MARYLAND DEPARTMENT OF THE ENVIRONMENT

AIR AND RADIATION ADMINISTRATION
APPLICATION FOR A PERMIT TO CONSTRUCT

DOCKET #16-22

COMPANY: Great Southern Wood Preserving, Inc.

LOCATION: 1201 Maryland Ave
Hagerstown Ave 21740

APPLICATION: Installation of one (1) pressurized wood treatment vessel using chrome copper arsenate (CCA)

ITEM	DESCRIPTION
1	Notice of Application and Opportunity to Request an Informational Meeting
2	Permit to Construct Application Forms

MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION

NOTICE OF APPLICATION AND
OPPORTUNITY TO REQUEST AN INFORMATIONAL MEETING

The Maryland Department of the Environment, Air and Radiation Administration (ARA) received a permit-to-construct application from Great Southern Wood Preserving, Inc. on May 12th, 2022, for the installation of one (1) pressurized wood treatment vessel using chrome copper arsenate (CCA). The proposed installation will be located at 1201 Maryland Ave, Hagerstown, MD 21740.

Copies of the application and other supporting documents are available for public inspection on the Department's website. Look for Docket #16-22 at the following link:

https://mde.maryland.gov/programs/Permits/AirManagementPermits/Pages/index.aspx

Pursuant to the Environment Article, Section 1-603, Annotated Code of Maryland, the Department will hold an informational meeting to discuss the application and the permit review process if the Department receives a written request for a meeting within 10 working days from the date of the second publication of this notice. All requests for an informational meeting should be directed to the attention of Ms. Shannon Heafey, Air Quality Permits Program, Air and Radiation Administration, 1800 Washington Boulevard, Baltimore, Maryland 21230.

Further information may be obtained by calling Ms. Shannon Heafey at 410-537-4433.

Christopher R. Hoagland, Director
Air and Radiation Administration

AIR QUALITY PERMIT TO CONSTRUCT APPLICATION CHECKLIST

OWNER OF EQUIPMENT/PROCESS	
COMPANY NAME:	Great Southern Wood - MD, Inc.
COMPANY ADDRESS:	1201 Maryland Avenue Hagerstown, MD 21740
LOCATION OF EQUIPMENT/PROCESS	
PREMISES NAME:	Same
PREMISES ADDRESS:	Same
CONTACT INFORMATION FOR THIS PERMIT APPLICATION	
CONTACT NAME:	Sam Whitt
JOB TITLE:	Production Manager
PHONE NUMBER:	301-791-5518
EMAIL ADDRESS:	swhitt@yellawood.com
DESCRIPTION OF EQUIPMENT OR PROCESS	
New Treating Cylinder installed for wood treating processes.	

Application is hereby made to the Department of the Environment for a Permit to Construct for the following equipment or process as required by the State of Maryland Air Quality Regulation, COMAR 26.11.02.09.

Check each item that you have submitted as part of your application package.

☐ Application package cover letter describing the proposed project

☒ Complete application forms (Note the number of forms included or NA if not applicable.)

No. 1 Form 5
No. NA Form 5T
No. NA Form 5EP
No. NA Form 6
No. NA Form 10
No. NA Form 11
No. NA Form 41
No. NA Form 42
No. NA Form 44

☐ Vendor/manufacturer specifications/guarantees

☒ Evidence of Workman's Compensation Insurance

☒ Process flow diagrams with emission points

☒ Site plan including the location of the proposed source and property boundary

☐ Material balance data and all emissions calculations

☒ Material Safety Data Sheets (MSDS) or equivalent information for materials processed and manufactured.

☐ Certificate of Public Convenience and Necessity (CPCN) waiver documentation from the Public Service Commission (1)

☐ Documentation that the proposed installation complies with local zoning and land use requirements (2)

(1) Required for emergency and non-emergency generators installed on or after October 1, 2001 and rated at 2001 kW or more.

(2) Required for applications subject to Expanded Public Participation Requirements.

MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Blvd ▪ Baltimore, Maryland 21230
(410) 537-3230 ▪1-800-633-6101 ▪ www.mde.state.md.us

Air and Radiation Management Administration ▪ Air Quality Permits Program

APPLICATION FOR PROCESSING/MANUFACTURING EQUIPMENT

Permit to Construct ☒ Registration Update ☐ Initial Registration ☐

1A. Owner of Equipment/Company Name
Great Southern Wood - MD, Inc.

