

**BİRLEŞİK**  
POWER OF  
STEEL

# RELIABILITY, TECHNOLOGY, BİRLEŞİK, KNOWLEDGE

We are in 12.000 companies in 5 continents where development, innovation, high performance and technological transformation are present. We will continue to bring the technological metals of the future to our industry simultaneously...

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**RELIABILITY,  
TECHNOLOGY,  
BİRLEŞİK,  
KNOWLEDGE**

The first special material cold drawing, the first cryogenic process, the first material design, the first export, the first tool steel forging, the first value-added product concept and most importantly, the superalloy materials that only certain companies in the world produced in Türkiye. We continue to produce, design and develop in engineering way.

# 52

countries

Birleşik Metal is the one and only Turkish company Who exports tool steel and special alloys to

Our great experience in steel sector, perfect technical and wide range of product including patened **Birleşik Performance Steel** make our customers satisfied all over the world

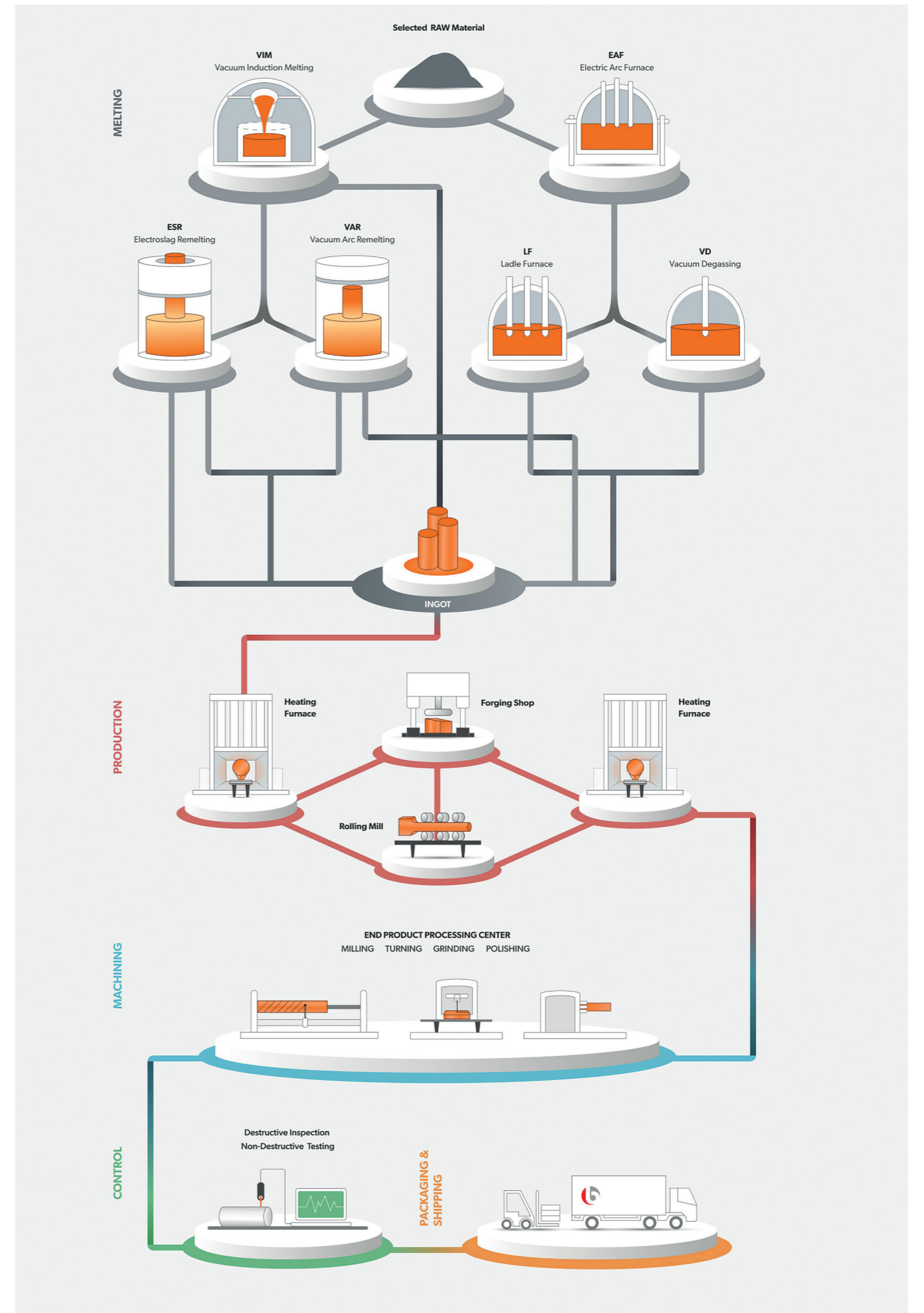


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# BİRLEŞİK POWER OF STEEL

While performing analysis based on tool steels, today this approach is evolving towards structure cleaning with microstructure control and secondary processes. Birleşik Metal is the company that follows these developments and brings them together with the sector.





# TOOL STEEL

# COLD WORK TOOL STEEL

## Tool Steel

### 1. Cold Work Tool Steel

Grade	C	Cr	Me	V	Others	Properties
1.2379	1.55	12.00	0.80	1.00	Si 0.40	Highly hardenable steel with excellent ratio between strength, mainly in pressure
1.2363	1.00	5.00	1.20	0.20	Si 0.30	Highly hardenable steel with high surface hardness and resistance against wearing. Good dimensional stability during heat treatment.
1.2767	0.45	1.30	0.20	-	Ni 4.00	Well hardenable steel with good dimension stability and resistance against wearing. High strength, higher toughness and resistance against material fatigue. Well polishable.
1.2436	2.12	11.20	-	-	W 0.65	High strength in combination with lower toughness. Dimensionally stabil. Better resistance against wearing and better hardenability in comparison with 1.2080 steel.
1.2601	1.65	12.00	0.60	0.30	W 0.50	Very high resistance against abrasive and adhesive wear, good toughness, good dimensional stability, high compressivtngth.
1.2067	1.00	1.50	-	-	-	Bearing steel featuring excellent hardness, wear resistance and high degree of prurity.
1.2350	0.50	7.00	1.50	1.40	Si 0.90	Good wear resistance, medium toughness. Severely stressed machine blades for cellulose and paper industry, woodworking miling cutters.
1.2378	2.20	12.50	1.00	2.00	-	High resistance against wearing.
