



MATERIAL SAFETY DATA SHEET

LEAD LINED WOOD DOOR

Radiation Protection Products, Inc.
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SECTION 1 - Product Identification

Product: Lead Lined Wood Doors
 Synonyms: None
 Manufacturing Location: Rome, Georgia, USA

SECTION 2 - Hazardous Ingredients/Identify Information

Component	CAS No.	% by wt.	Exposure Limits	Comments
Wood	None	15	PEL-TWA 5mg/m ³ PEL-TWA 2.5mg/m ³ TLV-STEL 10mg/m ³	Total dust Select Hardwood Softwood total dust
Lead	7439-92-1	40-82	PEL - TWA 0.05mg/m ³ TLV - TWA 0.15mg/m ³	Elemental/inorganic compounds
Leaded Glass	None	0-10	None	
Door Faces:				
- Wood	None	1-3	None	See above for wood
- Plastic	None	None	None	
Resin Solids				
-Urea formaldehyde	9055-05-6	1-5	PEL - TWA 0.75ppm PEL - STEL 2.0ppm	Free gaseous formaldehyde
(Contains less than 0.1% free formaldehyde)				
- Contact Adhesive	None	<1	None	
- PVA Adhesive	None	<1	None	

SECTION 3 - Hazard Identification

Appearance and Odor: Doors with a variety of grain patterns and hues. The products have a slight aromatic odor. Wood component may contain alder, ash, aspen, basswood, beech, birch, bubinga, cherry, chestnut, cottonwood, cypress, elm, fir, gum, hemlock, hickory, koa, mahogany (true and false), mansonia, maple, oak (red and white), pine poplar, spruce, teak, walnut.

Primary Health Hazards: The primary health hazards posed by this product are thought to be due to exposure to dust and/or lead particles generated from sawing, sanding, drilling, or routing this product, or exposure to free gaseous formaldehyde.

Primary Route(s) of Exposure:
 () Ingestion;
 () Inhalation; Dust, gas
 (X) Skin; Dust
 (X) Inhalation; Dust, gas

Medical Conditions Generally Aggravated by Exposure: Gaseous formaldehyde or wood dust may aggravate preexisting respiratory conditions or allergies.

Chronic Health Hazards: Wood dust, depending on the species, may cause allergic contact dermatitis and respiratory sensitization with prolonged, repetitive contact or exposure to elevated dust levels. Prolonged exposure to wood dust has been reported by some observers to be associated with nasal cancer. Long-term overexposure to lead dust or fumes can result in systemic lead poisoning.

Carcinogenicity Listing:

(X) NTP: Formaldehyde, Groups 2A and 2B
 (X) IARC Monographs: Formaldehyde, Group 2A; Wood dust, Group 1
 (X) OSHA Regulated: Formaldehyde, Lead
 Gaseous formaldehyde and lead have been shown to cause cancer in certain laboratory animals after long term exposure to very high concentrations (14+ ppm for formaldehyde), far above those normally found in the workplace with this product.
IARC - Group 1: Carcinogenic to Humans: Sufficient evidence of carcinogenicity. This classification is primarily based on studies showing an association between occupational exposure to wood dust and adenocarcinoma of the nasal cavities and paranasal sinuses. IARC did not find sufficient evidence of an association between occupational exposure to wood dust and cancers of the oropharynx, hypopharynx, lung, lymphatic and hematopoietic systems, stomach, colon, or rectum.
IARC - Group 2A: Probably Carcinogenic to Humans: Limited evidence of carcinogenicity to humans; sufficient evidence of carcinogenicity in experimental animals.
NTP - Groups 2A and 2B: The National Toxicology Program (NTP) has reported formaldehyde and lead are reasonably anticipated

to be a carcinogen, meaning there is limited evidence of carcinogenicity from human studies (Group 2A) or sufficient evidence of carcinogenicity from studies in experimental animals (Group 2B).

SECTION 4 - Emergency and First Aid Procedures

Ingestion: Not applicable under normal use.
Eye Contact: Gaseous formaldehyde may cause temporary irritation or a temporary burning sensation. Wood, lead, paper, or plastic dust(s) may cause mechanical irritation. Treat dust in eye as foreign object. Flush with water to remove dust particles. Get medical help if irritation persists.
Skin Contact: High concentrations of gaseous formaldehyde may cause allergic contact dermatitis in sensitized individuals resulting in redness, itching, and occasionally, hives. Wood dust(s) of certain species may elicit allergic contact dermatitis in sensitized individuals, as well as mechanical irritation resulting in hives. Get medical help if rash, irritation or dermatitis occurs.
Skin Absorption: Not known to occur under normal use.
Inhalation: High concentrations of gaseous formaldehyde may cause temporary irritation to the nose and throat. Wood, lead, paper, or plastic dust(s) may cause unpleasant obstruction in the nasal passages, resulting in dryness of nose, dry cough, sneezing, and headaches. Remove to fresh air. Get medical help if persistent irritation, severe coughing or breathing difficulty occurs.

