

## **NeXtal MbClass Suite**

Version 2.0 Revision Date 04/02/2020 Print Date 04/02/2020

#### **SECTION 1. IDENTIFICATION**

Product name : NeXtal MbClass Suite

## Manufacturer or supplier's details

Company : NeXtal

6201 Trust Dr Holland, OH 43528

USA

Telephone : 419-740-6600

E-mail address : www.calibrescientific.com

Emergency telephone : CHEMTREC

USA & Canada 1-800-424-9300

Outside USA & Canada (703) 527-3887

Chemtrec ID# 696910

#### Recommended use of the chemical and restrictions on use

Recommended use : Laboratory chemicals

#### **SECTION 2. HAZARDS IDENTIFICATION**

**GHS Classification** 

Flammable liquids : Category 2

Skin irritation : Category 2

Eye irritation : Category 2A

Carcinogenicity : Category 1B

Specific target organ

systemic toxicity - single

exposure

: Category 3 (Respiratory system, Central nervous system)

Acute aquatic toxicity : Category 2

Chronic aquatic toxicity : Category 2



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#### **GHS Label element**

Hazard pictograms :









Signal Word : Danger

Hazard Statements : H225 Highly flammable liquid and vapor.

H315 Causes skin irritation.

H319 Causes serious eye irritation. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness.

H350 May cause cancer.

H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements : **Prevention:** 

P201 Obtain special instructions before use.

P210 Keep away from heat/sparks/open flames/hot surfaces.

No smoking.

P280 Wear protective gloves/protective clothing/eye protection/

face protection.

Response:

P308 + P313 IF exposed or concerned: Get medical advice/

attention.

#### Other hazards

None known.

#### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

Substance name : NeXtal MbClass Suite

## **Hazardous ingredients**

Chemical Name	CAS-No.	Concentration (% w/w)	
PEG	25322-68-3	>= 30 - < 50	
2-propanol	67-63-0	>= 20 - < 30	
2-methylpentane-2,4-diol	107-41-5	>= 20 - < 30	
glycerol	56-81-5	>= 10 - < 20	
Magnesium chloride, hexahydrate	7791-18-6	>= 1 - < 10	
Magnesium nitrate, hexahydrate	13446-18-9	>= 1 - < 10	
ethanol	64-17-5	>= 1 - < 10	
zinc acetate dihydrate	5970-45-6	>= 1 - < 10	
calcium chloride dihydrate	10035-04-8	>= 1 - < 10	
lithium sulfate, monohydrate	10102-25-7	>= 1 - < 10	
lithium chloride	7447-41-8	>= 1 - < 10	
Sodium succinate dibasic hexahydrate	6106-21-4	>= 1 - < 10	
zinc chloride	7646-85-7	>= 0.1 - < 1	



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**SECTION 4. FIRST AID MEASURES** 

General advice : Move out of dangerous area.

Show this material safety data sheet to the doctor in

attendance.

If inhaled : If unconscious, place in recovery position and seek medical

advice.

If symptoms persist, call a physician.

In case of skin contact : Wash off immediately with soap and plenty of water while

removing all contaminated clothes and shoes.

If symptoms persist, call a physician.

In case of eye contact : Immediately flush eye(s) with plenty of water.

Remove contact lenses. Protect unharmed eyes.

Rinse thoroughly with plenty of water for at least 15 minutes

and consult a physician.

If swallowed : If accidentally swallowed obtain immediate medical attention.

Rinse mouth with water.

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and

delayed

: Causes skin irritation.

Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness.

May cause cancer.

Notes to physician : No information available.

#### **SECTION 5. FIRE-FIGHTING MEASURES**

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or

carbon dioxide.

Specific hazards during fire

fighting

: Do not allow run-off from firefighting to enter drains or water

courses.

Exposure to decomposition products may be a hazard to

health.

