

FOR ANY EMERGENCY, 24 HOURS / 7 DAYS, CALL:  
FOR ALL MSDS QUESTIONS & REQUESTS, CALL:

PRODUCT NAME: **Wolmanized® CA-C Treated Wood**

**1. PRODUCT AND COMPANY IDENTIFICATION**

<b>Manufactured By:</b>	REVISION DATE:	09/21/2009
	SUPERCEDES:	03/20/2009
	MSDS Number:	000000004504
	SYNONYMS:	None
	CHEMICAL	
	FAMILY:	
	DESCRIPTION /	Treated Wood Products
	USE:	
	FORMULA:	None established

**2. HAZARDS IDENTIFICATION**

OSHA Hazard Classification:	<b>Wood dust is classified as: carcinogenic, possible sensitizer, mild skin irritant, possible respiratory irritant., WARNING! MAY FORM COMBUSTIBLE DUST CONCENTRATIONS IN AIR (DURING PROCESSING)</b>
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Routes of Entry:	Inhalation, skin, eyes, ingestion
Chemical Interactions:	No known or reported interactions.
Medical Conditions Aggravated:	Inhalation of the dust from this material at concentrations above the TLV can aggravate pre-existing upper respiratory and lung diseases such as bronchitis, emphysema and asthma., Skin diseases including eczema and sensitization

Human Threshold Response Data

<b>Odor Threshold</b>	Not established for product.
Amine	2.6 ppm
<b>Irritation Threshold</b>	Not established for product.
Amine	> 5.0 ppm

**Hazardous Materials Identification System / National Fire Protection Association  
Classifications**

<u>Hazard Ratings :</u>	<u>Health</u>	<u>Flammability</u>	<u>Physical / Instability</u>	<u>PPI / Special hazard.</u>
HMIS	2*	1	0	
NFPA	2	1	0	

**Immediate (Acute) Health Effects**

**Inhalation Toxicity:** Airborne treated or untreated wood dust may cause nose, throat or lung irritation.

**Skin Toxicity:** Handling of wood may result in skin exposure to splinters. Prolonged and/or repeated contact with treated or untreated wood dust may result in mild irritation.

**Eye Toxicity:** Treated or untreated wood dust may cause mechanical irritation.

**Ingestion Toxicity:** Not expected to be a route of exposure in normal industrial use.

**Acute Target Organ Toxicity:** Skin, Eyes, Respiratory Tract

**Prolonged (Chronic) Health Effects**

**Carcinogenicity:** IARC has classified untreated hardwood and hardwood/softwood mix wood dust as a Group 1 human carcinogen. The wood dust classification is based primarily on IARC's evaluation of increased risk in the occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with occupational exposures to untreated wood dust. NTP has classified all untreated wood dust as a carcinogen.

**Reproductive and Developmental Toxicity:** Not known or reported to cause reproductive or developmental toxicity.

**Inhalation:** May cause respiratory sensitization and/or irritation.

**Skin Contact:** Treated or untreated wood dust, depending on the species, may cause dermatitis on prolonged, repetitive contact.

**Ingestion:** Not expected to be a route of exposure in normal industrial use.

**Sensitization:** Various species of untreated wood dust can elicit an allergic respiratory response in sensitized persons. Various species of untreated wood dust can elicit an allergic type skin irritation in sensitized persons.

Chronic Target Organ      Respiratory Tract, Skin, Eyes  
 Toxicity:  
 Supplemental Health      No additional health information available.  
 Hazard Information :

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

<u>CAS OR CHEMICAL NAME</u>	<u>CAS #</u>	<u>% RANGE</u>
COPPER COMPOUNDS	MIXTURE	0.1 - 2.0
Ethanolamine	141-43-5	
Wood Dust	Not Assigned	88 - 99.5
Ammonia (Only applies if treatment facility adds ammonia locally. Check with treatment facility to determine applicability.)	7664-41-7	0 - 1
Formaldehyde (by-product of the untreated plywood article)	50-00-0 (Only applies to plywood products)	0 - 0.1

**4. FIRST AID MEASURES**

Inhalation:      IF INHALED: Remove individual to fresh air. Seek medical attention if breathing becomes difficult or if respiratory irritation develops. If not breathing, give artificial respiration. Call for medical assistance.