1.2510	1.00	0.55	-	0.20	W 0.60	Good wear resistance, medium toughness. Severely stressed machine blades for cellulose and paper industry, woodworking miling cutters.
1.2510	1.00	0.55	-	0.20	W 0.60	Good wear resistance, medium toughness. Severely stressed machine blades for cellulose and paper industry, woodworking miling cutters.
1.2080	2.10	12.00	-	-	Si 0.30 Mn 0.40	Good wear resistance, medium toughness. Severely stressed machine blades for cellulose and paper industry, woodworking miling cutters.
1.2358	0.60	4.50	0.50	0.20	-	Good wear resistance, medium toughness. Severely stressed machine blades for cellulose and paper industry, woodworking miling cutters.
1.2842	0.90	0.40	-	0.10	Si 0.20 Mn 2.00	Well machinable steel with good dimensional stability and toughness. Meduim hardenable with high surface hardness. Very good resistance against cracks forming
1.2550	0.60	1.10	-	0.20	Si 0.60 Mn 0.30 W 2.00	Well hardenable steel, resistant against tempering. With advantageous combination of strength (both in heat) and high toughness. Very good resistance against wearing and impact loading.



# Tool Steel

## 1. Cold Work Tool Steel

Grade	Application
1.2379	All kinds of tools for cold work: stamps; extruding, drawing and shaped dies; profis cylinder; thread forming. Blades for cutting sheet metal and wire. Exposed parts of plastic molds. Crusher requiring higher toughness.
1.2363	All kinds of tools for cold work: stamps; extruding, drawing and shaped dies; profis cylinder; thread forming. Blades for cutting sheet metal and wire. Exposed parts of plastic molds. Crusher requiring higher toughness.
1.2767	The most heavy-duty asymmetric piercing devices. Small dies of complicated shape forms requiring toughness with high strength. Heavy duty devices for plastic moulding and extrusions.
1.2436	Heavy-duty cutting and broaching tools with highest durability. Tools for woodprocessing industry. deep-drawing tools. Dies fir abrasive plastics and ceramics. Measuring instrument
1.2510	Knives, stamps, dies. Measure instruments. Tools for thread rolling. Tools for coinage.
1.2080	Cutters and punches to the plate with high strength. Ball indenter pins, small beams. Tools for thread rolling and profiles. Shaped knives and cutters for smaller speeds. Small molds formaing non-metallic materials. Crushers.
1.2358	Tools for cutting and stamping. Tools for deep drawing and cold extrusions. Tools for woodworking.
1.2842	Shaped complex, less stressed tools for cutting and puching. Tools for bending and puiing. Ball indenter pins for great depth. Gauges and meters. Small molds for plastics and less stressed molds for ceramics and powders.
1.2550	Heavy-duty tools for punching and perforation. Tools for woodworking. Stamping diesi punching pins. Thermally and mechanically loaded knives. Pressing pins.