Hazardous combustion

products

Carbon monoxide, carbon dioxide and unburned

hydrocarbons (smoke). Nitrogen oxides (NOx)

Sulfur oxides
Carbon oxides
potassium oxide
Chlorine compounds
Magnesium oxides

Hydrogen chloride gas

Metal oxides

Specific extinguishing : In the event of fire and/or explosion do not breathe fumes.



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methods Use a water spray to cool fully closed containers.

Special protective equipment

for fire-fighters

Wear self-contained breathing apparatus for firefighting if

necessary.

#### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.

Ensure adequate ventilation.
Remove all sources of ignition.
Evacuate personnel to safe areas.

Avoid breathing dust/fumes/gas/mist/vapors/spray. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental precautions

: Prevent product from entering drains.

Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up

: Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth,

vermiculite) and place in container for disposal according to

local / national regulations (see section 13). Unsuitable cleaning agents: sodium hypochlorite

#### **SECTION 7. HANDLING AND STORAGE**

Advice on protection against

fire and explosion

 Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only

explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.

Advice on safe handling : Avoid formation of aerosol.

Do not breathe vapors/dust.

Avoid exposure - obtain special instructions before use.

Avoid contact with skin and eyes. For personal protection see section 8.

Smoking, eating and drinking should be prohibited in the

application area.

Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national

regulations.

Conditions for safe storage

: Keep container tightly closed in a dry and well-ventilated

place.

Materials to avoid : Do not store together with oxidizing and self-igniting products.

#### **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Ingredients with workplace control parameters



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Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
PEG	25322-68-3	TWA	10 mg/m3	US WEEL
		TWA (aerosol)	10 mg/m3	US WEEL
2-propanol	67-63-0	TWA	200 ppm	ACGIH
		STEL	400 ppm	ACGIH
		TWA	400 ppm 980 mg/m3	NIOSH REL
		ST	500 ppm 1,225 mg/m3	NIOSH REL
		TWA	400 ppm 980 mg/m3	OSHA Z-1
		TWA	400 ppm 980 mg/m3	OSHA P0
		STEL	500 ppm 1,225 mg/m3	OSHA P0
2-methylpentane-2,4-diol	107-41-5	С	25 ppm	ACGIH
		С	25 ppm 125 mg/m3	NIOSH REL
		С	25 ppm 125 mg/m3	OSHA P0
glycerol	56-81-5	TWA (mist, respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (mist, total dust)	15 mg/m3	OSHA Z-1
		TWA (Total)	10 mg/m3	OSHA P0
		TWA (Respirable fraction)	5 mg/m3	OSHA P0
		TWA	10 mg/m3	ACGIH
		TWA (Mist - total dust)	10 mg/m3	OSHA P0
		TWA (Mist - respirable fraction)	5 mg/m3	OSHA P0
ethanol	64-17-5	TWA	1,000 ppm 1,900 mg/m3	NIOSH REL
		TWA	1,000 ppm 1,900 mg/m3	OSHA Z-1
		TWA	1,000 ppm 1,900 mg/m3	OSHA P0
		STEL	1,000 ppm	ACGIH
zinc chloride	7646-85-7	TWA (Fumes)	1 mg/m3	OSHA Z-1
		TWA	1 mg/m3	ACGIH
		STEL	2 mg/m3	ACGIH
		TWA (Fumes)	1 mg/m3	NIOSH REL
		ST (Fumes)	2 mg/m3	NIOSH REL
		TWA	1 mg/m3	OSHA PO
		STEL	2 mg/m3	OSHA P0



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TWA (Fumes)	1 mg/m3	ACGIH
STEL (Fumes)	2 mg/m3	ACGIH
TWA (Fumes)	1 mg/m3	NIOSH REL
ST (Fumes)	2 mg/m3	NIOSH REL
TWA (Fumes)	1 mg/m3	OSHA P0
STEL (Fumes)	2 mg/m3	OSHA P0

#### Hazardous components without workplace control parameters

Ingredients	CAS-No.
Magnesium chloride,	7791-18-6
hexahydrate	
Magnesium nitrate,	13446-18-9
hexahydrate	
zinc acetate dihydrate	5970-45-6
calcium chloride dihydrate	10035-04-8
lithium sulfate, monohydrate	10102-25-7
lithium chloride	7447-41-8
Sodium succinate dibasic	6106-21-4
hexahydrate	

## **Biological occupational exposure limits**

Ingredients	CAS-No.	Control parameters	Biological specimen		Permissible concentration	Basis
	67-63-0	Acetone	Urine	End of shift at end of workweek	40 mg/l	ACGIH BEI

## Personal protective equipment

Respiratory protection : In the case of vapor formation use a respirator with an

approved filter.

