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**Section 1: IDENTIFICATION**

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**1.1 PRODUCT IDENTIFIER****Product Name and Code:** 20B**1.2 RECOMMENDED USE OF CHEMICAL AND RESTRICTIONS ON USE****Use:** Magnetic Particle Inspection.**1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET****Name/Address:** Magnaflux 155 Harlem Avenue, Glenview, Illinois 60025**Telephone Number:** 847-657-5300**1.4 EMERGENCY TELEPHONE NUMBER****Emergency Telephone Number:** CHEMTREC 800-424-9300**Date of Preparation:** March 21, 2014 **Version #:** 1.0

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**Section 2: HAZARD(S) IDENTIFICATION**

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**2.1 CLASSIFICATION OF THE CHEMICAL ACCORDING TO OSHA HAZCOM 2012****Hazard class**Skin Irritation 2  
Serious Eye Damage 1  
Reproductive Toxicity 2**2.2 LABEL ELEMENTS ACCORDING TO OSHA HAZCOM 2012****Hazard Pictogram:****Signal Word:** Danger**Hazard Statement:** Causes skin irritation. Causes serious eye damage. Suspected of damaging fertility or the unborn child.**Prevention:** Wash hands thoroughly after handling. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection.**Response:** If exposed or concerned: Get medical advice/attention. If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor.

**Storage:** Store locked up.

**Disposal:** Dispose of contents and container in accordance with all local, regional, national and international regulations.

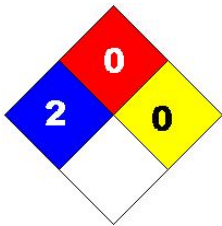
### 2.3 ADDITIONAL INFORMATION

**Hazards not otherwise classified:** Not applicable.

10 % of the mixture consists of ingredient(s) of unknown acute toxicity.

This product is a hazardous chemical as defined by NOM-018-STPS-2000.

**Mexico Classification:**



**Blue = Health   Red = Flammability   Yellow = Reactivity   White = Special**

**Hazard Rating:** 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

**WHMIS Classification(s):**  
Class D2B - Skin/Eye Irritant

**WHMIS Hazard Symbols:**



**WHMIS Signal Word:** WARNING

### Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 MIXTURES

Ingredient	UN #	H / F / R / *	CAS No	Wt. %
Sodium tetraborate decahydrate	Not available.	Not available.	1303-96-4	60 - 100
Alcohols, C6-10, ethoxylated propoxylated	Not available.	Not available.	68987-81-5	3 - 7
1-Naphthalenecarboxaldehyde, 2-hydroxy-, [(2-hydroxy-1-naphthalenyl)methylene]hydrazone	Not available.	Not available.	2387-03-3	1 - 5
Poly(oxy-1,2-ethanediyl), .alpha.-(phenylmethyl)-.omega.-[(1,1,3,3-tetramethylbutyl)phenoxy]-	Not available.	Not available.	60864-33-7	1 - 1.5
Fatty acids, C18-unsaturated, dimers, polymer with ethylene diamine and tall-oil fatty acids	Not available.	Not available.	68139-80-0	1 - 1.5
Manganese, elemental	UN2089 (powder)	1/2/2	7439-96-5	0.1 - 1

The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

\* Per NOM-018-STPS-2000

#### Section 4: FIRST- AID MEASURES

##### 4.1 DESCRIPTION OF THE FIRST AID MEASURE

- Eye:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. Get immediate medical advice/attention.
- Skin:** In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical advice/attention.
- Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical advice/attention.
- Ingestion:** If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention.

##### 4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

- Eye:** Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
- Skin:** Causes skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin.
- Inhalation:** May cause respiratory tract irritation.
- Ingestion:** May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

##### 4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENTS NEEDED

- Note to Physicians:** Symptoms may not appear immediately.
- Specific Treatments:** In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

#### Section 5: FIRE-FIGHTING MEASURES

##### 5.1 FLAMMABILITY

- Flammability:** This product is not flammable by WHMIS/OSHA/NOM-018-STPS-2000 criteria.

##### 5.2 EXTINGUISHING MEDIA

- Suitable Extinguishing Media:** Treat for surrounding material.
- Unsuitable Extinguishing Media:** None known.

##### 5.3 SPECIAL HAZARDS ARISING FROM THE CHEMICAL

- Products of Combustion:** May include, and are not limited to: oxides of carbon.

