

# Paslode - STOCKade Nickel Cadmium Battery

## ITW Paslode

Chemwatch: 4793-91  
Version No: 8.1  
Safety Data Sheet according to the Health and Safety at Work (Hazardous Substances) Regulations 2017

Chemwatch Hazard Alert Code: 0

Issue Date: 04/08/2021  
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L.GHS.NZL.EN.E

### SECTION 1 Identification of the substance / mixture and of the company / undertaking

#### Product Identifier

Product name	Paslode - STOCKade Nickel Cadmium Battery
Chemical Name	Not Applicable
Synonyms	Product Code: B20544E, B20542, B30150, A12910
Proper shipping name	BATTERIES, NICKEL-METAL HYDRIDE
Chemical formula	Not Applicable
Other means of identification	Not Available

#### Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	For the battery cell, chemical materials are stored in a hermetically sealed metal case, designed to withstand temperatures and pressures encountered during normal use. Sealed battery is Nonhazardous.
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#### Details of the manufacturer or supplier of the safety data sheet

Registered company name	ITW Paslode
Address	41 Poland Road Glenfield Auckland 0627 New Zealand
Telephone	+64 9 477 3000
Fax	+64 9 477 3001
Website	<a href="http://www.paslode.co.nz">www.paslode.co.nz</a>
Email	tech@paslode.co.nz

#### Emergency telephone number

Association / Organisation	NZ Poisons Centre
Emergency telephone numbers	0800 POISON
Other emergency telephone numbers	0800 764 766

### SECTION 2 Hazards identification

#### Classification of the substance or mixture

Classification [1]	Hazardous to the Aquatic Environment Long-Term Hazard Category 4
Legend:	1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI
Determined by Chemwatch using GHS/HSNO criteria	9.1D

#### Label elements

Hazard pictogram(s)	Not Applicable
Signal word	Not Applicable

#### Hazard statement(s)

H413	May cause long lasting harmful effects to aquatic life.
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#### Precautionary statement(s) Prevention

P273	Avoid release to the environment.
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#### Precautionary statement(s) Response

Not Applicable

#### Precautionary statement(s) Storage

Not Applicable

#### Precautionary statement(s) Disposal

P501	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.
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## SECTION 3 Composition / information on ingredients

### Substances

See section below for composition of Mixtures

### Mixtures

CAS No	%[weight]	Name
Not Available		hermetically sealed case containing:
7439-89-6	20-65	<u>iron</u>
7440-02-0	15-40	<u>nickel</u>
7440-43-9	10-40	<u>cadmium</u>
7440-48-4	0-3	<u>cobalt</u>
1333-86-4	0-1	<u>carbon black</u>
1310-73-2	}	<u>sodium hydroxide</u>
1310-66-3	}	<u>lithium hydroxide</u>
Not Available		note: hazards only apply if they are opened, crushed,
Not Available		burned or exposed to high temperature.
<b>Legend:</b>	1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L; * EU IOELVs available	

## SECTION 4 First aid measures

### Description of first aid measures

<b>Eye Contact</b>	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Wash out immediately with fresh running water.</li> <li>▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.</li> <li>▶ Seek medical attention without delay; if pain persists or recurs seek medical attention.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
<b>Skin Contact</b>	<p>If skin or hair contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Seek medical attention in event of irritation.</li> </ul>
<b>Inhalation</b>	<ul style="list-style-type: none"> <li>▶ If fumes, aerosols or combustion products are inhaled remove from contaminated area.</li> <li>▶ Other measures are usually unnecessary.</li> </ul>
<b>Ingestion</b>	<ul style="list-style-type: none"> <li>▶ Not considered a normal route of entry.</li> </ul> <p>For advice, contact a Poisons Information Centre or a doctor at once.  <b>Urgent hospital treatment is likely to be needed.</b></p>

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

Treat symptomatically.

## SECTION 5 Firefighting measures

### Extinguishing media

- ▶ Water spray or fog.
- ▶ Foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).
- ▶ Carbon dioxide.

