

THE ELECTRIC MATERIALS COMPANY

COMMUTATORS-EXTRUSIONS-ROTOR BAR-CASTINGS-FORGINGS

**SAFETY DATA SHEET (SDS)**ID: **C110SC**DATE ISSUED: **5/27/2015****SECTION 1 – PRODUCT IDENTIFICATION & COMPANY INFORMATION**PRODUCT NAME: **C11000 ELECTROLYTIC TOUGH PITCH SOLDERING COPPER**

OTHER DESIGNATIONS:

PRODUCT IDENTIFICATION: N/A

MANUFACTURER'S INFORMATION:

THE ELECTRIC MATERIALS COMPANY
50 SOUTH WASHINGTON STREET
NORTH EAST, PA 16428EMERGENCY PHONE NO.: **814-725-9621**WEBSITE: **WWW.ELECMAT.COM**

RECOMMENDED USE AND RESTRICTIONS ON USE:

Soldering Tips

SECTION 2 – HAZARD IDENTIFICATION

CLASSIFICATION:

Soldering copper tips are metallic articles that do not present hazards in their original form.

OTHER INFORMATION:

Fumes from hot processes may contain other compounds with different exposure limits. Dust or fumes generated by machining, grinding, welding or thermal cutting of the copper may produce airborne contaminants. Consult Sections 3 & 8 for further information.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS**CHEMICAL NAME****COMMON NAME****CAS #****PERCENT WEIGHT**

Cu

Copper

7440-50-8

100.0%

SECTION 4 – FIRST AID MEASURES

EYE CONTACT:

Eye injuries from solid particles should receive immediate medical attention. Dust may be flushed from eyes immediately with large amounts of water, lifting the lower and upper lids occasionally; seek medical attention.

SKIN CONTACT:

Cuts or abrasions should be treated promptly with thorough cleansing of the affected area. Wash the skin using soap or mild detergent and water. Get medical attention if irritation develops and persists.

INGESTION:

If the product or dust is swallowed, seek immediate medical attention or advice. Do not induce vomiting.

INHALATION:

If breathing has stopped, perform artificial respiration and obtain medical aid immediately. If breathing is difficult, provide fresh air and seek medical attention as soon as possible.

SECTION 5 – FIREFIGHTING MEASURES

FLAMMABLE PROPERTIES:	Not applicable	
EXTINGUISHING MEDIA:	Not applicable; non-combustible	
PROTECTION OF FIREFIGHTERS:	For a dust fire in a confined area, use a respirator approved for toxic dusts and fumes. Do not use water to extinguish fires around operations involving molten metal due to the potential for steam explosions.	
SECTION 6 – ACCIDENTAL RELEASE MEASURES		
Clean-Up Procedures: Product in solid form may be picked up by hand or other means to be placed into a container. When cleaning dust, use methods that minimize the dispersion of dust such as a high efficiency particulate air (HEPA) vacuum, wet dust mop, or wet clean-up. Put recovered material in a suitable, covered, and labeled container.		
SECTION 7 – HANDLING AND STORAGE		
RECOMMENDED STORAGE:	Maintain good housekeeping to prevent exposure to materials and chemicals that may contaminate or impair the quality of the product.	
PROCEDURES FOR HANDLING:	This product does not require special safety precautions for the handling prior to installation. Installation and removal of the product may cause exposure to dusts and other materials or chemicals associated with the installation (work) environment. Operations such as grinding, cutting, burning, and welding may generate dusts or fumes which may require special handling procedures.	
SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION		
ENGINEERING CONTROLS:	When machining, heating, or melting, use adequate local (preferably) or general exhaust ventilation to ensure that concentrations of dusts or fumes do not exceed exposure limits. Keep workplace clean and dry (unless wet machining is being used to capture dust and fume). Train personnel to minimize exposure to hazards during installation and replacement of product. On a regular basis, verify condition and proper function of equipment in which the product will be installed.	
SUBSTANCE	ACGIH TLV mg/m³	OSHA PEL mg/m³
Cu	1 0.2	1 (dust) 0.2 (fume)
SUPPLEMENTAL INFORMATION Individual protection measures: Use appropriate gloves to protect against physical hazards. Always wear safety glasses with side shields and appropriate hearing protection when grinding or cutting.	SUPPLEMENTAL INFORMATION Individual protection measures: Use an approved respirator, with the proper assigned protection factor, whenever airborne concentrations of hazardous components exceed exposure limits listed above.	SUPPLEMENTAL INFORMATION Individual protection: Workers should was before meals and leaving work.
TERMS: ALL EXPOSURE LIMITS REFERENCED HEREIN ARE 8 HOUR TIMEWEIGHTED AVERAGES (TWA) UNLESS OTHERWISE NOTED. TLV = THRESHOLD LIMIT VALUE/AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS (ACGIH) mg/m ³ = MILLIGRAMS PER CUBIC METER		
PERSONAL PROTECTION:	Proper hand and foot protection is recommended	
SECTION 9 – PHYSICAL & CHEMICAL PROPERTIES		
APPEARANCE/PHYSICAL STATE: Metallic solid with a copper color		
ODOR/ODOR THRESHOLD: None	VAPOR DENSITY: Not volatile	

MELTING/FREEZING POINT: Approximately 1083°C (1980°F) for copper	SPECIFIC GRAVITY: (relative density) 8.9 g/cm ³ (0.32 lb./in ³) for copper (water = 1)
BOILING POINT: 2500°C (4530°F) for copper	VAPOR PRESSURE: ~ 0 mm/Hg
FLASH POINT: Not determined	EVAPORATION RATE: Not volatile
FLAMMABILITY: Not flammable	SOLUBILITY IN WATER: Insoluble
UPPER & LOWER FLAMMABILITY LIMITS: Not applicable	pH: Not applicable
AUTO IGNITION TEMPERATURE: Not applicable	VISCOSITY: Not applicable
DECOMPOSITION TEMPERATURE: Not applicable	PARTITION COEFFICIENT: Not applicable

SECTION 10 – STABILITY & REACTIVITY

CHEMICAL STABILITY: Stable under normal use conditions	
CONDITIONS TO AVOID: Temperatures > 150° C (300° F), which may soften the copper material.	
REACTIVITY: Copper may react with acetylene gas to form copper acetylides, which are sensitive to shock. Copper may react with strong acids to generate explosive gas (e.g. hydrogen).	INCOMPATIBLE MATERIALS: Dust is explosively incompatible with sodium azide.
HAZARDOUS DECOMPOSITION PRODUCTS: None	HAZARDOUS POLYMERIZATION: The melting of this product may release metal oxides.

