

TUV Rheinland of North America

EFFECTS OF ELECTRICAL CURRENT IN THE HUMAN BODY		
Current	Reaction	
Below 1 Milliampere	Generally not perceptible	
1 Milliampere	Faint Tingle	
5 Milliampere	Slight shock felt. Not painful but disturbing. Average individual can	
	let go. Strong involuntary reactions can lead to other injuries.	
6 to 25 Milliampere (women)	Painful shocks. Loss of muscle control.	
9 to 30 Milliampere (men)	The freezing current or "let go" range. If extensor muscles are excited by shock, the person may be thrown away from the power source. Individuals cannot let go. Strong involuntary reactions can lead to other injuries.	
50 to 150 Milliamperes	Extreme pain, respiratory arrest, severe muscle reactions. Death is possible.	
1.0 to 4.3 Amperes	Rhythmic pumping action of the heart ceases. Muscular contraction and nerve damage occur; death is likely.	
10 Amperes	Cardiac arrest, severe burns, death is probable.	

Use your electrical smarts and follow these safety Do's and Don'ts:

Do's	Don'ts	
$\checkmark$ Only use plugs that fit the outlet.	✓ Don't overload outlets or $\checkmark$	
$\checkmark$ Make sure that electrical connections are tight.	motors.	
$\checkmark$ Check that the wire insulation is in good condition.	✓ Don't let grease, dust, or dirt	
✓ Keep machines and tools properly lubricated.	build up on machinery.	
✓ Use extension cords only when necessary and only if they are rated high enough for the application.	<ul> <li>✓ Don't place cords near heat or water.</li> </ul>	
$\checkmark$ Use waterproof cords outside.	$\checkmark$ Don't run cords along the floor	
✓ Only use approved extension lamps.	where they can be damaged.	
✓ Leave at least 3 feet of workspace around <b>electrical</b> equipment for instant access.	<ul> <li>Don't touch anything electric with wet hands.</li> </ul>	
<ul> <li>✓ Keep your work area clean. Be especially careful with oily rags, paper, sawdust, or anything that could burn.</li> </ul>	<ul> <li>✓ Don't put anything but an electric plug into an electric</li> </ul>	
✓ Follow manufacturer's instructions for all <b>electrical</b>	outlet.	
equipment.	✓ Don't use temporary wiring in	
✓ Leave <b>electrical</b> repairs to skilled maintenance personnel and	place of permanent wiring.	
licensed electricians.		
If the equipment that in installed within your jurisdiction is not NRTL-Listed, AHJ inspectors		
are well advised to be more vigilant about the hazards of electric shock and should require a		
third-party inspection by an accredited test Lab.		

For more information, Please contact

TUV Rheinland of North America, Inc. 12 Commerce Road Newtown, CT 06470 TEL: 203-426-0888 / FAX: 203-426-4009 Email: info@tuv.com or call 1-TUV-RHEINLAND