### Special hazards arising from the substrate or mixture

<b>Fire Incompatibility</b>	None known.
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### Advice for firefighters

<b>Fire Fighting</b>	<ul style="list-style-type: none"> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Wear breathing apparatus plus protective gloves in the event of a fire.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water courses.</li> <li>▶ Use fire fighting procedures suitable for surrounding area.</li> <li>▶ <b>DO NOT</b> approach containers suspected to be hot.</li> <li>▶ Cool fire exposed containers with water spray from a protected location.</li> <li>▶ If safe to do so, remove containers from path of fire.</li> <li>▶ Equipment should be thoroughly decontaminated after use.</li> </ul>
<b>Fire/Explosion Hazard</b>	<ul style="list-style-type: none"> <li>▶ Non combustible.</li> <li>▶ Not considered a significant fire risk, however containers may burn.</li> </ul> <p>May emit corrosive fumes.</p>

## SECTION 6 Accidental release measures

### Personal precautions, protective equipment and emergency procedures

See section 8

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## Environmental precautions

See section 12

## Methods and material for containment and cleaning up

<b>Minor Spills</b>	Dilute the leaked electrolyte with water and neutralize with diluted sulfuric acid [Mfr]. Collect and keep loose batteries electrically isolated from each other. <ul style="list-style-type: none"> <li>▶ Clean up all spills immediately.</li> <li>▶ Secure load if safe to do so.</li> <li>▶ Bundle/collect recoverable product.</li> <li>▶ Collect remaining material in containers with covers for disposal.</li> </ul>
<b>Major Spills</b>	Dilute the leaked electrolyte with water and neutralize with diluted sulfuric acid [Mfr]. <ul style="list-style-type: none"> <li>▶ Clean up all spills immediately.</li> <li>▶ Secure load if safe to do so.</li> <li>▶ Bundle/collect recoverable product.</li> <li>▶ Collect remaining material in containers with covers for disposal.</li> </ul>

Personal Protective Equipment advice is contained in Section 8 of the SDS.

## SECTION 7 Handling and storage

## Precautions for safe handling

<b>Safe handling</b>	Avoid short circuiting the cell. Avoid mechanical damage of the cell. Do not open or disassemble. Do not connect the positive terminal to the negative terminal with electrical wire or chain. Avoid polarity reverse connection when installing the battery to an instrument. Do not wet the battery with water, seawater or acid; or expose to strong oxidizer. Keep the battery away from heat and fire. Do not disassemble or reconstruct the battery; or solder the battery directly. Do not give a mechanical shock or deform. Use good occupational work practice. Observe manufacturer's storage and handling recommendations contained within this SDS. Avoid physical damage to containers.
<b>Other information</b>	<ul style="list-style-type: none"> <li>▶ Keep dry.</li> <li>▶ Store under cover.</li> <li>▶ Protect containers against physical damage.</li> <li>▶ Observe manufacturer's storage and handling recommendations contained within this SDS.</li> </ul>

## Conditions for safe storage, including any incompatibilities

<b>Suitable container</b>	Carton. Insulative and tear-proof materials. Store in original containers.
<b>Storage incompatibility</b>	Conductive materials and water. Do not store cells loose. <ul style="list-style-type: none"> <li>▶ Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.</li> </ul>

## SECTION 8 Exposure controls / personal protection

## Control parameters

## Occupational Exposure Limits (OEL)

## INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
New Zealand Workplace Exposure Standards (WES)	iron	Inhalable dust (not otherwise classified)	10 mg/m <sup>3</sup>	Not Available	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	iron	Respirable dust (not otherwise classified)	3 mg/m <sup>3</sup>	Not Available	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	nickel	Nickel, elemental or metallic respirable dust	0.005 mg/m <sup>3</sup>	Not Available	Not Available	carcinogen category 2 - Suspected human carcinogen (sen) - Sensitiser
New Zealand Workplace Exposure Standards (WES)	cadmium	Respirable dust (not otherwise classified)	3 mg/m <sup>3</sup>	Not Available	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	cadmium	Inhalable dust (not otherwise classified)	10 mg/m <sup>3</sup>	Not Available	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	cadmium	Cadmium and compounds, as Cd respirable dust	0.004 mg/m <sup>3</sup>	Not Available	Not Available	carcinogen category 1 - Known or presumed human carcinogen
New Zealand Workplace Exposure Standards (WES)	cobalt	Cobalt metal dust and fume, as Co	0.02 mg/m <sup>3</sup>	Not Available	Not Available	carcinogen category 2 - Suspected human carcinogen (bio) - Exposure can also be estimated by biological monitoring (skin) - Skin absorption (dsen) - Dermal sensitiser (rsen) - Respiratory sensitiser oto - Ototoxin
New Zealand Workplace Exposure Standards (WES)	carbon black	Carbon black	3 mg/m <sup>3</sup>	Not Available	Not Available	carcinogen category 2 - Suspected human carcinogen
New Zealand Workplace Exposure Standards (WES)	sodium hydroxide	Sodium hydroxide	Not Available	Not Available	2 mg/m <sup>3</sup>	Not Available
New Zealand Workplace Exposure Standards (WES)	lithium hydroxide	Lithium hydroxide	Not Available	1 ppm	Not Available	Not Available

## Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
iron	3.2 mg/m <sup>3</sup>	35 mg/m <sup>3</sup>	150 mg/m <sup>3</sup>

Continued...


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Ingredient	TEEL-1	TEEL-2	TEEL-3
nickel	4.5 mg/m3	50 mg/m3	99 mg/m3
cadmium	Not Available	Not Available	Not Available
cobalt	0.18 mg/m3	2 mg/m3	20 mg/m3
carbon black	9 mg/m3	99 mg/m3	590 mg/m3
sodium hydroxide	Not Available	Not Available	Not Available
lithium hydroxide	0.091 mg/m3	1 mg/m3	42 mg/m3
lithium hydroxide	0.16 mg/m3	1.8 mg/m3	74 mg/m3

Ingredient	Original IDLH	Revised IDLH
iron	Not Available	Not Available
nickel	10 mg/m3	Not Available
cadmium	9 mg/m3	Not Available
cobalt	20 mg/m3	Not Available
carbon black	1,750 mg/m3	Not Available
sodium hydroxide	10 mg/m3	Not Available
lithium hydroxide	Not Available	Not Available

## MATERIAL DATA

## Exposure controls

Appropriate engineering controls	General exhaust is adequate under normal operating conditions.
Individual protection measures, such as personal protective equipment	
Eye and face protection	None under normal operating conditions. <b>OTHERWISE:</b> ▶ Safety glasses.
Skin protection	See Hand protection below
Hands/feet protection	▶ Wear chemical protective gloves, e.g. PVC. ▶ Wear safety footwear or safety gumboots, e.g. Rubber
Body protection	See Other protection below
Other protection	None under normal operating conditions. If exposure to workplace dust is not controlled, respiratory protection is required; wear SAA approved dust respirator.

## Recommended material(s)

## GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

**"Forsberg Clothing Performance Index"**.

The effect(s) of the following substance(s) are taken into account in the **computer-generated** selection:

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Material	CPI
BUTYL	A
NAT+NEOPR+NITRILE	A
NATURAL RUBBER	A
NATURAL+NEOPRENE	A
NEOPRENE	A
NEOPRENE/NATURAL	A
NITRILE	A
NITRILE+PVC	A
PE	A
PE/EVAL/PE	A
PVC	A
SARANEX-23	A
SARANEX-23 2-PLY	A
TEFLON	A
VITON/CHLOROBUTYL	A

\* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

**NOTE:** As a series of factors will influence the actual performance of the glove, a final

## Respiratory protection

None under normal operating conditions.

selection must be based on detailed observation. -

\* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

#### Ansell Glove Selection

Glove — In order of recommendation
AlphaTec® Solvex® 37-185
AlphaTec® 38-612
AlphaTec® 58-008
AlphaTec® 58-530B
AlphaTec® 58-530W
AlphaTec® 58-735
AlphaTec® 79-700
AlphaTec® Solvex® 37-675
DermaShield™ 73-711
MICROFLEX® 63-864

The suggested gloves for use should be confirmed with the glove supplier.