SECTION 11 – TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS: Symptoms related to the physical, chemical and toxicological characteristics Under normal handling and use, exposure to product presents few health hazards. Dusts may cause mechanical irritations to eyes and skin. Ingestion may cause transient irritation of throat, stomach and gastrointestinal tract. Inhalation may cause coughing, nose and throat irritation, and sneezing. Higher dust exposures may cause difficulty breathing, congestion, and chest tightness.				
EYE CONTACT:	If present as dust, copper may cause irritation, discoloration, and damage. As a foreign body in the lens, copper dust may cause a dense cataract and discolor the lens.			
SKIN:	Copper can cause some irritation with possible discoloration of skin.			
INGESTION:	Ingestion of significant amounts of welding electrodes is unlikely. If copper is swallowed and person is conscious, give large quantities of water to drink. Get medical attention as soon as possible. Serious effects may occur if large amounts of dust are swallowed.			
INHALATION:	Breathing metal dust may worsen symptoms of individuals with pre-existing chronic respiratory disease. Follow exposure guidelines for copper dust and fume. Acute exposure to dust or fume may cause upper respiratory tract irritation, metallic taste in mouth, nausea, fatigue, and/or metal fume fever. Breathing copper dust may worsen symptoms of individuals with pre-existing chronic respiratory disease.			
Carcinogen Classification of Ingredients				
Ingredient	OSHA	NTP	IARC	Target Organ
None	-----	----	----	

TERMS:

OSHA – Occupational Safety & Health Administration

Y = Listed as a human carcinogen

NTP – National Toxicology Program

K = Known to be a human carcinogen

R = Reasonably anticipated to be a human carcinogen (RAHC)

IARC – International Agency for Research on Cancer

1 = Carcinogenic to humans

2A = Probably carcinogenic to humans

2B = Possibly carcinogenic to humans

3 = Unclassifiable as to carcinogenicity to humans

4 = Probably not carcinogenic to humans

Other –

NL = Not listed

SECTION 12 – ECOLOGICAL INFORMATION

ECOTOXICITY

Not applicable

PERSISTENCE AND DEGRADABILITY

Not applicable

BIOACCUMULATION POTENTIAL

Not applicable

MOBILITY IN SOIL

Not applicable

OTHER ADVERSE EFFECTS

Copper metal is relatively insoluble in water and, therefore, generally has low bioavailability. This product is not expected to present an environmental hazard. Avoid releasing dusts and fumes into the environment.

SECTION 13 – DISPOSAL CONSIDERATIONS

Recover or Recycle if possible. Dispose of according to Federal, State and Local Regulations. Dust collected from machining, welding, etc. may be classified as a hazardous waste. Consult Federal, State and Local regulations.

SECTION 14 – TRANSPORT INFORMATION

US DEPT OF TRANSPORTATION

(DOT)-HMR (Hazardous Materials Registration)

Not regulated

CANADIAN TRANSPORTATION OF

DANGEROUS GOODS (TDG)

Not regulated

UN SHIPPING NAME

Not regulated

UN NUMBER

Not regulated

TRANSPORT HAZARD CLASS

Not regulated

PACKING GROUP

Not regulated

ENVIRONMENTAL HAZARDS

None

LABEL(S) REQUIRED?

No

TRANSPORT IN BULK

Not applicable

SPECIAL SHIPPING INFORMATION

Not applicable

SECTION 15 - REGULATORY INFORMATION

US-OSHA (HAZARD COMMUNICATION STANDARD)

References

SARA TITLE III SECTION 302 (40CFR 355), SARA TITLE III 311/312 (40 CFR 370), SARA TITLE III 313 (40 CFR 372)

Component	CAS #	% By Weight
Copper	7440-50-8	≥ 99.8
<p>US-EPA (TOXIC SUBSTANCES CONTROL ACT – TSCA) All components of these products are on the TSCA inventory list or are excluded from listing.</p> <p>US-EPA (SARA TITLE III) Releases to the environment of Copper may be subject to reporting under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.</p>		
<p>CANADA-WHMIS (WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM) This SDS has been prepared according to the hazard criteria of the Controlled Product Regulations (CPR) and the SDS contains the information required by the CPR.</p>		
<p>CANADA DSL (DOMESTIC SUBSTANCES LIST) INVENTORY STATUS All components of these products are on the DSL Inventory.</p>		
<p>CEPA (CANADIAN ENVIRONMENTAL PROTECTION ACT) No components are on the Toxic Substances List.</p>		
<p>EINECS NO. (EUROPEAN INVENTORY OF EXISTING COMMERCIAL CHEMICAL SUBSTANCES) All components of these products are on the EINECS list.</p>		
<p>RoHS (RESTRICTION OF CERTAIN HAZARDOUS SUBSTANCES) COMPLIANCE Castings comply with RoHS.</p>		
<p>CALIFORNIA PROPOSITION 65 COMPLIANCE Copper is not on California's Proposition 65 list. (California Health & Safety Code 25248.5 et seq.)</p>		
<p>US STATE REGULATORY INFORMATION Some of the components listed in Section 3 (e.g., Copper) may be covered under specific state regulations.</p>		
SECTION 16 – OTHER INFORMATION		
<p>SDS PREPARED BY The information herein is given in good faith and based on technical data. The Electric Materials Company believes to be reliable. Since the conditions of use are outside our control, we assume no liability in connection with any use of this information and no warranty, expressed or implied is given. Contact the Electric Materials Company or its associates for additional information.</p>		<p>DATE 05/2015</p>
<p>NOTE: This data and label information is offered in good faith as typical values and not as a product specification. No warranty either expressed or implied is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally acceptable. However, each user should review the recommendations in specific context of the intended use and determine if they are appropriate.</p>		

LABEL Information:

We have no current labels for C110SC.



Material Safety Data Sheet

Material Name: Carbon Steel

*** Section 1 - Chemical Product and Company Identification ***

Manufacturer Information

Gerdaul Long Steel North America
4221 West Boy Scout Blvd.
Suite 600
Tampa, FL 33607

Phone: (800) 876-3626

Emergency # 800-424-9300 CHEMTREC

*** Section 2 - Hazards Identification ***

Emergency Overview

Fumes may cause irritation of the eyes and respiratory tract.

Potential Health Effects: Eyes

May cause irritation.

Potential Health Effects: Skin

Not considered to cause skin effects. Sensitive individuals may experience skin irritation.

Potential Health Effects: Ingestion

Not considered a route of exposure under anticipated product use conditions.

Potential Health Effects: Inhalation

Inhalation of fumes may cause irritation of the nose, throat and lungs. Chronic irritation may cause bronchitis, pneumonitis, siderosis, upper respiratory tract irritation, headaches, lack of coordination, metal fume fever.

Medical Conditions Aggravated by Exposure

Respiratory conditions may be aggravated by exposure to metal fumes or dusts.

HMIS Ratings: Health: 1 Fire: 0 HMIS Reactivity 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

*** Section 3 - Composition / Information on Ingredients ***

CAS #	Component	Percent
1309-37-1	Iron oxide	97
7439-96-5	Manganese	2
7440-50-8	Copper	1.5
124-38-9	Carbon dioxide	0.9
7440-02-0	Nickel	0.5
7440-21-3	Silicon	0.4
7440-31-5	Tin	0.08
7446-09-5	Sulfur dioxide	0.08
7723-14-0	Phosphorus	0.06
1314-62-1	Vanadium pentoxide	0.05

*** Section 4 - First Aid Measures ***

First Aid: Eyes

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

First Aid: Skin

For skin contact, flush with large amounts of water. If irritation persists, get medical attention.

First Aid: Ingestion

If the material is swallowed, get immediate medical attention or advice.

First Aid: Inhalation

Move person to non-contaminated air. Seek medical attention.