Hand protection

Material : Protective gloves

Remarks : The choice of an appropriate glove does not only depend on

its material but also on other quality features and is different from one producer to the other. 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 : Safety glasses

Wear face-shield and protective suit for abnormal processing

problems.

Ensure that eyewash stations and safety showers are close

to the workstation location.



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Skin and body protection : Wear appropriate personal protective equipment and clothing

including lab coat.

Choose body protection according to the amount and concentration of the dangerous substance at the workplace.

Footwear protecting against chemicals Workers should wear antistatic footwear.

Hygiene measures : Keep away from food and drink.

Wash hands before breaks and at the end of workday. Ensure adequate ventilation, especially in confined areas.

Avoid contact with the skin and the eyes. When using do not eat, drink or smoke.

#### **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : liquid

Color : No data available

Odor : No data available

Odor Threshold : No data available

pH : No data available

Melting point/range : No data available

Boiling point/boiling range : No data available

Flash point : No data available

Evaporation rate : No data available

Burning rate : No data available

Upper explosion limit : No data available

Lower explosion limit : No data available

Vapor pressure : No data available

Relative vapor density : No data available

Relative density : No data available

Density : No data available

Solubility(ies)

Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n-

octanol/water

: No data available

Autoignition temperature : No data available



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Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

Explosive properties : No data available

Oxidizing properties : No data available

**SECTION 10. STABILITY AND REACTIVITY** 

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : No decomposition if stored and applied as directed.

Possibility of hazardous

reactions

: Stable under recommended storage conditions.

Hazardous decomposition products formed under fire

conditions.

Vapors may form explosive mixture with air.

Keep away from oxidizing agents, and acidic or alkaline

products.

Conditions to avoid : Heat, flames and sparks.

Incompatible materials : No data available

Hazardous decomposition

products

: No decomposition if stored and applied as directed.

#### **SECTION 11. TOXICOLOGICAL INFORMATION**

## **Acute toxicity**

Not classified based on available information.

**Product:** 

Acute oral toxicity : No data available

Acute toxicity estimate: 2,394 mg/kg

Method: Calculation method

Acute inhalation toxicity : No data available

Acute dermal toxicity : No data available

**Ingredients:** 

PEG:

Acute inhalation toxicity : No data available

Acute dermal toxicity : No data available

2-propanol:



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Acute oral toxicity : LD50 Oral (Rat): 5,045 mg/kg

Acute dermal toxicity : LD50 Dermal (Rabbit): 12,800 mg/kg

2-methylpentane-2,4-diol:

Acute oral toxicity : LD50 Oral (Rat): 3,700 mg/kg

Acute dermal toxicity : LD50 Dermal (Rabbit): 7,892 mg/kg

glycerol:

Acute oral toxicity : LD50 Oral (Rat): 12,000 mg/kg

Acute dermal toxicity : LD50 Dermal (Rabbit): 10,000 mg/kg

Magnesium chloride, hexahydrate:

Acute oral toxicity : LD50 Oral (Rat): 8,100 mg/kg

Magnesium nitrate, hexahydrate:

Acute oral toxicity : LD50 Oral (Rat): 5,440 mg/kg

ethanol:

Acute oral toxicity : LD50 Oral (Rat): 10,470 mg/kg

Acute inhalation toxicity : LC50 (Rat): 20000 ppm

Exposure time: 10 h

zinc acetate dihydrate:

Acute oral toxicity : LD50 Oral (Rat): 794 mg/kg

lithium sulfate, monohydrate:

Acute oral toxicity : LD50 Oral (Rat): 613 mg/kg

lithium chloride:

Acute oral toxicity : LD50 Oral (Rat): 526 mg/kg

zinc chloride:

Acute oral toxicity : LD50 Oral (Rat): 350 mg/kg

Skin corrosion/irritation

Causes skin irritation.

