WHEN WEAR MATTERS
4805 - 82nd Avenue,
Edmonton, Alberta,
Canada, T6B 0E5

Hardfacing Electrodes
Technical Data sheet

TRIMAY TWP 56E

KEY FEATURES

- High deposition rate and ease of use make this product very economical for a hardfacing.
- Heavily coated chromium carbide
- Multiple layers up to ¼ inch is possible
- Excellent abrasion resistance
- Resist moderate to heavy impact due to a tough austenitic matrix
- Smooth, shiny and porosity-free deposit
- Low dilution with the base material
- Can be welded on mild, low allow and manganese steel as weld as stainless steel.
- Sharp edges maintain at high temperature
- 160% metal recovery
- Good hardness at 230ºC (450 ºF)
- Very stable Arc allows good weldability in flat and horizontal positions
- Low heat input due to low welding parameters
- Usually machined by grinding
- Can be machined with special tooling and process (not recommended for standard machine shop; please contact Trimay or representative for machining process.)

TYPICAL APPLICATIONS

- Pulper (Steel or Stainless Steel)
- Screw conveyer (Steel or Stainless Steel)
- Shovel buckets
- Bucket teeth
- Bulldozer corner bits
- Chutes
- Concrete mixer blades
- Dragline chains
- Dredge pump impellers
- Fan blades
- Mill augers
- Hammer mill impellers
- Tamper tools
- Crusher jaws and roll shells

WELDING PROCEDURE

Trimay TWP 56E - Clean the weld zone free from oil, grease, rust, dirt and other contaminants. With the electrode perpendicular to work piece, maintain a short arc. Application of a cushion layer is recommended for hard facing of manganese steels. Preheat the parts (not for manganese steel) and maintain the temperature constant during cooling to avoid excessive stress relieving (cross-checking) and facilitate spreading of the welding material. Low welding parameters are required to limit dilution and loss of properties from carbides.

Chemical Composition	C Mn Si Cr Fe
Hardness (as welded)	**57-60 RC**
Welding Process	SMAW
Polarity	DC Reverse or AC

TRIMAY TWP 56E Operating Parameters		
Diameter	Amps	Volts
3.25 mm.1/8"	120-150	26-30
4.0 mm.5/32"	130-180	26-30
5.0mm.3/16"	180-220	26-30

WHEN WEAR MATTERS
4805 - 82nd Avenue,
Edmonton, Alberta,
Canada, T6B 0E5

Hardfacing Electrodes
Technical Data sheet

TRIMAY TWP 57E

KEY FEATURES

- Good deposition rate and ease of use make this product economical for a hardfacing.
- Heavily coated chromium carbide developing a high percentage of hexagonal chrome carbide
- Multiple layers up to 3/8 inch is possible
- Resist severe abrasion (low & high stress)
- Good hardness at 230ºC (450 ºF)
- Resist moderate to heavy impact due to a **tough austenitic matrix**
- Smooth and porosity-free deposit
- Easy application without slag interference
- Equally good welding performance using either AC or DC equipment
- Low dilution with the base material
- Can be welded on mild, low allow and manganese steel as weld as stainless steel.
- Sharp edges maintain at very high temperature
- Very stable Arc allows good weldability in flat and horizontal positions
- Low heat input due to low welding parameters
- Easy to use (very little slag, no splatter)
- Can be machined by grinding only

TYPICAL APPLICATIONS

Pulper (Steel or Stainless Steel)
Screw conveyer (Steel or Stainless Steel)
Shovel buckets and bucket teeth
Ground engaging tools
Chutes
Concrete mixer blades
Pusher shoes
Sintering plant equipment
Fan blades
Mill augers
Hammer mill impellers
Tamper tools
Crusher jaws and roll shells

WELDING PROCEDURE

Trimay TWP 57E – Clean the weld zone free of all contaminants by grinding and remove previous deposits of hard surfacing. With the electrode perpendicular to work piece, maintain a short to medium arc length. Weaving may be used to help the weld pool to spread. Preheat the parts and maintain the temperature constant during cooling to avoid excessive stress relieving (cross-checking) and facilitate spreading of the welding material. Low welding parameters are required to limit dilution and loss of properties from carbides.

Chemical Composition	C Mn Si Cr Fe
Hardness (as welded)	**61-63 RC**
Welding Process	SMAW
Polarity	DC Reverse or AC

TRIMAY TWP 57E Operating Parameters		
Diameter	Amps	Volts
3.25 mm.1/8"	110-140	26-30
4.0 mm.5/32"	120-160	26-30
5.0mm.3/16"	160-180	26-30

