



# Know-How Machines Consumables

# DIEFILL

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Wear and tear doctors to the industries

Product	General Characteristics	Applications	Hardness
DF-4050	DF-4050 has been developed specially for the forging industries. It is utilized for repair and finishing of dies and component surfaces. This is also suitable for flood welding.  DF-4050 represents an ideal combination of alloys (Chromium, Molybdenum, and Nickel) which display excellent resiliency, high strength and resistance to cracking. It has good machinable deposit.	This alloy is an excellent choice for finishing hammer and press components, such as rams, saw blocks, shanks, die holders, bolster plates, etc. It is also used as an underlay and to fill up deep cracks in impressions where the automatic welding utilized because of narrow areas where conventional machining will be used that will not be part of a working area, i.e. flash lands, ribs, etc. to reduce welding material cost. Rolling Mill Roll, crane wheels rims, Earthmoving undercarriage parts, axles, clutches, cams, shafts couplings rail crossing points gear wheels.	43-48 Rc
DF-4600	DF-4600 is suitable for high temperature application on hot work steel as protection against impact, pressure and friction. It is specially formulated for buildup on dies and tools with good cutting edge retention. The deposit has very good creep resistance.	Ideal for press jacks, drop forging dies, cylinders, punches etc.	42-46 Rc
DF-5016	DF-5016 is designed for the repair & reclamation or composite fabrication to eliminate low spots and undercuts.  DF-5016 is a Heat-treatable high carbon, molybdenum, tungsten, chromium, vanadium alloy which develops a 61-64 HRC hardness when double tempered at 550°C. The large quantity of free complex carbide dispersed in a matrix of dense martensite resists extreme soil or metallic abrasion.	For the repair of A.T.S.I. type M1/M2 and D2. For the repair reclamation or composite fabrication of Draw dies, Forming dies, Shear blades, Forming rolls, Large reamers, & Drills.	55-60 Rc
DF-5042	DF-5042 was developed for repair on tools of same analysis and for facings on hot working tools made of low-alloyed or unalloyed steels. Especially applicable for facing if machining of the weld deposit is required. Machining possible with cemented carbide alloy tools.	Hot cuts forging dies, Press casting dies, Mandrels, Lower and Upper dies, Heading dies.	40-45 Rc
DF-5050	DF-5050 is utilized for partial repair and for finishing dies and component surfaces, to eliminate low spots, and undercuts where flood welding has been performed. DF-5050 is normally used in building up of forging dies & tools including H11 & H12.	Build up of gears, Pinions, Rolls etc., Repair of worn out parts.	48-52 Rc
DF-5059	DF-5059 is developed for the reinforcement of cutting edges on tool bodies made of low alloyed or unalloyed or steels and for the lining of cold and hot cutting tools. Excellent results have been achieved with-resistant facings, for instance with hammers.	Hot working Punches and Dies Extrusion moulds and Dies, Shear blades milling and Cutting tools, Cutting edges of stamping Dies, Swaging hammers and Wood-cutting tools.	59-64 HRC
DF-5065	It is developed for heat resistant, though overlaying of the same or similar types of hot-work steel, low and non alloyed steel. It has very good resistance to thermal shock. Working temperature upto 550°C. Machining of the weld deposit is possible.	Hot working Punches and Dies extrusion moulds and dies, Shear blades milling and Cutting tools, Cutting edges of stamping dies, Swaging hammers wood cutting tools.	50-54 Rc
DF-5080	DF-5080 has been designed for the forging industries to buildup the cutting edges of trimming dies. The weld metal is crack free and retain its hardness at high temperature. The weld metal can be machined with carbide tools.	It is suitable for hot shear blades, slides press casting dies, heading dies, trimming dies, hot cutting dies, hot working punches etc.	42-46 Rc
DF-6030	DF-6030 is a specially developed alloy for repair welding of critical materials where normal joining alloy does not meet required weld specifications. It is the perfect solution to your problem of maintenance welding/repairing of critical parts. It has designed to give excellent benefits of post weld heat treatment in cold condition.	DF-6030 is suitable for wide variety of applications such as... Suitable for welding Ni-alloys Suitable for cryogenic applications High thermal shock resistance. Highest elongation of more than 40% Suitable for high temperature and creep resisting steels Wide temperature operating range-198°C to +150°C. Good corrosion resistance. Good tensile strength and Yield Strength	UTS: upto 670 N/mm YS: upto 410 N/mm