Mailing Address
1201 Maryland Avenue
Street Address

Hagerstown | MD | 21740
City | State | Zip

Telephone Number
(301) 791-5518

Signature

Kevin B. Savoy, Vice President | 4/20/2022
Print Name and Title | Date

DO NOT WRITE IN THIS BLOCK
2. REGISTRATION NUMBER

County No. (1-2) | Premises No. (3-6)
Registration Class (7) | Equipment No. (8-11)
Data Year (12-13) | Application Date

1B. Equipment Location and Telephone Number (if different from above)
Same as above
Street Number and Street Name

City/Town | State | Zip | ( ) Telephone Number

Premises Name (if different from above)

3. Status (A= New, B= Modification to Existing Equipment, C= Existing Equipment)

Status (15)	New Construction Begun (MM/YY) (16-19)	New Construction Completed (MM/YY) (20-23)	Existing Initial Operation (MM/YY) (20-23)
A	1121	1221	

4. Describe this Equipment: Make, Model, Features, Manufacturer (include Maximum Hourly Input Rate, etc.)
Wood Treating Cylinder (Retort): 52 ft length, 6.5 ft diameter

5. Workmen's Compensation Coverage MWC313421-22 (Binder/Policy Number) 4/1/2023 (Expiration Date)
Company Old Republic Insurance Company

NOTE: Before a Permit to Construct may be issued by the Department, the applicant must provide the Department with proof of worker's compensation coverage as required under Section 1-202 of the Worker's Compensation Act.

6A. Number of Pieces of Identical Equipment Units to be Registered/Permitted at this Time 0

6B. Number of Stack/Emission Points Associated with this Equipment 0

7. Person Installing this Equipment (if different from Number 1 on Page 1)

Name_____ Title_____

Company MAECO FABRICATION, INC.

Mailing Address/Street 12530 Seager Road

City/Town Grand Bay State AL Telephone (251) 865-6203

8. Major Activity, Product or Service of Company at this Location

Manufacture of pressure-treated pine lumber and storage and distribution of the same.

9. Control Devices Associated with this Equipment

None [X] 24-0

Simple/Multiple Cyclone	Spray/Adsorb Tower	Venturi Scrubber	Carbon Adsorber	Electrostatic Precipitator	Baghouse	Thermal/Catalytic Afterburner	Dry Scrubber
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
24-1	24-2	24-3	24-4	24-5	24-6	24-7	24-8

Other

[ ] Describe_____

24-9

10. Annual Fuel Consumption for this Equipment

OIL-1000 GALLONS	SULFUR %	GRADE	NATURAL GAS-1000 FT^3	LP GAS-100 GALLONS	GRADE
0	0		0	0	
26-31	32-33	34	35-41	42-45	

COAL- TONS	SULFUR %	ASH%	WOOD-TONS	MOISTURE %
0	0	0	0	0
46-52	53-55	56-58	59-63	64-65

OTHER FUELS _____ (Specify Type) [0] 66-1 ANNUAL AMOUNT CONSUMED _____ (Specify Units of Measure)

OTHER FUEL _____ (Specify Type) [0] 66-2 ANNUAL AMOUNT CONSUMED _____ (Specify Units of Measure)

1= Coke 2= COG 3=BFG 4=Other

11. Operating Schedule (for this Equipment)

Continuous Operation	Batch Process	Hours per Batch	Batch per Week	Hours per Day	Days Per Week	Days per Year
[ ]	[X]					
67-1	67-2	68-69		70-71	72	73-75

Seasonal Variation in Operation:

No Variation	Winter Percent	Spring Percent	Summer Percent	Fall Percent	(Total Seasons= 100%)
[ ]	23	29	25	23	
76	77-78	79-80	81-82	83-84	

12. Equivalent Stack Innformation- is Exhaust through Doors, Windows, etc. Only? (Y/N) N

85

If not, then	Height Avove Ground (FT)	Inside Diameter at Top	Exit Temperature (ºF)	Exit Velocity (FT/SEC)
	15	8"	Atmosphere	25
	86-88	89-91	92-95	96-98

NOTE:
Attach a block diagram of process/process line, indicating new equipment as reported on this form and all existing equipment, including control devices and emission points.