WHEN WEAR MATTERS
4805 - 82nd Avenue,
Edmonton, Alberta,
Canada, T6B 0E5

Hardfacing Electrodes
Technical Data sheet

TRIMAY TWP 61E

KEY FEATURES

- Very high deposition rate and ease of use make this excellent product economical for a hardfacing considering its low application cost.
- Coated electrode with Tungsten, Vanadium and Borium for outstanding properties
- Formation of super-hard metal-boride
- Multiple layers up to 3/8 inch are possible without an intermediate cushion layer.
- Resist severe abrasion at up to 450ºC (840 ºF)
- Good resistance to impact (cushion layer required)
- Smooth, , crack free (when cool slowly) and porosity-free deposit
- Ledeburitic structure
- Low dilution with the base material
- Can be welded on mild, low allow and manganese steel as weld as stainless steel.
- Around 140% metal recovery
- Very stable Arc allows good weldability in flat and horizontal positions
- Low heat input due to low welding parameters
- Easy to use (very little slag and splatter)
- Can be machined by grinding only

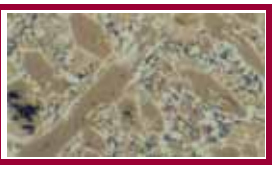
TYPICAL APPLICATIONS

- Applications in Cement and alphatt Plants, Foundries, Steel Mills and agricultural use
- Pulper & Screw Press **(Steel or Stainless Steel)**
- Bucket and teeth
- Slurry pipes
- Concrete mixer blades
- Kiln dampers
- Scavenger fans
- Asphalt plant mixer paddles
- Hammer mill impellers
- Crusher jaws and hammers
- Roll shells & Coal screens
- Cement plants
- Foundry and Steel mills

WELDING PROCEDURE

Trimay TWP 61E – Clean the weld zone free of ail contaminants by grinding and remove previous deposits of hard surfacing. With the electrode vertical to work piece, maintain a short to medium arc length. Weaving may be used to help the weld pool to spread. Preheat the parts and maintain the temperature constant during cooling to avoid stress relieving (cross-checking) and facilitate spreading of the welding material. Low welding parameters are required to limit dilution and loss of properties from carbides.

Chemical Composition	C Cr V W B Fe
Hardness (as welded)	**67 RC (50 Rc at 400°C/752°F)**
Welding Process	SMAW
Polarity	DC Reverse or AC



TRIMAY TWP 61E Operating Parameters		
Diameter	Amps	Volts
3.25 mm.1/8"	110-140	26-30
4.0 mm.5/32"	120-160	26-30
5.0mm.3/16"	160-180	26-30

Daniel Jutras, Eng., Sales Director
Phone/fax : (450) 472-6894 Cel. (514) 992-9084
djutras@videotron.ca www.solu-tex.com

WHEN WEAR MATTERS
4805 - 82nd Avenue,
Edmonton, Alberta,
Canada, T6B 0E5

Hardfacing Electrodes
Technical Data sheet

TRIMAY TWP 70E (New)

KEY FEATURES

- Good deposition rate.
- Dip coated stick electrode consisting of a nickel tube filled with tungsten carbide (up to 70%) and a combination of elements which create a special NICKEL BASED ALLOY
- Extremely resistant to corrosion and high stress abrasion
- Multiple layers are possible without an intermediate cushion layer.
- Very uniform distribution of stable tungsten carbides that will allow the matrix to maintain its ductility
- Smooth, crack free (when cool slowly) and porosity-free deposit
- Moderate impact resistance
- Low dilution with the base material
- Can be welded on mild, low allow and manganese steel as weld as stainless steel.
- Very stable Arc allows good weldability in flat and horizontal positions
- Low heat input due to low welding parameters
- Easy to use (very little slag, no splatter)
- Grinding is possible with diamond tool only

TYPICAL APPLICATIONS

- Applications in Cement Plants, Petroleum exploration, mining industries, chemical and food industries, etc.
- Screw Press (Steel or Stainless Steel)
- Screw conveyer (Steel or Stainless Steel)
- Mixer shovels
- Sand processing plant
- Concrete mixer blades
- Slurry pumps
- Asphalt plant mixer paddles
- Dredger buckets
- All ground engaging tool in agricultural use
- Oilfield tools (diamond bits, stabilizers)

WELDING PROCEDURE

Trimay TWP 70E – Clean the weld zone free of ail contaminants by grinding and remove previous deposits of hard surfacing. With the electrode perpendicular to work piece, maintain a short to medium arc length. Minimal weaving may be used to help the weld pool to spread. Preheat the parts and maintain the temperature constant during cooling to avoid excessive stress relieving (cross-checking) and facilitate spreading of the welding material. Low welding parameters are required to limit dilution and loss of properties from carbides.

Chemical Composition (wt-%)	Ni-Cr-B-Si (30%) **W (50 to 62%)**
Hardness (as welded)	**Matrix 53-55Rc Carbide >85Rc 45 – 350 µm**
Welding Process	SMAW
Polarity	DC Reverse or AC

TRIMAY TWP 70E Operating Parameters		
Diameter	Amps	Volts
5.0mm.3/16"	110-160	26-30
6.0 mm.1/4"	160-200	26-30

Picture to come

Daniel Jutras, Eng., Sales Director
Phone/fax : (450) 472-6894 Cel. (514) 992-9084
djutras@videotron.ca www.solu-tex.com