## SECTION 9 Physical and chemical properties

### Information on basic physical and chemical properties

<b>Appearance</b>	Hermetically sealed cylindrical battery.		
<b>Physical state</b>	Manufactured	<b>Relative density (Water = 1)</b>	2.4-4.0
<b>Odour</b>	Not Available	<b>Partition coefficient n-octanol / water</b>	Not Available
<b>Odour threshold</b>	Not Available	<b>Auto-ignition temperature (°C)</b>	Not Applicable
<b>pH (as supplied)</b>	Not Applicable	<b>Decomposition temperature (°C)</b>	Not Available
<b>Melting point / freezing point (°C)</b>	Not Available	<b>Viscosity (cSt)</b>	Not Applicable
<b>Initial boiling point and boiling range (°C)</b>	Not Applicable	<b>Molecular weight (g/mol)</b>	Not Applicable
<b>Flash point (°C)</b>	Not Applicable	<b>Taste</b>	Not Available
<b>Evaporation rate</b>	Not Applicable	<b>Explosive properties</b>	Not Available
<b>Flammability</b>	Not Applicable	<b>Oxidising properties</b>	Not Available
<b>Upper Explosive Limit (%)</b>	Not Applicable	<b>Surface Tension (dyn/cm or mN/m)</b>	Not Applicable
<b>Lower Explosive Limit (%)</b>	Not Applicable	<b>Volatile Component (%vol)</b>	Not Available
<b>Vapour pressure (kPa)</b>	Not Applicable	<b>Gas group</b>	Not Available
<b>Solubility in water</b>	Immiscible	<b>pH as a solution (1%)</b>	Not Applicable
<b>Vapour density (Air = 1)</b>	Not Applicable	<b>VOC g/L</b>	Not Available

## SECTION 10 Stability and reactivity

<b>Reactivity</b>	See section 7
<b>Chemical stability</b>	Product is considered stable and hazardous polymerisation will not occur.
<b>Possibility of hazardous reactions</b>	See section 7
<b>Conditions to avoid</b>	See section 7
<b>Incompatible materials</b>	See section 7
<b>Hazardous decomposition products</b>	See section 5

## SECTION 11 Toxicological information

### Information on toxicological effects

<b>Inhaled</b>	Not normally a hazard due to non-volatile nature of product
<b>Ingestion</b>	Not normally a hazard due to physical form of product. The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion.
<b>Skin Contact</b>	Overexposure is unlikely in this form. The material can produce chemical burns following direct contact with the skin.
<b>Eye</b>	Not normally a hazard due to physical form of product. The material can produce chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating.

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<b>Chronic</b>	No toxic effects from unit packages. Small capacity cells may be swallowed in non-industrial situations. Cadmium compounds are present in the active electrochemical materials if liberated on deliberate destructive disassembly.	
<b>Paslode - STOCKade Nickel Cadmium Battery</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Not Available	Not Available
<b>iron</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Oral (Rat) LD50: 98600 mg/kg <sup>[2]</sup>	Not Available
<b>nickel</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Oral (Rat) LD50: 5000 mg/kg <sup>[2]</sup>	Eye: no adverse effect observed (not irritating) <sup>[1]</sup> Skin: no adverse effect observed (not irritating) <sup>[1]</sup>
<b>cadmium</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Inhalation(Rabbit) LC50: 0.028 mg/L4h <sup>[1]</sup> Oral (Rat) LD50: 225 mg/kg <sup>[2]</sup>	Not Available
<b>cobalt</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup> Inhalation(Rat) LC50: <=0.05 mg/l4h <sup>[1]</sup> Oral (Rat) LD50: ~550 mg/kg <sup>[1]</sup>	Eye: adverse effect observed (irritating) <sup>[1]</sup> Skin: no adverse effect observed (not irritating) <sup>[1]</sup>
<b>carbon black</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Dermal (rabbit) LD50: >2000 mg/kg <sup>[1]</sup> Oral (Rat) LD50: >2000 mg/kg <sup>[1]</sup>	Eye: no adverse effect observed (not irritating) <sup>[1]</sup> Skin: no adverse effect observed (not irritating) <sup>[1]</sup>
<b>sodium hydroxide</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Dermal (rabbit) LD50: 1350 mg/kg <sup>[2]</sup> Oral (Rabbit) LD50: 325 mg/kg <sup>[1]</sup>	Eye (rabbit): 0.05 mg/24h SEVERE Eye (rabbit):1 mg/24h SEVERE
		Eye (rabbit):1 mg/30s rinsed-SEVERE
		Eye: adverse effect observed (irritating) <sup>[1]</sup> Skin (rabbit): 500 mg/24h SEVERE
		Skin: adverse effect observed (corrosive) <sup>[1]</sup>
<b>lithium hydroxide</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Inhalation(Rat) LC50: 0.96 mg/L4h <sup>[2]</sup> Oral (Rat) LD50: 210 mg/kg <sup>[2]</sup>	Eye: adverse effect observed (irritating) <sup>[1]</sup> Skin: adverse effect observed (corrosive) <sup>[1]</sup>
<b>Legend:</b>	1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances	