# Tool Steel

## 1. Cold Work Tool Steel Performance Series

### BİRLEŞİK PERFORMANCE COLD WORK STEEL

#### • KNIFE V8

Properties	Application
Very high war resistance at high temperatures.	Flat dies with high wear resistance, hot and could cutting knives, forging dies.

Grade	C	Cr	Mn	Mo	V	Others
KNIFE V8	0.50	7.80	-	1.50	1.50	-

#### • PERFO WEAR

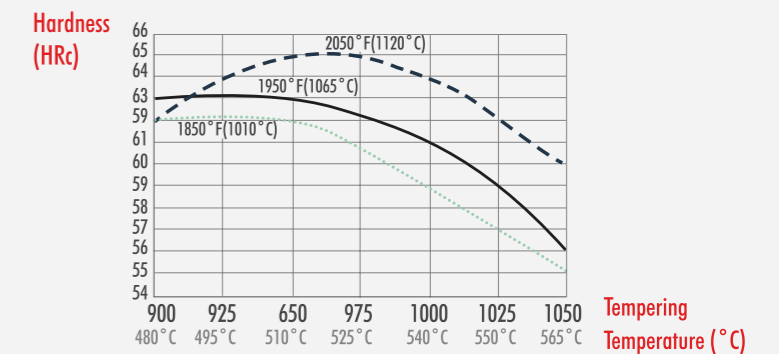
Properties	Application
Better wear resistance and toughness than AISI D2.	Press moulds, rollers, lamination and fineblaking dies, industrial knives.

Grade	C	Cr	Mn	Mo	V	Others
PERFO WEAR	1.10	7.80	-	1.40	2.00	1.00 W

#### Heat Treatment

##### Softening Annealing

Preheating	Hardening	Annealing
840-870 °C	1010-1120 °C	840-900 °C



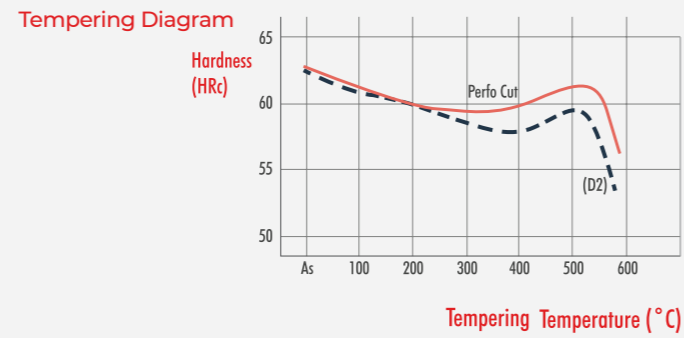


# Tool Steel

1. Cold Work Tool Steel Performance Series

## • PERFO CUT

Properties	Application					
Excellent toughness, wear resistance and compressive strength.	Press moulds, rollers, lamination and fineblaking dies, industrial knives.					
Grade	C	Cr	Mn	Mo	V	Others
PERFO WEAR	0.95	8.00	1.40	2.00	0.30	1.00 Si



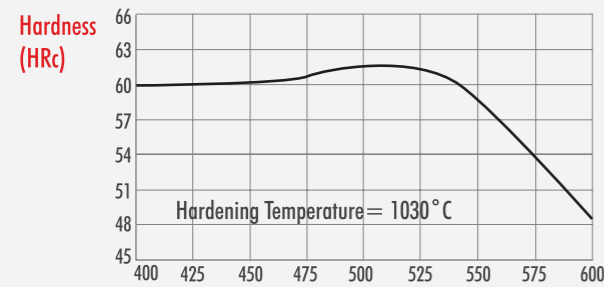
# TOOL STEEL

# HOT WORK TOOL STEEL

## • PERFO CUT Nb

Properties	Application					
-	Cutting/punch dies, cold stamping, deep drawing, cold- rolled roller, dies.					

