



Hardox® wear plate in

# Quarry and open pit mining

**HARDOX®**  
WEAR PLATE

# What is your wear challenge?

Quarrying and open-pit mining operations deliver some of the world's toughest wear challenges. Throughout the production flow, Hardox® wear plate's superior wear resistance against sliding and impact wear translates to extended service life between repairs or replacement of parts and therefore longer maintenance intervals.

## Sustainability in action

Choosing Hardox® wear steel for your heavy equipment is a sustainable action you can take right now. Hardox® is helping to reduce the environmental impact of steel and of the equipment.

Its combination of high strength, hardness and toughness allows you to use less steel to build stronger yet lighter and more resource-efficient equipment that lasts longer.



### Shovel

Shovel buckets can be built with Hardox® 450 or Hardox® 500 Tuf. Hardox® HiTuf is recommended for cutting edges while Hardox® 500 is ideal for bucket cheek plates.



### Dump pocket

For lining of dump pockets at the discharge site, Hardox® 500 Tuf, Hardox® 550 or Hardox® 600 are suitable grades to reach the desired wear resistance.



### Bulldozer

Hardox® 450 and Hardox® 500 Tuf grades are ideal for premium blade structures. Hardox® 500 and Hardox® 550 are suitable for wear liners and Hardox® HiTuf for rippers.



### Hopper and feeder

Hoppers and feeders are exposed to heavy sliding wear and impact, which makes Hardox® 500 Tuf, Hardox® 550 or Hardox® 600 recommended grades.



### Dump body

The hardness and exceptional toughness of Hardox® 500 Tuf lets you design low-weight bodies with the wear resistance of much heavier structures.

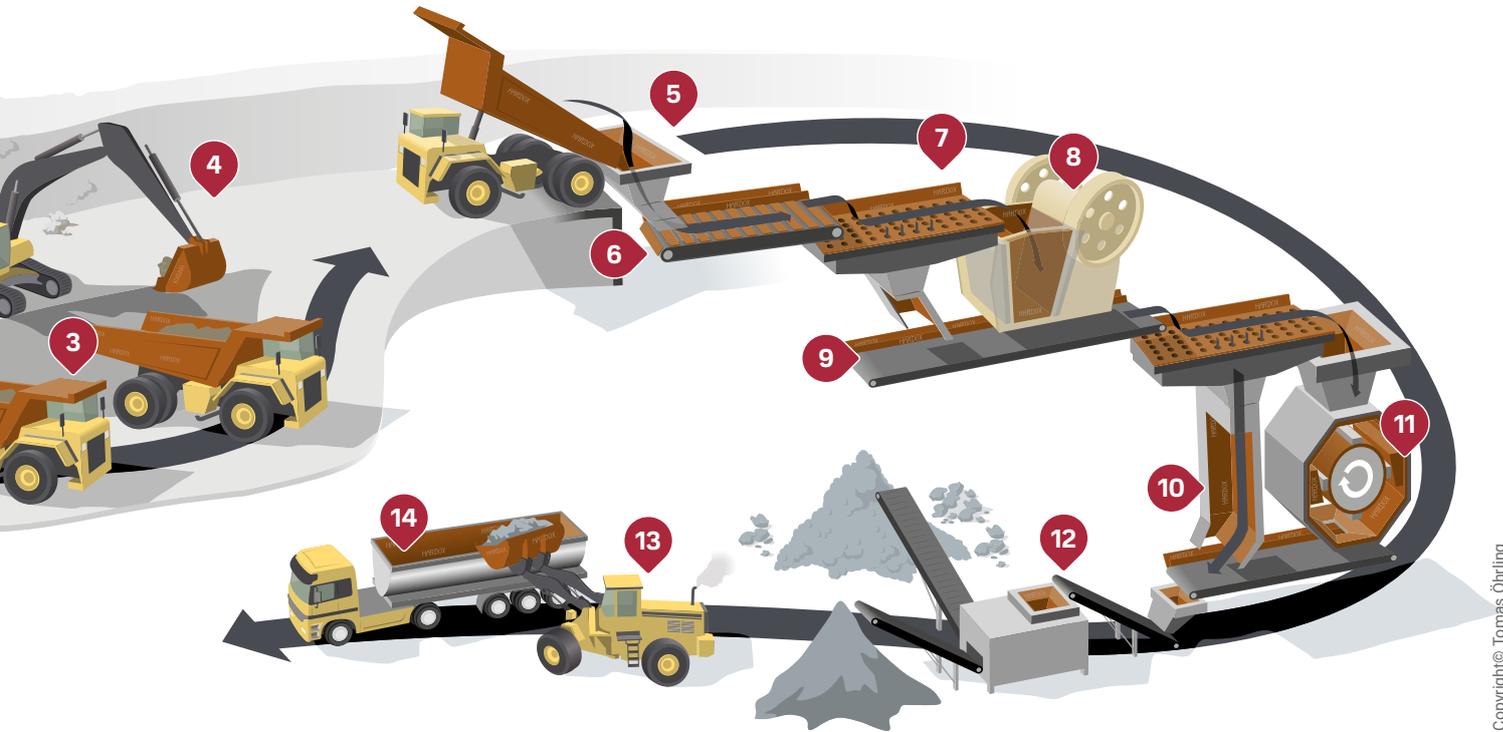


### Crusher

Crushing rocks made of granite and other highly abrasive materials involves a combination of sliding and impact wear, calling for hard and tough Hardox® 500 Tuf, Hardox® 550 or Hardox® 600.