13. Input Materials (for this equipment only)
Is any of this data to be considered confidential? N (Y or N)

NAME	CAS NO. (IF APPLICABLE)	INPUT RATE PER HOUR	UNITS	PER YEAR	UNITS
1. Trivalent Chromium	1308-38-9			61,914.2	lbs
2. Arsenic Pentoxide	1303-28-2			45,185.8	lbs
3. Copper Oxide	1317-39-1			21,928	lbs
4. Wood	N/A			2,876,212	lbs
5.					
6.					
7.					
8.					
9.					
TOTAL					

14. Output Materials (for this equipment)
Process/Product Stream

NAME	CAS NO. (IF APPLICABLE)	OUTPUT RATE PER HOUR	UNITS	PER YEAR	UNITS
1. Trivalent Chromium	1308-38-9			61,914.2	lbs
2. Arsenic Pentoxide	1303-28-2			45,185.8	lbs
3. Copper Oxide	1317-39-1			21,928	lbs
4. Wood	N/A			2,876,212	lbs
5.					
6.					
7.					
8.					
9.					
TOTAL					

15. Waste Streams- Solid and Liquid

NAME	CAS NO. (IF APPLICABLE)	OUTPUT RATE PER HOUR	UNITS	PER YEAR	UNITS
1. Drip Pad Residue (F035)	N/A	1.07	lbs	9,350	lbs
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
TOTAL					

16. Total Stack Emissions (for this equipment only) in Pounds Per Operating Day

Particulate Matter	Oxides of Sulfur	Oxides of Nitrogen
0	0	0
99-104	105-110	111-116

Carbon Monoxide	Volatile Organic Compounds	PM-10
0	0	0
177-122	123-128	129-134

17. Total Fugitive Emissions (for this equipment only) in Pounds Per Operating Day

Particulate Matter	Oxides of Sulfur	Oxides of Nitrogen
0	0	0
135-139	140-144	145-149

Carbon Monoxide	Volatile Organic Compounds	PM-10
0	0	0
150-154	155-159	160-164

Method Used to Determine Emissions **(1= Estimate 2= Emission Factor 3= Stack Test 4= Other)**

TSP	SOX	NOX	CO	VOC	PM10
1	1	1	1	1	1
165	166	167	168	169	170

AIR AND RADIATION MANAGEMENT ADMINISTRATION USE ONLY

18. Date Rec'd. Local _____ **Date Rec'd. State** _____ **Return to Local Jurisdiction** **Date**_____ **By**_____

Reviewed by Local Jurisdiction Date_____ By_____ **Reviewed by State** Date_____ By_____

19. Inventory Date **Month/Year** (171-174) **Equipment Code** (175-177) **SCC Code** (178-185)

20. Annual Operating Rate (186-192) **Maximum Design Hourly Rate** (193-199) **Permit to Operate Month** (200-201) **Transaction Date (MM/DD/YR)** (202-207)

Staff Code (208-210) **VOC Code** (211 212) **SIP Code** (213 214) **Regulation Code** (215-218) **Confidentiality** (219)

Point Description (220-238) **Action** (239) A: Add C: Change

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 03/25/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
McGriff Insurance Services, Inc.
3400 Overton Park Drive SE
Suite 300
Atlanta, GA 30339

CONTACT NAME: Vera Neville
PHONE (A/C, No, Ext): 404 497-7500 FAX (A/C, No):
E-MAIL ADDRESS: vneville@mcgriff.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Old Republic Insurance Company	24147
INSURER B : National Fire & Marine Insurance Company	20079
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

INSURED
Great Southern Wood Preserving, Inc.
P.O. Box 610
140 U. S. Highway 431 North
Abbeville, AL 36310

