

## 6.2 Technology Safety Data Sheet

|  |
|--|
| <b>Technology Safety Data Sheet</b><br><b>DeWalt Reciprocating Saw (OENHP #: 2001-01, Version A)</b> |
|--|

| Section 1: Technology Identity   |                           |   |
|--|---------------------------|---|
| Technology Name(s):  | Emergency Contact:        |   |
| DeWalt Reciprocating Saw   |                           |   |
| Manufacturer's Name and Address:   | Information Contact:      |   |
| DeWalt Industrial Tool Company<br>701 East Joppa Road<br>Baltimore, Maryland 21286 | Telephone: 1-800-433-9258 |   |
| Date Prepared:   | TSDS Version Number:      | Prepared By:  |
| 8/20/01  | 2001-01, Version A        | John Kovach, MS; Jeana Harrison; Aaron Ondo, MS;<br>Bruce Lippy, CIH, CSP |

**Section 2: Technology Description**

The DeWalt reciprocating saw is an industrial tool for cutting wood, as well as steel, aluminum, copper, and other metals. A variable speed selector wheel, operated from the trigger, is provided to control the speed of the tool for added versatility. The further the trigger is depressed, the higher the speed of the saw. Three cutting depths can be achieved through the use of an adjustable shoe, which is operated by a push-button on the handgrip. Blade change is accomplished with the release of a blade clamp lever located on the handgrip. The design of the saw's motor housing permits close cutting to floors, corners, and other difficult areas. A broad choice in blades allows the cutting of wood and various types of metals.

**Section 3: Technology Pictures**



Figure 1. An operator beginning a cut in the vertical direction with the DeWalt Reciprocating Saw.



Figure 2. An operator using the DeWalt Reciprocating Saw to make a cut in the horizontal direction.

**Technology Safety Data Sheet**  
**DeWalt Reciprocating Saw (OENHP #: 2001-01, Version A)**

**Section 4: Safety Hazards**

Hazard Category:

- 4 – Could result in death or permanent total disability
- 3 – Could result in permanent partial disability or injuries or occupational illness that may result in hospitalization of at least three persons
- 2 – Could result in injury or occupational illness resulting in one or more lost work days
- 1 – Could result in injury or illness not resulting in a lost work day

|  |                    |
|--|--------------------|
| A. Buried Utilities, Drums, and Tanks  | Hazard Rating: N/A |
| <ul style="list-style-type: none"> <li>• Buried utilities, drums, and tanks are not associated with this technology.</li> </ul>  |                    |
| B. Chemical (Reactive, Corrosive, Pyrophoric, etc)   | Hazard Rating: N/A |
| <ul style="list-style-type: none"> <li>• Chemical use is not associated with this technology.</li> </ul>   |                    |
| C. Confined Space  | Hazard Rating: N/A |
| <ul style="list-style-type: none"> <li>• Confined space is not a hazard associated with this technology.</li> </ul>  |                    |
| D. Electrical  | Hazard Rating: 1   |
| <ul style="list-style-type: none"> <li>• Shock due to insufficient amperage in cord and/or ungrounded outlets may occur.</li> <li>• Performing maintenance or blade changes while machinery is energized may lead to shock. Following lockout/tagout procedures will reduce this risk.</li> <li>• Exposure to a damaged extension cord may lead to shock.</li> </ul> |                    |
| E. Explosives  | Hazard Rating: N/A |
| <ul style="list-style-type: none"> <li>• Explosives are not associated with this technology.</li> </ul>  |                    |
| F. Fire Protection   | Hazard Rating: N/A |
| <ul style="list-style-type: none"> <li>• The facility fire protection plan should cover this tool, as it does not present an additional fire hazard.</li> </ul>  |                    |
| G. Gas Cylinders   | Hazard Rating: N/A |
| <ul style="list-style-type: none"> <li>• Gas cylinders are not used with this technology.</li> </ul>   |                    |
| H. Ladders/Platforms   | Hazard Rating: N/A |
| <ul style="list-style-type: none"> <li>• Electrical shock is possible when used with metal ladders or platforms.</li> </ul>  |                    |
| I. Lockout/Tagout  | Hazard Rating: 1   |
| <ul style="list-style-type: none"> <li>• The facility's lockout/tagout procedures and manufacturer's recommended procedures should cover this tool.</li> </ul>   |                    |
| J. Mechanical Hazards  | Hazard Rating: 2   |
| <ul style="list-style-type: none"> <li>• Cuts or abrasions may occur from contact with saw blade during use and blade changes.</li> </ul>  |                    |
| K. Moving Vehicles   | Hazard Rating: N/A |
| <ul style="list-style-type: none"> <li>• This saw does not utilize any moving vehicles, although one will be used to move the fiberglass-reinforced crates to the decommissioning area. The workers should be aware of the normal hazards associated with moving vehicles.</li> </ul>  |                    |
| L. Overhead Hazards  | Hazard Rating: 1   |
| <ul style="list-style-type: none"> <li>• During dismantlement of the fiberglass-reinforced crates, pieces of crate could fall upon completion of a cut or when the top of the crate is removed. Workers should wear hard hats when working on crates.</li> </ul>   |                    |

