



**Universal
Forest
Products**

TO: Railroad Tie Purchaser

FROM: Legal Compliance Department DATE: March 15, 2011

SUBJECT: Creosote Treated Wood Railroad Tie MSDS

Purchaser:

Used railroad ties are not manufactured by Universal Forest Products, Inc. or its operating affiliates and subsidiaries (“UFP”); consequently, UFP does not produce and maintain an MSDS. Instead UFP relies on receiving MSDS’s from its suppliers. Attached is an MSDS from one manufacturer of creosote railroad ties.

In addition, end users can refer to the Creosote Treated Wood Consumer Information Sheet for use and handling information. This Consumer Information Sheet contains language approved by the U.S. Environmental Protection Agency. You can find it by going to www.ufpi.com and typing “creosote consumer information sheet” in the search box at the top of the page.



Safety Data Sheet

Material Name: CREOSOTE PRESSURE TREATED WOOD

SDS ID: 00228327

*** Section 1 - PRODUCT AND COMPANY IDENTIFICATION ***

Manufacturer Information

KOPPERS INC.
436 Seventh Avenue
Pittsburgh, PA 15219-1800
Mfg Contact: 412-227-2001 (SDS Requests: 866-852-5239)

CHEMTREC: 800-424-9300 (Outside USA: +1 703-527-3887)
Emergencies (Medical in USA): 877-737-9047
Emergencies (Medical Outside of USA): 651-632-9269
Email: naorgmsds@koppers.com

Material Name: CREOSOTE PRESSURE TREATED WOOD

Product Use

Industrial wood products; specifically railroad ties, utility poles, and marine pilings.

*** Section 2 - HAZARDS IDENTIFICATION ***

EMERGENCY OVERVIEW

Physical Form: Pressure treated poles and crossties - treated at a retention level of 7-9 lbs/ft³ with a wood density of 45-55 lbs/ft³. Pressure treated piling - treated at a retention level of 12-20 lbs/ft³ with a wood density of 45 lbs/ft³. Actual retention level dependent on wood stock, moisture levels, and customer specifications.

Color: dark, brown to black

Odor: tar odor

Signal Word: WARNING!

Major Health Hazards: harmful if inhaled, harmful on contact with the skin, respiratory tract irritation, skin irritation, eye irritation, allergic reactions, nasal/sinus cancer, lung cancer, skin cancer

Physical Hazards: Dust/air mixtures may ignite or explode.

Precautionary Statements: Avoid breathing dust. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wash thoroughly after handling. Protective clothing must be changed when it shows signs of contamination. Observe good hygiene and safety practices when handling this product. There is an EPA approved Consumer Information Sheet (CIS) available for this product, do not use this product until the CIS and MSDS have been read and understood.

POTENTIAL HEALTH EFFECTS

Inhalation

Short Term: Creosote may cause irritation. Wood dust may cause irritation and allergic reactions.

Long Term: Creosote may cause nausea, vomiting, and headache. Wood dust may cause irritation, allergic reactions, nosebleed, nausea, vomiting, loss of appetite, chest pain, difficulty breathing, headache, drowsiness, dilated pupils, visual disturbances, irregular heartbeat, lung damage, liver damage, kidney damage, and nasal/sinus cancer.

Skin

Short Term: Creosote may cause irritation, skin discoloration, skin disorders, sensitivity to sunlight, changes in body temperature, nausea, vomiting, headache, difficulty breathing, irregular heartbeat, bluish skin color, and convulsions. Wood dust may cause irritation, allergic reactions, skin disorders, difficulty breathing, irregular heartbeat, headache, visual disturbances and kidney damage.

Long Term: Creosote may cause dermatitis, skin discoloration, skin disorders, sensitivity to sunlight, changes in body temperature, nausea, vomiting, headache, difficulty breathing, irregular heartbeat, bluish skin color, lung cancer, and skin cancer. Wood dust may cause irritation, allergic reactions, and skin disorders.

Eye

Short Term: Creosote may cause irritation and sensitivity to sunlight. Wood dust may cause irritation and eye damage.

Long Term: Creosote may cause irritation and sensitivity to sunlight. Wood dust may cause irritation and eye damage.

Ingestion

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Short Term: Creosote may cause irritation, nausea, vomiting, changes in body temperature, difficulty breathing, irregular heartbeat, headache, dizziness, bluish skin color, cardiovascular collapse, and convulsions. Wood dust may cause nausea, vomiting, loss of appetite, difficulty breathing, irregular heartbeat, and drowsiness.

Long Term: Creosote may cause irritation, nausea, vomiting, headache, gastrointestinal effects, dizziness, changes in body temperature, visual disturbances, difficulty breathing, irregular heartbeat, bluish skin color, and cardiovascular collapse. No information is available for wood dust.

*** Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS ***

CAS	Component	Percent
Not Available	WOOD DUST, SOFTWOODS	<85
Not Available	WOOD DUST, HARDWOODS	<85
8001-58-9	COAL TAR CREOSOTE	<15

Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Wood dust, all soft and hard woods, Wood dusts-hard wood, Wood dusts (all other wood dusts), Wood dusts (birch, mahogany, teak, walnut), Wood dust, western red cedar, Creosotes.

*** Section 4 - FIRST AID MEASURES ***

Inhalation

If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

Skin

Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. DO NOT rub until skin is free of sawdust and preservative material. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

Eyes

Flush eyes with plenty of water for at least 15 minutes. DO NOT rub eyes. Then get immediate medical attention.

Ingestion

If a large amount is swallowed, get medical attention.

*** Section 5 - FIRE FIGHTING MEASURES ***

See Section 9 for Flammability Properties

NFPA Ratings: Health= 2 Fire= 1 Reactivity= 0

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

Flammable Properties

Dust/air mixtures may ignite or explode. During fire conditions, vapors and decomposition products may be released, forming flammable/explosive mixtures in air. Contact with heat may generate toxic and/or flammable gases.

Sensitivity to Mechanical Impact

Not available

Sensitivity to Static Discharge

Not available

Extinguishing Media

carbon dioxide, regular dry chemical, regular foam, water spray

Protective Equipment and Precautions for Firefighters

Full fire fighting turn-out gear (bunker gear).

Fire Fighting Measures

Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Use extinguishing agents appropriate for surrounding fire.

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*** Section 6 - ACCIDENTAL RELEASE MEASURES ***

Water Release

Subject to California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65).

Occupational Spill / Release

Collect debris and used material in appropriate container for disposal. Due to the concentration of Creosote and the CERCLA (40 CFR 302.4) reportable quantity of 1 pound, the release of 6 pounds of this product requires National Response Center notification.

*** Section 7 - HANDLING AND STORAGE ***

Handling Procedures

Use methods to minimize dust. Avoid frequent or prolonged inhalation of sawdust from treated wood. When sawing and machining treated wood, wear a dust mask. When power-sawing and machining, wear goggles to protect eyes from flying particles. Whenever possible, these operations should be performed outdoors to avoid indoor accumulations of airborne sawdust from treated wood. Avoid frequent or prolonged skin contact with creosote-treated wood; when handling the treated wood, wear long-sleeved shirts and long pants and use gloves impervious to the chemicals (for example, gloves that are vinyl-coated). Use protective skin cream on exposed skin before and during work shift. To reduce sun sensitivity a sun-blocking lotion (SPF 15+) can also be applied prior to application of a protective cream. After working with the wood, and before eating, drinking and use of tobacco products, wash exposed areas thoroughly. If oily preservative or sawdust accumulate on clothes, launder before reuse. Wash work clothes separately from other household clothing.

Storage Procedures

No special requirements.

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

Exposure Guidelines

Creosote is a complex mixture of variable composition, and while no odor threshold for creosote has been established, work done at the University of California has measured the odor thresholds for one of the more volatile components in creosote and determined that the involved odor threshold is in the part per billion range, and well below applicable exposure limits. On the basis of these data the perception of creosote odor in and of itself should not be taken as an indication of exposure in excess of accepted exposure limits.

Exposure to wood dust would not be expected under normal use conditions. If handling or use patterns associated with creosote treated wood involve the use of a power saw, sander, drill or any tool or activity resulting in the generation of airborne particulate the following wood dust exposure limits should be observed and appropriate steps taken to minimize exposure.

Component Exposure Limits

WOOD DUST, HARDWOODS (Not Available)

ACGIH: 1 mg/m³ TWA (inhalable fraction)

NIOSH: 1 mg/m³ TWA

Mexico: 1 mg/m³ TWA

WOOD DUST, SOFTWOODS (Not Available)

ACGIH: 0.5 mg/m³ TWA (inhalable fraction)
Sensitizer

NIOSH: 1 mg/m³ TWA

COAL TAR PITCH VOLATILES (65996-93-2)

OSHA (US): 0.2 mg/m³ TWA (benzene soluble fraction)

ACGIH: 0.2 mg/m³ TWA (as benzene soluble aerosol)

NIOSH: 0.1 mg/m³ TWA (cyclohexane-extractable fraction)

Mexico: 0.002 mg/m³ TWA; 0.02 mg/m³ TWA (as Particulate polycyclic aromatic hydrocarbons)
0.015 ppm STEL; 0.03 mg/m³ STEL

Ventilation

Ensure adequate ventilation. Ensure compliance with applicable exposure limits.

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PERSONAL PROTECTIVE EQUIPMENT

Eyes / Face

ANSI Z87.1-1989 approved safety glasses with side shields.