Skin Contact:      IF ON SKIN: Flush skin with water for 15 minutes. Take off all contaminated clothing. Seek medical attention if irritation develops.

Eye Contact:      IF IN EYES: Flush eyes with plenty of water for at least 15 minutes. Seek medical attention if irritation develops.

Ingestion:      IF SWALLOWED: Immediately drink water to dilute. Seek medical attention if symptoms develop. Never give anything by mouth to an unconscious person.

## **5. FIRE FIGHTING MEASURES**

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Flammability Summary (OSHA):	Product is not known to be flammable, combustible, pyrophoric or explosive.
<u>Flammable Properties</u>	
Flash Point:	No data.
Autoignition Temperature:	No data.
Fire / Explosion Hazards:	Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
Extinguishing Media:	Water spray
Fire Fighting Instructions:	In case of fire, use normal fire-fighting equipment and the personal protective equipment recommended in Section 8 to include a NIOSH approved self-contained breathing apparatus.
Hazardous Combustion Products:	During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion., Hazardous combustion/decomposition products may include but are not limited to:, Copper metal and copper oxides, Copper Fumes
Upper Flammable / Explosive Limit, % in air:	No data.
Lower Flammable / Explosive Limit, % in air:	No data.

## **6. ACCIDENTAL RELEASE MEASURES**

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Personal Protection for Emergency Situations:	No extra protection required beyond that listed in Section 8. In case of fire, use normal fire fighting equipment.
<u>Spill Mitigation Procedures</u>	
Air Release:	Hazardous concentrations in air may be found in local spill area and immediately downwind. Contain all solids for treatment or disposal.
Water Release:	This material is insoluble in water. Notify all downstream users of possible contamination. Contain all solids for treatment or disposal.
Land Release:	Avoid dust generation. Contain all solids for treatment or disposal.

Additional Spill Information : Remove all sources of ignition. Utilize emergency response personal protection equipment prior to the start of any response. Evacuate all non-essential personnel. Dust Deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Nonsparking tools should be used. Dispose of spill residues per guidelines under Section 13, Disposal Consideration.

## **7. HANDLING AND STORAGE**

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Handling: DO NOT BURN TREATED WOOD. Whenever possible, sawing or machining treated or untreated wood should be performed outdoors to avoid accumulations of airborne wood dust. Wear gloves, eye protection, dust mask and protective clothing. Do not use treated chips or sawdust as mulch. Wash hands thoroughly before eating, drinking, using tobacco products, and/or using restrooms. Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

Storage: Keep away from unguarded flame, sparks, and heat sources. Protect from physical damage. Maintain good housekeeping.

Incompatible Materials for Storage: oxidizers strong acids and bases

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

Ventilation: Whenever possible, sawing or machining treated or untreated wood should be performed outdoors or in well ventilated areas to avoid accumulations of airborne wood dust. Ventilation should be sufficient to maintain exposures below the recommended exposure limits.

Protective Equipment for Routine Use of Product

Respiratory Protection : When sawing or cutting treated or untreated wood, wear a NIOSH approved P95 or P100 Particulate filter respirator. FOR PLYWOOD PRODUCTS ONLY: If Formaldehyde vapor levels exceed the recommended exposure limits, wearing a NIOSH approved respirator is required. Formaldehyde is a by-product of the untreated plywood article and not the result of this treatment.

Respirator Type : For plywood products only: A NIOSH approved full-face air purifying respirator with combination formaldehyde/organic vapor cartridge and a P100 filter. Air purifying respirators should not be used in oxygen deficient or IDLH atmospheres or if exposure concentrations exceed ten (10) times the published limit.