COVERAGES

CERTIFICATE NUMBER: 7L8JH3TP

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS		
A	X COMMERCIAL GENERAL LIABILITY			MWZY313422-22	04/01/2022	04/01/2023	EACH OCCURRENCE	$	2,000,000
	CLAIMS-MADE X OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$	2,000,000
							MED EXP (Any one person)	$	N/A
							PERSONAL & ADV INJURY	$	1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$	2,000,000
	POLICY PRO-JECT LOC						PRODUCTS - COMP/OP AGG	$	2,000,000
	OTHER:							$	
	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	$	
	ANY AUTO						BODILY INJURY (Per person)	$	
	OWNED AUTOS ONLY / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$	
	HIRED AUTOS ONLY / NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$	
								$	
B	X UMBRELLA LIAB X OCCUR			42UMO310570-03	04/01/2022	04/01/2023	EACH OCCURRENCE	$	5,000,000
	EXCESS LIAB CLAIMS-MADE						AGGREGATE	$	5,000,000
	DED X RETENTION $ 25,000						Products/Completed Ops	$	
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY			MWC313421-22	04/01/2022	04/01/2023	X PER STATUTE OTH-ER		
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N: Y	N/A					E.L. EACH ACCIDENT	$	1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$	1,000,000
							E.L. DISEASE - POLICY LIMIT	$	1,000,000
								$	
								$	
								$	
								$	
								$	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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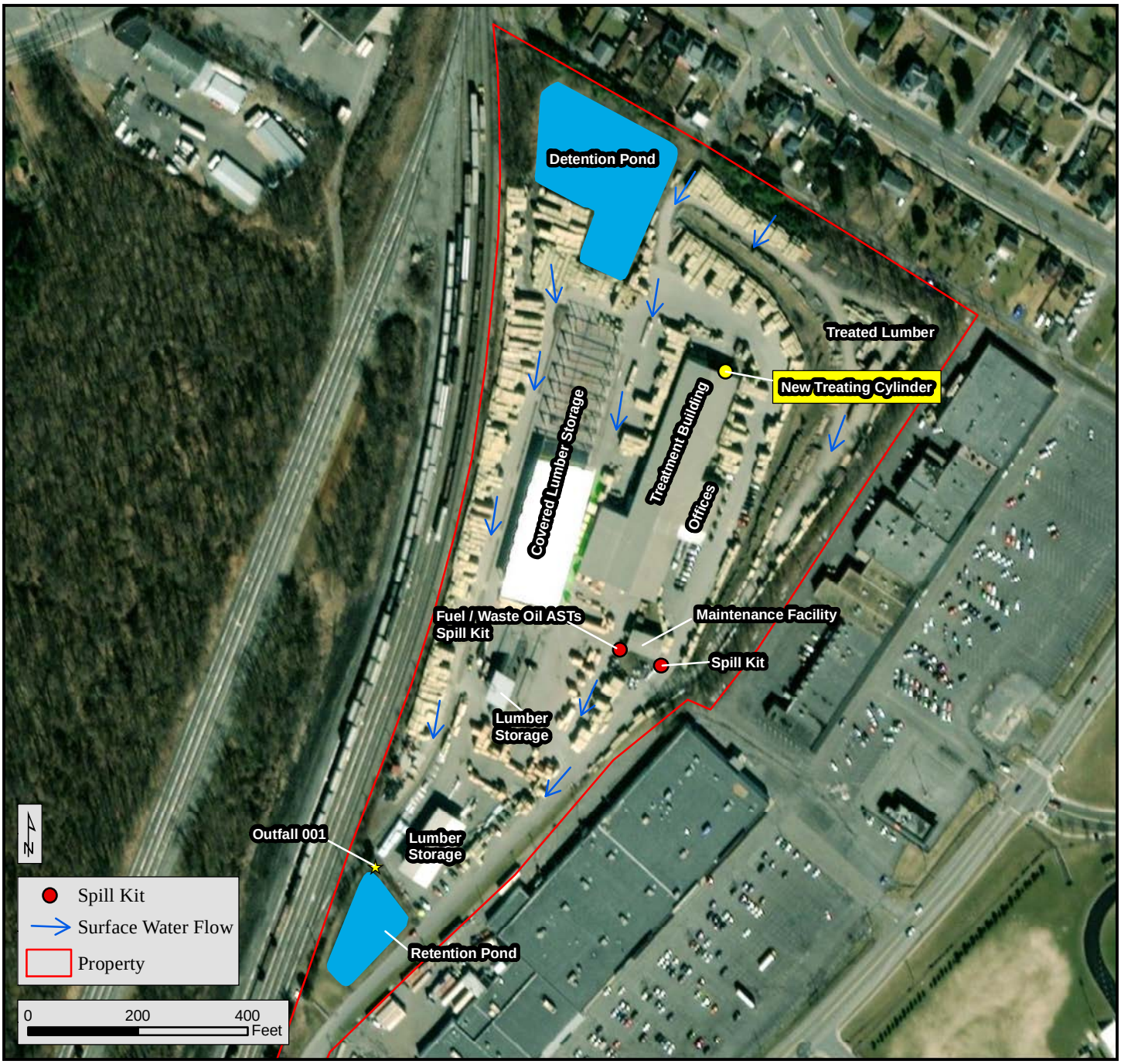
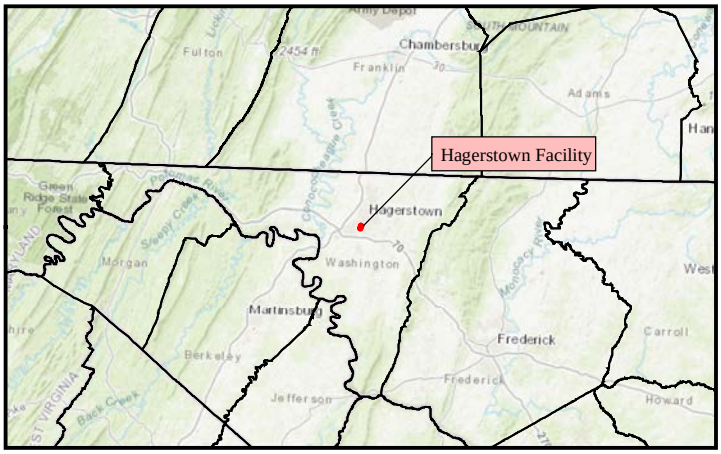
SITE MAP