Protective Clothing

Wear tightly woven long-sleeved shirts and long pants. Remove and launder contaminated clothing separately from other laundry before reuse.

Glove Recommendations

Individuals must wear gloves impervious to the wood treatment formulations in all situations where dermal contact with creosote is expected.

Protective Material Types

Examples of impervious materials for protective clothing (e.g. overalls, jackets, gloves and boots) required during application and handling of creosote are polyvinyl acetate (PVA), polyvinyl chloride (PVC), Neoprene and NBR (Buna-N).

Respiratory Protection

If the applicable TLVs and/or PELs are exceeded, use canister or cartridge respirators, which are MSHA/NIOSH-approved, with high-efficiency particulate filters.

*** Section 9 - PHYSICAL AND CHEMICAL PROPERTIES ***

Physical State: Solid

Color: dark, brown to black

Physical Form: Pressure treated poles and crossties - treated at a retention level of 7-9 lbs/ft³ with a wood density of 45-55 lbs/ft³.
Pressure treated piling - treated at a retention level of 12-20 lbs/ft³ with a wood density of 45 lbs/ft³. Actual retention level dependent on wood stock, moisture levels, and customer specifications.

Odor: tar odor

pH: Not available

Freezing / Melting Point: Not available

Boiling Point: Not available

Flash Point: Not applicable

Decomposition Temperature: Not available

Evaporation Rate: Not available

Lower Explosive Limit: Not available

Upper Explosive Limit: Not available

Vapor Pressure: Not available

Vapor Density: Not available

Specific Gravity (water=1): Not available

Water Solubility: Not available

Coefficient of Water/Oil Dist: Not available

Autoignition: Not available

Viscosity: Not available

Volatility: Not available

*** Section 10 - STABILITY AND REACTIVITY ***

Chemical Stability

Stable at normal temperatures and pressure.

Conditions to Avoid

Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

Materials to Avoid (Incompatibilities)

oxidizing materials, acids

Decomposition Products

carbon monoxide, carbon dioxide, oxides of nitrogen

Possibility of Hazardous Reactions

Will not polymerize.

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*** Section 11 - TOXICOLOGICAL INFORMATION ***

Irritation / Corrosive Information

RTECS Irritation

The components of this material have been reviewed and RTECS publishes no applicable data as of the date on this document.

Local Effects

WOOD DUST, HARDWOODS (Not Available)

Irritant: inhalation, skin, eye.

WOOD DUST, SOFTWOODS (Not Available)

Irritant: inhalation, skin, eye.

COAL TAR CREOSOTE (8001-58-9)

Irritant: inhalation, skin, eye.

Acute and Chronic Toxicity

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

COAL TAR CREOSOTE (8001-58-9)

Oral LD50 Rat 2524 mg/kg

RTECS Acute Toxicity (selected)

The components of this material have been reviewed, and RTECS publishes the following endpoints:

COAL TAR CREOSOTE (8001-58-9)

Oral: 725 mg/kg Oral Rat LD50

Acute Toxicity Level

COAL TAR CREOSOTE (8001-58-9)

Moderately Toxic: ingestion.

Carcinogenicity (Product)

OSHA: No

NTP: Yes

IARC: Yes

(See below for additional information on component carcinogen status)

Component Carcinogenicity

WOOD DUST, HARDWOODS (Not Available)

ACGIH: A1 - Confirmed Human Carcinogen

NIOSH: potential occupational carcinogen

NTP: Known Human Carcinogen (Select Carcinogen)

IARC: Monograph 100C [in preparation]; Monograph 62 [1995] (Group 1 (carcinogenic to humans))

WOOD DUST, SOFTWOODS (Not Available)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

NIOSH: potential occupational carcinogen

NTP: Known Human Carcinogen (Select Carcinogen)

IARC: Monograph 100C [in preparation]; Monograph 62 [1995] (Group 1 (carcinogenic to humans))

COAL TAR CREOSOTE (8001-58-9)

NIOSH: potential occupational carcinogen

IARC: Monograph 92 [2010]; Supplement 7 [1987]; Monograph 35 [1985] (Group 2A (probably carcinogenic to humans))

RTECS Tumorigenic

The components of this material have been reviewed, and RTECS publishes data for one or more components.

RTECS Mutagenic

The components of this material have been reviewed, and RTECS publishes data for one or more components.

RTECS Reproductive Effects

The components of this material have been reviewed, and RTECS publishes data for one or more components.

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Target Organs (Product)

respiratory system, skin, eyes, immune system (sensitizer)

Target Organs (Components)

WOOD DUST, HARDWOODS (Not Available)

immune system (sensitizer).

WOOD DUST, SOFTWOODS (Not Available)

immune system (sensitizer).

