

## HARDOX® HIACE FIGHTS ACIDIC WEAR IN WASTE COLLECTION



SSAB has researched the field of corrosive wear for several years and developed a new grade of steel more suitable for these environments: Hardox® HiAce. This steel has the benefit of resisting corrosive wear in municipal waste management, in refuse trucks, waste-to-energy plants, recycling facilities and other industries with acidic environments.

The higher wear resistance allows for the use of thinner steel that reduces weight and still gives a longer service life. Lighter waste collection trucks are more cost-efficient for the fleet operator and give a lower environmental impact.

Several waste collection truck producers have used Hardox® HiAce and feedback has been very positive. Two garbage trucks with Hardox® HiAce in the floor plate have been running in Sweden for several years. Measurements and visual inspections of the trucks' floor indicate that Hardox® HiAce lives up to the tough requirements in this challenging environment.

Hardox® HiAce has the same excellent mechanical properties as Hardox® 450, such as hardness, yield strength and toughness. The difference is how Hardox® HiAce deals with corrosive wear.

When the pH level goes down, different wear mechanisms kick in. Harder steels won't necessarily provide a longer equipment service life. Hardox® HiAce performs similar to a 450 HBW steel in a regular wear environment. At lower pH levels, it can extend service life up to 3 times compared with an AR400 steel.

In tests, we compared Hardox® HiAce to stainless steel using different acids and abrasives. The results indicate that Hardox® HiAce can outperform ordinary stainless steel, such as SS304, by almost 20 %.

Hardox® HiAce can also perform as a structural steel. It has a guaranteed impact energy of 27 J at -20 °C (20 ft-lb at -4 °F). It is available in thicknesses of 3-100 mm (0.118-3.937") according to the dimension program below. It can be processed by the same kind of machinery used for other Hardox® grades. The bendability is the same as for Hardox® 450.

## Relative service life in a corrosive environment in municipal waste & recycling



Product	Nominal hardness HBW	Impact toughness CVT guaranteed J at -20°C (ft-lb at -4°F)	Service life in acid environment subjected to wear (relative to 400 HBW steel)	CEV/CET typical	Thickness range mm (inches)	
Hardox® HiAce wear plate	450	27 J (20 ft-lb)	up to 3 times	1.01/0.39 for 20 mm (0.787")	4-100 (0.157-3.937)	
Hardox® HiAce wear sheet	450	27 J (20 ft-lb)	up to 3 times	0.99/0.38	3-4 (0.118-0.157)	

## Hardox® HiAce wear plate

Width	1000-		1500-	1601-	1701-			2001-	2101-	2201-	2301-	2401-	2501-	2601-	2701	2751-		2901-			3201-	3301-
Thickness	1350	1499	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2750	2800	2900	3000	3100	3200	3300	3350
4.0-4.7																						
4.8-5.7																						
5.8-6.7																						
6.8-7.7																						
7.8-8.7									Maxir	num len	gth 1463	30 mm (	576")									
8.8-10.0																						
10.1-24.0																						
24.1-60.0																						
60.1-65.0																						
65.1-70.0																						
70.1-75.0																						
75.1-80.0																						
80.1-85.0																						
85.1-90.0																						
90.1-95.0																						
95.1-100.0																						

## Hardox® HiAce wear sheet

Width	880-	1001-	1201-	1251-	1301-	1471-	1511-	1531-
Thickness	1000	1200	1250	1300	1470	1510	1530	1600
3.00-3.24								
3.25-3.74								
3.75-3.99		Maxim	um leng					
4.00								

Outside the range of dimensions

Some restrictions, contact your local sales representative for information