Weyerhaeuser Oriented Strand Board (OSB) Products including: Sheathing, Edge, Edge Gold®, Hardwood Edge, RBS Roof Sheathing®, Rim Board, Structurwood, SturdiStep

1. Identification

TRADE NAME(S): Weyerhaeuser Oriented Strand Board (OSB) products including: Sheathing; Edge; Edge Gold®; Hardwood Edge; RBS Roof Sheathing®; Rim Board, Structurwood, SturdiStep

SYNONYMS and/or GRADES: Radiant Barrier Sheathing (RBS), Rim Board, Web stock

PRODUCT USES: Building Materials

CHEMICAL NAME/CLASS: Wood Products

MANUFACTURER'S NAME: Weyerhaeuser
ADDRESS: 220 Occidental Ave S., Seattle, WA 98104
EMERGENCY PHONE (DOT): (844) 523-4081 (3E Company)
BUSINESS PHONE: (206) 539-3910
INTERNET ACCESS: See section 16
REVISED DATE: August, 17, 2016

2. Hazard(s) Identification

Signal Word: DANGER

NOTE: These products are not hazardous in the form in which they are shipped by the manufacturer but may become hazardous as the result of downstream activities (e.g. cutting, sanding) which creates small particles resulting in the potential hazards as described below.

<table>
<thead>
<tr>
<th>Classification</th>
<th>Hazard Statement(s)</th>
<th>Pictogram(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEALTH</td>
<td>Wood dust may cause nasopharyngeal cancer and/or cancer of the nasal cavities and paranasal sinuses by inhalation</td>
<td></td>
</tr>
</tbody>
</table>

Carcinogen- Category 1A (H350)*
### 2. Hazard(s) Identification (cont’d.)

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Description</th>
<th>Hazard Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Irritation</td>
<td>Category 2 (H315)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>May cause skin irritation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Specific Target Organ Toxicity- Single Exposure (STOT) Category-3 (H335)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>May cause respiratory irritation</td>
<td></td>
</tr>
<tr>
<td>Eye Irritation</td>
<td>Category 2B (H320)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Causes eye irritation</td>
<td></td>
</tr>
<tr>
<td>Combustible Dust</td>
<td>(OSHA Defined Hazard)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>If converted to small particles during further processing, handling, or by</td>
<td></td>
</tr>
<tr>
<td></td>
<td>other means, may form combustible dust concentrations in air</td>
<td></td>
</tr>
</tbody>
</table>

*Hazard codes (GHS)*

- **HMIS Rating (Scale 0-4):**
  - Health = 2*
  - Fire = 1
  - Physical Hazard = 0
- **NFPA Rating (Scale 0-4):**
  - Health = 1
  - Fire = 1
  - Reactivity = 0

**Precautionary Statement(s)/Codes (GHS):**

**Prevention Statements:**
- P210: Keep away from sparks, flame or other heat sources.
- P243: Take precautionary measures against static discharge.
- P260 and P261: Avoid breathing dust.
- P280: Wear appropriate protective equipment for skin exposure. In case of inadequate ventilation wear an approved respirator suitable for conditions of use.
- P362 and P363: Take off contaminated clothing and wash before reuse.

**Response Statements:**
- P304 and P340: If inhaled and breathing becomes difficult, remove person to fresh air and keep comfortable for breathing.
- P308 and P313: If experiencing respiratory symptoms, following removal to fresh air, call a doctor or other qualified medical professional.
- P313: If skin irritation or rash occurs get medical advice/attention.
- P362: Wash contaminated clothing before reuse.
- P352 and P264: If on skin wash with plenty of soap and water.
- P338 and P351: If in eyes, rinse cautiously for several minutes. Remove contact lenses if present and easy to do so.

