

GLOBAL PRESENCE



Top Supplier to Major OEM's in USA, Europe and SEA.



Dealership / Representation Enquiries Solicited Worldwide



**ELECTRONICA
TOUGH CARB**

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end to end tungsten carbide solutions...



**ELECTRONICA
TOUGH CARB**



From Powders to Products



- Products for :
- Petroleum – Oil & Gas
 - Metal Cutting
 - Mining & Drilling
 - Powder Compaction
 - Metal Forming – Heading
 - Wear Applications

ELECTRONICA TOUGH CARB LIMITED

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Electronica Tough Carb Ltd.

WHO ARE WE?

- Vertically Integrated OEM based in India.
- Every thing is produced In-House from Tungsten Powders to Tungsten Carbide Products.
- We develop, design, and deliver special customized products & solutions.
- Profound Multi-sector / Industry Expertise.

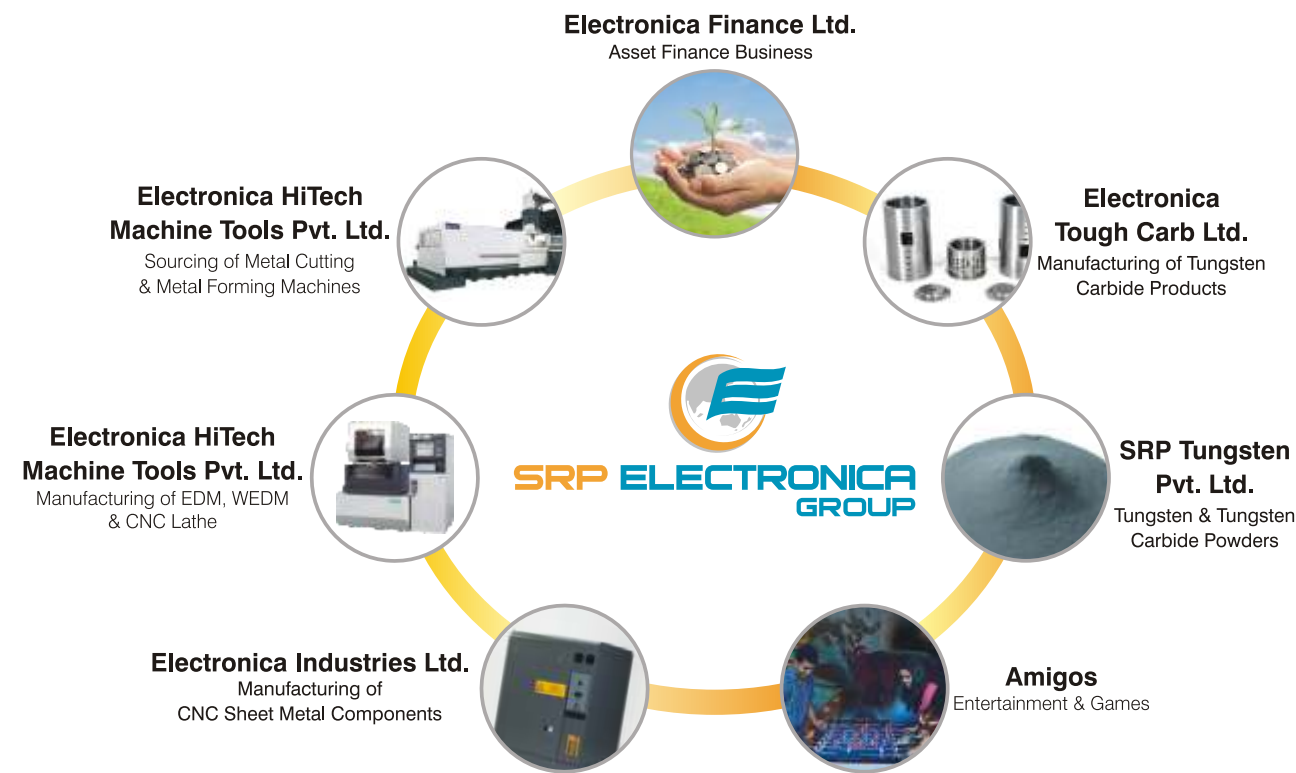
OUR EXPERTISE

- Produce the finest quality Powders and Products.
- We offer advanced technology and infrastructure.
- Our products are tailor made but cost effective, and give superior value.