Skin Protection : Wear leather gloves. Wear long sleeve shirt, pants, and steel-toed shoes when handling treated or untreated wood.

Eye Protection: Use safety glasses with side shields or chemical goggles when sawing or cutting treated or untreated wood.

Protective Clothing Type: Wear leather gloves.

General Protective Measures: Due to the explosive potential of dust when suspended in air, precautions should be taken when sawing, sanding, or machining wood or wood products to prevent sparks or other ignition sources. If required, use wet methods and/or explosion suppression systems to reduce generation of dust. Local exhaust ventilation is recommended when sawing, sanding, or machining this product. General dilution ventilation is recommended in processing and storage areas.

Exposure Limit Data

<u>CHEMICAL NAME</u>	<u>CAS #</u>	<u>Name of Limit</u>	<u>Exposure</u>
COPPER COMPOUNDS		NIOSH-IDLH	100 mg/m3
Ethanolamine	141-43-5	ZUS_ACGIH	3 ppm TWA
Ethanolamine	141-43-5	ZUS_ACGIH	6 ppm STEL
Ethanolamine	141-43-5	ZUS_OSHAPO	3 ppm TWA 8 mg/m3 TWA
Ethanolamine	141-43-5	ZUS_OSHAPO	6 ppm STEL 15 mg/m3 STEL
Ethanolamine	141-43-5	ZUS_OSHAP1	3 ppm TWA 6 mg/m3 TWA

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Ethanolamine	141-43-5	NIOSH-IDLH	30 ppm
Wood Dust		ZUS_OSHAZ3	15.0 mg/m3 PEL Total dust (as nuisance dust)
Wood Dust		ZUS_OSHAZ3	5.0 mg/m3 PEL Respirable fraction. (as nuisance dust)
Wood Dust		ZUS_ACGIH	0.5 mg/m3 TWA inhalable fraction (Western Red Cedar)
Wood Dust		ZUS_ACGIH	1.0 mg/m3 TWA inhalable fraction (All other species)
Ammonia (Only applies if treatment facility adds ammonia locally. Check with treatment facility to determine applicability.)	7664-41-7	ZUS_ACGIH	25 ppm TWA
Ammonia (Only applies if treatment facility adds ammonia locally. Check with treatment facility to determine applicability.)	7664-41-7	ZUS_ACGIH	35 ppm STEL
Ammonia (Only applies if treatment facility adds ammonia locally. Check with treatment facility to determine applicability.)	7664-41-7	ZUS_OSHAPO	35 ppm STEL 27 mg/m3 STEL
Ammonia (Only applies if treatment facility adds ammonia locally. Check with treatment facility to determine applicability.)	7664-41-7	ZUS_OSHAP1	50 ppm TWA 35 mg/m3 TWA
Ammonia (Only applies if treatment facility adds ammonia locally. Check with treatment facility to determine applicability.)	7664-41-7	NIOSH-IDLH	300 ppm
Formaldehyde (by-product of the untreated plywood article)	50-00-0	ZUS_ACGIH	0.3 ppm C
Formaldehyde (by-product of the untreated plywood article)	50-00-0	ZUS_OSHAPO	0.75 ppm TWA See Table Z-2 for operations or sectors excluded from section 1910.1048 or for which limit(s) is(are) stayed. Sec. 1910.1048 Formaldehyde., Sec. 1910.1048 Formaldehyde.
Formaldehyde (by-product of the untreated plywood article)	50-00-0	ZUS_OSHAPO	2 ppm STEL See Table Z-2 for operations or sectors excluded from section 1910.1048 or for which limit(s) is(are) stayed. Sec. 1910.1048 Formaldehyde., Sec. 1910.1048 Formaldehyde.
Formaldehyde (by-product of the untreated plywood article)	50-00-0	ZUS_OSHAP2	0.75 ppm TWA Sec. 1910.1048 Formaldehyde., see 1910.1048

