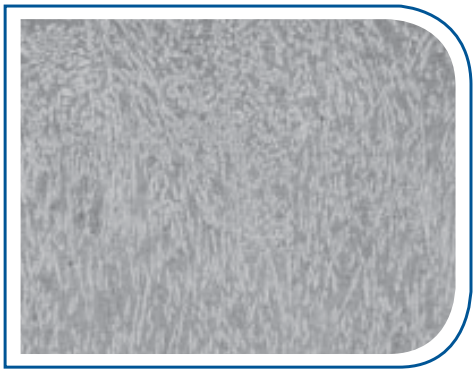

V45 microstructure at 100x magnification

Typical V45 finish

Vidaplate V45 chute in cement plant

Vidaplate® V45 & V45XP

Base Material

Vidaplate is a clad plate manufactured by welding an abrasion resistant material to a steel base. The standard base material is mild steel; however, this can be changed to suit your operating environment.

Overlay Material

The V45 and V45XP overlay materials are complex chromium carbide irons that are based on AS2576-2460. The microstructure of these materials consists of primary M_7C_3 and MC carbides in a complex carbide austenite matrix. The high temperature abrasion resistance performance is attributable to the presence of refractory elements molybdenum, niobium and tungsten.

V45XP contains a higher amount of refractory elements then V45, which results in a greater resistance to abrasion at high temperatures.

Typical Properties

Bulk Hardness (HV_{50}):

Grade	Ambient	400°C	800°C
V456	80	620	480
V45XP	680	620	480

Typical Carbide Hardness: $1500HV_{0.5}$

Volume Fraction Primary Carbide:

Grade	MC	M_3C_7
V45	3-6%	22%
V45XP	10-15%	20%

Vidaplate®

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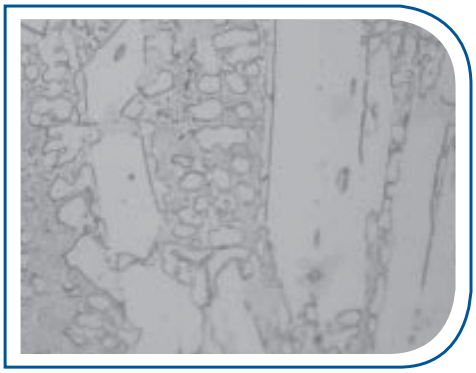
PRODUCTS

Vidaplate®
V45 & V45XP



V45 microstructure at 500x magnification

Vidaplate V45 panels for a paul wurth chute

Vidaplate V45 screw feeder segment

Welding

Vidaplate can generally be welded in the same manner as the base material, provided care is taken to avoid contact with the overlay material when laying down structural welds. For further information contact your nearest Bradken branch.

Cutting, Forming and Fabrication

Plasma cutting is the recommended method for cutting Vidaplate. It is preferable to cut Vidaplate from the backing plate side to ensure a clean edge and to prevent carbide contamination. Vidaplate can also be easily cold formed into almost any shape that mild steel can, by pinch rolls or hydraulic press brake.

The steel backing plate provides Vidaplate with structural integrity, thus entire structures can be fabricated from Vidaplate. Bradken has the capabilities to manufacture such structures or to supply cut and formed, ready-to-go wear liners.

Services & Applications

Vidaplate V45 and V45XP are suited for applications requiring severe abrasion resistance at elevated temperatures. Typical uses include:

- Sizing screens
- Ducts
- Sinter bins
- Paul wurth chutes
- Chute liners

Vidaplate®

For more information contact Bradken at **wpbsales@bradken.com.au**

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