Great Southern Wood - MD, Inc.

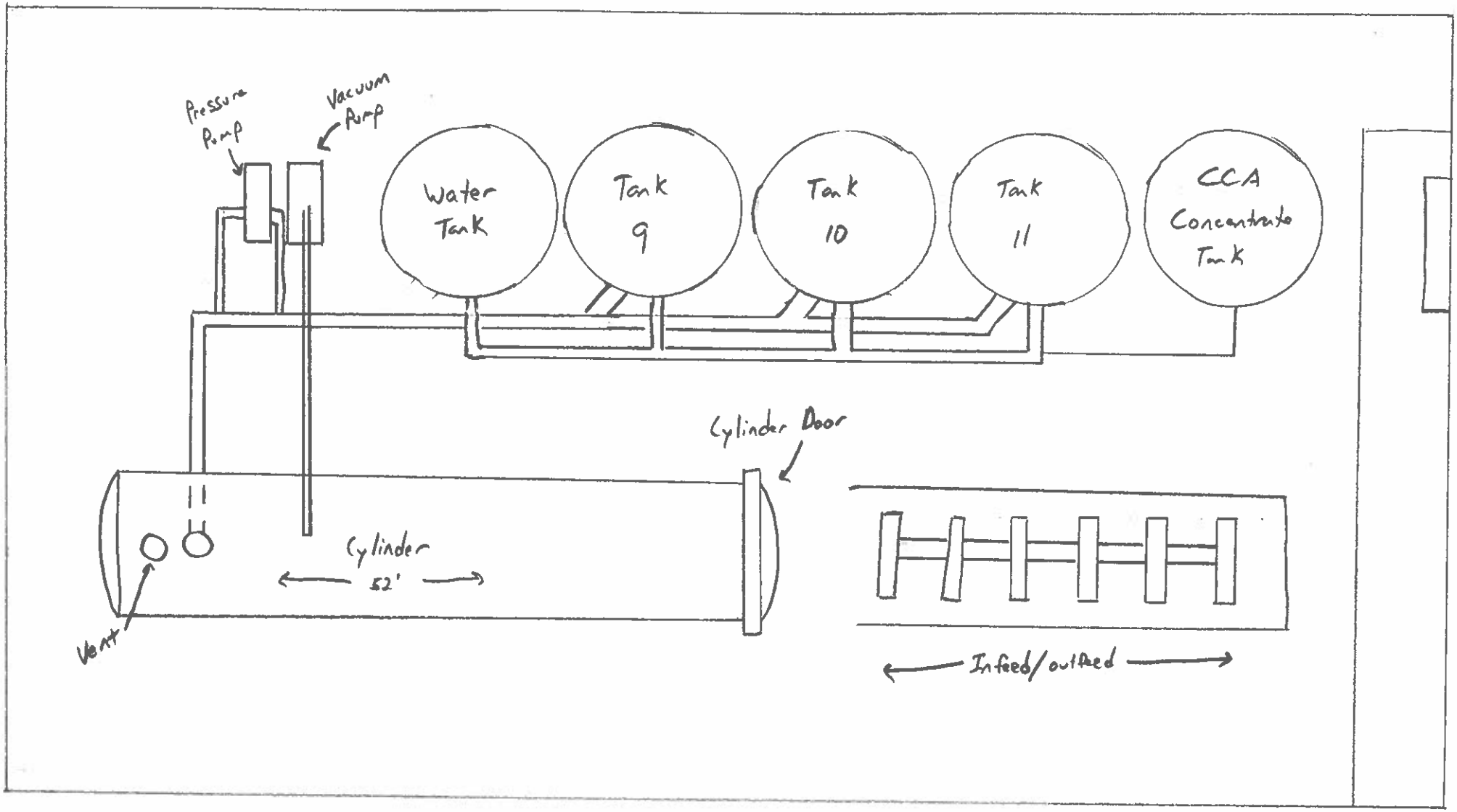
1201 Maryland Avenue
Hagerstown, Washington County
Maryland