WHAT WE SEEK FROM YOU?

- Opportunity to Serve YOU as your preferred Supplier.
- Help YOU to be more competitive – both at home and on a global scale.
- Association / JV or Collaboration (Commercial or Technical)
- Represent us in Your Geographic Area

Group Business Spectrum



APPLICATION SECTORS



OIL & GAS



DEFENCE



PHARMACEUTICALS



MINING & DRILLING



AGRICULTURE



PAPER & PRINTING



GLASS & PLASTIC



AUTOMOBILE



- 48 Sales & Service Offices
- 3000 Sq. Mtrs. Total Office Space
- 751 Total Number of Employees

- SRP Group - Total Business Turnover – USD 155 Million
- 5 Manufacturing Locations
- 55,000 Sq. Mtrs. Total Land Area

TUNGSTEN CARBIDE GRADE SPECIFICATIONS AND APPLICATIONS

	GRADE	SP. WT.	HARDNESS	MIN.TRS	Chemical Composition %				Application
		GMS/CC	HV5	N/mm2	WC	Co	Ni	Other	
WEAR GRADE	TCW-10	14.84 - 15.00	1450 - 1585	2900	94	6	Nil	Nil	Wear pads for various machines & machine parts. Wire drawing Nibs, Slip gauges, Shot Blasting nozzles, Mechanical seal rings, Core rods, Scraper blades, Cable & rope making machine guides, Spray nozzles, Work rest blades, Wiggler Pin in shaving blade industry, Choke beans, Trims, Flow Cages, Valve seats in petroleum industries.
	TCW-10 S	14.84 - 15.00	1480 - 1630	2900	93.8	6	Nil	0.2	High wear resistance application, Stone crushing blades, Road Brakeing, Flow Cages for high Wear abrasive resistance for petroleum industries.
	TCW20	14.49 - 14.65	1260 - 1400	2900	90.5	9.5	Nil	Nil	Bucket excavators in mining applications, Special wear products for oil & gas application.
	TCW-30	14.34 - 14.50	1210 - 1350	3000	89	11	Nil	Nil	Dies, Punches and Core Rods for Powder Compaction, Tube/Bar Drawing Dies
METAL FORMING	TCW-40	13.94 - 14.10	1060 - 1180	3000	85	15	Nil	Nil	Coining and sizing dies, Cutting & Cupping dies, Straightening Rolls for steel mills, Bowls for mineral application, Tube / Bar drawing dies for bigger size of tube.
	TCW 65	13.05 - 13.25	740 - 860	3100	75	25	Nil	Nil	Can extrusion dies, Heading dies, Nut forming dies, Swaging Dies, Sheet metal toolings, Punches, Impact extrusion toolings, Nail heading dies, Dies for taper roller bearings for bearing industries.
	TCW 65 M	13.05 - 13.25	780 - 900	3100	75	25	Nil	Nil	Special Heading application, Nut forming dies
NICKEL BINDER NON MAGNETIC	TCN-06	14.88 - 15.04	1300 - 1450	2400	94	Nil	6	Nil	Seal rings used in corrosive fluid pumps and food processing pumps, Construction application (Machine part) for chemical fertilizer, Wear application for Oil & Gas industries
	TCN-27	13.05 - 13.25	750 - 850	3100	72.5	Nil	27	0.5	Special requirement for Oil & Gas industries for wear application.
MICRO CHIPPING RESISTANCE	TCF-06	14.76 - 14.92	1700 - 1850	2400	93.5	6	Nil	0.5	Metal cutting applications, Wire Drawing, Shot blasting nozzles
	TCF-10	14.34 - 14.50	1580 - 1730	3000	89.5	10	Nil	0.5	Metal cutting tips, Flats, Rods, Blades for Plastic granules cutting.
	TCF-15	13.88 - 14.04	1300 - 1430	3300	84.66	15	Nil	0.34	High impact / wear for coining dies, Special application in Oil & Gas Industries.
METAL CUTTING	TCK-15	14.72 - 14.88	1500 - 1630	2400	92.2	6	Nil	1.8	Asbestos sheet cutting Knives.
	TCK-20	14.72 - 14.88	1475 - 1600	2400	92.2	6	Nil	1.8	Cast iron general purpose machining tips, Flats, Rods, Broach Cutter for bimetal bearing industries, Burr Blanks, Bottle cap shaving Cutters, Metal Saws

• TRS Value of Sinter HIP products

NOTE: - As a part of continuous improvement the above specifications may alter. We also make grades for Mining applications viz. TCR 11, 20, 30.