*** Section 5 - Fire Fighting Measures ***

General Fire Hazards

See Section 9 for Flammability Properties.

Concentrations of metallic fines in the air could present an explosion hazard.

Material Safety Data Sheet

Material Name: Carbon Steel

Hazardous Combustion Products

Above the melting point, iron oxide fumes may be present.

Extinguishing Media

For molten metal, use Class D chemical or sand.

Fire Fighting Equipment/Instructions

Firefighters should wear full protective gear.

NFPA Ratings: Health: 1 Fire: 0 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

*** Section 6 - Accidental Release Measures ***

Containment Procedures

None necessary.

Clean-Up Procedures

Fine particles and small chips should be swept up and disposed of properly.

Evacuation Procedures

Isolate area. Keep unnecessary personnel away.

Special Procedures

User should consult applicable standards for specific process employed to determine any special precautions needed to insure the health and safety of its employees.

*** Section 7 - Handling and Storage ***

Handling Procedures

Avoid contact with skin and eyes. Wash thoroughly after handling.

Storage Procedures

No special storage procedures necessary.

*** Section 8 - Exposure Controls / Personal Protection ***

A: Component Exposure Limits

Iron oxide (1309-37-1)

ACGIH: 5 mg/m³ TWA (respirable fraction)
OSHA: 10 mg/m³ TWA (fume)
NIOSH: 5 mg/m³ TWA (dust and fume, as Fe)

Manganese (7439-96-5)

ACGIH: 0.2 mg/m³ TWA
OSHA: 1 mg/m³ TWA (fume)
3 mg/m³ STEL (fume)
5 mg/m³ Ceiling
NIOSH: 1 mg/m³ TWA (fume)
3 mg/m³ STEL

Copper (7440-50-8)

ACGIH: 0.2 mg/m³ TWA (fume); 1 mg/m³ TWA (dust and mist, as Cu)
OSHA: 0.1 mg/m³ TWA (dust, fume, mists, as Cu)
NIOSH: 1 mg/m³ TWA (dust and mist)

Carbon dioxide (124-38-9)

ACGIH: 5000 ppm TWA
30000 ppm STEL
OSHA: 10000 ppm TWA; 18000 mg/m³ TWA
30000 ppm STEL; 54000 mg/m³ STEL
NIOSH: 5000 ppm TWA; 9000 mg/m³ TWA
30000 ppm STEL; 54000 mg/m³ STEL

Material Safety Data Sheet

Material Name: Carbon Steel

Nickel (7440-02-0)

ACGIH: 1.5 mg/m3 TWA (inhalable fraction)
OSHA: 1 mg/m3 TWA
NIOSH: 0.015 mg/m3 TWA

Silicon (7440-21-3)

OSHA: 10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)
NIOSH: 10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust)

Tin (7440-31-5)

ACGIH: 2 mg/m3 TWA
OSHA: 2 mg/m3 TWA
NIOSH: 2 mg/m3 TWA

Sulfur dioxide (7446-09-5)

ACGIH: 2 ppm TWA
5 ppm STEL
OSHA: 2 ppm TWA; 5 mg/m3 TWA
5 ppm STEL; 15 mg/m3 STEL
NIOSH: 2 ppm TWA; 5 mg/m3 TWA
5 ppm STEL; 13 mg/m3 STEL

Phosphorus (7723-14-0)

OSHA: 0.1 mg/m3 TWA
NIOSH: 0.1 mg/m3 TWA

Vanadium pentoxide (1314-62-1)

ACGIH: 0.05 mg/m3 TWA (dust or fume, respirable fraction)
NIOSH: 0.05 mg/m3 Ceiling (15 min, dust and fume, as V)

Engineering Controls

Use general ventilation and use local exhaust, where possible, in confined or enclosed spaces.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

Wear safety glasses; chemical goggles for fumes which may arise from thermal processing.

Personal Protective Equipment: Skin

Use impervious gloves.

Personal Protective Equipment: Respiratory

If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection.

Personal Protective Equipment: General

Eye wash fountain and emergency showers are recommended.

*** Section 9 - Physical & Chemical Properties ***

Appearance:	Grey metallic	Odor:	Metallic or odorless
Physical State:	Solid	pH:	NA
Vapor Pressure:	NA	Vapor Density:	NA
Boiling Point:	3000°C (5432°F)	Melting Point:	1535°C (2795°F)
Solubility (H2O):	NA	Specific Gravity:	7.0
Evaporation Rate:	NA	VOC:	NA
Octanol/H2O Coeff.:	NA	Flash Point:	NA
Flash Point Method:	NA	Upper Flammability Limit (UFL):	NA
Lower Flammability Limit (LFL):	NA	Burning Rate:	NA
Auto Ignition:	NA		

Material Safety Data Sheet

Material Name: Carbon Steel

*** Section 10 - Chemical Stability & Reactivity Information ***

Chemical Stability

This is a stable material.

Chemical Stability: Conditions to Avoid

None

Incompatibility

Strong Acids

Hazardous Decomposition

Metal fumes if heated. Above the melting point, iron oxide fumes may be present

Possibility of Hazardous Reactions

Will not occur.

*** Section 11 - Toxicological Information ***

Acute Dose Effects

A: General Product Information

Operations or fire which supply sufficient energy to the product (i.e. welding, high speed grinding or melting) can release dust or fumes which may make components of the product biologically available. Exposure to dusts or fumes from some metals including iron, zinc, manganese, chromium, cobalt and copper can produce a condition known as metal fume fever. Iron dust can irritate the eyes and respiratory tract by mechanical action. Acute iron poisoning may involve hemorrhagic vomiting and diarrhea, abdominal pain, acidosis, coagulaopathy, shock, coma and convulsions followed by hepatic and renal failure and perhaps cardiovascular collapse. Chronic inhalation of iron has resulted in mottling of the lungs, a condition referred to as siderosis.

Systemic effects from ingestion of nickel include capillary damage, kidney damage, myocardial weakness and central nervous system depression. Allergic skin sensitization reactions are the most frequent effect of exposure to nickel compounds. Exposure to nickel compounds may also result in allergic lung sensitization. Exposure to copper fume or dust can cause respiratory tract irritation, hemolytic anemia and allergic contact dermatitis.

B: Component Analysis - LD50/LC50

Iron oxide (1309-37-1)

Oral LD50 Rat: >10000 mg/kg

Manganese (7439-96-5)

Oral LD50 Rat: 9 g/kg

Nickel (7440-02-0)

Oral LD50 Rat: >9000 mg/kg

Silicon (7440-21-3)

Oral LD50 Rat: 3160 mg/kg

Sulfur dioxide (7446-09-5)

Inhalation LC50 Rat: 2500 ppm/1H

Phosphorus (7723-14-0)

Inhalation LC50 Rat: 4.3 mg/L/1H; Oral LD50 Rat: 3.03 mg/kg; Dermal LD50 Rat: 100 mg/kg

Vanadium pentoxide (1314-62-1)

Inhalation LC50 Rat: 2.21 mg/L/4H; Oral LD50 Rat: 10 mg/kg; Dermal LD50 Rat: >2500 mg/kg

Carcinogenicity

A: General Product Information

The carcinogenic effect of nickel has been well documented in occupationally exposed nickel refinery workers. Lung and nasal cancers were the predominant forms of cancer in the exposed workers.