**Technology Safety Data Sheet**  
**DeWalt Reciprocating Saw (OENHP #: 2001-01, Version A)**

|  |                    |
|--|--------------------|
| M. Pressure Hazards  | Hazard Rating: N/A |
| <ul style="list-style-type: none"> <li>There are no pressure hazards associated with this technology.</li> </ul>   |                    |
| N. Slips/Trips/Falls   | Hazard Rating: 1   |
| <ul style="list-style-type: none"> <li>Electrical cords should be properly managed during cutting operations.</li> <li>Work area should be kept clean and organized to eliminate possible tripping hazards.</li> </ul>   |                    |
| O. Suspended Loads   | Hazard Rating: N/A |
| <ul style="list-style-type: none"> <li>Suspended loads are a site-specific hazard and are not part of this technology.</li> </ul>  |                    |
| P. Trenching/Excavation  | Hazard Rating: N/A |
| <ul style="list-style-type: none"> <li>Trenching and excavation are not used for this technology.</li> </ul>   |                    |
| <b>Section 5: Health Hazards</b>   |                    |
| A. Inhalation  | Hazard Rating: 2   |
| <p>Inhalation hazards are highly dependent upon the type of material being cut.</p> <ul style="list-style-type: none"> <li>General inhalation hazards associated with woodworking: <ul style="list-style-type: none"> <li>Wood dust</li> <li>Plywood resins</li> </ul> </li> <li>Inhalation hazards associated with the disassembly of fiberglass-reinforced plywood crates: <ul style="list-style-type: none"> <li>Fiberglass dust (possible human carcinogen)</li> <li>Fiberglass resins</li> <li>Vapors and formaldehyde</li> </ul> </li> </ul> |                    |
| B. Skin Absorption   | Hazard Rating: 2   |
| <p>Skin absorption is largely based upon the material being cut.</p> <ul style="list-style-type: none"> <li>Fiberglass dust causes skin irritation (associated with the disassembly of fiberglass-reinforced plywood crates).</li> </ul>   |                    |
| C. Noise   | Hazard Rating: 2   |
| <p>A noise assessment should be conducted on-site during actual use of the technology to determine the type of hearing protection required.</p> <ul style="list-style-type: none"> <li>Excessive noise from tool and cutting operations may cause hearing damage.</li> <li>Excessive noise from ventilation and filtration system, as well as any noise from nearby operations, may cause hearing damage.</li> </ul>   |                    |
| D. Heat Stress/Cold Stress   | Hazard Rating: 2   |
| <p>Heat stress is generally site-specific, although there are heat stress issues associated with this tool.</p> <ul style="list-style-type: none"> <li>Heat stress can be generated by personal protective equipment such as: Tyvek suits, full-face respirators, and gloves.</li> <li>Heat from hand tool during extended tool duty time may cause heat stress.</li> <li>Extended worker duty time could cause heat stress, especially if the worker is working in hot conditions or wearing personal protective equipment.</li> </ul>            |                    |
| E. Ergonomics  | Hazard Rating: 2   |
| <ul style="list-style-type: none"> <li>Hand/arm vibration from the tool may cause nerve damage known as Raynaud's Syndrome.</li> <li>Static and awkward operating postures may cause pain in the hands and/or arms.</li> <li>Awkward lifting of tool may cause pain in the hands and/or arms.</li> </ul>   |                    |
| F. Ionizing Radiation  | Hazard Rating: N/A |
| <ul style="list-style-type: none"> <li>Ionizing radiation is site-specific.</li> </ul>   |                    |
| G. Non-ionizing Radiation  | Hazard Rating: N/A |
| <ul style="list-style-type: none"> <li>Non-ionizing radiation is site-specific.</li> </ul>   |                    |