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Formaldehyde (by-product of the untreated plywood article)	50-00-0	ZUS_OSHAP2	2 ppm STEL Sec. 1910.1048 Formaldehyde., see 1910.1048
Formaldehyde (by-product of the untreated plywood article)	50-00-0	ZUS_OSHAP1	0.75 ppm TWA
Formaldehyde (by-product of the untreated plywood article)	50-00-0	ZUS_OSHAP1	2 ppm STEL
Formaldehyde (by-product of the untreated plywood article)	50-00-0	ZUS_OSHAP1	
Formaldehyde (by-product of the untreated plywood article)	50-00-0	ZUS_OSHAP2	
Formaldehyde (by-product of the untreated plywood article)	50-00-0	ZUS_OSHAPO	
Formaldehyde (by-product of the untreated plywood article)	50-00-0	NIOSH-IDLH	20 ppm (Only applies to plywood products.)

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	solid
Form	solid
Color:	green, slightly
Odor:	None
Molecular Weight:	None established
Specific Gravity :	Not applicable
pH :	Not applicable
Boiling Point:	Not applicable
Freezing Point:	Not applicable
Melting Point:	No data
Density:	solid
Vapor Pressure:	Not applicable
Vapor Density:	Not applicable
Viscosity:	Not applicable
Fat Solubility:	No data
Solubility in Water:	insoluble
Partition coefficient n-octanol/water:	No data
Evaporation Rate:	Not applicable
Oxidizing:	The substance has no oxidizing properties
Volatiles, % by vol.:	No data
VOC Content	No data
HAP Content	No data

## 10. STABILITY AND REACTIVITY

Stability and Reactivity Summary:	Stable under normal conditions. Product will not undergo hazardous polymerization.
Conditions to Avoid:	Sparks, open flame, other ignition sources, and elevated temperatures., Contact with incompatible substances
Chemical Incompatibility:	strong acids, oxidizers
Hazardous Decomposition	During a fire, irritating and highly toxic gases may be

Products: generated by thermal decomposition or combustion.  
Decomposition Temperature: No data

## 11. TOXICOLOGICAL INFORMATION

### Component Animal Toxicology

Oral LD50 value:

Ethanolamine LD50 = 1,700 mg/kg rat

Dermal LD50 value:

Ethanolamine LD50 Approximately 1,000 mg/kg rabbit

Inhalation LC50 value:

Ethanolamine LC50 1 h > 4.8 MG/L mouse

Ethanolamine LC50 4 h > 970 ppm mouse

### Product Animal Toxicity

Oral LD50 value: LD50 Believed to be > 5,000 mg/kg Rat

Dermal LD50 value: LD50 Believed to be > 2,000 mg/kg Rabbit

Inhalation LC50 No data

value:

**Skin Irritation:** Prolonged and/or repeated contact with treated or untreated wood dust may result in mild irritation.

**Eye Irritation:** Treated or untreated wood dust may cause mechanical irritation.

**Skin Sensitization:** Various species of untreated wood dust can elicit an allergic respiratory response in sensitized persons., Various species of untreated wood dust can elicit an allergic type skin irritation in sensitized persons.

**Subchronic / Chronic Toxicity:** May cause respiratory sensitization and/or irritation., Treated or untreated wood dust, depending on the species, may cause dermatitis on prolonged, repetitive contact.

**Reproductive and Developmental Toxicity:** Not known or reported to cause reproductive or developmental toxicity.

Ethanolamine

This chemical has been tested in laboratory animals and no evidence of teratogenicity, embryotoxicity or fetotoxicity was seen.

**Mutagenicity:** Not known or reported to be mutagenic.

Ethanolamine

This chemical has been tested in a battery of mutagenicity/genotoxicity assays and the results were negative.

**Carcinogenicity:** IARC has classified untreated hardwood and hardwood/softwood mix wood dust as a Group 1 human carcinogen. The wood dust classification is based primarily on IARC's evaluation of increased risk in the occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with occupational exposures to untreated wood dust. NTP has classified all untreated wood dust as a carcinogen.