## Hardox® applications in quarry and open-pit mining

- |               |                |                     |                      |
|---------------|----------------|---------------------|----------------------|
| 1. Shovel     | 5. Dump pocket | 9. Conveyor         | 13. Loader           |
| 2. Bulldozer  | 6. Feeder      | 10. Transfer chute  | 14. Tipper/dump body |
| 3. Dump truck | 7. Screener    | 11. Hammer crusher  |                      |
| 4. Excavator  | 8. Jaw crusher | 12. Final screening |                      |



Copyright© Tomas Öhring



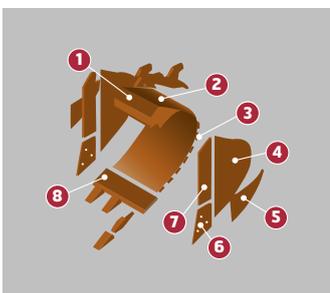
### Transfer chute

Every change of transfer direction needs a chute with liner plates subjected to intensive wear. The chutes can be made of Hardox® 500 Tuf, Hardox® 550 or Hardox® 600.



### Tipper body

Weight-optimized tipper bodies are without stiffeners on the sides. Utilizing Hardox® 500 Tuf will give maximum payload capacity, service life and fuel efficiency for every loaded tonne.



### Bucket

Buckets are subjected to sliding and impact wear as well as high loads. Hardox® 500 Tuf in combination with Hardox® 500, Hardox® 550 and Hardox® 600 make it possible to optimize loading performance and service life.

1. Beam: Hardox® 500 Tuf
2. Shell: Hardox® 500 Tuf
3. Wear bar: Hardox® 500 Tuf/ Hardox® 550/ Hardox® 600
4. Side sheet: Hardox® 500 Tuf
5. Cheek plate: Hardox® 500 Tuf/ Hardox® 550/ Hardox® 600
6. Side corner: Hardox® 500 Tuf/ Hardox® 550
7. Side cutter: Hardox® 500 Tuf
8. Cutting edge: Hardox® 500 Tuf/ Hardox® 500

## Wear: The inside story

Your choice of wear plate has consequences for your business. Hardox® wear plate maximizes the wear performance of your equipment and machines, reduces workshop lead times and increases the overall productivity of your operations.

Thanks to the consistent properties of Hardox® steel, you can always rely on its high performance. It also gives you a highly predictable service life, allowing you to optimize your maintenance planning.

With its combination of high hardness, high strength, and toughness, Hardox® steel can be used in a variety of applications.

What's the secret behind Hardox® wear plate? It starts early in production with state-of-the-art steelmaking and a unique hardening and quenching process, resulting in wear plates with outstanding hardness, toughness, and workshop friendliness.

### Support at your service

In addition to our steel products, SSAB provides you with technical support from SSAB Tech Support and SSAB Knowledge Service Center. Our technical support can help with everything from optimizing your product design to hands-on workshop issues. Our technical development managers and material specialists have decades of experience in solving wear challenges.

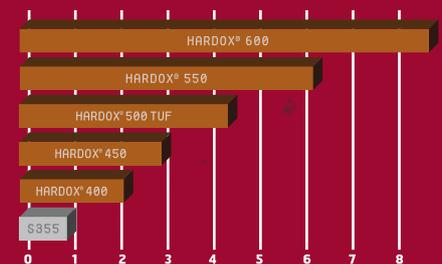
SSAB is a Nordic and US-based steel company. SSAB offers value added products and services developed in close cooperation with its customers to create a stronger, lighter and more sustainable world. SSAB has employees in over 50 countries. SSAB has production facilities in Sweden, Finland and the US. SSAB is listed on Nasdaq Stockholm and has a secondary listing on Nasdaq Helsinki. [www.ssab.com](http://www.ssab.com)

Hardox® is a trademark of the SSAB group of companies. All rights reserved. The information contained in this brochure is provided only as general information. SSAB AB accepts no responsibility for the suitability or appropriateness for any specific application. As such, the user is responsible for any and all necessary adaptations and/or modifications required for specific applications.

[hardox.com](http://hardox.com)

### Service life

Choosing the most suitable Hardox® grade for your application can have a great effect on the service life of your equipment. The table shows the relative service life of some Hardox® grades, with mild steel as a reference.\*



\* The calculations are based on sliding wear with granite.

### Hardox® WearCalc

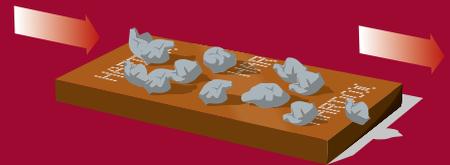
Hardox® WearCalc app is a powerful prediction tool that calculates wear and helps you optimize your choice of Hardox® wear plate. Visit [hardox.com](http://hardox.com) to download.

### Different types of wear

Wear comes in different forms, and each has a different impact on the service life of your application. The most common wear types are sliding wear and impact wear. Each type of rock is composed of a unique combination of minerals which contribute to the specific type of abrasive wear damage.

### Sliding wear

Hardox® steel has great resistance to sliding wear since it's difficult for abrasive materials to cut into the steel's hard surface.



### Impact wear

Hardox® is a wear steel with high toughness, which makes it stand up to impact from rocks and other heavy objects striking the steel.