Material Safety Data Sheet

Material Name: Carbon Steel

B: Component Carcinogenicity

Iron oxide (1309-37-1)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Supplement 7 [1987], Monograph 1 [1972] (Group 3 (not classifiable))

Nickel (7440-02-0)

ACGIH: A5 - Not Suspected as a Human Carcinogen
NIOSH: potential occupational carcinogen
NTP: Reasonably Anticipated To Be A Human Carcinogen (Possible Select Carcinogen)
IARC: Monograph 49 [1990], Supplement 7 [1987] (Group 2B (possibly carcinogenic to humans))

Sulfur dioxide (7446-09-5)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Monograph 54 [1992] (Group 3 (not classifiable))

Vanadium pentoxide (1314-62-1)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Monograph 86 [2006] (Group 2B (possibly carcinogenic to humans))

Teratogenicity

Manganese, copper and nickel have been reported to have adverse reproductive effects in experimental animals. Copper and nickel have been shown to be fetotoxic in experimental animals.

Neurological Effects

Chronic overexposure to manganese compounds may result in CNS effects such as weakness, sleepiness, emotional instability and spastic gait. These effects can be permanent.

Other Toxicological Information

Under normal conditions of handling, the likelihood of inhaling or ingesting amounts necessary for these effects to occur is very small.

*** Section 12 - Ecological Information ***

Ecotoxicity

A: General Product Information

No information available for the product.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Copper (7440-50-8)

Test & Species	Conditions
96 Hr LC50 Pimephales promelas	23 µg/L
96 Hr LC50 Oncorhynchus mykiss	13.8 µg/L
96 Hr LC50 Lepomis macrochirus	236 µg/L
72 Hr EC50 Scenedesmus subspicatus	120 µg/L
96 Hr EC50 water flea	10 µg/L
96 Hr EC50 water flea	200 µg/L

Nickel (7440-02-0)

Test & Species	Conditions
96 Hr LC50 Oncorhynchus mykiss	31.7 mg/L
96 Hr LC50 Pimephales promelas	3.1 mg/L
96 Hr LC50 Brachydanio rerio	>100 mg/L
72 Hr EC50 freshwater algae (4 species)	0.1 mg/L
72 Hr EC50 Selenastrum capricornutum	0.18 mg/L
96 Hr EC50 water flea	510 µg/L

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Material Name: Carbon Steel

Phosphorus (7723-14-0)

Test & Species

	Conditions
96 Hr LC50 Lepomis macrochirus	0.0024 mg/L [flow-through]
96 Hr LC50 Brachydanio rerio	>100 mg/L [static]
48 Hr EC50 Daphnia magna	0.111 mg/L

*** Section 13 - Disposal Considerations ***

US EPA Waste Number & Descriptions

Component Waste Numbers

Vanadium pentoxide (1314-62-1)

RCRA: waste number P120

Disposal Instructions

Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations. See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

*** Section 14 - Transportation Information ***

US DOT Information

Shipping Name: Not Regulated

TDG Information

Shipping Name: Not Regulated

*** Section 15 - Regulatory Information ***

US Federal Regulations

A: Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Manganese (7439-96-5)

SARA 313: 1.0 % de minimis concentration

Copper (7440-50-8)

SARA 313: 1.0 % de minimis concentration

CERCLA: 5000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers); 2270 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers)

Nickel (7440-02-0)

SARA 313: 0.1 % de minimis concentration

CERCLA: 100 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers); 45.4 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers)

Sulfur dioxide (7446-09-5)

SARA 302: 500 lb TPQ

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Material Name: Carbon Steel

Phosphorus (7723-14-0)

SARA 302: 100 lb TPQ (This material is a reactive solid. The TPQ does not default to 10000 pounds for non-powder, non-molten, non-solvent form)
 CERCLA: 1 lb final RQ; 0.454 kg final RQ

Vanadium pentoxide (1314-62-1)

SARA 302: 100 lb lower threshold TPQ; 10000 lb upper threshold TPQ
 CERCLA: 1000 lb final RQ; 454 kg final RQ

B: Component Marine Pollutants

This material contains one or more of the following chemicals required by US DOT to be identified as marine pollutants.

Component	CAS #	
Copper	7440-50-8	DOT regulated severe marine pollutant

State Regulations

A: General Product Information

Product may be subject to reporting in states other than those listed for individual components.

B: Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Iron oxide	1309-37-1	Yes	Yes	Yes	Yes	Yes	Yes
Manganese	7439-96-5	Yes	Yes	Yes	Yes	Yes	Yes
Copper	7440-50-8	Yes	Yes	Yes	Yes	Yes	Yes
Carbon dioxide	124-38-9	Yes	Yes	Yes	Yes	Yes	Yes
Nickel	7440-02-0	Yes	Yes	Yes	Yes	Yes	Yes
Silicon	7440-21-3	No	Yes	Yes	Yes	Yes	Yes
Tin	7440-31-5	Yes	Yes	Yes	Yes	Yes	Yes
Sulfur dioxide	7446-09-5	Yes	Yes	Yes	Yes	Yes	Yes
Phosphorus	7723-14-0	Yes	Yes	Yes	Yes	Yes	Yes
Vanadium pentoxide	1314-62-1	Yes	Yes	Yes	Yes	Yes	Yes

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause cancer.

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Iron oxide	1309-37-1	1 %
Manganese	7439-96-5	1 %
Copper	7440-50-8	1 %
Nickel	7440-02-0	0.1 %

Additional Regulatory Information

Material Safety Data Sheet

Material Name: Carbon Steel

Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
Iron oxide	1309-37-1	Yes	DSL	EINECS
Manganese	7439-96-5	Yes	DSL	EINECS
Copper	7440-50-8	Yes	DSL	EINECS
Carbon dioxide	124-38-9	Yes	DSL	EINECS
Nickel	7440-02-0	Yes	DSL	EINECS
Silicon	7440-21-3	Yes	DSL	EINECS
Tin	7440-31-5	Yes	DSL	EINECS
Sulfur dioxide	7446-09-5	Yes	DSL	EINECS
Phosphorus	7723-14-0	Yes	DSL	EINECS
Vanadium pentoxide	1314-62-1	Yes	DSL	EINECS

*** Section 16 - Other Information ***

Other Information

Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use.

Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists; ADG = Australian Code for the Transport of Dangerous Goods by Road and Rail; ADR/RID = European Agreement of Dangerous Goods by Road/Rail; AS = Standards Australia; DFG = Deutsche Forschungsgemeinschaft; DOT = Department of Transportation; DSL = Domestic Substances List; EEC = European Economic Community; EINECS = European Inventory of Existing Commercial Chemical Substances; ELINCS = European List of Notified Chemical Substances; EU = European Union; HMIS = Hazardous Materials Identification System; IARC = International Agency for Research on Cancer; IMO = International Maritime Organization; IATA = International Air Transport Association; MAK = Maximum Concentration Value in the Workplace; NDSL = Non-Domestic Substances List; NFPA = National Fire Protection Association; NOHSC = National Occupational Health & Safety Commission; NTP = National Toxicology Program; STEL = Short-term Exposure Limit; TDG = Transportation of Dangerous Goods; TLV = Threshold Limit Value; TSCA = Toxic Substances Control Act; TWA = Time Weighted Average

End of Sheet

Safety Data Sheet

1. Identification

Product Name: VALLEY BLACK W/R AIR DRY Product Code: 11015A-P3

Jamestown Coating Technologies
108 Main Street
Jamestown, PA 16134

Information Telephone Number: 800-628-3565
Emergency Telephone Number: 800-424-9300



Product Use: Industrial Use Only
Not recommended for: Not Applicable

2. Hazards

GHS Ratings:

Flammable liquid	4	Flash point $\geq 60^{\circ}\text{C}$ (140°F) and $\leq 93^{\circ}\text{C}$ (200°F)
Skin corrosive	3	Reversible adverse effects in dermal tissue, Draize score: $\geq 1.5 < 2.3$
Eye corrosive	2A	Eye irritant: Subcategory 2A, Reversible in 21 days
Mutagen	1B	Known to produce heritable mutations in human germ cells Subcategory 1B, Positive results: In vivo heritable germ cell tests in mammals, Human germ cell tests, In vivo somatic mutagenicity tests, combined with some evidence of germ cell mutagenicity
Carcinogen	1B	Presumed Human Carcinogen, Based on demonstrated animal carcinogenicity
Reproductive toxin	2	Human or animal evidence possibly with other information

GHS Hazards

H227	Combustible liquid
H316	Causes mild skin irritation
H319	Causes serious eye irritation
H340	May cause genetic defects
H350	May cause cancer
H361	Suspected of damaging fertility or the unborn child

GHS Precautions

P201	Obtain special instructions before use
P202	Do not handle until all safety precautions have been read and understood
P210	Keep away from heat/sparks/open flames/hot surfaces – No smoking
P235	Keep cool
P264	Wash hands thoroughly after handling
P280	Wear protective gloves/protective clothing/eye protection/face protection
P281	Use personal protective equipment as required
P305+P351+P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing
P308+P313	IF exposed or concerned: Get medical advice/attention
P332+P313	If skin irritation occurs: Get medical advice/attention
P337+P313	Get medical advice/attention
P370+P378	In case of fire: Use ... for extinction
P405	Store locked up
P403+P235	Store in a well ventilated place. Keep cool

Signal Word: Danger

3. Composition

Chemical Name	CAS number	Weight Concentration %
2-Butanol	78-92-2	5.00%
2-Butoxyethanol	111-76-2	3.00%
Carbon black	1333-86-4	2.00%
Stoddard solvent	8052-41-3	0.30%

4. First Aid

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.

Eye Contact: In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes while holding eyelids open. Seek prompt medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush exposed skin with soap and plenty of water. Wash clothing before reusing. Thoroughly clean contaminated shoes before reuse. Seek medical attention.

Ingestion: If swallowed, contact medical personnel or poison control center immediately. If directed by them, induce vomiting immediately. Never give anything by mouth to an unconscious person.

5. Fire Fighting

Flash Point: 63 C (145 F)

Extinguishing Media: CO₂, Dry Chemical Foam, Alcohol-Resistant Foam, Water Spray

Unusual Fire/Exposure Hazards: Vapors may form explosive mixture with air. "Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty drums should be completely drained, properly bunged, and promptly returned to a drum reconditioner, or properly disposed of. Prevent build-up of vapors by providing adequate air exchange. Container areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure. Avoid build-up of wet material on filters and absorption materials. May cause spontaneous combustion under certain environmental conditions.

Fire Equipment: Containers can build up pressure if exposed to heat (fire). As in any fire, wear self-contained apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear. Full emergency equipment with self-contained breathing apparatus and full protective clothing should be worn by firefighters. During a fire, HDI vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. Closed containers may explode when exposed to extreme heat, or burst when contaminated with water (CO₂ evolved). Solvent vapors may be heavier than air. Stagnant air may cause vapors to accumulate and travel along the ground to an ignition source which may result in a flashback to the source of the vapor.

6. Spillage

Personal precautions: Wear appropriate personal safety equipment. Keep out of reach of children

Environmental precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Shut off source of leak only if safe to do so. If vapor cloud forms, water fog may be used to suppress; contain runoff.

Methods for cleaning: Dike and contain. Soak up residue with an inert absorbent such as clay, sand or other suitable material. Place in non-leaking chemical waste containers for proper disposal. Flush area with water to remove trace residue.

Large Spills: For large spills, evacuate the hazard area of unprotected personnel.

7. Handling and Storage

Handling: Wash thoroughly after handling. Ground and bond containers when transferring material.

Vapors may accumulate and travel to ignition sources distant from handling site. Keep container closed when not in use. Use with adequate ventilation. Containers, even when empty, can contain explosive vapors. Do not cut, drill, or grind containers.

Hygiene measures: Wash hands before eating. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated contact with skin.

Storage: Keep away from heat, sparks and flame. Keep from freezing. Keep container closed when not in use.

8. Exposure Control

Chemical Name / CAS No.	OSHA Exposure Limits	ACGIH Exposure Limits	Other Exposure Limits
2-Butanol 78-92-2	150 ppm TWA; 450 mg/m ³ TWA	100 ppm TWA	NIOSH: 100 ppm TWA; 305 mg/m ³ TWA 150 ppm STEL; 455 mg/m ³ STEL
2-Butoxyethanol 111-76-2	50 ppm TWA; 240 mg/m ³ TWA	20 ppm TWA	NIOSH: 5 ppm TWA; 24 mg/m ³ TWA
Carbon black 1333-86-4	3.5 mg/m ³ TWA	3 mg/m ³ TWA (inhalable fraction)	NIOSH: 3.5 mg/m ³ TWA; 0.1 mg/m ³ TWA (Carbon black in presence of Polycyclic aromatic hydrocarbons, as PAH)
Stoddard solvent 8052-41-3	500 ppm TWA; 2900 mg/m ³ TWA	100 ppm TWA	NIOSH: 350 mg/m ³ TWA 1800 mg/m ³ Ceiling (15 min)

Engineering Controls: Eyewash stations and safety showers should be available for use in an emergency. Use only in a well ventilated area. Use spark-proof tools and explosion proof equipment.

Ventilation: Good general ventilation should be sufficient to control airborne levels. Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during use of this product. Use ventilation as required to control vapor concentration.

Personal protection equipment: A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection. Avoid prolonged or repeated breathing of vapors. If exposure exceeds TLV, use a NIOSH approved respirator to prevent overexposure.

Eye protection: Wear safety glasses with side shields (or goggles) and a face shield.

Hand protection: Avoid contact with skin, eyes, and clothing. Wash hands thoroughly after handling. Where splashing is possible, fully chemically resistant protective clothing (e.g. acid suit) and boots are required.