**Explosion Data:**

**Sensitivity to Mechanical Impact:** Not available.

**Sensitivity to Static Discharge:** Not available.

**5.4 SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE FIGHTERS**

Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

**Section 6: ACCIDENTAL RELEASE MEASURES**

**6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES**

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Avoid any contact with the skin and eyes.

**6.2 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING - UP**

**Methods for Containment:** Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Use appropriate Personal Protective Equipment (PPE).

**Methods for Cleaning-Up:** Vacuum or sweep material and place in a disposal container.

**Section 7: HANDLING AND STORAGE**

**7.1 PRECAUTIONS FOR SAFE HANDLING**

**Handling:** Avoid contact with skin and eyes. Do not swallow. Good housekeeping is important to prevent accumulation of dust. Avoid generating and breathing dust. Handle and open container with care.

Handle in well-ventilated areas. When using do not eat, drink or smoke. (See section 8)

**General Hygiene Advice:** Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

**7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES**

**Storage:** Keep out of the reach of children. Keep container tightly closed. Do not store at temperatures above 49 °C / 120 °F. (See section 10)

**Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 CONTROL PARAMETERS**

**Exposure Guidelines**

Ingredient	Occupational Exposure Limits	
	OSHA-PEL	ACGIH-TLV
Sodium tetraborate decahydrate	10 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>
Alcohols, C6-10, ethoxylated propoxylated	Not available.	Not available.
1-Naphthalenecarboxaldehyde, 2-hydroxy-, [(2-hydroxy-1-naphthalenyl)methylene]hydrazone	Not available.	Not available.

Poly(oxy-1,2-ethanediyl), .alpha.-(phenylmethyl)-.omega.-[(1,1,3,3-tetramethylbutyl)phenoxy]-	Not available.	Not available.
Fatty acids, C18-unsaturated, dimers, polymer with ethylenediamine and tall-oil fatty acids	Not available.	Not available.
Manganese, elemental	1 mg/m <sup>3</sup>	0.02 mg/m <sup>3</sup> (respirable fraction) 0.1 mg/m <sup>3</sup> (inhalable fraction)

## 8.2 EXPOSURE CONTROLS

**Engineering Controls:** Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

## 8.3 INDIVIDUAL PROTECTIVE MEASURES

### Personal Protective Equipment:

**Eye/Face Protection:** Wear approved dust- or splash-proof safety glasses (properly fitted) and facial protection (face shield).

### Skin Protection:

**Hand Protection:** Chemical-resistant gloves - nitrile rubber.

**Body Protection:** Wear suitable protective clothing.

**Respiratory Protection:** In case of insufficient ventilation, wear suitable respiratory equipment.

**General Health and Safety Measures:** Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Wash contaminated clothing before reusing.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Dry Power.
<b>Color:</b>	Brown.
<b>Odor:</b>	Odorless.
<b>Odor Threshold:</b>	Not available.
<b>Physical State:</b>	Solid.
<b>pH:</b>	9 (1% water)
<b>Melting Point/Freezing Point:</b>	Not available.
<b>Initial Boiling Point and Boiling Range:</b>	Not available.
<b>Flash Point:</b>	Not available.
<b>Evaporation Rate:</b>	Not available.
<b>Flammability:</b>	Not flammable.
<b>Lower Flammability/Explosive Limit:</b>	Not available.
<b>Upper Flammability/Explosive Limit:</b>	Not available.
<b>Vapor Pressure:</b>	Not available.
<b>Vapor Density:</b>	Not applicable.

<b>Relative Density/Specific Gravity:</b>	1.2
<b>Solubility:</b>	3% (in water)
<b>Partition coefficient: n-octanol/water:</b>	Not available.
<b>Auto-ignition Temperature:</b>	Not available.
<b>Decomposition Temperature:</b>	Not available.
<b>Viscosity:</b>	Not available.
<b>Oxidizing Properties:</b>	Not available.
<b>Explosive Properties:</b>	Not available.

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**Section 10: STABILITY AND REACTIVITY**

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**10.1 REACTIVITY**

No dangerous reaction known under conditions of normal use.

**10.2 CHEMICAL STABILITY**

Stable under normal storage conditions.

**10.3 POSSIBILITY OF HAZARDOUS REACTIONS**

No dangerous reaction known under conditions of normal use.

**10.4 CONDITIONS TO AVOID**

None known.

**10.5 INCOMPATIBLE MATERIALS**

None known.

**10.6 HAZARDOUS DECOMPOSITION PRODUCTS**

May include, and are not limited to: oxides of carbon.

