Risk Assessment Guidance

Title Portable Battery Power Tools using 7-15v 12-18v 18-36v

This risk assessment guidance has been carried out for the general use of battery powered portable tools; specific additional risk assessments have been carried out for grinders. This risk assessment covers the use of portable power tools within workshops and stages. This document is a general risk assessment only and should be reviewed by supervisors.

When individuals provide their own portable power tools they must ensure they are in good condition and meet the standards set out within this risk assessment.

This risk assessment should be reviewed fully by users of battery powered portable power tools prior to use of such equipment for the first time and in the event that it is not sufficient to control the risk then the user should report this to their supervisors.

Job Sequence	Hazard Identification	Controls
Conduct pre-operational checks	Poor condition of portable power tools. Damage to the machine or guards.	A log of use must be kept for all tools when deemed necessary by the manufacturer's instructions. All portable power tools must be maintained and serviced by a competent person as per the manufacturer's suggested intervals. Portable power tools must be visually inspected before each use and damage reported to the workshop manager / supervisor. Personal power tools which are damaged should be removed from the site. Check the battery for any signs of bulging. Do not use it if the battery has visible damage.
Battery	Storage and use.	If overheating occurs within the battery, rest tools and allow the battery to cool before reusing. Avoid operating or storing the battery in too high or too low ambient temperatures. Always use the correct charger designed for the device supplied by the manufacturer and never leave the charger unattended whilst charging.
Flammable/explosive atmosphere	Fire/Explosion.	Avoid over charging the battery at high voltage or for long periods. Regularly allow the battery to be completely discharged. Keep batteries under charge away from flammable objects and surfaces.
Moving parts	Entanglement. Flying Objects.	Human contact with moving or rotating parts can cause cuts or abrasions and particles from the work process can enter the eye. Always keep loose clothing, jewellery, long hair or lanyards tied up or secured and away from any moving parts.

		Always ensure that any guards supplied with portable power tools are in working order and in place. Work pieces can be thrown violently if not clamped / secured correctly, because of ‘‘kickback’’ or if the tools start unexpectedly.
Flying debris, swarf etc.	Eye, hand or face injury.	**Always use protective eyewear** or face shield, protective gloves and dust masks as required by the tool / task. Always ensure that any guards supplied with portable power tools are in working order and in place.
Noise	Hearing damage.	**Wear hearing protection** if noise levels are above 80dB(A) or if uncomfortably loud (request assessment if in doubt). Where noisy portable power tools are being used for a prolonged period hearing protection should be used. People working adjacent to noisy works should be advised of these hazards. Supervisors should inform users of risks from noise.
Vibration	Hand/Arm Vibration Syndrome (HAVS). Carpal Tunnel Syndrome.	Select power tools with lowest vibration levels. Minimise the time individuals use the equipment. Restrict the use of vibration inducing tools to recommended times. Ensure tools are properly stored, maintained and used according to manufacturer’s instructions. Where using drills or cutting disks ensure they are sharp and in good condition. Supervisors should inform users of risks from vibration. Where suitable ‘anti vibration gloves’ should be provided by the department and worn.
Ergonomic	Muscular-skeletal injury. Torque.	Ensure there is adequate space to do the job and that the hand/arm being worked is suitably supported. Battery tools should have soft start kits. Battery operated tools can have high torque. If started at full speed take care, ensure you are holding the tool correctly and that you start the tools slowly.
Slips, trips and falls		Ensure the work environment is as free as possible from tools, materials, debris and spills. All work should be from a suitable and stable work platform. If using battery operated power tools at height ensure the area below is safe, that the tools can be operated safely and if tools jam or bind, you are safe and there is no risk of the tool or material dropping.
Dust Battery damage failure	Respiratory illness.	When the work process creates dust always wear a suitable dust mask (check for type and fit).

	Reduced visibility Skin irritation Battery fluid Corrosive/colourless gas	Where practicable, or where a lot of work is planned, use a vacuum with a suitable filter connected to the tool. Increase ventilation to the work area (e.g. open windows, temporary extract etc). Wear close-fitting safety goggles. Stop working if visibility is noticeably reduced. Wear suitable protective clothing (especially gloves). People working adjacent to dusty works should be advised of these hazards. Supervisors should inform users of risks from the dust produced. Clean work area regularly (e.g. sweep, vacuum, wash down). Ensure good personal hygiene. Warning! Batteries contain corrosive and hazardous chemicals. Avoid contact with the skin if those chemicals are exposed or released. Dispose of correctly. Do not use it if the battery has signs of damage. Check for signs of leaching or swelling of the case.
Tool jamming or binding	Wrist/hand injury.	Check tool is appropriate for the job and used in accordance with the manufacturer's instructions. Always start the tool slowly using soft start. When using power tools with loose materials ensure they are suitably secured, and that blades, drills and disks are the correct type for the material and sharp. Ensure tools are kept clean and maintained according to manufacturer’s instructions.
Inappropriate use	All of the above.	Check tool is appropriate for the job and used in accordance with the manufacturer's instructions. Users shall be trained in the correct use of battery powered portable tools. Inexperienced power-tool users should be supervised or observed when first using an unfamiliar item of equipment or in an unfamiliar environment. Power tools should be regularly checked, cleaned and maintained and securely stored when not in use.
Work Environment and storage	General environment, ventilation and lighting levels. Space to operate and handle materials safely. Housekeeping.	Battery powered small power tools should not be used if there is a risk the operator could be distracted. There must be sufficient light to see the piece being worked clearly. Ensure power cables are properly isolated from the moving blade. Avoid storing or using batteries in or near areas of high moisture.
First Aid		Make sure you are aware of the first aid provisions in place. All accidents & near misses must be reported to your Supervisor

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All persons working with this equipment or within close vicinity must sign and show that they have read and understood the risk assessment guidance and that they will follow the above control measures set out above during their work processes.

Additional Guidance	**COSHH Assessment**	**Method Statement**	**Other (Specify)**
Compressed air supply		**N/A**	**Only trained persons are allowed to operate this equipment.**
Name			
Signed			Date