**Disposal:**
- P501: Dispose of contents in accordance with federal, state and local regulations.

**Ingredients of Unknown Acute Toxicity (>1%):** NAP
3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS#</th>
<th>Wt.%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wood (wood dust, softwood or hardwood)</td>
<td>None</td>
<td>84-89</td>
</tr>
<tr>
<td>Resin Solids: Polymeric Phenol-Formaldehyde (^1) (C(_7)H(_6)O(_2))</td>
<td>9003-35-4</td>
<td>1-14</td>
</tr>
<tr>
<td>Polymeric Diphenylmethane Diisocyanate (^2) [C(_6)H(_3)(NCO)CH(_2)](_n)</td>
<td>9016-87-9</td>
<td>1-14</td>
</tr>
<tr>
<td>Paraffin or Emulsified Wax (^3)</td>
<td>8002-74-2</td>
<td>1-2</td>
</tr>
<tr>
<td>Polyethylene Coated and/or Laminated Paper</td>
<td>None</td>
<td>1-2</td>
</tr>
<tr>
<td>Aluminum Foil (RBS Roof Sheathing only)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Common names: \(^1\) Phenol-formaldehyde resin; \(^2\) Polymeric MDI; \(^3\) Hydrocarbon waxes.

4. First Aid Measures

**Inhalation:** Remove to fresh air if respiratory symptoms are experienced. Seek medical help if persistent irritation, severe coughing, breathing difficulty or other serious symptoms occur.

**Eye Contact:** Treat dust in eye as a foreign object. Flush with water to remove dust particles. Remove contact lenses if present and easy to do so. Avoid touching or rubbing eyes to avoid further irritation or injury. Seek medical help if irritation persists.

**Skin Contact:** Wood dust may elicit contact dermatitis. Seek medical help if rash, irritation or dermatitis persists.

**Skin Absorption:** Not known to be absorbed through the skin.

**Ingestion:** Not applicable under normal use.

**Symptoms or Effects:**
Acute Symptoms/Effects – Wood dust may cause mechanical and/or chemical irritation of the respiratory system. Wood dust can cause physical obstructions in the nasal passages, resulting in dryness of nose, dry cough, and sneezing. Wood dust may cause mechanical irritation of the eyes.

Delayed Symptoms/Effects – Unique delayed effects are not anticipated after exposure. See Section 11 for additional information on chronic effects.

5. Fire-fighting Measures

**Extinguishing Media and Restrictions:** Water, carbon dioxide and sand.

**Specific Hazards, Anticipated Combustion Products:** Natural decomposition of organic materials such as wood may produce toxic gases and an oxygen deficient atmosphere in enclosed or poorly ventilated areas. Thermal decomposition (i.e. smoldering, burning) products include carbon monoxide, carbon dioxide, aliphatic aldehydes, including formaldehyde, resin acids, terpenes, polycyclic aromatic hydrocarbons and aluminum oxides (RBS Roof Sheathing only).

**Autoignition Temperature:** Variable [typically 400°-500°F (204°-260°C)]

**Special Firefighting Equipment/Procedures:** No special equipment anticipated. Beware of potential combustible dust explosion hazard.

**Unusual Fire and Explosion Hazards:** Depending on moisture content and more importantly, particle diameter and airborne concentration, wood and resin dust may explode in the presence of an ignition source. Wood dust may similarly deflagrate (combustion without detonation like an explosion) if ignited in an open or loosely contained area. An airborne concentration of 40 grams (40,000 mg) of dust per cubic meter of air is often used as the LEL for wood dusts. Reference NFPA Standards 654, 664 and the NFPA Fire Protection Handbook for guidance. Ventilation systems should be kept clean and precautions should be taken to prevent sparks or other ignition sources.
6. Accidental Release Measures

Steps to be taken in case Material Is Released or Spilled: Sweep or vacuum up for recovery and disposal. Avoid creating dusty conditions whenever feasible. Maintain good housekeeping to avoid accumulation of wood and resin dust on exposed surfaces. Use approved filtering face piece respirator (“dust mask”) or higher levels of respiratory protection as indicated and goggles where ventilation is not possible and exposure limits may be exceeded or for additional worker comfort.

7. Handling and Storage

Precautions to be taken in Handling and Storage: Dried wood and resin dust may pose a combustible dust hazard. Keep away from ignition sources. Avoid eye contact. Avoid prolonged or repeated contact with skin. Avoid prolonged or repeated breathing of wood dust. These products may release some formaldehyde in gaseous form. Specific handling and storage conditions should be assessed to determine potential formaldehyde concentrations. Store in well-ventilated, cool, dry place away from open flame.

