

Material and hardness guide

How to pick a steel grade and a hardness for the contamination level you actually run.

Every position in this catalogue was measured against equipment running in production before it was added. Brand names and trademarks are referenced solely to identify equipment compatibility. Plastedge is not an OEM manufacturer, authorised dealer or official partner of the manufacturers mentioned unless expressly stated otherwise.

The short version

Harder is not automatically better. A knife that is too hard for a contaminated input chips instead of wearing, and a chipped edge takes more material off in the regrind than a rounded one. Pick the grade for what actually goes into the line, not for the datasheet.

Grades we work with

Grade	Typical hardness	Where it fits	Regrinds
1.2379	60-62 HRC	Clean to lightly contaminated regrind, film, bottle flake	8-12
1.2379	58-60 HRC	Mixed post-consumer input with occasional metal	8-12
1.2842	58-60 HRC	Shock loads, thick-wall purge and lump material	6-10
1.2312 nitrided	58-60 HRC surf.	Screen changer and breaker plate sealing faces	n/a
1.2344	52-54 HRC	Die plates and hot melt contact surfaces	n/a
HSS	62-64 HRC	Fine granulation of clean engineering plastics	10-14
Tungsten carbide	1300-1500 HV	Glass-filled and mineral-filled compounds	specialist

Reading a worn edge

- Rounded edge with an even land: normal abrasive wear - regrind on schedule.
- Chipping along the edge: the grade is too hard or the gap is too tight.
- Blue or straw heat marks: the gap is too wide and the material is being crushed.
- Wear on one end only: the seat is not flat or the knife is being shimmed.
- Cratering behind the edge: filler content is higher than the grade can take.

Cutting gap

The gap drifts as the knives wear, and most premature failures we are called to look at start there. Set it to the machine manual after every knife change, and record it - a gap log tells you more about part life than any hardness number.

Application	Typical gap	Check interval
Shredder, post-consumer	0.30 - 0.50 mm	every knife change
Granulator, film	0.10 - 0.20 mm	every knife change
Granulator, rigid	0.15 - 0.25 mm	every knife change
Wash line cutter	0.20 - 0.35 mm	weekly

Documents with every delivery

Every delivery, whatever the position, carries the same four documents at no extra charge: the material certificate with the steel grade, melt number and full chemical analysis; the hardness report with the measuring point marked on the drawing; the measurement report with the actual dimensions taken after grinding; and the customs set with the HS code and the packing list.

Ordering and lead times

How to order: send the machine brand and model, the part group or the original part number, the quantity, a photo of the worn part (both sides if possible) and a drawing or the dimensions you measured. An engineer answers with price and lead time within one working day.

Stock positions are dispatched within 48 hours. Made-to-order geometry from a sample or a drawing takes 10-15 working days depending on the steel grade and the heat treatment.