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General Safety Precautions & Product Hazards

This site contains information and specifications concerning cutting tools sold by Stellram®. Although some of the cutting tools made from carbides and ceramics are very tough and resist breakage, most are brittle and special safety precautions are required when using them. Small fragments and chips may be thrown from a cutting tool when a fracture occurs. These fragments or chips are thrown at high speeds and are very hot. Contact with the skin or eyes could cause severe injury. Also, the grinding of these cutting tools produces fine carbide and cobalt or nickel dust which may be harmful to the lungs. Listed below are some suggestions on how to minimize the potential for injury while using cutting tools.

Stellram has no control over use of these cutting tools. The user must determine the suitability of these tools in each application. Refer to applicable MSDS (Material Safety Data Sheets).

WARNING: Use of cutting fluids and work materials create hazards. Be careful.

1. Keep the cutting fluid clean so no particles can be carried back across the workpiece and possibly scratch it.
2. Cutting fluids may catch on fire when exposed to high temperatures generated during cutting.
3. Work materials such as aluminum, magnesium, uranium and titanium are flammable and could catch on fire.
4. Cutting fluids should be treated or replaced to reduce bacterial levels which may cause illness.

To protect the operator and observer from possible flying objects which could result in severe injury, the following protective devices should be worn or used while using cutting tools:

1. Wear hard hats.
2. Wear safety glasses with side shields.
3. Wear closed shoes with steel toes.
4. Keep protective enclosure on machine in place during operation.

WARNING: Very hot chip fragments may be thrown from cutting tools at high speeds. Chips can cause severe burns, cuts or punctures to the skin or damage to the eyes.

**Grinding of this product will produce dust that may be potentially hazardous.
Use adequate ventilation - read the applicable Material Data Safety Sheets.
The following safety precautions must be followed
by operators and observers while using cutting tools.**

1. Make sure that the insert size and shape is adequate for the intended use.
2. Chip control is necessary to prevent a continuous chip catching in the workpiece.
3. Chips are very hot and have sharp edges and should not be moved by hand.
4. Turn off the machine whenever chips are removed or when changing cutting tools.
5. Do not use air hoses to blow chips away from the machine.
6. To prevent tool breakage use the correct size toolholder.
7. Make sure the overhang on the toolholder is as short as possible.
8. Too much overhang results in chatter and tool breakage.
9. To prevent the workpiece from coming loose during use, be sure the workpiece is tight and secure in its holder.
10. Overloading of tungsten carbide cutting tools may cause fractures of these tools.
11. Drilling slugs may eject at high speeds.

**WARNING: Grinding or finishing carbides produces fine carbide, cobalt or nickel dust.
This may cause injury to the lungs.
Operators and observers must take the following
safety precautions to minimize possible injuries:**

1. Use with adequate ventilation.
2. Maintain the dust or mist level below OSHA and ACGIH levels.
3. Avoid breathing dust or mist. If not possible, wear OSHA approved respirators, particularly when grinding tungsten carbide.
4. Minimize prolonged skin contact.
5. Wash hands thoroughly before handling.

For more information about the product hazards and safety precautions that must be taken to minimize the possibility of injury, please call your Stellram Sales Engineer.