9. Physical and Chemical Properties

APPEARANCE AND ODOR BLACK/AMINE Odor threshold: Not Available pH 8.5 Melting point: Not Available SOLUBLE IN H2O FULLY H2O SOLUBLE Flash Point: 145 F,63 C Flammability: Not Available Partition coefficient (n- Not Available octanol/water): Decomposition temperature: Not Available Grams VOC/Liter Less Water 189.8658	Vapor Pressure: 1.3 mmHg Vapor Density: 3.6 Specific Gravity: 1.004804593 Freezing point: Not Available Boiling range: Not Available Evaporation rate: Not Available Explosive Limits: Not Available Autoignition temperature: Not Available VISCOSITY - #5 ZAHN 31 Seconds
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10. Stability and Reactivity

Incompatible materials: Alkaline materials, strong acids, and oxidizing materials.

Hazardous Decomposition: May produce hazardous fumes which may contain smoke, carbon dioxide or carbon monoxide.

11. Toxicological Information

Mixture Toxicity

Component Toxicity

111-76-2 2-Butoxyethanol
Oral LD50: 470 mg/kg (Rat) Dermal LD50: 220 mg/kg (Rabbit) Inhalation LC50: 450 ppm (Rat)

This material may be harmful or fatal if swallowed.

Effects of Overexposure

<u>CAS Number</u>	<u>Description</u>	<u>% Weight</u>	<u>Carcinogen Rating</u>
8052-41-3	Stoddard solvent	0.3	Stoddard solvent: EU REACH: Present (P)
1333-86-4	Carbon black	2	Carbon black: NIOSH: potential occupational carcinogen IARC: Possible human carcinogen OSHA: listed

12. Ecological Information

Component Ecotoxicity

2-Butanol 96 Hr LC50 Pimephales promelas: 3380 - 3990 mg/L [flow-through]
48 Hr EC50 Daphnia magna: 1859 - 7143 mg/L [Static]

2-Butoxyethanol 96 Hr LC50 Lepomis macrochirus: 1490 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 2950 mg/L
48 Hr EC50 Daphnia magna: >1000 mg/L

13. Disposal Considerations

Dispose in accordance with local, state or federal regulations. Incinerate in approved facility. Do not incinerate closed containers.

14. Transportation Information

<u>Agency</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT	PAINT, NOT REGULATED			
IATA	PAINT, NOT REGULATED			
IMDG	PAINT, NOT REGULATED			

15. Regulatory Information

All ingredients are TSCA Listed.

ACGIH - Threshold Limit Values - Carcinogens
1333-86-4 Carbon black 2 % Carcinogens
111-76-2 2-Butoxyethanol 3 % Carcinogens

ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV - STEL)
- None

ACGIH - Threshold Limit Values - Time Weighted Averages (TLV - TWA)

ACGIH - Threshold Limit Values - TLV Basis - Critical Effects
8052-41-3 Stoddard solvent 0 %
1333-86-4 Carbon black 2 %
111-76-2 2-Butoxyethanol 3 %
78-92-2 2-Butanol 5 %

ACGIH - Threshold Limit Values - Ceilings (TLV-C)
- None

This product contains the following chemical(s), which are included on the California 8 CCR Section 339 Director's List of Hazardous Substances:

8052-41-3 Stoddard solvent
1333-86-4 Carbon black
111-76-2 2-Butoxyethanol
78-92-2 2-Butanol

State of California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): WARNING! This product contains the following chemicals which are listed by the State of California as carcinogenic or a reproductive toxin:

1333-86-4 Carbon black 2 % Toxic

Coalition of Northeast Governors (CONEG) - Model Toxics in Packaging Legislation
- None

This product contains the following chemical(s), which are considered under Delaware's Accidental Release Prevention Regulations for Sufficient Quantities:
- None

This product contains the following chemical(s), which are considered under Delaware's Accidental Release Prevention Regulations for Threshold Quantities:
- None

All components of this product are included on the EINECS (European Inventory of Existing Commercial Chemical Substances) Inventory, or are not required to be listed on the EINECS Inventory.

This product contains the following chemical(s), rated by the IARC as Group 1, Carcinogenic to Humans:

- None

This product contains the following chemical(s), rated by the IARC as Group 2A, Probably Carcinogenic to Humans:

- None

This product contains the following chemical(s), rated by the IARC as Group 2B, Possibly Carcinogenic to Humans:

1333-86-4 Carbon black 2 % Carcinogens

This product contains the following chemical(s), rated by the IARC as Group 3, Not Classifiable:

111-76-2 2-Butoxyethanol 3 %

This product contains the following chemical(s), rated by the IARC as Group 4, Probably Not Carcinogenic:

- None

This product contains the following chemical(s), which are included in Idaho's Carcinogenic Toxic Air Pollutants with Acceptable Ambient Concentrations:

- None

This product contains the following chemical(s), which are included in Idaho's Carcinogenic Toxic Air Pollutants with Emissions Levels:

- None

This product contains the following chemical(s), which are included in Idaho's Non-Carcinogenic Toxic Air Pollutants with Acceptable Ambient Concentrations:

8052-41-3 Stoddard solvent

1333-86-4 Carbon black

111-76-2 2-Butoxyethanol

78-92-2 2-Butanol

This product contains the following chemical(s), which are included in Idaho's Non-Carcinogenic Toxic Air Pollutants with Emissions Levels:

8052-41-3 Stoddard solvent

1333-86-4 Carbon black

111-76-2 2-Butoxyethanol

78-92-2 2-Butanol

This product contains the following chemical(s), which have Idaho Occupational Exposure Limit Ceilings:

- None

This product contains the following chemical(s), which have Idaho Occupational Exposure Limit Time Weighted Averages:

8052-41-3 Stoddard solvent

1333-86-4 Carbon black

111-76-2 2-Butoxyethanol

78-92-2 2-Butanol

This product contains the following chemical(s), which are considered Illinois Toxic Air Contaminants:

1333-86-4 Carbon black

This product contains the following chemical(s), which are considered Illinois Toxic Air Contaminants Carcinogens:

1333-86-4 Carbon black

This product contains the following chemical(s), which are considered Massachusetts Allowable Threshold Concentrations:

- None

This product contains the following chemical(s), which are included on the Massachusetts Right To Know List:

8052-41-3 Stoddard solvent
1333-86-4 Carbon black
111-76-2 2-Butoxyethanol
78-92-2 2-Butanol

This product contains the following chemical(s), which are considered Massachusetts Threshold Effects Exposure Limits:

- None

This product contains the following chemical(s), which are considered Maine Hazardous Air Pollutants:

- None

This product contains the following chemical(s), which are included in North Carolina's Control of Toxic Air Pollutants:

- None

This product contains the following chemical(s), which are considered NIOSH - Pocket Guide - Ceiling Limits:

8052-41-3 Stoddard solvent

This product contains the following chemical(s), which are considered NIOSH - Pocket Guide - IDLHs (Immediately Dangerous to Health or Life):

8052-41-3 Stoddard solvent
1333-86-4 Carbon black
111-76-2 2-Butoxyethanol
78-92-2 2-Butanol

This product contains the following chemical(s), which are considered NIOSH - Pocket Guide - Proposed STELs:

- None

This product contains the following chemical(s), which are considered NIOSH - Pocket Guide - Proposed TWAs:

- None

This product contains the following chemical(s), which are considered NIOSH - Pocket Guide - Proposed Ceilings:

- None

This product contains the following chemical(s), which are considered NIOSH - Health Standards - Pesticides:

8052-41-3 Stoddard solvent
111-76-2 2-Butoxyethanol
78-92-2 2-Butanol

This product contains the following chemical(s), which are considered NIOSH - Pocket Guide - Potential Occupational Carcinogens:

1333-86-4 Carbon black

This product contains the following chemical(s), which are considered NIOSH - Pocket Guide - Proposed Skin Notations:

- None

This product contains the following chemical(s), which are considered NIOSH - Pocket Guide - Skin Notations:

111-76-2 2-Butoxyethanol

This product contains the following chemical(s), which are considered NIOSH - Pocket Guide - STELs:

78-92-2 2-Butanol

This product contains the following chemical(s), which are considered NIOSH - Pocket Guide - Target Organs:

8052-41-3 Stoddard solvent
1333-86-4 Carbon black
111-76-2 2-Butoxyethanol

78-92-2 2-Butanol

This product contains the following chemical(s), which are considered NIOSH - Pocket Guide - TWAs:

- 8052-41-3 Stoddard solvent
- 1333-86-4 Carbon black
- 111-76-2 2-Butoxyethanol
- 78-92-2 2-Butanol

This product contains the following chemical(s), which are considered New Jersey Right To Know Hazardous Substances:

- 8052-41-3 Stoddard solvent
- 1333-86-4 Carbon black
- 111-76-2 2-Butoxyethanol
- 78-92-2 2-Butanol

This product contains the following chemical(s), which are considered New Jersey Extraordinarily Hazardous Substances:

- None

This product contains the following chemical(s), which are considered NTP (National Toxicology Program) - Items Under Consideration:

- None

This product contains the following chemical(s), which are considered NTP (National Toxicology Program) - Management Status Report - Evidence of Carcinogenicity:

- 111-76-2 2-Butoxyethanol

This product contains the following chemical(s), which are considered NTP (National Toxicology Program) - Management Status Report - Testing Status and NTIS Number:

- 111-76-2 2-Butoxyethanol

This product contains the following chemical(s), which are considered NTP (National Toxicity Program) - Report on Carcinogens - Known Human Carcinogens:

- None

This product contains the following chemical(s), which are considered NTP (National Toxicology Program) - Report on Carcinogens - Reasonably Anticipated to be Human Carcinogens:

- None

This product contains the following chemical(s), which are included in New York's Ambient Air Quality Standards:

- None

This product contains the following chemical(s), which are considered New York's Occupational Exposure Limits Ceilings:

- None

This product contains the following chemical(s), which are considered New York's Occupational Exposure Limits No Exposure Permitted:

- None

This product contains the following chemical(s), which are considered New York's Occupational Exposure Limits Skin Designations:

- 111-76-2 2-Butoxyethanol

This product contains the following chemical(s), which are considered New York's Occupational Exposure Limits Time Weighted Averages:

- 8052-41-3 Stoddard solvent
- 1333-86-4 Carbon black
- 111-76-2 2-Butoxyethanol

78-92-2 2-Butanol

This product contains the following chemical(s), which are included on New York's Priority Chemical Avoidance List:

- None

This product contains the following chemical(s), which are included on New York's Reporting of Releases Part 597 List of Hazardous Substances:

- None

This product contains the following chemical(s), which are included on Pennsylvania's Right To Know Environmental Hazard List:

78-92-2 2-Butanol

This product contains the following chemical(s), which are considered Pennsylvania Right To Know Special Hazardous Substances:

1333-86-4 1333-86-4

This product contains the following chemical(s), which are included on Pennsylvania's Right To Know List:

8052-41-3 Stoddard solvent

1333-86-4 Carbon black

111-76-2 2-Butoxyethanol

78-92-2 2-Butanol

- None

All components of this product are included on the TSCA Chemical Inventory Section 8(b), or are not required to be listed on the TSCA Chemical Inventory.

This product contains the following chemical(s), which are reportable as CERCLA/SARA Section 302 Extremely Hazardous Substances EPCRA RQs:

- None

This product contains the following chemical(s), which are reportable as CERCLA/SARA Section 302 Extremely Hazardous Substances TPQs:

- None

This product contains the following chemical(s), which are reportable as CERCLA/SARA Section 313 for Emission Reporting:

78-92-2 2-Butanol

This product contains the following chemical(s), which are included in CERCLA/SARA Section 313's PBT Chemical Listing:

- None

This product contains the following chemical(s), which are reportable as CERCLA/SARA Hazardous Substances and their Reportable Quantities:

- None

This product contains the following chemical(s), which are reportable as CERCLA/SARA Radionuclides and their Reportable Quantities:

- None

This product contains the following chemical(s), which are US Clean Air Act 1990 Hazardous Air Pollutants:

- None

This product contains the following chemical(s), which are considered US Clean Air Act Accidental Release Prevention Flammable Substances:

- None

This product contains the following chemical(s), which are considered US Clean Air Act Accidental Release Prevention Toxic Substances:

- None

This product contains the following chemical(s), which are considered US Clean Air Act Class I Ozone Depletors:

- None

This product contains the following chemical(s), which are considered US Clean Air Act Class II Ozone Depletors:

- None

This product contains the following chemical(s), which are considered US Clean Air Act Greenhouse Gases:

- None

This product contains the following chemical(s), which are considered US Clean Air Act Greenhouse Gases:

- None

This product contains the following chemical(s), which are considered US Clean Air Act High Risk Hazardous Air Pollutants:

- None

This product contains the following chemical(s), which are considered US Clean Air Act HON Rule - Organic HAPs:

- None

This product contains the following chemical(s), which are considered US Clean Air Act HON Rule - SOCM I Chemicals:

111-76-2 2-Butoxyethanol

This product contains the following chemical(s), which fall under the US Clean Air Act National Primary Ambient Air Quality Standard:

- None

This product contains the following chemical(s), which fall under the US Clean Air Act National Secondary Ambient Air Quality Standard:

- None

This product contains the following chemical(s), which fall under the US Clean Air Act Reactivity Factors for VOCs in Aerosol Coatings:

1569-01-3 2-Propanol, 1-propoxy-

111-76-2 2-Butoxyethanol

5131-66-8 1-Butoxy-2-propanol

78-92-2 2-Butanol

This product contains the following chemical(s), which fall under the US Clean Air Act SNAP Program Listing of Substitutes for ODSs:

7732-18-5 Water

This product contains the following chemical(s), which are contained in the US Clean Air Act Urban HAPs List (Integrated Urban Strategy):

- None

This product contains the following chemical(s), which are considered US Clean Air Act VOCs in SOCM I:

111-76-2 2-Butoxyethanol

78-92-2 2-Butanol

This product contains the following chemical(s), which are considered US Clean Air Act VOCs with Negligible Photochemical Reactivity:

- None

This product contains the following chemical(s), which are considered US Clean Water Act Bioaccumulation Chemicals of Concern:

- None

This product contains the following chemical(s), which are considered US Clean Water Act Hazardous Substances:

- None

This product contains the following chemical(s), which are considered US Clean Water Act Priority Pollutants:

- None

This product contains the following chemical(s), which fall under US Clean Water Act Reportable Quantities of Designated Hazardous Substances:

- None

This product contains the following chemical(s), which fall under US Clean Water Act Recommended Water Quality Criteria - CCC for Freshwater Life:

- None

This product contains the following chemical(s), which fall under US Clean Water Act Recommended Water Quality Criteria - CCC for Saltwater Life:

- None

This product contains the following chemical(s), which fall under US Clean Water Act Recommended Water Quality Criteria - CMC for Freshwater Life:

- None

This product contains the following chemical(s), which fall under US Clean Water Act Recommended Water Quality Criteria - CMC for Saltwater Life:

- None

This product contains the following chemical(s), which fall under US Clean Water Act Recommended Water Quality Criteria - Human Health Consumption for Aquatic Organisms Only:

- None

This product contains the following chemical(s), which fall under US Clean Water Act Recommended Water Quality Criteria - Human Health Consumption for Water and Aquatic Organisms:

- None

This product contains the following chemical(s), which fall under US Clean Water Act Recommended Water Quality Criteria - Organoleptic Effects:

- None

This product contains the following chemical(s), which are considered US Clean Water Act Toxic Pollutants:

- None

This product contains the following chemical(s), which fall under US Clean Water Act Total Toxic Organics for Electroplating Point Source Category:

- None

This product contains the following chemical(s), which fall under US Clean Water Act Total Toxic Organics for Metal Finishing Point Source Category:

- None

This product contains the following chemical(s), which are considered to be US Department of Homeland Security Chemical Facility Anti-Terrorism Standards (CFATS) Theft Minimum Concentrations:

- None

This product contains the following chemical(s), which are considered to be US Department of Homeland Security Chemical Facility Anti-Terrorism Standards (CFATS) Theft STQs:

- None

This product contains the following chemical(s), which are considered to be US OSHA - Hazard Communication Carcinogens:

1333-86-4 Carbon black

This product contains the following chemical(s), which are considered to be US OSHA - Final PELs - Acceptable Maximum Peaks Above the Ceiling Concentrations for an 8-hour Shift:

- None

This product contains the following chemical(s), which are considered to be US OSHA - Final PELs - Short Term Exposure Limits:

- None

This product contains the following chemical(s), which are considered to be US OSHA - Final PELs - Ceiling Limits:

- None

This product contains the following chemical(s), which are considered to be US OSHA - Final PELs - Skin Notations:

111-76-2 2-Butoxyethanol

This product contains the following chemical(s), which are considered to be US OSHA - Final PELs - Time Weighted Averages:

8052-41-3 Stoddard solvent

1333-86-4 Carbon black

111-76-2 2-Butoxyethanol

78-92-2 2-Butanol

This product contains the following chemical(s), which are considered to be US Resource Conservation and Recovery Act (RCRA) Hazardous Constituents:

- None

This product contains the following chemical(s), which are considered to be US Toxic Substances Control Act (TSCA) Section 6 Restricted Substances:

- None

This product contains the following chemical(s), which are considered to be US Toxic Substances Control Act (TSCA) Section 8a - Chemical Data Reporting Rule - Ineligible Substances:

- None

This product contains the following chemical(s), which are considered to be US Toxic Substances Control Act (TSCA) Section 8a Chemical-Specific Reporting and Recordkeeping:

- None

This product contains the following chemical(s), which are included on the US Toxic Substances Control Act (TSCA) Section 8d 716.120(a) Health and Safety Reporting List of Substances:

111-76-2 2-Butoxyethanol

5131-66-8 1-Butoxy-2-propanol

This product contains the following chemical(s), which are included on the US Toxic Substances Control Act (TSCA) Section 8d 716.120(a) Health and Safety Reporting List of Categories:

- None

This product contains the following chemical(s), which are considered Washington Permissible Exposure Limits Ceilings:

- None

This product contains the following chemical(s), which are considered Washington Permissible Exposure Limits Carcinogens:

- None

This product contains the following chemical(s), which are considered Washington Permissible Exposure Limits Simple Asphyxiants:

- None

This product contains the following chemical(s), which are considered Washington Permissible Exposure Limits Skin Designations:

111-76-2 2-Butoxyethanol

This product contains the following chemical(s), which are considered Washington Permissible Exposure Limits STELs:

8052-41-3 Stoddard solvent

1333-86-4 Carbon black

111-76-2 2-Butoxyethanol

78-92-2 2-Butanol

This product contains the following chemical(s), which are considered Washington Permissible Exposure Limits TWAs:

8052-41-3 Stoddard solvent

1333-86-4 Carbon black

111-76-2 2-Butoxyethanol

78-92-2 2-Butanol

This product contains the following chemical(s), which are considered Wisconsin Hazardous Air Contaminants from All Sources with Emissions from Stack Heights Less than 25 Feet:

- None

This product contains the following chemical(s), which are considered Wisconsin Hazardous Air Contaminants from All Sources with Emissions from Stack Heights 75 Feet or Greater:

8052-41-3 Stoddard solvent

1333-86-4 Carbon black

111-76-2 2-Butoxyethanol

This product contains the following chemical(s), which are considered Wisconsin Hazardous Air Contaminants Substances of Concern for Sources of Incident Emissions:

- None

This product contains the following chemical(s), which are considered Wisconsin Hazardous Air Contaminants from All Sources with Emissions from Stack Heights 25 Feet to Less Than 40 Feet:

8052-41-3 Stoddard solvent

1333-86-4 Carbon black

111-76-2 2-Butoxyethanol

This product contains the following chemical(s), which are considered Wisconsin Hazardous Air Contaminants from All Sources with Emissions from Stack Heights 40 Feet to Less Than 75 Feet:

8052-41-3 Stoddard solvent

1333-86-4 Carbon black

111-76-2 2-Butoxyethanol

This product contains the following chemical(s), which are considered West Virginia Air Quality Toxic Air Pollutants Emission Limits:

- None

16. Other Information

Hazardous Material Information System (HMIS)

HEALTH	<input type="text" value="2"/>
FLAMMABILITY	<input type="text" value="2"/>
PHYSICAL HAZARD	<input type="text" value="1"/>
PERSONAL PROTECTION	<input type="text"/>

HMIS & NFPA Hazard Rating

Legend

* = Chronic Health Hazard

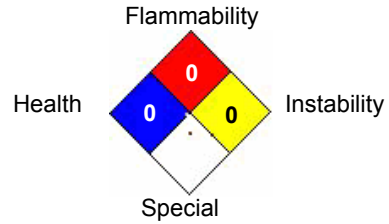
0 = INSIGNIFICANT

1 = SLIGHT

2 = MODERATE

3 = HIGH

National Fire Protection Association (NFPA)



Disclaimer: The information contained herein is based upon data provided to Jamestown Coating Technologies by the suppliers of the raw materials used in the manufacture of this product. Reported amounts and properties may vary slightly due to fluctuations in the physical properties of the supplied materials. These suppliers are to ensure that such information is accurate. Jamestown Coatings makes no warranty, either express or implied, regarding the accuracy of this information, or the results to be obtained by the use thereof. In no event will Jamestown Coatings be responsible for damages of any nature whatsoever resulting from the use of or reliance upon such information.

Date revised: 2015-06-02

Reviewer Revision

Date Prepared: 6/2/2015