Project No.10-18
April 2022

GEO-SOURCE, Inc.
Environmental Consultants

462 N. Court Street, Florence, AL 35630
(256)-767-2000



Existing Plant →

← N W S E

* Not to Scale *

SAFETY DATA SHEET

1. Identification

Product identifier	**K-33 (60%) Wood Preservative**
Other means of identification	
SDS number	73-KPC
EPA Reg No	3008-34
Recommended use	Preservative concentrate used for pressure treatment of wood.
Recommended restrictions	Outdoor residential structures such as decks and playgrounds.

Manufacturer/Importer/Supplier/Distributor information

Company Name	Koppers Performance Chemicals Inc.
Address	1016 Everee Inn Rd., Griffin, GA 30224
Telephone number	770-233-4200
Contact person	Regulatory Manager, KPC Inc.
Emergency Telephone Number	CHEMTREC 1-800-424-9300
E-mail	KPCmgrsds@koppers.com

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Acute toxicity, oral	Category 3
	Acute toxicity, dermal	Category 3
	Acute toxicity, inhalation	Category 3
	Skin corrosion/irritation	Category 1A
	Serious eye damage/eye irritation	Category 1
	Sensitization, respiratory	Category 1
	Sensitization, skin	Category 1
	Germ cell mutagenicity	Category 1B
	Carcinogenicity	Category 1A
	Reproductive toxicity	Category 2
	Specific target organ toxicity, repeated exposure	Category 1 (Respiratory system)
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 1
OSHA defined hazards	Not classified.	

Label elements

Signal word	Danger
Hazard statement	Toxic if swallowed. Toxic in contact with skin. Toxic if inhaled. Causes severe skin burns and eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. May cause genetic defects. May cause cancer. Suspected of damaging fertility. Causes damage to organs (Respiratory system) through prolonged or repeated exposure. Very toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. In case of inadequate ventilation wear respiratory protection.
Response	If swallowed: Immediately call a poison center/doctor. If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. 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. If skin irritation or rash occurs: Get medical advice/attention. Take off immediately all contaminated clothing and wash it before reuse. Collect spillage.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Water	7732-18-5	39.6
Chromic Acid	1333-82-0	29.9
Arsenic Acid (expressed as As2O5)	7778-39-4	20
Cupric Oxide	1317-39-1	10.5

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a POISON CENTER or doctor/physician.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
Most important symptoms/effects, acute and delayed	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Difficulty in breathing. Causes digestive tract burns. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off immediately all contaminated clothing. If exposed or concerned: get medical attention/advice. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water spray, fog or mist. Carbon Dioxide.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed. Closed containers may rupture violently if heated. Contact with combustible material may cause fire.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Should not be released into the environment. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent product from entering drains. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