<b>NICKEL</b>	Oral (rat) TDLo: 500 mg/kg/5D-I Inhalation (rat) TCLo: 0.1 mg/m <sup>3</sup> /24H/17W-C Tenth Annual Report on Carcinogens: Substance anticipated to be Carcinogen [National Toxicology Program: U.S. Dep. of Health & Human Services 2002]
<b>COBALT</b>	Allergic reactions which develop in the respiratory passages as bronchial asthma or rhinoconjunctivitis, are mostly the result of reactions of the allergen with specific antibodies of the IgE class and belong in their reaction rates to the manifestation of the immediate type. In addition to the allergen-specific potential for causing respiratory sensitisation, the amount of the allergen, the exposure period and the genetically determined disposition of the exposed person are likely to be decisive. Factors which increase the sensitivity of the mucosa may play a role in predisposing a person to allergy. They may be genetically determined or acquired, for example, during infections or exposure to irritant substances. Immunologically the low molecular weight substances become complete allergens in the organism either by binding to peptides or proteins (haptens) or after metabolism (prohaptens). Particular attention is drawn to so-called atopic diathesis which is characterised by an increased susceptibility to allergic rhinitis, allergic bronchial asthma and atopic eczema (neurodermatitis) which is associated with increased IgE synthesis. Exogenous allergic alveolitis is induced essentially by allergen specific immune-complexes of the IgG type; cell-mediated reactions (T lymphocytes) may be involved. Such allergy is of the delayed type with onset up to four hours following exposure.
<b>CARBON BLACK</b>	Inhalation (rat) TCLo: 50 mg/m <sup>3</sup> /6h/90D-I Nil reported No significant acute toxicological data identified in literature search.
<b>SODIUM HYDROXIDE</b>	The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may produce severe skin irritation after prolonged or repeated exposure, and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) thickening of the epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis. Prolonged contact is unlikely, given the severity of response, but repeated exposures may produce severe ulceration.
<b>LITHIUM HYDROXIDE</b>	The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling the epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.

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<b>NICKEL &amp; COBALT</b>	The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.
<b>NICKEL &amp; COBALT &amp; CARBON BLACK</b>	<b>WARNING:</b> This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans.
<b>SODIUM HYDROXIDE &amp; LITHIUM HYDROXIDE</b>	Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (often particles) and is completely reversible after exposure ceases. The disorder is characterized by difficulty breathing, cough and mucus production.

<b>Acute Toxicity</b>	✗	<b>Carcinogenicity</b>	✗
<b>Skin Irritation/Corrosion</b>	✗	<b>Reproductivity</b>	✗
<b>Serious Eye Damage/Irritation</b>	✗	<b>STOT - Single Exposure</b>	✗
<b>Respiratory or Skin sensitisation</b>	✗	<b>STOT - Repeated Exposure</b>	✗
<b>Mutagenicity</b>	✗	<b>Aspiration Hazard</b>	✗

**Legend:** ✗ – Data either not available or does not fill the criteria for classification  
 ✓ – Data available to make classification

