppm**	**STEL mg/m³**
Cadmium and compounds as Cd	[7440-43-9]	-	0.004	-	-
Nickel, elemental or metallic	[7440-02-0]	-	0.005	-	-
Potassium hydroxide	[1310-58-3]			Ceiling	2

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply.
New Zealand: Workplace Exposure Standards and Biological Exposure Indices APRIL 2022 13TH EDITION.
AUST: Workplace Exposure Standards for Airborne Contaminants Oct 2022.

Engineering Controls
A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

Personal Protection Equipment

Eyes	Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area
Skin	Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
Respiratory	If the exposure limit is exceeded and engineering controls are not feasible, wear a supplied air, full-face piece respirator, airline hood, or full-face piece self-contained breathing apparatus. Breathing air quality must meet the requirements of the OSHA respiratory protection standard (29CFR1910.134).
General	Provide clean work clothes daily to workers who regularly use this material. Wash hands before eating and do not eat, drink, or smoke in workplace.

Section 9 Physical and Chemical Properties

The product is a manufactured article. The battery cell is contained in a hermetically sealed case, designed to withstand temperatures and pressure encountered during normal use. As a result, during normal use, hazardous materials are fully contained inside the battery cell. However, if exposed to a fire, explosion, extreme abuse, misuse, or improper disposal that results in breaching of the battery cell case, hazardous materials may be released. The following physical data relating to the hazardous materials contained within the battery cell are provided for the user's information.

Appearance	Rechargeable Battery Case
Colour	Red
Odour	Not available
Odour Threshold	Not available
pH	Not available
Boiling Point	Not available
Melting Point	Not available
Freezing Point	Not available
Flash Point	Not available
Flammability	Not available
Upper and Lower Explosive Limits	Not available
Vapour Pressure	Not available
Vapour Density	Not available
Specific Gravity (H_2O)	Not available
Water Solubility	Not available
Partition Coefficient:	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Kinematic Viscosity	Not available
Particle Characteristics	Not available

Section 10. Stability and Reactivity

Stability of Substance	Stable under ordinary conditions of use and storage. Discolors on exposure to light.

Possibility of hazardous reactions	Not available
Conditions to Avoid	Heat, flames, ignition sources and incompatibles.
Incompatible Materials	Strong acids and strong oxidizers, albumin, solutions of iron, zinc, aluminum, toluene diisocyanate, and alkalis. Ignites spontaneously in the presence of red fuming nitric acid, and with sodium.
Hazardous Decomposition Products	Burning may produce carbon monoxide, carbon dioxide, nitrogen oxides.

Section 11 Toxicological Information

Acute Effects:

Swallowed	Not applicable.
Dermal	Not applicable.
Inhalation	Not applicable.
Eye	Not applicable.
Skin	Not applicable.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	Not applicable.

Oral rat LD50: 250 mg/kg; skin rabbit LD50: 820 mg/kg; inhalation mouse LC50: 175 ppm (7 hours); irritation skin rabbit: 20 mg/24H moderate; irritation eye rabbit 102 mg severe. Investigated as a tumorigen, mutagen, and reproductive effector

Section 12. Ecotoxicological Information

When released into the soil, this material is expected to readily biodegrade. When released into the soil, this material may leach into groundwater. When released into the soil, this material may evaporate to a moderate extent. When released into water, this material is expected to readily biodegrade. When released into water, this material is expected to have a half-life between 10 and 30 days. This material has an experimentally-determined bio concentration factor (BCF) of less than 100. This material is not expected to significantly bio accumulate. When released into the air, this material is expected to be readily degraded by reaction with photo chemically produced hydroxyl radicals. When released into the air, this material is expected to be readily degraded by photolysis. When released into the air, this material is expected to have a half-life of less than 1 day. When released into the air, this material is not expected to adversely affect the ozone layer. Environmental Toxicity: This material is expected to be very toxic to terrestrial life. This material is expected to be very toxic to aquatic life. The LC50/96-hour values for fish are between 10 and 100 mg/l. The EC50/48-hour values for daphnia are less than 1 mg/l.

Section 13. Disposal Considerations

Disposal Method:
Disposal Method:
Dispose/Recycle according to the applicable municipal, state and federal regulations.
Do not dispose in household or commercial waste bin.

Precautions or methods to avoid: Avoid release to the environment.

Section 14 Transport Information

This product is classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code) (7th edition).

This product is classified as a Dangerous Good for transport in NZ; NZS 5433:2020

Road, Rail, Sea and Air Transport

Battery Pack:

UN No	3496
Class - Primary	9
Packing Group	N/A
Proper Shipping Name	BATTERIES, NICKEL-METAL HYDRIDE
Marine Pollutant	No
Special Provisions	117, 963

Section 15 Regulatory Information

Australia:
NOT Classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia

Not classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

New Zealand:
This substance is NOT hazardous according to the EPA Hazardous Substances (Classification) Notice 2020 - This product is considered as a Manufactured Article.

Section 16 Other Information

Glossary

EC_{50}	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
HSW	Health and Safety at Work.
LC_{50}	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD_{50}	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

References:
Australia:

1. Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice.
2. Standard for the Uniform Scheduling of Medicines and Poisons.
3. Australian Code for the Transport of Dangerous Goods by Road & Rail.
4. Model Work Health and Safety Regulations, Schedule 10: Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.
5. Workplace exposure standards for airborne contaminants, Safe work Australia.
6. American Conference of Industrial Hygienists (ACGIH).
7. Globally Harmonised System of classification and labelling of chemicals.

New Zealand:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices APRIL 2022 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2020
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer

This document has been prepared by TCC (NZ) Ltd and serves as the suppliers Safety Data Sheet ('SDS'). It is based on information concerning the product which has been provided to TCC (NZ) Ltd or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer. While TCC (NZ) have taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, TCC (NZ) Ltd accept no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS

The information herein is given in good faith, but no warranty, express or implied is made.

Please contact the Australian Manufacturer or New Zealand distributor, if further information is required.

Issue Date: 18 December 2023 Review Date: 18 December 2028