8. Exposure Control Measures/Personal Protection

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>Agency</th>
<th>Exposure Limit(s)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wood (wood dust, softwood and hardwood)</td>
<td>OSHA</td>
<td>PEL-TWA 15 mg/m³</td>
<td>Total dust (PNOR)</td>
</tr>
<tr>
<td></td>
<td>OSHA</td>
<td>PEL-TWA 5 mg/m³</td>
<td>Respirable dust fraction</td>
</tr>
<tr>
<td></td>
<td>ACGIH</td>
<td>TLV-TWA 1 mg/m³</td>
<td>Inhalable fraction</td>
</tr>
<tr>
<td>Resin Solids: Polymeric phenol-formaldehyde b</td>
<td>OSHA</td>
<td>PEL-TWA 0.75 ppm</td>
<td>Free gaseous formaldehyde</td>
</tr>
<tr>
<td></td>
<td>OSHA</td>
<td>PEL-STEL 2 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ACGIH</td>
<td>TLV- (C) 0.3 ppm</td>
<td></td>
</tr>
<tr>
<td>Polymeric Diphenylmethane Diisocyanate c</td>
<td>OSHA</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ACGIH</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Paraffin wax</td>
<td>OSHA</td>
<td>PEL-TWA 2 mg/m³</td>
<td>Paraffin wax fume</td>
</tr>
<tr>
<td></td>
<td>ACGIH</td>
<td>TLV-TWA 2 mg/m³</td>
<td>Paraffin wax fume</td>
</tr>
<tr>
<td>Polyethylene Coated and/or Laminated Paper Aluminum Foil (RBS Roof Sheathing only)</td>
<td>OSHA</td>
<td>PEL-TWA 15 mg/m³</td>
<td>Aluminum (total dust fraction)</td>
</tr>
<tr>
<td></td>
<td>OSHA</td>
<td>PEL-TWA 5 mg/m³</td>
<td>Aluminum (respirable dust fraction)</td>
</tr>
<tr>
<td></td>
<td>ACGIH</td>
<td>TLV-TWA 10 mg/m³</td>
<td>Aluminum (total dust)</td>
</tr>
</tbody>
</table>

^ In AFL-CIO v OSHA, 965 F. 2d 962 (11th Cir. 1992), the Court overturned OSHA’s 1989 Air Contaminants Rule, including the specific PEL’s for wood dust that OSHA had established at that time. The 1989 vacated PEL’s were: 5 mg/m³ PEL-TWA and 10 mg/m³ STEL (15 min), all softwood and hardwood except Western Red Cedar. Wood dust is now regulated by OSHA as “Particulates Not Otherwise Regulated” (PNOR), which is also referred to as “nuisance dust”. However, some states have regulated wood dust PEL’s in their state plans. Additionally, OSHA indicated that it may cite employers under the OSH Act general duty clause in appropriate circumstances.
8. Exposure Control Measures/Personal Protection (cont’d.)

These products may contain free formaldehyde (<0.1%, wt %), which may be released depending on concentration and environmental conditions. These panels contain no added urea-formaldehyde resins. Large scale chamber studies on similar materials conducted by the APA Engineered Wood Association have shown that the finished products off-gas levels below 0.1 ppm. This ingredient is the polymerized form of MDI resin.

Ventilation:

LOCAL EXHAUST – Provide local exhaust as needed so that exposure limits are met. Ventilation to control dust should be considered where potential explosive concentrations and ignition sources are present. The design and operation of any exhaust system should consider the possibility of explosive concentrations of wood dust within the system. See “SPECIAL” section below. Use of tool mounted exhaust systems should also be considered, especially when working in enclosed areas.

MECHANICAL (GENERAL) – Provide general ventilation in processing and storage areas so that exposure limits are met.

SPECIAL – Ensure that exhaust ventilation and material transport systems involved in handling these products contain explosion relief vents or suppression systems designed and operated in accordance with applicable standards if the operating conditions justify their use.

OTHER ENGINEERING CONTROLS – Cutting and machining of these products should preferably be done outdoors or with adequate ventilation and containment.

Personal Protective Equipment:

RESPIRATORY PROTECTION – Use filtering face piece respirator (“dust mask”) tested and approved under appropriate government standards such as NIOSH (US), CSA (Canada), CEN (EU), or JIS (Japan) where ventilation is not possible and exposure limits may be exceeded or for additional worker comfort or symptom relief. Use respiratory protection in accordance with jurisdictional regulatory requirements similar to the OSHA respiratory protection standard 29CFR 1910.134 following a determination of risk from potential exposures.