Product	General Characteristics	Applications	Hardness
DF-6031	DF-6031 is a heat treatable chromium, molybdenum, vanadium alloy which exhibits good wear resistance at elevated temperatures upto 565°C. The blend of alloying element produce a fine grained martensitic microstructure which displays good thermal fatigue resistance.	Die casting dies, shafts, fractured tools and dies. Highly suitable for forging dies build up. Extrusion dies and plastic molds constructed of A.I.S.I. type H-13 tool steels.	49-54 Rc
DF-6032	DF-6032 has ideal combination of alloys (Chromium, Molybdenum, and Nickel) which display excellent resiliency, high strength and resistance to cracking. It is very good machinable as deposited.	This alloy is an excellent choice for finishing hammer and press components, such as rams, sow blocks, shanks, die holders, bolster plates, etc. It is also used as an underlay and to fill up deep cracks in impressions.	28-34 Rc
DF-6036	DF-6036 was developed for repair of dies and tools in forging industry. The weld metal has very good slag detachability, smooth and shining bead appearance. It can be machined with carbide tools.	It is suitable for repairing of all types of die impressions and cavities. It is also suitable for joining as well as buildup of all drop-forging tools like punches, dies, inserts, etc.	37-43 Rc
DF-6050	DF-6050 is a high Molybdenum tool steel, modified with Tungsten for increased red hardness and resistance to heat checking. Weld deposits of this alloy are extremely dense and hard but still impart good impact resistance.	DF-6050 is recommended for the partial repair of press and hammer hot forging dies. It is suitable for repairing forging dies, flash lands and other areas that are worn out where the balance of the impression is in good shape. E.D.M. machining process is recommended. It is also suitable for the repair of dies that are used to forge non-ferrous alloys	50-55 Rc
DF-6080	DF-6080 is especially developed for hot & cold tooling applications. It is also suitable for cold forming applications such as automotive trim sections, forming dies and blanking dies.	Ideal for press dies, screw press dies, and impactor dies.	56-60 Rc
DF-7010	DF-7010 has been specially designed for hot forging dies. It can be used for buildup of cast steel gears, pinions and sprockets.	Joining of forging tools, build up of drop forging dies & tools, repair of worn out parts, build up of gear teeth	37-43 Rc
DF-7020	DF-7020 is a very good wear resistant Chromium, Tungsten, and Molybdenum hot working alloy. This alloy displays excellent retention of hardness at elevated temperatures yielding excellent abrasion resistance. It also displays reasonable impact resistance, imparting good notch toughness values at the bottom of impression ribs, etc.	For the repair or redemption of hot and cold trim and shearing dies, punches, press forging dies as well as the composite construction of A.I.S.I. type H-12 type extrusion dies and die casting dies.	52-59 Rc
DF-7025	DF-7025 was specially developed for build-up and hardfacing of wood chipper anvils, debarking hammers. It can resist working temperature upto 500°C. The weld deposit are highly crack resistant, forgeable and temperable. It is also suitable for providing cutting edges on carbon and low alloy steels.	Ideal for forging dies, stamping, extrusions dies press jacks, drop forging dies, cylinders, punches etc.	50-55 Rc
DF-7040	DF 7040 is a superb choice for both cold and warm applications where shock and/or heavy impact is encountered. It works exceptionally well on metal stamping blank trim and pierce dies where edge chipping causes burn on parts.	DF 7040 is an ideal alloy for building cutting edges on composite cold and hot trim sections and punches. It is recommended for welding A.I.S.I. 5-7 tool steel, however, because its weld deposits can be tempered to various hardness values, also it can be used to repair other shock-resisting grades plus many types of water-hardening tool steel.	55-60 Rc
DF-8000	DF-8000 is a versatile cobalt-containing alloy with high impact resistance. It is used primarily on work pieces exposed to high alternating temperatures and corrosion.	Valves and valve seats, scaling surfaces, hot shear blades, hot pressing tools, forging deburrers, wire mill rolls and beaters for coke comminution	38-43 Rc
DF-8100	It deposits a Co, Cr, Ni, Mo alloy. The hard facing parts are subjected to hot metal-to-metal wear. It has good toughness even at high temperature. The surfacing part undergoes repeated thermal cycles and shocks. It has good oxidation resistance. Excellent edge retention property.	Forging hotcham dies, hot working tools, trimming dies etc.	50-55 Rc





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