## SECTION 12 Ecological information

## Toxicity

Paslode - STOCKade Nickel Cadmium Battery	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
iron	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	18mg/l	2
	EC50	48h	Crustacea	>100mg/l	2
	LC50	96h	Fish	0.00499-0.00819mg/l	4
nickel	NOEC(ECx)	48h	Algae or other aquatic plants	0.1-4mg/l	4
	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	0.18mg/l	1
	EC50	48h	Crustacea	>100mg/l	1
	EC50	96h	Algae or other aquatic plants	0.174-0.311mg/l	4
cadmium	LC50	96h	Fish	0.06mg/l	4
	EC50(ECx)	72h	Algae or other aquatic plants	0.18mg/l	1
	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	0.018mg/L	2
	EC50	48h	Crustacea	0.0054-0.0374mg/l	4
cobalt	EC50	96h	Algae or other aquatic plants	0.049-0.162mg/l	4
	LC50	96h	Fish	4.2-6.9mg/l	Not Available
	NOEC(ECx)	672h	Fish	0.00002mg/l	4
	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	0.029mg/L	2
carbon black	EC50	48h	Crustacea	0.241mg/L	2
	EC50	96h	Algae or other aquatic plants	23.8mg/l	2
	LC50	96h	Fish	0.8mg/l	2
	NOEC(ECx)	72h	Algae or other aquatic plants	0.01-0.015mg/l	1
	Endpoint	Test Duration (hr)	Species	Value	Source
EC50	72h	Algae or other aquatic plants	>0.2mg/l	2	
EC50	48h	Crustacea	33.076-41.968mg/l	4	
LC50	96h	Fish	>100mg/l	2	

## Paslode - STOCKade Nickel Cadmium Battery

	NOEC(ECx)	24h	Crustacea	3200mg/l	1
sodium hydroxide	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	48h	Crustacea	34.59-47.13mg/l	4
	LC50	96h	Fish	144-267mg/l	4
	EC50(ECx)	48h	Crustacea	34.59-47.13mg/l	4
lithium hydroxide	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	1.88mg/l	2
	EC50	48h	Crustacea	19.1mg/l	2
	LC50	96h	Fish	62.2mg/l	2
	NOEC(ECx)	72h	Algae or other aquatic plants	0.31mg/l	2
<b>Legend:</b>	Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data				

**DO NOT** discharge into sewer or waterways.

## Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
sodium hydroxide	LOW	LOW

## Bioaccumulative potential

Ingredient	Bioaccumulation
sodium hydroxide	LOW (LogKOW = -3.8796)

## Mobility in soil

Ingredient	Mobility
sodium hydroxide	LOW (KOC = 14.3)

## SECTION 13 Disposal considerations

## Waste treatment methods

Product / Packaging disposal
Recycle wherever possible. Consult manufacturer for recycling options. Consult State Land Waste Management Authority for disposal.

Ensure that the hazardous substance is disposed in accordance with the Hazardous Substances (Disposal) Notice 2017

## Disposal Requirements

Packages that have been in direct contact with the hazardous substance must be only disposed if the hazardous substance was appropriately removed and cleaned out from the package. The package must be disposed according to the manufacturer's directions taking into account the material it is made of. Packages which hazardous content have been appropriately treated and removed may be recycled.

The hazardous substance must only be disposed if it has been treated by a method that changed the characteristics or composition of the substance and it is no longer hazardous. Do not dispose to the environment any component, which may be biocumulative or not rapidly degradable.

Only discharge the substance to the environment if an environmental exposure limit has been set for the substance.

Only deposit the hazardous substance into or onto a landfill or sewage facility or incinerator, where the hazardous substance can be handled and treated appropriately.

## SECTION 14 Transport information

## Labels Required

	
Marine Pollutant	NO
HAZCHEM	2Y

Land transport (UN): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

## Sea transport (IMDG-Code / GGVSee)

14.1. UN number	3496
14.2. UN proper shipping name	BATTERIES, NICKEL-METAL HYDRIDE



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14.3. Transport hazard class(es)	IMDG Class	9
	IMDG Subsidiary Hazard	Not Applicable
14.4. Packing group	Not Applicable	
14.5. Environmental hazard	Not Applicable	
14.6. Special precautions for user	EMS Number	F-A, S-I
	Special provisions	117 963
	Limited Quantities	0

## 14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

## 14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
iron	Not Available
nickel	Not Available
cadmium	Not Available
cobalt	Not Available
carbon black	Not Available
sodium hydroxide	Not Available
lithium hydroxide	Not Available

## 14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
iron	Not Available
nickel	Not Available
cadmium	Not Available
cobalt	Not Available
carbon black	Not Available
sodium hydroxide	Not Available
lithium hydroxide	Not Available

## SECTION 15 Regulatory information

## Safety, health and environmental regulations / legislation specific for the substance or mixture

This substance is to be managed using the conditions specified in an applicable Group Standard