EYE PROTECTION – Approved goggles or tight fitting safety glasses are recommended when excessive exposures to dust may occur (e.g. during clean up) and when eye irritation may occur.

PROTECTIVE GLOVES – Cloth, canvas, or leather gloves are recommended to minimize potential slivers or mechanical irritation from handling product.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT – Outer garments which cover the arms may be desirable in extremely dusty areas.

WORK/HYGIENE PRACTICES – Follow good hygienic and housekeeping practices. Clean up areas where wood and resin dust settles to avoid excessive accumulation of this combustible material. Minimize compressed air blowdown or other practices that generate high airborne-dust concentrations.

9. Physical/Chemical Properties

Appearance: Weyerhaeuser OSB products consist of a ligno cellulosic matrix of interlocking wood fibers having a slight characteristic odor. The wood component of these products may consist of aspen, southern pine, red pine, maple, black poplar or birch. OSB Sheathing has green with white paint on the edges. Edge flooring is painted green with white on the edges; Edge Gold flooring is painted gold on the edges and Hardwood Edge is painted brown on the edges. RBS Sheathing has paper backed perforated aluminum foil adhered to one face of the board. Rim Board comes in variable length strips. SturdiStep is cut-to-order OSB.
9. Physical/Chemical Properties (cont’d.)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor/Odor Threshold(s)</td>
<td>NAV</td>
</tr>
<tr>
<td>pH</td>
<td>NAP</td>
</tr>
<tr>
<td>Melting/Freezing Point</td>
<td>NAP</td>
</tr>
<tr>
<td>Boiling Point (@ 760 mm Hg) and Range</td>
<td>NAP</td>
</tr>
<tr>
<td>Flash Point</td>
<td>NAP</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>0</td>
</tr>
<tr>
<td>Flammability</td>
<td>NAP</td>
</tr>
<tr>
<td>Lower/Upper Explosive Limits</td>
<td>40,000 mg of dust per cubic meter of air is often used as the LEL for wood dusts.</td>
</tr>
<tr>
<td>Vapor Pressure (mm Hg)</td>
<td>NAP</td>
</tr>
<tr>
<td>Vapor Density (air = 1; 1 atm)</td>
<td>NAP</td>
</tr>
<tr>
<td>Relative Density</td>
<td>NAP</td>
</tr>
<tr>
<td>Solubility</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>Partition Coefficient (n-octanal/water)</td>
<td>NAP</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>Variable [typically 400°-500°F (204°-260°C)]</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>NAV</td>
</tr>
<tr>
<td>Viscosity</td>
<td>NAP</td>
</tr>
<tr>
<td>Other Properties</td>
<td>NAP</td>
</tr>
</tbody>
</table>

10. Stability and Reactivity

Reactivity: NAP

Hazardous Polymerization: □ May occur   ☒ Will not occur

Stability: □ Unstable   ☒ Stable

Conditions to Avoid: Avoid open flame. Product may ignite at temperatures in excess of 400°F (204°C).

Incompatibility (Materials to Avoid): Avoid contact with oxidizing agents and drying oils.

Hazardous Decomposition or By-Products: Thermal decomposition (i.e. smoldering, burning) can release carbon monoxide, oxides of nitrogen, carbon dioxide, aliphatic aldehydes including formaldehyde, resin acids, terpenes, polycyclic aromatic hydrocarbons and aluminum oxides (RBS Roof Sheathing only). Natural decomposition of organic materials such as wood may produce toxic gases and an oxygen deficient atmosphere in enclosed or poorly ventilated areas. Spontaneous and rapid hazardous decomposition will not occur.

Sensitivity to Static Discharge: Airborne wood dust may be ignited by a static discharge depending on airborne concentrations, particle size and moisture content.

11. Toxicological Information

Likely Route(s) of Exposure:

□ Ingestion:
☒ Skin: Dust
☒ Inhalation: Dust
☒ Eye: Dust
11. Toxicological Information (cont’d.)