Medical Conditions Aggravated by Exposure Based on Product and Component Information

respiratory disorders, skin disorders and allergies

Additional Information (Product)

This product contains coal tar creosote. Volume 35 of the IARC monograph states that there is limited evidence that coal tar derived creosotes are carcinogenic in humans and sufficient evidence for the carcinogenicity of creosote in experimental animals. Limitations in the human exposure studies reviewed by IARC (including the presence of other chemicals, small study populations and not well documented exposure levels) contributed to IARC's conclusions regarding human exposure to creosote. When applied to the skin of mice in experimental studies, creosote produced skin tumors and in one study produced lung tumors.

Most available information on the effects of coal tar creosote in humans comes from older occupational studies in the wood-preserving and construction industries. Today, with the use of engineering controls and personal protective equipment, occupational exposure to creosote components is expected to be below permissible exposure limits (measured as CTPVs). Wood dust is particles of varying size produced from processing or handling wood. Cancer of the nasal cavities and sinuses is associated with exposure to hardwood dust. IARC concluded that there were too few studies to evaluate cancer risks attributable to exposure to softwood alone and to any particular species of wood. In view of the overall lack of consistent findings, IARC also concluded that there is no indication that occupational exposure to wood dust has a causal role in cancers of the throat, lung, lymphatic and blood systems, stomach, colon or rectum.

Different woods produce different health effects and there is evidence that wood from different trees of the same species can produce varying health effects. Woods other than Western Red Cedar (WRC) seem unlikely to be responsible for large numbers of cases of respiratory allergies. Other common wood dusts produce asthma/pulmonary effects that are less well described than the responses to WRC. These other wood species (e.g., oak and pine) are considered somewhat allergenic.

*** Section 12 - ECOLOGICAL INFORMATION ***

Component Analysis - Aquatic Toxicity

COAL TAR CREOSOTE (8001-58-9)

Fish: 96 Hr LC50 Brachydanio rerio: 2.6 - 6.6 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 0.57 mg/L [static]

Invertebrate: 48 Hr EC50 Daphnia magna: 1.04 mg/L; 48 Hr EC50 Daphnia magna: 0.065 - 0.082 mg/L [Static]

*** Section 13 - DISPOSAL CONSIDERATIONS ***

Disposal Methods

Dispose in accordance with all applicable regulations. Treated wood should not be burned in open fires or in stoves, fireplaces or residential boilers, because toxic chemicals may be produced as part of the smoke and ashes. Treated wood from commercial or industrial use (e.g., construction sites) may be burned only in commercial or industrial incinerators or boilers in accordance with state and federal regulations. For more information please see Koppers Consumer Information Sheet for this product.

Component Waste Numbers

COAL TAR CREOSOTE (8001-58-9)

RCRA: waste_number U051

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*** Section 14 - TRANSPORT INFORMATION ***

US DOT Information

No Classification assigned.

TDG Information

No Classification assigned.

*** Section 15 - REGULATORY INFORMATION ***

U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), TSCA 12(b), and/or require an OSHA process safety plan.

COAL TAR CREOSOTE (8001-58-9)

SARA 313: 0.1 % de minimis concentration

SARA 311/312 Hazardous Categories (40 CFR 370 Subparts B and C)

Acute Health: Yes Chronic Health: Yes Fire: No Pressure: No Reactive: No

U.S. State Regulations

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

Component	CAS#	CA	MA	MN	NJ	PA	RI
WOOD DUST, HARDWOODS (¹related to: Wood dust, all soft and hard woods) (²related to: Wood dusts-hard wood)	Not Available	No	No	Yes¹	No	Yes²	Yes¹
WOOD DUST, SOFTWOODS (¹related to: Wood dust, all soft and hard woods)	Not Available	No	No	Yes¹	No	No	Yes¹
COAL TAR CREOSOTE (¹related to: Creosotes)	8001-58-9	Yes	Yes	Yes¹	Yes	Yes	No

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.

Canadian Regulations

WHMIS Classification

Not a Controlled Product under Canada's Workplace Hazardous Material Information System.

WHMIS Ingredient Disclosure List

There are no components listed on the Ingredient Disclosure List.

Canada Inventory Information (Product)

This product is exempt.

U.S. Inventory (TSCA) Information (Product)

This product is exempt.

Inventory Status (Components)

Component Analysis - Inventory

Component	CAS#	US	CA
COAL TAR CREOSOTE	8001-58-9	Yes	DSL

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*** Section 16 - OTHER INFORMATION ***

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; RID - European Rail Transport; RTECS - Registry of Toxic Effects of Chemical Substances®; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States

Other Information

The information set forth in this Safety Data Sheet does not purport to be all-inclusive and should be used only as a guide. While the information and recommendations set forth herein are believed to be accurate, the company makes no warranty regarding such information and recommendations and disclaims all liability from reliance thereon.

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