HSR Number	Group Standard
HSR002521	Animal Nutritional and Animal Care Products Group Standard 2020
HSR002530	Cleaning Products Subsidiary Hazard Group Standard 2020
HSR002535	Gases under Pressure Mixtures Subsidiary Hazard Group Standard 2020
HSR002503	Additives Process Chemicals and Raw Materials Subsidiary Hazard Group Standard 2020
HSR002606	Lubricants Lubricant Additives Coolants and Anti freeze Agents Subsidiary Hazard Group Standard 2020
HSR002612	Metal Industry Products Subsidiary Hazard Group Standard 2020
HSR002624	N.O.S. Subsidiary Hazard Group Standard 2020
HSR002638	Photographic Chemicals Subsidiary Hazard Group Standard 2020
HSR002644	Polymers Subsidiary Hazard Group Standard 2020
HSR002647	Reagent Kits Group Standard 2020
HSR002648	Refining Catalysts Group Standard 2020
HSR002653	Solvents Subsidiary Hazard Group Standard 2020
HSR002670	Surface Coatings and Colourants Subsidiary Hazard Group Standard 2020
HSR002684	Water Treatment Chemicals Subsidiary Hazard Group Standard 2020
HSR100425	Pharmaceutical Active Ingredients Group Standard 2020
HSR002600	Leather and Textile Products Subsidiary Hazard Group Standard 2020
HSR002605	Lubricants Low Hazard Group Standard 2020
HSR002544	Construction Products Subsidiary Hazard Group Standard 2020
HSR002549	Corrosion Inhibitors Subsidiary Hazard Group Standard 2020
HSR002552	Cosmetic Products Group Standard 2020
HSR002558	Dental Products Subsidiary Hazard Group Standard 2020
HSR002565	Embalming Products Subsidiary Hazard Group Standard 2020
HSR002571	Fertilisers Subsidiary Hazard Group Standard 2020

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HSR Number	Group Standard
HSR002573	Fire Fighting Chemicals Group Standard 2021
HSR002578	Food Additives and Fragrance Materials Subsidiary Hazard Group Standard 2020
HSR002585	Fuel Additives Subsidiary Hazard Group Standard 2020
HSR002596	Laboratory Chemicals and Reagent Kits Group Standard 2020
HSR008053	Graphic Materials Group Standard 2020
HSR100580	Tattoo and Permanent Makeup Substances Group Standard 2020
HSR100757	Veterinary Medicines Limited Pack Size Finished Dose Group Standard 2020
HSR100758	Veterinary Medicines Non dispersive Closed System Application Group Standard 2020
HSR100759	Veterinary Medicines Non dispersive Open System Application Group Standard 2020
HSR100592	Agricultural Compounds Special Circumstances Group Standard 2020
HSR100756	Active Ingredients for Use in the Manufacture of Agricultural Compounds Group Standard 2020

Please refer to Section 8 of the SDS for any applicable tolerable exposure limit or Section 12 for environmental exposure limit.

#### iron is found on the following regulatory lists

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)  
 New Zealand Inventory of Chemicals (NZIoC)  
 New Zealand Workplace Exposure Standards (WES)

#### nickel is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List  
 International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs  
 International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2B: Possibly carcinogenic to humans  
 International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)  
 New Zealand Approved Hazardous Substances with controls  
 New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals  
 New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data  
 New Zealand Inventory of Chemicals (NZIoC)  
 New Zealand Workplace Exposure Standards (WES)

#### cadmium is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List  
 International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs  
 International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 1: Carcinogenic to humans  
 International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)  
 New Zealand Approved Hazardous Substances with controls  
 New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals  
 New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data  
 New Zealand Inventory of Chemicals (NZIoC)  
 New Zealand Workplace Exposure Standards (WES)

#### cobalt is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List  
 FEI Equine Prohibited Substances List - Controlled Medication  
 FEI Equine Prohibited Substances List (EPSL)  
 International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs  
 International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2A: Probably carcinogenic to humans  
 International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)  
 New Zealand Approved Hazardous Substances with controls  
 New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals  
 New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data  
 New Zealand Inventory of Chemicals (NZIoC)  
 New Zealand Workplace Exposure Standards (WES)