Signs and Symptoms of Exposure:

Wood Dust - NTP: According to its Report on Carcinogens, Thirteenth Edition, NTP states, “Wood dust is known to be a human carcinogen based on sufficient evidence of carcinogenicity from studies in humans”. An association between wood dust exposure and cancer of the nasal cavity has been observed in many case reports, cohort studies, and case-control studies that specifically addressed nasal cancer. Associations with cancer of the nasal cavities and paranasal sinuses were observed both in studies of people whose occupations are associated with wood dust exposure and in studies that directly estimated wood dust exposure. This classification is based primarily on increased risk in the occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with exposure to wood dust. The evaluation did not find sufficient evidence to associate cancers of the oropharynx, hypopharynx, lung, lymphatic and hematopoietic systems, stomach, colon or rectum with exposure to wood dust. There is inadequate evidence for the carcinogenicity of wood dust from studies in experimental animals according to NTP.

Wood Dust: 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 to 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.

Formaldehyde - NTP: According to its Report on Carcinogens, Thirteenth Edition, NTP states, Formaldehyde (gas) is known to be a human carcinogen based on sufficient evidence of carcinogenicity from studies in humans and supporting data on mechanisms of carcinogenesis.

Formaldehyde: IARC – Group 1: Carcinogenic to humans, sufficient evidence of carcinogenicity. A working group of IARC has determined that there is sufficient evidence that formaldehyde causes nasopharyngeal cancer in humans, a rare cancer in developed countries and “strong but not sufficient evidence” for leukemia. However, numerous epidemiological studies have failed to demonstrate a relationship between formaldehyde exposure and nasal cancer or pulmonary diseases such as emphysema or lung cancer.

Carcinogenicity Listing:

- NTP: Wood dust, Known Human Carcinogen. Formaldehyde, Known to be a Human Carcinogen.
- IARC Monographs: Wood dust, Group 1 – carcinogenic to humans. Formaldehyde, Group 1-carcinogenic to humans.
- OSHA Regulated: Formaldehyde Gas

Toxicity Data: No specific information available for product in purchased form. Individual component information is listed below.

Components:

Wood dust (softwood or hardwood)
Dusts generated from sawing, sanding or machining the product may cause respiratory irritation, nasal dryness and irritation, coughing and sinusitis. NTP and IARC (Group 1) classify wood dust as a human carcinogen. See Section 2 above.

Formaldehyde
Human inhalation TC_{10} of 17 mg/m³ for 30 minutes produced eye and pulmonary results; human inhalation TC_{50} of 300 ug/m³ produced nose and central nervous system results; LC_{50} (rat, inhalation) = 1,000 mg/m³, 30 minutes; LC_{50} (mice, inhalation) = 400 mg/m³, 2 hours. IARC and NTP classify formaldehyde as a human carcinogen (IARC Group 1). See Section 2 above.

Target Organs: Eyes, skin, and respiratory system.

Note: Weyerhaeuser evaluated the studies referenced in the ACGIH® TLV® Documentation for Wood Dust and others which included potential allergenic references for wood species which may cause skin or respiratory sensitization. There are a limited number of studies of highly variable consistency which reference sensitization from some species of wood. When the total weight of evidence is considered these products are determined to be an eye, skin and repository irritant and not a respiratory or skin sensitizer according to health hazard classification criteria.
12. Ecological Information

**Ecotoxicity:** NAV for finished product.

*Formaldehyde component:*
- 96 hr LC$_{50}$ Fathead Minnow 24 mg/L
- 96 hr LC$_{50}$ Bluegill 0.10 mg/L
- 5 min EC$_{50}$ Photobacterium phosphoreum 9 mg/L
- 96 hr EC$_{50}$ Water flea 20 mg/L

**Biopersistence and Degradability:** The wood and resin portions of these products would be expected to be biodegradable.

*Formaldehyde*
Trace amounts of free formaldehyde may be released to the atmosphere and would be expected to be removed in the atmosphere by direct photolysis and oxidation by photochemically produced hydroxyl radicals (half-life of a few hours). In the aqueous phase formaldehyde biodegradation is expected to take place in a few days.

*Polymeric MDI*
The effects from a simulated accidental pollution event in a pond with polymeric MDI on different trophic levels of the aquatic ecosystem were investigated (Heimbach F. et.al., 1996). Neither monomeric MDI nor its potential reaction product MDA (4, 4’-diphenylmethanediame) was detected in water or accumulated by fish. The MDI polymerized to inert polyurea on the sediment of the test ponds. This polymerization formed carbon dioxide, released as bubbles which floated to the water surface. There was no direct effect on the pelagic community (phytoplankton, zooplankton, fish, and macrophytes) of the test ponds. The atmospheric concentration of MDI arising from a release is naturally low on account of MDI’s very low volatility. It is expected that airborne MDI will have a rather short half-life as a consequence of ready degradation to inorganic compounds by hydroxyl radicals present in the troposphere.