7. Handling and storage

Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Type	Value
Chromic Acid (CAS 1333-82-0)	TWA	0.005 mg/m3

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Chromic Acid (CAS1333-82-0)	PEL	1 mg/m3

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
Chromic Acid (CAS 1333-82-0)	Ceiling	0.1 mg/m3

US. ACGIH Threshold Limit Values

Components	Type	Value
Arsenic Acid (expressed as As2O5) (CAS 7778-39-4)	TWA	0.01 mg/m3
Chromic Acid (CAS 1333-82-0)	TWA	0.05 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Arsenic Acid (expressed as As2O5) (CAS 7778-39-4)	Ceiling	0.002 mg/m3	
Chromic Acid (CAS 1333-82-0)	TWA	0.001 mg/m3	
Cupric Oxide (CAS 1317-39-1)	TWA	1 mg/m3	Dust and mist.

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Arsenic Acid (expressed as As2O5) (CAS 7778-39-4)	35 µg/l	Inorganic arsenic, plus methylated metabolites, as As	Urine	*
Chromic Acid (CAS 1333-82-0)	25 µg/l	Total chromium	Urine	*
	10 µg/l	Total chromium	Urine	*

* - For sampling details, please see the source document.

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. General ventilation normally adequate. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection Chemical respirator with specific cartridge and full facepiece providing protection against the compound of concern.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Liquid.

Color Dark red-orange.

Odor Odorless.

Odor threshold Not available.

pH < 1

Melting point/freezing point Not available.

Initial boiling point and boiling range > 212 °F (> 100 °C)

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	1.83 (Water = 1)
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Percent volatile	40 % v/v (Water)
Pounds per gallon	15.3

10. Stability and reactivity

Reactivity	Reacts violently with strong alkaline substances. This product may react with reducing agents.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Do not mix with other chemicals. Contact with incompatible materials.
Incompatible materials	Strong bases. Reducing agents. Aluminum. Zinc. Combustible material.
Hazardous decomposition products	Metallic oxides.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Toxic if inhaled. May cause damage to organs through prolonged or repeated exposure by inhalation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin contact	Toxic in contact with skin. Causes severe skin burns. May cause an allergic skin reaction.
Eye contact	Causes serious eye damage.
Ingestion	Toxic if swallowed. Causes digestive tract burns.
Symptoms related to the physical, chemical and toxicological characteristics	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Difficulty in breathing. Causes digestive tract burns.

Information on toxicological effects

Acute toxicity	Toxic if inhaled. Toxic in contact with eyes and skin. Toxic if swallowed. May cause an allergic skin reaction.

Components	**Species**	**Test Results**
Cupric Oxide (CAS 1317-39-1)		
Acute		
Dermal LD50	Rat	> 2000 mg/kg, 24 hours
Inhalation LC50	Rat	2.92 mg/l, 4 hours
Oral LD50	Rat	0.47 g/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Causes severe skin burns.
Serious eye damage/eye irritation	Causes serious eye damage.
Respiratory or skin sensitization	
Respiratory sensitization	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitization	May cause an allergic skin reaction.
Germ cell mutagenicity	May cause genetic defects.
Carcinogenicity	May cause cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

Arsenic Acid (expressed as As2O5) (CAS 7778-39-4)	1 Carcinogenic to humans.
Chromic Acid (CAS 1333-82-0)	1 Carcinogenic to humans.

NTP Report on Carcinogens

Arsenic Acid (expressed as As2O5) (CAS 7778-39-4)	Known To Be Human Carcinogen.
Chromic Acid (CAS 1333-82-0)	Known To Be Human Carcinogen.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Arsenic Acid (expressed as As2O5) (CAS 7778-39-4)	Cancer
Chromic Acid (CAS 1333-82-0)	Cancer

Reproductive toxicity	Suspected of damaging fertility.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Causes damage to organs (Respiratory system) through prolonged or repeated exposure.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Causes damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity	Very toxic to aquatic life with long lasting effects. Because of the low pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	This product is water soluble and may disperse in soil.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	D002: Waste Corrosive material [pH <=2 or =>12.5, or corrosive to steel] D004: Waste Arsenic D007: Waste Chromium