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**Section 11: TOXICOLOGICAL INFORMATION**

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**11.1 INFORMATION ON TOXICOLOGICAL EFFECTS**

**Likely Routes of Exposure:** Skin contact, eye contact, inhalation, and ingestion.

**Symptoms related to physical/chemical/toxicological characteristics:**

**Eye:** Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

**Skin:** Causes skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

**Ingestion:** May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

**Inhalation:** May cause respiratory tract irritation.

**Acute Toxicity:**

Ingredient	IDLH	LC50	LD50

Sodium tetraborate decahydrate	Not available.	Not available.	Oral 2660 mg/kg, rat
Alcohols, C6-10, ethoxylated propoxylated	Not available.	Not available.	Not available.
1-Naphthalenecarboxaldehyde, 2-hydroxy-, [(2-hydroxy-1-naphthalenyl)methylene]hydrazone	Not available.	Not available.	Not available.
Poly(oxy-1,2-ethanediyl), .alpha.-(phenylmethyl)-.omega.-[(1,1,3,3-tetramethylbutyl)phenoxy]-	Not available.	Not available.	Not available.
Fatty acids, C18-unsaturated, dimers, polymer with ethylene diamine and tall-oil fatty acids	Not available.	Not available.	Not available.
Manganese, elemental	500 mg Mn/m <sup>3</sup>	Not available.	Oral >9000 mg/kg, rat

Calculated overall Chemical Acute Toxicity Values		
LC50 (inhalation)	LD50 (oral)	LD50 (dermal)
Not available.	>2000 mg/kg, rat	Not available.

Ingredient	Chemical Listed as Carcinogen or Potential Carcinogen (NTP, IARC, OSHA, ACGIH, CP65)*
Sodium tetraborate decahydrate	G-A4
Alcohols, C6-10, ethoxylated propoxylated	Not listed.
1-Naphthalenecarboxaldehyde, 2-hydroxy-, [(2-hydroxy-1-naphthalenyl)methylene]hydrazone	Not listed.
Poly(oxy-1,2-ethanediyl), .alpha.-(phenylmethyl)-.omega.-[(1,1,3,3-tetramethylbutyl)phenoxy]-	Not listed.
Fatty acids, C18-unsaturated, dimers, polymer with ethylenediamine and tall-oil fatty acids	Not listed.
Manganese, elemental	G-A5

\* See Section 15 for more information.

## 11.2 DELAYED, IMMEDIATE, AND CHRONIC EFFECTS OF SHORT- AND LONG-TERM EXPOSURE

<b>Skin Corrosion/Irritation:</b>	Causes skin irritation.
<b>Serious Eye Damage/Irritation:</b>	Causes serious eye irritation.
<b>Respiratory Sensitization:</b>	Based on available data, the classification criteria are not met.
<b>Skin Sensitization:</b>	Based on available data, the classification criteria are not met.
<b>STOT-Single Exposure:</b>	Based on available data, the classification criteria are not met.
<b>Chronic Health Effects:</b>	
<b>Carcinogenicity:</b>	Based on available data, the classification criteria are not met.
<b>Germ Cell Mutagenicity:</b>	Based on available data, the classification criteria are not met.
<b>Reproductive Toxicity:</b>	
<b>Developmental:</b>	Suspected of damaging the unborn child.
<b>Teratogenicity:</b>	Based on available data, the classification criteria are not met.
<b>Embryotoxicity:</b>	Based on available data, the classification criteria are not met.

**Fertility:** Suspected of damaging fertility.

**STOT-Repeated Exposure:** Based on available data, the classification criteria are not met.

**Aspiration Hazard:** Based on available data, the classification criteria are not met.

**Toxicologically Synergistic Materials:** Not available.

**Other Information:** Not available.

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**Section 12: ECOLOGICAL INFORMATION**

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**12.1 ECOTOXICITY**

**Acute/Chronic Toxicity:** May cause long-term adverse effects in the aquatic environment.

**12.2 PERSISTENCE AND DEGRADABILITY**

Not available.

**12.3 BIOACCUMULATIVE POTENTIAL**

**Bioaccumulation:** Not available.

**12.4 MOBILITY IN SOIL**

Not available.

**12.5 OTHER ADVERSE EFFECTS**

Not available.

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**Section 13: DISPOSAL CONSIDERATIONS**

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**13.1 WASTE TREATMENT METHODS**

**Disposal Method:** This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

**Other disposal recommendations:** Not available.

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**Section 14: TRANSPORT INFORMATION**

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**14.1 UN NUMBER**

<b>DOT</b>	<b>TDG</b>	<b>NOM-004-SCT2-1994</b>
Not regulated.	Not regulated.	Not regulated.

