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## **Know Your Knife Steel**

Steel type is an important decision to make when designing a knife. Appropriate steel selection is related to both the edge geometry and the end-use purpose of the knife. Knowing the design intent of your knife, and understanding the properties of its steel can help you to get the most out of your knife, both in performance and in your enjoyment while using. Knife steels that are used by KKustom are listed below, including a summary of their properties.

### **CPM S35VN**

A powdered metal stainless alloy 'super-steel' from Crucible Industries USA. S35VN was formulated to offer improvements over S30V. It provides a very high balance of both edge retention and toughness. It also has high corrosion resistance. S35VN is a premium choice in steel for an all-duty knife.

### **CPM 3V**

A powdered metal carbon alloy 'super-steel' from Crucible Industries USA. 3V was successfully designed to be the ultimate in a tough steel. It also has high edge retention properties but its toughness is what really stands out. Corrosion resistance of 3V is moderate, so it is only considered a semi-stainless steel. 3V is a premium choice in steel for an extreme-duty knife.

### **CPM 154**

A powdered metal stainless alloy 'super-steel' from Crucible Industries USA. CPM 154 is an improvement over 154CM. It provides a high balance of both edge retention and toughness. It also has high corrosion resistance. CPM 154 is a very good choice in knife steel, and has become the industry standard for high-end knives.

### **154CM**

A conventional stainless alloy steel from Crucible Industries USA. 154CM was originally designed for use as a stainless bearing steel. It was formulated to be an improvement over 440C. As compared with more modern steels, 154CM has moderate edge retention, moderate toughness, and high corrosion resistance. Before the development of modern *super-steels*, 154CM was once the industry standard for high-end knives. It is still a very good choice when a conventional stainless knife steel is desired.

### **Nitro-V**

A conventional stainless alloy steel from Buderus Edelstahl Germany/NJSB. Nitro-V is an improved AEB-L, having greater corrosion resistance. Like AEB-L, it is also a finely-grained steel, which leads to its very high toughness properties. Edge retention is only moderate. However, it is easier to sharpen relative to other stainless steels. It has high corrosion resistance. Nitro-V is a versatile knife steel. It excels in hard-duty knives because of its toughness properties, but it also works great in fine slicing and culinary knives because of its fine grain structure's stability. Nitro-V is a solid choice in knife steel, especially for those who want a stainless blade that can be more easily maintained in the field or in the kitchen.

### **80CrV2**

A conventional carbon alloy steel from Buderus Edelstahl Germany. 80CrV2 is an improvement over 1084. For a carbon steel, it has a good balance of edge retention and high toughness. Corrosion resistance is very low, as with all steels of this type. Although requiring more protective maintenance unless coated, high-carbon steel blades are very easy to sharpen. Some still prefer

conventional carbon steel for this reason. 80CrV2 is a good choice in many types of knives, if a traditional steel is desired.

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