

# INSIGHTS™

Reduce Carryback

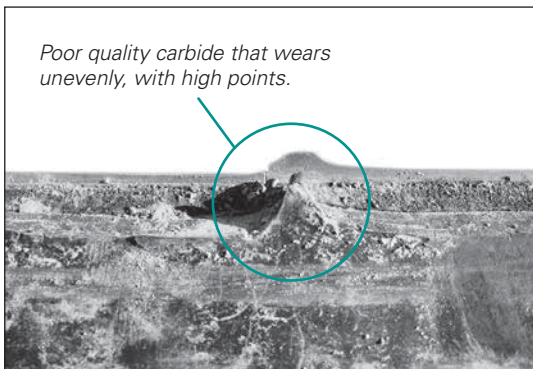
TECHNICAL SOLUTIONS FOR BELT CONVEYOR PRODUCTIVITY

## Why are tungsten carbide blades used on belt cleaners?

Tungsten carbide tipped blades provide superior cleaning efficiency. They also feature a lower lifetime cost—due to their durability—compared to many other blade types. Traditionally, tungsten carbide blades have been compatible only with vulcanized belts. Today, technical advancements with certain blade options make these blades more compatible with mechanically spliced belts as well.

### Are all tungsten carbide blades the same?

- Absolutely not! Carbide is a composite of carbide granules and binder metals that provides a very hard, long-wearing material for belt cleaner blades. There are several ways to vary the mixture.
- Some low cost carbides can have inferior wear resistance which results in short blade life. Others have poor impact resistance and can chip out—potentially causing damage to the belt.



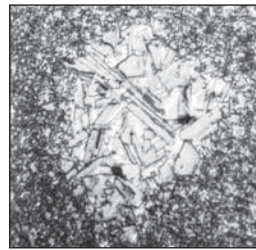
- Many blade tips are weakened with voids or binder pooling due to inferior production processes. Bargain-priced carbide isn't always a bargain.

### Why choose a tungsten carbide blade?

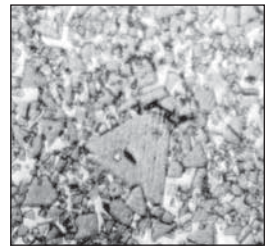
Look for blades that offer:

- **Better cleaning efficiency.** When optimally tensioned, the thin, hard blade will provide superior cleaning performance.
- **Good value.** When you consider lifetime cost vs. initial cost, a tungsten carbide blade's durability and lower required maintenance often makes up the cost difference over the life of the blade.
- **Versatility.** Some designs can be used with mechanical belt fasteners. (See back page for reference information.)

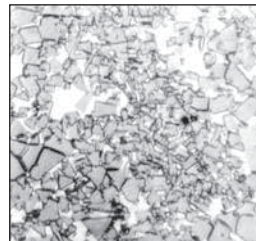
### Poor quality carbides may have the defects shown below:



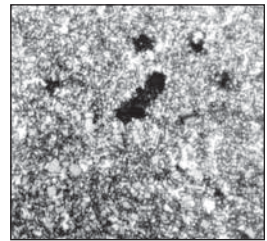
Grade contamination



Coarse structure



Binder pooling



Voids in structure

### Where to use tungsten carbide blades:

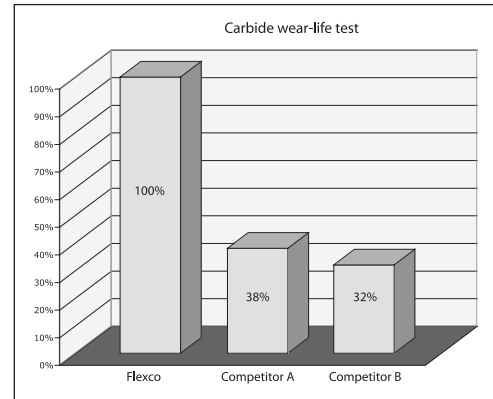
- **Highest cleaning efficiency** is another attribute that makes tungsten carbide the right choice in applications where unbeatable performance is required.
- **Highly abrasive** materials are commonly conveyed on belts that use these wear-resistant blades.
- **Reduced maintenance** is the reason why many users choose carbide-tipped blades; they're well worth the investment in applications where less durable blade materials result in unacceptable wear rates, cause frequent retensioning tasks, and increase maintenance costs.

## Tungsten Carbide Blades

### High grade carbide blades are worth the investment

Tungsten carbide blades from Flexco are made from a superior grade of carbide – free from contamination, binder pooling, voids, and coarse structure that often occur in inferior products. This superior composite makes our carbide blades long lasting and impact resistant.

Flexco has done extensive research and invested years of testing to design and manufacture the right tungsten carbide blades for demanding applications. A carefully selected standardized ASTM Abrasion Test (results shown at right) shows carbide from Flexco lasts approximately three times longer in belt cleaning conditions.

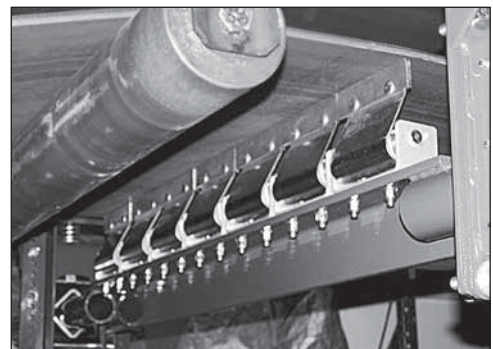


Carbide wear-life test.

### Cleaning your belts properly will extend their life and productivity

Tungsten carbide blades can be the most cost-effective means to provide superior cleaning power with vulcanized or mechanically-spliced belts. But the type of blade/tip you choose can make a great deal of difference. There are different tungsten carbide blades on the market and it's tough to determine which ones are quality products. You can't tell by the naked eye. Let Flexco help. Our tungsten carbide blades:

- Offer a superior level of cleaning efficiency that only a top-quality tungsten carbide can provide.
- Are compatible with Flexco and other mechanical splices.
- Provide long life even in longwall mining or high-tonnage aggregate and iron ore applications.
- When correctly specified and installed, will not cause excess belt wear and will outlast urethane by up to 10 times.



### Flexco offers two types of tungsten carbide blades:

**C-Tip** — a specially designed blade with impact-resistant tungsten carbide that offers the cleaning efficiency of a metal blade that is compatible with Flexco splices.

**V-Tip** — an exclusive tungsten carbide provides extra-long wear life that is typically measured in years instead of months. V-Tips are for use with vulcanized belts only.