For specific applications new grades can be developed.



Reduction Furnace



Cold Isostatic Press



Dorst Press



Sinter-HIP Furnace

POWDERS

TUNGSTEN TRI-OXIDE (BTO / YTO)

High quality Tungsten Tri-Oxide is produced by **Green Technology (Solvent Extraction)** in state of art plant. The process is developed by R & D Unit. The technique is indigenously developed and equipment is also indigenously built.

It has acquired the latest and sophisticated Quality Control equipment. The powder produced is of international standards.

TUNGSTEN METAL POWDER (W)

The WO₃ is reduced in a controlled atmosphere in a continuous pusher type furnace and the tungsten metal is produced.

Average Particle size : from 0.50 μ to 20 μfss.

TUNGSTEN CARBIDE POWDER (WC)

The Tungsten Metal powder is converted to Tungsten Carbide (WC) by reaction with pure Carbon powder in furnace, by a process called carborization. Tungsten Carbide is, quantitatively, the most important Tungsten compound. Because of its hardness, it is the main constituent in cemented carbide (hard metal).

Average Particle size : from 1 μ to 17 μfss

GRADED POWDER (RTP POWDER)

The Tungsten carbide powder is to be mixed with binder elements like **Cobalt or Nickel** and other alloying elements. The composition is pre-decided. The grades, which are based on their end application have different combination of alloying elements & pressing lubricants. The mix powder is prepared by milling. This powder is called as "**Ready to press**".

FUSED TUNGSTEN CARBIDE (FTC)

The strength & hardness of carbide makes it useful as tough, long-life abrasive grit. It is used in matrix mixture for various applications and also for hard facing rods.

Average Particle size : from 0.1 mm to 1 mm

RECYCLING

- ✓ Our Core philosophy is to conduct business in a Ethical, Transparent and Environment friendly manner which helps us not only to sustain but also ensures long time growth.
- ✓ Electronica Tough Carb achieves this by continuously using recycling process in the manufacturing plant. The key lies in collecting and processing trash materials and turning them into new Products.
- ✓ This reduces amount of waste, conserves natural mineral resources, prevents pollution by reducing the need to collect new raw material. This also saves energy and helps sustain the environment for future generations.
- ✓ The Electronica Tough Carb recycling concept was implemented as an initiative to minimise waste and offset the effects of raw material consumption.



end to end tungsten carbide solutions...

PETROLEUM – OIL & GAS

For aggressive, corrosive, abrasive and impacting environments

DRILLING COMPONENTS

Cutters, Nozzles, Bits

VALVES - CHOKE & TRIM COMPONENTS

Flow Control Trims, Plugs, Seats, Disk Stacks, Guides, Valve body, Choke Beans, Bushings, Cages, Stabilizer Disks, Flow Control Needles, Wear Sleeves, Straight Wall chokes

HIGH PRESSURE PUMP COMPONENTS

Plungers, Nozzles, Seats and Stems, Flow Tubes, Weights



METAL CUTTING

- Cutters
- knives
- Roto Scarfs
- Blades,
- Rotary Cutters



MINING & DRILLING

- Drill Steel Inserts
- Ballistic, Conical, Chisel
- Flat & Semi-round, hemispheric Buttons
- Cutter Picks and Cross bits
- Coal picks
- Excavator inserts



POWDER COMPACTION

- Dies
- Punches
- Core Rods
- Mixer Discs
- Pusher Rods



METAL FORMING – HEADING

- Plugs, Dies
- Punches, Blanks
- Hot Forging dies
- Heading dies
- Extrusion dies
- Nut forming & Fastener dies



WEAR APPLICATIONS FLUID HANDLING COMPONENTS FOR PUMPS & SEALS

Seal rings and Bushings, Centrifuge – Nozzles, Valves, Mechanical Seals, Nozzles, Homogenizer, Decanter - Tiles, Compressors - Seal faces

GENERAL WEAR PARTS

Bearing tooling, Pins for security locks, extrusion dies, roof tile tooling, fastener dies, stamping tool blanks, knives for pellets, Seal rings, Gauges, probes, nozzles, swirl plates, wire guides, bushings, rollers, pads, strips, mandrels,