Ethanolamine

This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA. Chemicals of similar structure have been shown not to cause cancer in laboratory animals.

## 12. ECOLOGICAL INFORMATION

Overview: No data for product. Individual constituents are as follows:

### Ecological Toxicity Values for: Ethanolamine

Rainbow trout (Oncorhynchus mykiss)	- (nominal, static). 96 h LC50 = 150 mg/l
Mosquito fish	- (nominal, static). 96 h LC50 = 337.5 mg/l
Bluegill	- (nominal, static). 96 h LC50 = 329.16 mg/l
Fathead minnow (Pimephales promelas),	- (measured, flow-through) 96 h LC50 = 2,070 mg/l
Goldfish	- (measured, static) 96 h LC50 = 170 mg/l
Daphnia magna (Water flea)	- (nominal, static). 24 h LC50= 140 mg/l
Crangon crangon (shrimp)	- (nominal, renewal). 48 h LC50> 100 mg/l
Brine shrimp	- 48 h LC50= 7,100 mg/l
Daphnia magna (Water flea)	- 48 h EC50= 65 mg/l

## 13. DISPOSAL CONSIDERATIONS

**CARE MUST BE TAKEN TO PREVENT ENVIRONMENTAL CONTAMINATION FROM THE USE OF THE MATERIAL. THE USER OF THE MATERIAL HAS THE RESPONSIBILITY TO DISPOSE OF UNUSED MATERIAL, RESIDUES AND CONTAINERS IN COMPLIANCE WITH ALL RELEVANT LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS REGARDING TREATMENT, STORAGE AND DISPOSAL FOR HAZARDOUS AND NONHAZARDOUS WASTES.**

Waste Disposal Summary : If this product becomes a waste, it will be a nonhazardous waste according to U.S. RCRA regulations. Dispose of in accordance with all Local, State, Federal, and Provincial Environmental Regulations.

Potential US EPA Waste Codes : Not applicable

**14. TRANSPORT INFORMATION**

Land (US DOT): NOT REGULATED AS A DOT HAZARDOUS MATERIAL

Water (IMDG): NOT REGULATED AS A HAZARDOUS MATERIAL,

Flash Point: No data.

Air (IATA): NOT REGULATED AS A HAZARDOUS MATERIAL,

Emergency Response Guide Not applicable

Number:

**15. REGULATORY INFORMATION**

**UNITED STATES:**

Toxic Substances Control Act (TSCA): This item is exempt from TSCA and FIFRA under the treated article exemption per 40 CFR 152.25(a).

EPA Pesticide Registration Number: None established

FIFRA Listing of Pesticide Chemicals (40 CFR 180): Not registered in the US under FIFRA.

**Superfund Amendments and Reauthorization Act (SARA) Title III:**

Hazard Categories Sections 311 / 312 (40 CFR 370.2):

Health Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard

Physical None

**Emergency Planning & Community Right to Know (40 CFR 355, App. A):**

**Extremely Hazardous Substance Section 302 - Threshold Planning Quantity:**

ZUS\_SAR302 TPQ (threshold planning quantity) None established

**Reportable Quantity (49 CFR 172.101, Appendix):**

ZUS\_CERCLA Reportable quantity None established

ZUS\_SAR302 Reportable quantity None established

**Supplier Notification Requirements (40 CFR 372.45), 313 Reportable Components**

ZUS\_SAR313 De minimis concentration

**Clean Air Act Toxic ARP Section 112r:**

CAA 112R None established

**Clean Air Act Socmi:**

HON SOC                      None established

**Clean Air Act VOC Section 111:**  
CAA 111                      None established

**Clean Air Act Haz. Air Pollutants Section 112:**

CAA AP                      None established

**State Right-to-Know Regulations Status of Ingredients**

**Pennsylvania:**

CAS #	COMPONENT NAME
141-43-5	Ethanolamine
34590-94-8	Propanol, (2, methoxy-methylethoxy-)
50-00-0	Formaldehyde (by-product of the untreated plywood article)