**Technology Safety Data Sheet**  
**DeWalt Reciprocating Saw (OENHP #: 2001-01, Version A)**

|   |                    |
|---|--------------------|
| H. Biological Hazards   | Hazard Rating: N/A |
| <ul style="list-style-type: none"> <li>There are no biological hazards associated with this technology.</li> </ul>  |                    |
| I. Other  | Hazard Rating: N/A |
| <ul style="list-style-type: none"> <li>None</li> </ul>  |                    |
| <b>Section 6: Phase Analysis</b>  |                    |
| A. Construction/Start-up  |                    |
| <ul style="list-style-type: none"> <li>Identify hazards through a pre-job analysis to determine personal protective equipment required.</li> <li>Inspect saw for obvious damage that may cause excessive vibration and potential for electrical shock.</li> <li>Select proper blade for each job so that worker fatigue and kickback is minimized and to reduce potential for sprains.</li> <li>Check power cords for proper amperage, frays, and cuts to protect against electrical shock.</li> <li>Ensure blades are straight and the teeth are sharp to reduce amount of force needed and to minimize vibration.</li> <li>Ensure blades are properly mounted to start work to avoid kickback or sprain.</li> </ul> |                    |
| B. Operation  |                    |
| <ul style="list-style-type: none"> <li>Maintain proper work position, don't overextend arms.</li> <li>Wear proper safety protection for hands (leather-work gloves with rubber grips), eyes (safety glasses or goggles), and ears (ear plugs or ear muffs), and respiratory protection (depends upon the operation).</li> <li>Do not bind the blade between work pieces; do not force tool.</li> <li>Change blade only while the tool is not energized and use approved lockout/tagout procedures.</li> <li>Use proper amperage power cord and a grounded outlet.</li> </ul>  |                    |
| C. Maintenance (Emergency and Routine)  |                    |
| <ul style="list-style-type: none"> <li>Check for damage to the saw and frayed cord.</li> <li>Perform all maintenance with the power off (unplug saw) and use approved lockout/tagout procedures.</li> <li>Conduct maintenance with qualified personnel and use manufacturer's authorized parts.</li> </ul>  |                    |
| D. Shutdown (Emergency and Routine)   |                    |
| <ul style="list-style-type: none"> <li>Keep blade away from body while shutting down the tool.</li> <li>Grip plug and remove from socket (outlet).</li> <li>Maintain proper ergonomic position to avoid cuts and abrasions by the blade.</li> </ul>   |                    |
| E. Decontamination/Decommissioning  |                    |
| <ul style="list-style-type: none"> <li>Use approved decontamination procedures.</li> <li>Discard unit using approved procedures.</li> </ul>   |                    |
| <b>Section 7: Worker Protection Measures</b>  |                    |
| A. Exposure Monitoring  |                    |
| <ul style="list-style-type: none"> <li>Noise sampling should be conducted during the actual use of the tool to determine the actual noise levels and the proper personal protective equipment necessary.</li> <li>Air sampling should be conducted during the actual use of the tool to determine levels of site-specific contaminants in the air. Nuisance dust is associated with woodcutting and fibers are associated with the cutting of fiberglass-reinforced crates.</li> </ul>  |                    |

**Technology Safety Data Sheet  
DeWalt Reciprocating Saw (OENHP #: 2001-01, Version A)**

**B. Worker Training**

Worker training should include the following elements:

- Pre-job walk through
- Manufacturer's operating procedures
- Respirator training
- Personal protective equipment to be used
- Hearing conservation program, including the proper use of ear plugs
- Lockout/tagout procedures
- Recognition of heat stress symptoms
- Electrical training
- Recognition of ergonomic issues and symptoms

**C. Medical Surveillance**

- Audiograms must be administered if the noise levels are above 85 decibels. Workers whose personal noise sample yields results greater than 85 decibels must be placed in a hearing conservation program, which includes audiograms.

**D. Engineering Controls**

- No additional engineering controls are recommended.

**E. Administrative Controls**

- Worker training
- Controlled duty time of personnel and the equipment

**F. Personal Protective Equipment**

- Gloves
- Safety glasses or goggles
- Hearing protection

**Section 8: Emergency Preparedness**

- Emergency response procedure should identify how the hazards identified in this TSDS are being addressed. Each worker should be trained and understand how to respond.

**Section 9: Comments, Lessons Learned, and Special Considerations**

- May want to cover blade to reduce employee's exposure.
- The dismantling process for the fiberglass-reinforced plywood crates is lengthy, involving cutting, saw blade changes, and material handling during the process. The cutting process involves extended continuous duty time for the saw. As a result, a temperature rise for the tool was experienced and was transmitted to the handgrip. A consideration may be the use of a thermal overload in the saw that would add further protection to the equipment and the worker. This would further limit saw use and reduce the heat on the handgrip.
- In order to minimize contact with the partially exposed blade during the beginning and end of a job, consider operating procedures that include blade insertion as the last step in preparation for a job and blade removal as the first step at the end of a job. Since the blade is exposed at all times by design, removal of the blade during downtime would minimize this potential hazard.