**Product:** 

Remarks:

May irritate skin.

**Ingredients:** 

2-propanol:

Species: Rabbit

Result: Mild skin irritation

glycerol:

Species: Rabbit Exposure time: 24 h Result: Mild skin irritation

Magnesium nitrate, hexahydrate:



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Species: Rabbit Exposure time: 24 h Result: Mild skin irritation

zinc chloride:

Assessment: Causes burns. Result: Causes burns.

#### Serious eye damage/eye irritation

Causes serious eye irritation.

## **Product:**

Remarks:

May cause irreversible eye damage.

#### **Ingredients:**

# **2-propanol:** Species: Rabbit

Result: Eye irritation Exposure time: 24 h

## glycerol:

Species: Rabbit

Result: Mild eye irritation Exposure time: 24 h

#### Magnesium nitrate, hexahydrate:

Species: Rabbit

Result: Mild eye irritation Exposure time: 24 h

#### ethanol:

Result: Eye irritation

#### zinc chloride:

Result: Risk of serious damage to eyes. Assessment: Risk of serious damage to eyes.

#### Respiratory or skin sensitization

Skin sensitization: Not classified based on available information. Respiratory sensitization: Not classified based on available information.

#### Germ cell mutagenicity

Not classified based on available information.

#### **Ingredients:**

#### zinc chloride:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro

Result: positive

#### Carcinogenicity

May cause cancer.

IARC Group 2A: Probably carcinogenic to humans

Magnesium nitrate, hexahydrate 13446-18-9



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**OSHA**No ingredient 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 ingredient 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

Not classified based on available information.

#### STOT-single exposure

May cause respiratory irritation. May cause drowsiness or dizziness.

#### **Ingredients:**

#### 2-propanol:

Assessment: May cause drowsiness or dizziness.

#### zinc chloride:

Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

## STOT-repeated exposure

Not classified based on available information.

#### **Ingredients:**

#### zinc chloride:

Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

#### **Aspiration toxicity**

Not classified based on available information.

#### **Further information**

## Product:

## Remarks:

Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Concentrations substantially above the TLV value may cause narcotic effects.

Solvents may degrease the skin.

## **SECTION 12. ECOLOGICAL INFORMATION**

#### **Ecotoxicity**

#### **Product:**

Toxicity to fish : No data available

Toxicity to algae : No data available

Toxicity to bacteria : No data available



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**Ingredients:** 

PEG:

Toxicity to fish : (Leuciscus idus (Golden orfe)): > 500 mg/l

Exposure time: 96 h Test Type: static test

2-propanol:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 9,640 mg/l

Exposure time: 96 h

Toxicity to algae : EC50 (Desmodesmus subspicatus (Scenedesmus

subspicatus)): 2,000 mg/l Exposure time: 72 h

2-methylpentane-2,4-diol:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 10,700 mg/l

Exposure time: 96 h

Toxicity to daphnia and other

aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): 3,200 mg/l

Exposure time: 48 h

glycerol:

Toxicity to fish : LC0 (Leuciscus idus (Golden orfe)): > 250 mg/l

Exposure time: 48 h

zinc acetate dihydrate:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.55 mg/l

Exposure time: 96 h

lithium chloride:

Toxicity to fish : LC50: 17 mg/l

Exposure time: 96 h

zinc chloride:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 38 mg/l

Exposure time: 96 h

Toxicity to daphnia and other

aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): 0.33 mg/l

Exposure time: 48 h

Toxicity to algae : EC0 (Pseudokirchneriella subcapitata (microalgae)): 0.1 mg/l

Exposure time: 96 h

Toxicity to bacteria : (Bacteria): 45 mg/l

Persistence and degradability

No data available

**Bioaccumulative potential** 

**Product:** 

Bioaccumulation : No data available



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Mobility in soil

No data available

Other adverse effects

**Product:** 

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82

Protection of Stratospheric Ozone - CAA Section 602 Class I

Substances

Remarks: This product neither contains, nor was

manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A +

B).