Tempering Diagram



Heat Treatment

Preheating	Hardening	Annealing
790-830 °C	1200-1050 °C	500-600 °C (Please see the tempering diagram.)

Tempering Temperature (°C)

Grade	C	Cr	Mn	Mo	V	Others
PERFO CUT Nb	0.85	1.40	-	2.00	0.50	0.90 Si 0.15 Nb



# Tool Steel

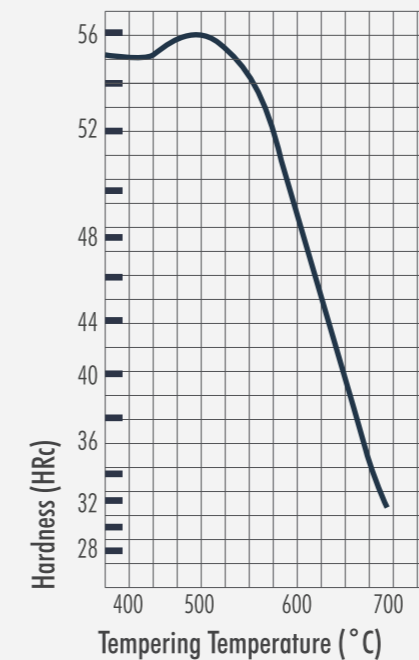
## 2. Hot Work Tool Steel

Grade	C	Cr	Mo	V	Others	Properties
1.2344	0.40	5.10	1.30	1.00	Si 1.00	High resistance against tempering and wearing, with high strength in heat (higher than at 1.2343). Very good toughness and resistance against heat fatigue. Steel is not very temperature shock sensitive.
1.2343	0.40	5.10	1.20	0.40	Si 1.00	Steel with advantageous combination of strength, toughness and resistance against thermal fatigue. Resistant steel against thermal shocks and wearing.
1.2367	0.38	5.00	2.85	0.55	Si 0.40	Excellent strength and resistance against wearing at heat. High resistance against tempering. Very well hardenable with high toughness and resistance against temperature shocks.
1.2365	0.40	2.90	2.75	0.55	Si 0.30 Mn 0.30	Excellent strength and resistance against wearing at heat. High resistance against tempering. Very well hardenable with high toughness and resistance against temperature shocks.
1.2365	0.40	2.90	2.75	0.55	Si 0.30 Mn 0.30	High resistance against tempering.
1.2714	0.55	1.10	0.50	0.10	Ni 1.60	Highly hardenable steel with balanced structure even at big cross sections. Resistant against temperature and impact load. Good ratio between strength, toughness and resistance against temperature fatigue.
1.2885	0.30	2.95	2.80	0.55	Si 0.30 Mn 0.40	Highly hardenable steel with balanced structure even at big cross sections. Resistant against temperature and impact load. Good ratio between strength, toughness and resistance against temperature fatigue.
1.2709	Mx 0.03	Mx 0.25	4.80	-	Co 9.00 Ni 18.0 Ti 1.10	Speacial maraging steel.
1.2581	0.30	3.00	-	0.40	Si 0.30 Mn 0.35	The tungsten content is beneficial for hot strength at red heat, although toughness is somewhat reduced.

Grade	Application
1.2344	Very stressed tools for extrusions and light metal pressure casting. Small dies, punching mandrels, stamps, cutting dies. Tools cooled with water.
1.2343	Extrusion dies and dies for light metal processing. Small and medium forging dies. Tools cooled with water. Small and medium-sized cutting tools. Stressed parts for metal pressure casting.
1.2367	Extremely stressed tools for extruding and non-metal pressure casting. Tools for heat work cooled with water. Small and medium-sized dies highly resistant against wearing. Mostly stressed tools for plastics processing.
1.2365	Extrusion of copper and copper alloys, forging dies, piercing mandrels.
1.2714	Big and medium-sizes dies for forging hammer and forging presses. Big-sized punches, forging inserts, cutting mandrels, knives. Auxiliary tools for extruding. Big-sized tools for plastic moulding. Knives for scrap cutting.
1.2345	Cold and hot knives, shear blades, cutting rolls, punches, dies.