#### carbon black is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List  
 International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs  
 International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2B: Possibly carcinogenic to humans  
 International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)  
 New Zealand Approved Hazardous Substances with controls  
 New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals  
 New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data  
 New Zealand Inventory of Chemicals (NZIoC)  
 New Zealand Workplace Exposure Standards (WES)

#### sodium hydroxide is found on the following regulatory lists

New Zealand Approved Hazardous Substances with controls  
 New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals  
 New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data  
 New Zealand Inventory of Chemicals (NZIoC)  
 New Zealand Workplace Exposure Standards (WES)

#### lithium hydroxide is found on the following regulatory lists

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals

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New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data

New Zealand Inventory of Chemicals (NZIoC)

New Zealand Workplace Exposure Standards (WES)

**Additional Regulatory Information**

Not Applicable

**Hazardous Substance Location**

Subject to the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Hazard Class	Quantities
Not Applicable	Not Applicable

**Certified Handler**

Subject to Part 4 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Class of substance	Quantities
Not Applicable	Not Applicable

Refer Group Standards for further information

**Maximum quantities of certain hazardous substances permitted on passenger service vehicles**

Subject to Regulation 13.14 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Hazard Class	Gas (aggregate water capacity in mL)	Liquid (L)	Solid (kg)	Maximum quantity per package for each classification
Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

**Tracking Requirements**

Not Applicable

**National Inventory Status**

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (iron; nickel; cadmium; cobalt; carbon black; sodium hydroxide; lithium hydroxide)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	No (iron; nickel; cadmium; cobalt)
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	Yes
Vietnam - NCI	Yes
Russia - FBEPH	Yes
<b>Legend:</b>	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

**SECTION 16 Other information**

<b>Revision Date</b>	04/08/2021
<b>Initial Date</b>	20/08/2013

**SDS Version Summary**

Version	Date of Update	Sections Updated
7.1	22/07/2021	Hazards identification - Classification, Identification of the substance / mixture and of the company / undertaking - Supplier Information
8.1	04/08/2021	Hazards identification - Classification, Composition / information on ingredients - Ingredients, Identification of the substance / mixture and of the company / undertaking - Supplier Information, Transport information - Transport, Transport Information

**Other information**

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

**Paslude - STOCKade Nickel Cadmium Battery****Definitions and abbreviations**

- ▶ PC - TWA: Permissible Concentration-Time Weighted Average
- ▶ PC - STEL: Permissible Concentration-Short Term Exposure Limit
- ▶ IARC: International Agency for Research on Cancer
- ▶ ACGIH: American Conference of Governmental Industrial Hygienists
- ▶ STEL: Short Term Exposure Limit
- ▶ TEEL: Temporary Emergency Exposure Limit,
- ▶ IDLH: Immediately Dangerous to Life or Health Concentrations
- ▶ ES: Exposure Standard
- ▶ OSF: Odour Safety Factor
- ▶ NOAEL: No Observed Adverse Effect Level
- ▶ LOAEL: Lowest Observed Adverse Effect Level
- ▶ TLV: Threshold Limit Value
- ▶ LOD: Limit Of Detection
- ▶ OTV: Odour Threshold Value
- ▶ BCF: BioConcentration Factors
- ▶ BEI: Biological Exposure Index
- ▶ DNEL: Derived No-Effect Level
- ▶ PNEC: Predicted no-effect concentration
  
- ▶ AIIIC: Australian Inventory of Industrial Chemicals
- ▶ DSL: Domestic Substances List
- ▶ NDSL: Non-Domestic Substances List
- ▶ IECS: Inventory of Existing Chemical Substance in China
- ▶ EINECS: European INventory of Existing Commercial chemical Substances
- ▶ ELINCS: European List of Notified Chemical Substances
- ▶ NLP: No-Longer Polymers
- ▶ ENCS: Existing and New Chemical Substances Inventory
- ▶ KECI: Korea Existing Chemicals Inventory
- ▶ NZIoC: New Zealand Inventory of Chemicals
- ▶ PICCS: Philippine Inventory of Chemicals and Chemical Substances
- ▶ TSCA: Toxic Substances Control Act
- ▶ TCSI: Taiwan Chemical Substance Inventory
- ▶ INSQ: Inventario Nacional de Sustancias Químicas
- ▶ NCI: National Chemical Inventory
- ▶ FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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