Additional ecological

information

: An environmental hazard cannot be excluded in the event of

unprofessional handling or disposal.

Toxic to aquatic life with long lasting effects.

#### **SECTION 13. DISPOSAL CONSIDERATIONS**

**Disposal methods** 

Waste from residues : The product should not be allowed to enter drains, water

courses or the soil.

Send to a licensed waste management company.

Dispose of as hazardous waste in compliance with local and

national regulations.

Dispose of contents/container in accordance with local

regulation.

Contaminated packaging : Dispose of as unused product.

Do not re-use empty containers.

#### **SECTION 14. TRANSPORT INFORMATION**

**IATA-DGR** 

UN/ID No. : UN 1993

Proper shipping name : Flammable liquid, n.o.s.

(ISOPROPANOL, ethanol)

Class : 3 Packing group : II

Labels : Flammable Liquids

IMDG-Code

UN number : UN 1993

Proper shipping name : FLAMMABLE LIQUID, N.O.S.

(ISOPROPANOL, ethanol)

Class : 3
Packing group : II
Labels : 3
EmS Code : F-E, S-E
Marine pollutant : yes



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

Not applicable for product as supplied.

#### **Domestic regulation**

**49 CFR** 

UN/ID/NA number : UN 1993

Proper shipping name : FLAMMABLE LIQUIDS, N.O.S.

(ISOPROPANOL, ethanol)

Class : 3 Packing group : II

Labels : Class 3 - Flammable Liquid

ERG Code : 128

Marine pollutant : yes(ZINC ACETATE, Zinc chloride)

#### **SECTION 15. REGULATORY INFORMATION**

#### **EPCRA - Emergency Planning and Community Right-to-Know**

## SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Fire Hazard

Acute Health Hazard Chronic Health Hazard

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:

Magnesium nitrate,

hexahydrate

13446-18-9

zinc acetate dihydrate 5970-45-6

zinc chloride 7646-85-7

#### **US State Regulations**

California Prop. 65 WARNING! This product contains a chemical known in the

State of California to cause cancer.

ethanol 64-17-5

WARNING: This product contains a chemical known in the State of California to cause birth defects or other reproductive

harm.

ethanol 64-17-5

#### **TSCA list**

No substances are subject to a Significant New Use Rule.



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No substances are subject to TSCA 12(b) export notification requirements.

#### **SECTION 16. OTHER INFORMATION**

#### Full text of other abbreviations

(Q)SAR - (Quantitative) Structure Activity Relationship; ASTM - American Society for the Testing of Materials; bw - Body weight; DIN - Standard of the German Institute for Standardisation; ECx -Concentration associated with x% response: ELx - Loading rate associated with x% response: EmS - Emergency Schedule; ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; IARC - International Agency for Research on Cancer; IATA -International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative; DSL -Domestic Substances List (Canada); KECI - Korea Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); AICS - Australian Inventory of Chemical Substances; IECSC - Inventory of Existing Chemical Substances in China; ENCS - Existing and New Chemical Substances (Japan): ISHL - Industrial Safety and Health Law (Japan): PICCS - Philippines Inventory of Chemicals and Chemical Substances: NZIoC - New Zealand Inventory of Chemicals: TCSI - Taiwan Chemical Substance Inventory: CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; DOT - Department of Transportation; EHS -Extremely Hazardous Substance; HMIS - Hazardous Materials Identification System; MSHA -Mine Safety and Health Administration; NFPA - National Fire Protection Association; RCRA -Resource Conservation and Recovery Act; RQ - Reportable Quantity; SARA - Superfund Amendments and Reauthorization Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; GLP - Good Laboratory Practice; ERG - Emergency Response Guide; NTP - National Toxicology Program; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods

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