**14.2 UN PROPER SHIPPING NAME**

<b>DOT</b>	<b>TDG</b>	<b>NOM-004-SCT2-1994</b>
Not applicable.	Not applicable.	Not applicable.

**14.3 TRANSPORT HAZARD CLASS (ES)**

<b>DOT</b>	<b>TDG</b>	<b>NOM-004-SCT2-1994</b>
Not applicable.	Not applicable.	Not applicable.

**14.4 PACKING GROUP**



**DOT**

Not applicable.

**TDG**

Not applicable.

**NOM-004-SCT2-1994**

Not applicable.

**14.5 ENVIRONMENTAL HAZARDS**

Not available.

**14.6 TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE**

Not available.

**14.7 SPECIAL PRECAUTIONS FOR USER**

Do not handle until all safety precautions have been read and understood.

**Section 15: REGULATORY INFORMATION**

**15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/ LEGISLATIONS SPECIFIC FOR THE CHEMICAL**

**Canada:** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

**US:** SDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012

**Mexico:** SDS prepared pursuant to NOM-018-STPS-2000.

SARA Title III				
Ingredient	Section 302 (EHS) TPQ (lbs.)	Section 304 EHS RQ (lbs.)	CERCLA RQ (lbs.)	Section 313
Sodium tetraborate decahydrate	Not listed.	Not listed.	Not listed.	Not listed.
Alcohols, C6-10, ethoxylated propoxylated	Not listed.	Not listed.	Not listed.	Not listed.
1-Naphthalenecarboxaldehyde, 2-hydroxy-, [(2-hydroxy-1-naphthalenyl) methylene]hydrazone	Not listed.	Not listed.	Not listed.	Not listed.
Poly(oxy-1,2-ethanediyl), .alpha.-(phenylmethyl)-.omega.-[(1,1,3,3-tetramethylbutyl)phenoxy]-	Not listed.	Not listed.	Not listed.	Not listed.
Fatty acids, C18-unsaturated, dimers, polymer with ethylenediamine and tall-oil fatty acids	Not listed.	Not listed.	Not listed.	Not listed.
Manganese, elemental	Not listed.	Not listed.	Not listed.	313

**State Regulations**

**California Proposition 65:**

This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

**Global Inventories:**

Ingredient	Canada DSL/NDSL	USA TSCA

Sodium tetraborate decahydrate	DSL	Yes.
Alcohols, C6-10, ethoxylated propoxylated	NDSL	Yes.
1-Naphthalenecarboxaldehyde, 2-hydroxy-, [(2-hydroxy-1-naphthalenyl)methylene] hydrazone	DSL	Yes.
Poly(oxy-1,2-ethanediyl), .alpha.-(phenylmethyl)-.omega.-[(1,1,3,3-tetramethyl butyl)phenoxy]-	DSL	Yes.
Fatty acids, C18-unsaturated, dimers, polymer with ethylenediamine and tall-oil fatty acids	DSL	Yes.
Manganese, elemental	DSL	Yes.

<b>NFPA National Fire Protection Association:</b>	
<b>Health:</b>	2
<b>Fire:</b>	0
<b>Reactivity:</b>	0

<b>HMIS-Hazardous Materials Identification System</b>	
<b>Health:</b>	2*
<b>Fire:</b>	0
<b>Physical Hazard:</b>	0

**Hazard Rating:** 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

**SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:**

**CP65 California Proposition 65**

**OSHA (O) Occupational Safety and Health Administration.**

**ACGIH (G) American Conference of Governmental Industrial Hygienists.**

- A1 - Confirmed human carcinogen.
- A2 - Suspected human carcinogen.
- A3 - Animal carcinogen.
- A4 - Not classifiable as a human carcinogen.
- A5 - Not suspected as a human carcinogen.

**IARC (I) International Agency for Research on Cancer.**

- 1 - The agent (mixture) is carcinogenic to humans.
- 2A - The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.
- 2B - The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.
- 3 - The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.
- 4 - The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.

**NTP (N) National Toxicology Program.**

- 1 - Known to be carcinogens.
- 2 - Reasonably anticipated to be carcinogens.

**Section 16: OTHER INFORMATION**

**Date of Preparation:** March 21, 2014

**Expiry Date:** March 21, 2017

**Version:** 1.0

**Revision Date:** March 21, 2014

Conforms to OSHA HazCom 2012, CPR & NOM-018-STPS-2000 Standards

**Disclaimer:** We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

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**Prepared for:** Magnaflux

**End of Safety Data Sheet**