**Bioaccumulation:** NAV
**Soil Mobility:** NAV
**Other adverse effects:** NAP

13. Disposal Considerations

**Waste Disposal Method:** Dry land disposal or incineration is acceptable in most areas. It is, however, the user’s responsibility to determine at the time of disposal whether your waste meets any jurisdictional criteria. Note that wood dust may pose a combustible dust hazard.

14. Transport Information

**Mode:** (air, land, water) Not regulated as a hazardous material by the U.S. Department of Transportation. Not listed as a hazardous material in Canadian Transportation of Dangerous Goods (TDG) regulations. Not regulated as a hazardous material by IMDG or IATA regulations concerning the transport of hazardous materials.

**UN Proper Shipping Name:** NAP
**UN/NA ID Number:** NAP
**Hazard Class:** NAP
**Packing Group:** NAP
**Environmental Hazards (Marine Pollutant):** NAP
**Special Precautions:** NAP
15. Regulatory Information

**TSCA:** Phenol-formaldehyde resin, polymeric diphenylmethane diisocyanate, titanium dioxide and paraffin wax are on the TSCA inventory.

**CERCLA:** Formaldehyde (100 lbs RQ) is on the CERCLA chemical substance inventory.

**DSL:** Formaldehyde, titanium dioxide, polymeric diphenylmethane diisocyanate and paraffin wax are on the DSL.

**OSHA:** Wood products are not hazardous under the criteria of the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. However, wood dust generated by sawing, sanding or machining these products may be hazardous. Workplace exposure to formaldehyde is specifically regulated under 29 CFR 1910.1048.

**STATE RIGHT-TO-KNOW:**

**California Proposition 65** – These products contain formaldehyde, which depending on temperature and humidity may be emitted from the product. Weyerhaeuser has evaluated formaldehyde emission rates from its products and have found these rates to be below the significant risk level. The user should determine whether formaldehyde emissions resulting from its site specific use, handling, ventilation design, capacity and final construction design for these products could exceed the safe harbor level.

**Warning:** Drilling, sawing, sanding or machining wood products generates wood dust, a substance known to the State of California to cause cancer. In addition, the painted and/or coated products may contain titanium dioxide. Titanium dioxide (airborne, unbound particles of respirable size) is a substance known to the State of California to cause cancer.

**NOTE:** Titanium dioxide is a common pigment ingredient. Some OSB products contain titanium dioxide in the paint and/or coatings on the edges. However, titanium dioxide is not anticipated to be potentially released unless it is cut, ground or sanded. The titanium dioxide as supplied will remain bound in the material/paint/coating. Based on foreseeable exposure scenarios, Weyerhaeuser does not believe the potential titanium dioxide exposure will present a health risk. California’s listing was based on the IARC Group 2B classification of titanium dioxide (Volume 93, 2010b) which included studies that showed lung cancer in experimental animals. Relevant human exposures have not shown an association between titanium dioxide exposure and cancer.

**Pennsylvania** – These products contain formaldehyde which, depending on temperature and humidity, may be emitted from the product. When cut or otherwise machined, these products may emit wood dust and titanium dioxide. These products may also contain paraffin wax. Formaldehyde, titanium dioxide, wood dust, and paraffin wax appear on Pennsylvania’s Appendix A, Hazardous Substance Lists.

**New Jersey** – These products contain formaldehyde which, depending on temperature and humidity, may be emitted. When cut or otherwise machined, the products may emit wood dust and titanium dioxide. Formaldehyde, titanium dioxide and wood dust are on the New Jersey Environmental Hazardous Substance List.

**Minnesota** – Minnesota Statutes, 1984, Sections 144.495 and 325F.181 do not apply to these products; these statues apply to plywood, particleboard and MDF and other products manufactured with urea-formaldehyde resins.

**SARA 313 Information** To the best of our knowledge, these products contain formaldehyde at de minimis concentrations (<0.1%) and is not subjected to the SARA Title III Section 313 supplier notification requirements.