ZUSPA\_RTK

Pennsylvania: Hazardous substance list  
1989-08-11  
ETHANOL, 2-AMINO-

Pennsylvania: Hazardous substance list  
1989-08-11  
PROPANOL, (2-METHOXYMETHYLETHOXY)-

Pennsylvania: Hazardous substance list  
1989-08-11  
FORMALDEHYDE  
Environmental hazard, Special hazardous substance

**New Jersey:**

CAS #	COMPONENT NAME
141-43-5	Ethanolamine
34590-94-8	Propanol, (2, methoxy-methylethoxy-)
50-00-0	Formaldehyde (by-product of the untreated plywood article)

ZUSNJ\_RTK

New Jersey Right to Know Hazardous Substance List (RTK-HSL)

2007-03-01  
ETHANOLAMINE MONOETHANOLAMINE ETHANOL, 2-AMINO-  
Special Health Hazard - Corrosive

New Jersey Right to Know Hazardous Substance List (RTK-HSL)

2007-03-01  
DIPROPYLENE GLYCOL METHYL ETHER PROPANOL, 1(or 2)-(2-  
METHOXYMETHYLETHOXY)- (2-METHOXYMETHYLETHOXY)  
PROPANOL

New Jersey Right to Know Hazardous Substance List (RTK-HSL)

2007-03-01  
FORMALDEHYDE METHYL ALDEHYDE FORMALIN  
Special Health Hazard - Carcinogen, Special Health Hazard -  
Corrosive, Special Health Hazard - Flammable - Fourth Degree,  
Special Health Hazard - Mutagen

**Massachusetts:**

CAS #	COMPONENT NAME
141-43-5	Ethanolamine
34590-94-8	Propanol, (2, methoxy-methylethoxy-)
50-00-0	Formaldehyde (by-product of the untreated plywood article)

ZUSMA\_RTK

Massachusetts Right to Know List of Chemicals and Hazard Classifications

1993-04-24  
ETHANOLAMINE 2-AMINOETHANOL

Massachusetts Right to Know List of Chemicals and Hazard Classifications

1993-04-24  
DIPROPYLENE GLYCOL METHYL ETHER

Massachusetts Right to Know List of Chemicals and Hazard Classifications

1993-04-24  
FORMALDEHYDE FORMALIN  
Carcinogen, Extraordinarily hazardous

**California Proposition 65:**

CAS #	COMPONENT NAME
50-00-0	Formaldehyde (by-product of the untreated plywood

article)

ZUSCA\_P65

California Proposition 65. Safe drinking water and toxic enforcement act.  
No Significant Risk Levels 40 µg/day  
Formaldehyde (gas)  
Carcinogen

California Proposition 65. Safe drinking water and toxic enforcement act.  
No Significant Risk Levels 40 micrograms per day  
Formaldehyde (gas)

California Proposition 65. Safe drinking water and toxic enforcement act.  
Formaldehyde  
Carcinogen

**WHMIS Hazard Classification:**  
None established

## 16. OTHER INFORMATION

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MSDS REVISION STATUS : Revised to meet the ANSI standard of 16 sections  
SECTIONS REVISED: 2, 5, 6, 7, 8  
Major References : Available upon request.

THIS MATERIAL SAFETY DATA SHEET (MSDS) HAS BEEN PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200. THE INFORMATION IN THIS MSDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. THIS INFORMATION HAS BEEN PREPARED FOR THE GUIDANCE OF PLANT ENGINEERING, OPERATIONS AND MANAGEMENT AND FOR PERSONS WORKING WITH OR HANDLING THIS PRODUCT. THE MANUFACTURER BELIEVES THIS INFORMATION TO BE RELIABLE AND UP TO DATE AS OF THE DATE OF PUBLICATION BUT, MAKES NO WARRANTY THAT IT IS.