US RCRA Hazardous Waste P List: Reference

Arsenic Acid (expressed as As2O5) (CAS 7778-39-4)	P010

Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number	UN2922
UN proper shipping name	Corrosive liquids, toxic, n.o.s. (Arsenic Acid, Chromic Acid) (RQ = 1 LB)
Transport hazard class(es)	
Class	8
Subsidiary risk	6.1
Label(s)	8, 6.1
Packing group	II
Environmental hazards	
Marine pollutant	No
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	B3, IB2, T7, TP2
Packaging exceptions	154
Packaging non bulk	202
Packaging bulk	243

IATA

UN number	UN2922
UN proper shipping name	Corrosive liquid, toxic, n.o.s. (Arsenic Acid, Chromic Acid)
Transport hazard class(es)	
Class	8
Subsidiary risk	6.1
Label(s)	8, 6.1
Packing group	II
Environmental hazards	No
ERG Code	8P
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN2922
UN proper shipping name	CORROSIVE LIQUID, TOXIC, N.O.S. (Arsenic Acid, Chromic Acid)
Transport hazard class(es)	
Class	8
Subsidiary risk	6.1
Label(s)	8, 6.1
Packing group	II
Environmental hazards	
Marine pollutant	No
EmS	F-A, S-B
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Chromic Acid (CAS 1333-82-0)	0.1 % Annual Export Notification required.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Arsenic Acid (expressed as As2O5) (CAS 7778-39-4)	Cancer
Chromic Acid (CAS 1333-82-0)	Cancer
Arsenic Acid (expressed as As2O5) (CAS 7778-39-4)	Liver
Chromic Acid (CAS 1333-82-0)	Eye irritation
Arsenic Acid (expressed as As2O5) (CAS 7778-39-4)	Skin
Chromic Acid (CAS 1333-82-0)	Skin sensitization
Arsenic Acid (expressed as As2O5) (CAS 7778-39-4)	Respiratory irritation
	Nervous system
	Acute toxicity

CERCLA Hazardous Substance List (40 CFR 302.4)

Arsenic Acid (expressed as As2O5) (CAS 7778-39-4)	LISTED
Cupric Oxide (CAS 1317-39-1)	LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Acute toxicity, oral
Acute toxicity, dermal
Acute toxicity, inhalation
Skin corrosion/irritation Serious eye damage/eye irritation Sensitization, respiratory
Sensitization, skin
Germ cell mutagenicity
Carcinogenicity
Reproductive toxicity
Specific target organ toxicity, repeated exposure

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Chromic Acid	1333-82-0	29.9
Arsenic Acid (expressed as As2O5)	7778-39-4	20
Cupric Oxide	1317-39-1	10.5

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Arsenic Acid (expressed as As2O5) (CAS 7778-39-4)
Chromic Acid (CAS 1333-82-0)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

FIFRA Information This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label.

Signal word DANGER. POISON.

Hazard statement Corrosive. Causes irreversible eye damage, skin or mucous membrane irritation. Harmful or fatal if swallowed, inhaled, or absorbed through skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

US state regulations

US. Massachusetts RTK - Substance List

Arsenic Acid (expressed as As2O5) (CAS 7778-39-4)

US. New Jersey Worker and Community Right-to-Know Act

Arsenic Acid (expressed as As2O5) (CAS 7778-39-4)
Chromic Acid (CAS 1333-82-0)
Cupric Oxide (CAS 1317-39-1)

US. Pennsylvania Worker and Community Right-to-Know Law

Arsenic Acid (expressed as As2O5) (CAS 7778-39-4)
Chromic Acid (CAS 1333-82-0)

US. Rhode Island RTK

Arsenic Acid (expressed as As2O5) (CAS 7778-39-4)
Cupric Oxide (CAS 1317-39-1)

US. California Proposition 65

WARNING: This product can expose you to chemicals including arsenic and chromium, which are known to the State of California to cause cancer. This product can expose you to chemicals including chromium, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 04-25-2015

Revision date 08-13-2018

Version # 04

HMIS® ratings
Health: 2
Flammability: 0
Physical hazard: 1
Personal protection: B

NFPA ratings

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