SECTION 5 - Fire and Explosion Data

Flash Point (Method Used): NAP
Flammable Limits:
 LEL: See below under "Unusual Fire and Explosion Hazards"
 UEL: NAP
Extinguishing Media: Water, carbon dioxide, sand, dry chemical.

Autoignition Temperature: 400°-500°F (204°-260°C) for wood.
Special Firefighting Procedures: Wet down with water.
Unusual Fire and Explosion Hazards: Depending on moisture content and, more importantly, particle diameter, wood dust may explode in the presence of an ignition source. An airborne concentration of 40 grams (40,000 mg) of dust per cubic meter of air is often used as the LEL for wood dust. This product in purchased form minimizes the possibility of dust release.

SECTION 6 - Accidental Release Measures

Steps to be Taken in Case Material is Released or Spilled: Not applicable for product in purchased form. Dust generated from sawing, sanding, drilling, or routing this product may be vacuumed or shoveled for recovery or disposal. Avoid dusty conditions and provide good ventilation.
Other Precautions: A NIOSH/MSHA-approved full-face respirator or half-mask respirator with chemical goggles should be worn when the formaldehyde and/or wood dust allowable exposure limits may be exceeded. It is recommended that the full-face and half-mask respirators have a combination formaldehyde and dust cartridge.

SECTION 7 - Handling and Storage

Precautions to be taken in Handling and Storage: No special handling precautions are required for product in purchased form. Keep in cool, dry place away from open flame. This product may release small quantities of gaseous formaldehyde. Store in a well ventilated area.

SECTION 8 - Exposure Control Measures

Personal Protective Equipment:
RESPIRATORY PROTECTION — Not applicable for product in purchased form. A NIOSH/MSHA-approved respirator is recommended when allowable exposure limits may be exceeded.
PROTECTIVE GLOVES — Not required. However, cloth, canvas, or leather gloves are recommended to minimize potential mechanical irritation from handling product.
EYE PROTECTION — Not applicable for product in purchased form. Goggles or safety glasses are recommended when machining this product and in areas with high dust levels.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT — Not applicable for product in purchased form. Outer garments may be desirable in extremely dusty areas.
WORKHYGIENE PRACTICES — Follow good hygienic and housekeeping practices. Wash hands before eating if lead dust is suspected on skin or clothing. Clean up areas where dust settles to avoid excessive accumulation of this combustible material. Minimize blowdown or other practices that generate high airborne-dust concentrations.

Ventilation:
LOCAL EXHAUST — Provide local exhaust as needed so that exposure limits are met.
MECHANICAL (GENERAL) — Provide general ventilation in processing and storage areas so that exposure limits are met.
SPECIAL — None.
OTHER — None.



SECTION 9 - Physical and Chemical Properties

Boiling Point (@ 760 mm Hg):
Vapor Pressure (mm Hg):
Vapor Density (air = 1; 1 atm):
Specific Gravity (H2O = 1):
Melting Point:
Evaporation Rate (Butyl acetate = 1):
Solubility in Water (% by weight):
% Volatile by Volume (@ 70°F (21°C)):
pH:

NAP (Wood); 3,164°F (1,740°C) (Lead)
NAP
NAP
Variable for wood; depends on species and moisture content. 11.3 (Lead).
NAP (Wood); 621°F (Lead)
NAP
Insoluble
0
NAP

SECTION 10 - Stability and Reactivity

Stability:
Stable Conditions to Avoid:
Incompatibility (Materials to Avoid):
Hazardous Decomposition or Byproducts:
Hazardous Polymerization:

Stable (), Unstable (x)
Avoid open flame. Product may ignite at temperatures in excess of 400°F (204°C).
Avoid contact with oxidizing agents.
Depending on moisture content, availability of oxygen, and temperature, thermal decomposition products include carbon monoxide, water, various aldehydes (both aliphatic and aromatic), tars, carbon, and lead fumes.
() May occur (x) Will not occur