### • DIN 1.2343 (X38 CrMoV51)

1.2343 is an air hardening hot work tool steel which combines a very good red-hardness with toughness and covers a wide variety of applications. 1.2344 can be water cooled in service and offers high temperature strength and wear resistance.





## BİRLEŞİK PERFORMANCE HOT WORK TOOL STEEL

### • PERFO HOT

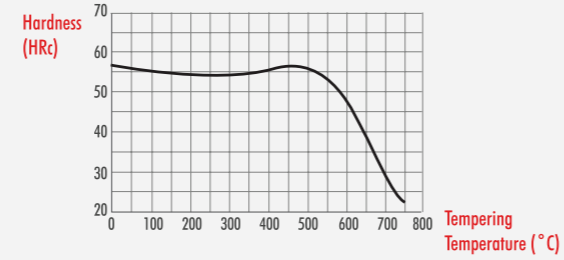
#### Properties

Excellent impact toughness.

#### Application

Die casting, extrusion, forging die, hot cutting knives.

Tempering Diagram



Grade	C	Cr	W	Co	Others
PERFO HOT	0.37	5.30	1.30	-	1.05 Si 0.45 Mn 1.45 Mo 0.28 V 0.05 Nb

### • PERFO HOT Co

#### Properties

High wear resistance in combination with hardness protection at higher temperatures.

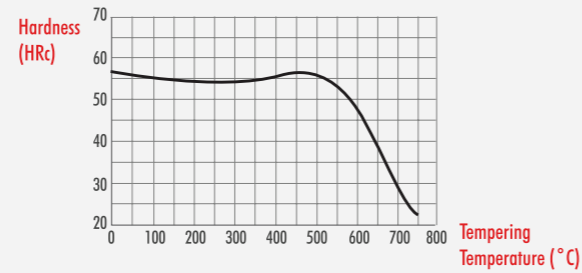
#### Application

Extrusion dies, model blocks, punches mandrels.

#### Heat Treatment

Softening Annealing	Hardening	Annealing
820-840 °C Slow cooling at furnace	1000-1050°C	520-700°C

Tempering Diagram



Grade	C	Cr	W	Co	Others
PERFO HOT Co	0.40	4.25	4.25	4.25	

## TOOL STEEL

## PLASTIC MOLD STEEL



## Tool Steel

### 3. Plastic Mold Steel

Grade	C	Cr	Mo	Ni	Others	Properties
1.2738	0.40	2.0	0.20	1.00	Mn 1.5 Si 0.30	A good ratio between strength and toughness. Very well polishable.
1.2083	0.40	13.00	-	-	Mn 0.70	Good polishing properties, excellent resistance to corrosion.
1.2316	0.36	16.0	1.20			Ideal for Pvc molds.
1.2312	0.40	1.90	0.20	-	Mn 1.5 S 0.05 Si 0.40	Very weel machinable steel with high toughness.
1.2311	0.40	1.90	0.20	-	Mn 1.5 Si 0.30	Ideal for small size plastic mold steels.
1.1730	0.45	-	-	-	Mn 0.70 Si 0.30	Good machinability and toughness.
1.2764	0.19	1.30	0.20	4.10	-	Very good polishability.

Grade	Application
1.2738	Very stressed tools for extrusions and light metal pressure casting. Small dies, punching mandrels, stamps, cutting dies. Tools cooled with water.
1.2083	Extrusion dies and dies for light metal processing. Small and medium forging dies. Tools cooled with water. Small and medium-sized cutting tools. Stressed parts for metal pressure casting.
1.2316	Extremely stressed tools for extruding and non-metal pressure casting. Tools for heat work cooled with water. Small and medium-sized dies highly resistant against wearing. Mostly stressed tools for plastics processing.
1.2312	Extrusion of copper and copper alloys, forging dies, piercing mandrels.
1.2311	Big and medium-sizes dies for forging hammer and forging presses. Big-sized punches, forging inserts, cutting mandrels, knives. Auxiliary tools for extruding. Big-sized tools for plastic moulding. Knives for scrap cutting.
1.1730	Good machinability and toughness.
1.2764	Press tools, highly stressed plastic moulds, profiling rolls.

