

# Grounding: Concepts and Instructions

**Grounding** is a special form of bonding in which conductive equipment is connected to an earthing electrode or to the building grounding system in order to prevent sparking between conductive equipment and grounded structures.

Grounding cables must be durable and of low resistance. Recommended materials for grounding are un-insulated copper or stainless steel, aviation-type flexible cable and single-point clamps. These clamps will make contact with metal surfaces through most paint, rust and surface contaminants. The single-point clamps are superior to the battery-type and "alligator" type clamps for making direct contact.

This bulletin contains drawings of typical arrangements of bonding and grounding devices which should be used wherever solvents are handled.

Caution must be exercised in the installation of static grounding systems not to use as a ground, any current carrying part of the electrical system. Fires caused by electrical arcing from current feedback through the grounding system have occurred in plants where static-control grounds were tied into the electrical systems neutrals. The static grounding point(s) should be prominently identified and may be anything metal that is attached to the building, for example, the fume hood itself or the plumbing pipes.