SECTION 11 - Toxicological Information

No information available for product in purchased form. Individual component information is listed below if available.
Wood: Wood dust (softwood or hardwood) OSHA Hazard Rating = 3.3; moderately toxic with probable oral lethal dose to humans being 0.5-5 g/kg (about 1 pound for a 70 kg or 150 pound person).
Paper: (cellulose); LD50 (rat, inhalation) = 5,800 mg/m³/4 hours.
Plastic: None.
Resin solids: None.
Formaldehyde: OSHA hazard rating = 3 for local and systemic acute and chronic exposures; highly toxic. Irritation studies: human skin, 150 ug/3 days, intermittent exposure produced mild results; human eye, 1 ppm/6 minutes produced mild results. **Toxicity studies:** human inhalation TCLO of 8 ppm reported, but response not specified; human inhalation TCLO of 17 mg/m³ for 30 minutes produced eye and pulmonary results; human inhalation TCLO of 300 ug/m³ produced nose and central nervous system results; LC50 (rat, inhalation) = 1,000 mg/m³/30 minutes; LC50 (mice, inhalation) = 400 mg/m³/2 hours.
Lead: TDLo (woman, oral) = 450 mg/kg/6Y produced flaccid paralysis, hallucinations, distorted perceptions, and muscle weakness. TCLO (human, inhalation) = 10 ug/m³ produced gastritis and liver changes (liver results not specified).
Source: OSHA Regulated Hazardous Substances, Government Institutes, Inc., February 1990; Registry of Toxic Effects of Chemical Substances (RTECS), National Institute for Occupational Safety and Health (provided by Canadian Centre for Occupational Health and Safety, CCINFO November 1995).

SECTION 12 - Ecological Information

No information available at this time.

SECTION 13 - Disposal Considerations

Waste Disposal Method: it is the user's responsibility to determine at the time of disposal whether the product meet EPA RCRA criteria for hazardous waste. Follow applicable federal, state and local regulations. For further information contact A & L Shielding Inc.

SECTION 14 - Transport Information

Not regulated by the U.S. Department of Transportation.

SECTION 15 - Regulatory Information

TSCA
All ingredients are on the TSCA inventory.
STATE RIGHT-TO KNOW
This product is known to contain substances subject to the disclosure requirements of:
* California Prop 65 - Lead: This product also contains formaldehyde which, depending on temperature and humidity may be emitted from the product. Formaldehyde is a compound that is known in the State of California to cause cancer. The manufacturer of the core material, Weyerhaeuser, has evaluated formaldehyde emission rates from its products and have found these rates to be below the 'no significant risk' level that would require product warnings.
* New Jersey - Formaldehyde and lead

* Pennsylvania - Lead: When cut or otherwise machined, the product may emit wood dust and formaldehyde both are listed substance in Pennsylvania.

SARA 313 Information: To the best of our knowledge, this product contains no chemical except lead that is subject to SARA Title III Section 313 supplier notification requirements.

SARA 311/312 Hazard Category: This product has been reviewed according to the EPA "Hazard Categories" promulgated under SARA Title III Sections 311 and 312 and is considered, under applicable definitions, to meet the following categories:

- * An immediate (acute) health hazard - yes (lead)
- * A delayed (chronic) health hazard - yes (formaldehyde, lead)
- * A fire hazard - no
- * A reactivity hazard - no
- * A sudden release hazard - no

SECTION 16 - Additional Information

Date Prepared: 09/18/02
Date Revised: 08/20/10
Prepared By: Manufacturing Management

User's Responsibility: The information contained in this Material Safety Data Sheet is based on the experience of occupational health and safety professionals and comes from sources believed to be accurate or otherwise technically correct. It is the user's responsibility to determine if this information is suitable for their applications and to follow safety precautions as may be necessary. The user has the responsibility to make sure that this sheet is the most up-to-date issue.

For additional information, see www.aishielding.com or e-mail A & L Shielding Inc. at service@aishielding.com

Definition of Common Terms:

- ACGIH = American Conference of Governmental Industrial Hygienists
- C = Ceiling Limit
- CAS# = Chemical Abstracts System Number
- EPA = Environmental Protection Agency
- IARC = International Agency for Research on Cancer
- LRCO = Lowest concentration in air resulting in death
- LC50 = Concentration in air resulting in death to 50% of experimental animals
- LDLo = Lowest dose resulting in death
- LD50 = Administered dose resulting in death to 50% of experimental animals
- MSHA = Mining Safety and Health Administration
- NAP = Not Applicable
- NAV = Not Available
- NIOSH = National Institute for Occupational Safety and Health
- NTP = National Toxicology Program
- OSHA = Occupational Safety and Health Administration
- PEL = Permissible Exposure Limit
- RCRA = Resource Conservation and Recovery Act
- STEL = Short-Term Exposure Limit (15 minutes)
- TCLo = Lowest concentration in air resulting in a toxic effect
- TDLo = Lowest dose resulting in a toxic effect
- TLV = Threshold Limit Value
- TWA = Time-Weighted Average (8 hours)
- WHMIS = Workplace Hazardous Materials Information System