**SARA 311/312 Hazard Category:** These products have been reviewed according the EPA “Hazard Categories: promulgated under SARA Title III, Sections 311 and 312 and is considered, under applicable definitions, to meet the following categories:

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>An immediate (acute) health hazard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A delayed (chronic) health hazard</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>A corrosive hazard</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>A fire hazard</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>A reactivity hazard</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>A sudden release hazard</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>
15. Regulatory Information (cont'd.)

FDA: Not intended for use as a food additive or indirect food contact item.

WHMIS Classification: Wood and products made from wood are exempt from WHMIS per the
   Hazardous Products Act. However, wood dust is considered to be a controlled product: D2A (wood
dust and formaldehyde: IARC Group 1).

16. Other Information

Date Prepared: 11/04/2010
Date Revised: 08/17/2016
Prepared By: Weyerhaeuser Company Health and Safety

Weyerhaeuser SDS available on:

User’s Responsibility: The information contained in this 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 the product is suitable for its
   proposed application(s) and to follow necessary safety precautions. The user has the responsibility
   to make sure that this SDS is the most up-to-date issue.

Definition of Common Terms:
ACGIH® = American Conference of Governmental Industrial Hygienists
C   = Ceiling Limit
CAS# = Chemical Abstracts System Number
DOT  = U. S. Department of Transportation
DSL  = Domestic Substance List
EC#  = Identifying Number Assigned to Chemicals Contained in the European Inventory of
   Existing Chemical Substances (EINECS)
EC50 = Effective Concentration That Inhibits the Endpoint to 50% of Control Population
EPA  = U.S. Environmental Protection Agency
GHS  = Globally Harmonized System of Classification and Labelling of Chemicals
HMIS  = (Canada) Hazardous Materials Identification System
IARC = International Agency for Research on Cancer
IATA = International Air Transport Association
IMDG = International Maritime Dangerous Goods
LC50 = Concentration in Air Resulting in Death To 50% of Experimental Animals
LDLo = Lowest Concentration in Air Resulting in Death
LD50 = Administered Dose Resulting in Death to 50% of Experimental Animals
LDLo = Lowest Dose Resulting in Death
LEL  = Lower Explosive Limit
LFL  = Lower Flammable Limit
MSHA = Mine Safety and Health Administration
NAP  = Not Applicable
NAV  = Not Available
NIOSH = National Institute for Occupational Safety and Health
NFPA = National Fire Protection Association
NPRI = (Canada) National Pollution Release Inventory
NTP  = National Toxicology Program
OSHA = Occupational Safety and Health Administration
PEL  = Permissible Exposure Limit
PNOR = Particulate Not Otherwise Regulated
PNOS = Particulate Not Otherwise Specified
RCRA = Resource Conservation and Recovery Act
STEL = Short-Term Exposure Limit (15 minutes)
### 16. Other Information (cont'd.)

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<th>Abbreviation</th>
<th>Definition</th>
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<tr>
<td>STP</td>
<td>Standard Temperature and Pressure</td>
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<tr>
<td>TCLo</td>
<td>Lowest Concentration in Air Resulting in a Toxic Effect</td>
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<tr>
<td>TDG</td>
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<td>TDLo</td>
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<td>TLV</td>
<td>Threshold Limit Value</td>
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<td>Time-Weighted Average (8 hours)</td>
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<td>WHMIS</td>
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</table>
Danger

Wood dust may cause nasopharyngeal cancer and/or cancer of the nasal cavities and paranasal sinuses by inhalation. May cause respiratory, skin and eye irritation.

May form combustible dust concentrations in air if small particles are formed during processing or handling.

Precautions: Avoid breathing dust and wear appropriate protective equipment for respiratory, skin or eye exposures. Prevent dust release and accumulations to minimize hazards. Take off contaminated clothing and wash before reuse. Keep dust away from ignition sources such as heat, sparks, and flame.

First Aid: If on skin wash with plenty of mild soap and water. If in eyes, rinse cautiously for several minutes. Remove contact lenses if present and easy to do so. If experiencing respiratory symptoms, remove to fresh air. Contact a qualified medical professional for serious or persistent skin, eye or respiratory symptoms.

Weyerhaeuser

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Label for Weyerhaeuser OSB Products; all included. See SDS 8/2016 for additional information.