Magnesium Ribbon

Background:

The element Magnesium is not found naturally on Earth, as it is highly reactive. Elemental magnesium is a fairly strong, silvery-white, light-weight metal. This metal burns with a characteristic brilliant white light, making it a useful ingredient in flares. Mg is also used in the manufacturing of car parts and in electronic devices. Because of low weight and good mechanical and electrical properties, magnesium is widely used for the manufacturing of mobile phones, laptops, and cameras.

Historically, magnesium was one of the main aerospace construction metals and was used for German military aircraft as early as World War I and extensively for German aircraft in World War II. The Germans coined the name '[Elektron](http://en.wikipedia.org/wiki/Elektron_%28alloy%29)' for magnesium alloy. The term is still used today. Because of perceived hazards with magnesium parts in the event of fire, the application of magnesium in the commercial aerospace industry was generally restricted to engine related components. However, the use of magnesium alloys in aerospace is increasing, mostly driven by the increasing importance of fuel economy and the need to reduce weight.

Hazards:

* Mg burns very brightly so special care should be taken to look at the flame using only peripheral vision. Directly looking at the flame can lead to blindness.

Procedure:

Strips of solid Magnesium

Lighter

1. Hold a piece of Mg at the bottom of the strip.
2. Light the strip on fire.
3. As soon as the strip is burning, turn the head to the side so only the peripheral vision is used to watch the strip burn.

Chemistry Involved:

The burning of Mg produces ultraviolet light.

Lesson Implementation:

This would be a good demo to use when talking about the properties of different metals. Videos of some of the properties of other metals would be shown, and the burning of Mg would be the only property shown using a demonstration.

References:

Published and Online

1. [www.wikipedia.com](http://www.wikipedia.com)
2. Summerlin, L. R., Borgford, C.L., Ealy, J.B. (1988). *Chemical Demonstrations: A Sourcebook for Teachers Volume 2, First Edition.* Washington, DC: American Chemical Society.

Video

1. <http://www.youtube.com/watch?v=qSr39UwpELo>
2. <http://www.youtube.com/watch?v=8aqr1BO14Lw>