## BİRLEŞİK PERFORMANCE PLASTIC MOLD STEEL

### • PERFO COR

Properties	Application
Co, Mo, V added martensitic stainless steel. Very good wearing resistance and toughness. Resistance against acid.	Resistance against acid needed cutting tool steels, knife blades, surgically cutting tools, corrosion resistance needed bearing shell, pistons in refrigerator compressor.

Grade	C	Cr	Mo	V	CO	Others
PERFO COR	1.05	17.50	0.20	0.10	1.50	+

Perfo Cor is cobalt, molibden and vanadium added martensitic stainless steel.

### Physical Properties

Temp (°C)	20	100	200	300
Coefficient of Elasticity				
GPa	223	217	209	201
Thermal Expansion Coefficient				
10 <sup>-6</sup> m/mk	10.4	10.4	10.8	11.2
Thermal Conductivity Coefficient				
kg/dm <sup>2</sup>	7.7			



# TOOL STEEL

# HIGH SPEED STEEL

## Tool Steel

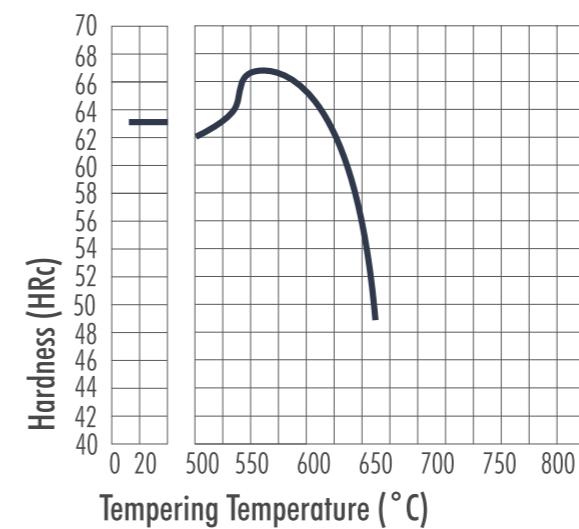
### 4. High Speed Steel

Grade	Application
1.3343	Twist drills, reamers, broaching tools, metal saws, milling tools of all types, wood working tools.
1.3243	Turning and planing tools of all types, milling cutters, taps, twist drills, wood working tools.
1.3207	Turning and milling tools for roughing and finishing work, wood working tools, highly stressed cold work tools, tool bits.
1.3247	Milling cutters, taps, twist drills, broaches tools.

Grade	C	Cr	Mo	V	Others	Properties
1.3343	0.90	4.10	5.00	1.80	W 6.20	Standard high speed steel
1.3243	0.90	4.00	5.00	1.80	W 6.20 Co 5.00	5% Cobalt high speed steel
1.3207	1.25	4.10	3.40	3.20	W 1.00 Co 10.50	10% Cobalt high resistance against temperature
1.3247	1.10	4.20	9.50	1.20	W 1.50 Co 8.00	8% Cobalt high toughness

#### • DIN 1.3207 (T42)

High speed steel with maximum performance properties due to its composition, contains high tungsten and cobalt alloys, optimum cutting properties, high wear resistance and red hardness, high temperature strength and toughness, edge holding ability, fine grain size and carbide particle size.





## TOOL STEEL

# NITRIDING STEEL

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## Tool Steel

### 5. Nitriding Steel

Grade	C	Cr	Mo	V	Others	Properties
1.8550	0.35	1.70	0.20	0.60	Ni 0.90 Al 1.10	Perfect nitriding and polishability.
1.8509	0.42	1.70	0.30	-	Al 1.10	Pinion shafts, measuring tools, injection pump parts, spool valves and gudgeon pins.
1.8519	0.28	2.55	0.20	0.15		CrMo Valloyed nitriding steel with a surface hardness after nitriding of min 800 HV

Grade	Application
1.8550	Nitriding steel which makes it possible to achieve nitrided layers with a very high level of hardness.
1.8509	Machine slides, extruder components, parts requiring a high level of hardness after nitriding for optimum resistance to wear due to friction and abrasion.
1.8519	Structural parts with high surface hardness - piston rods, extruders, cylinders, shafts, straightening tools, measuring tools, etc

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#### • DIN 1.8550 (34 CrAlNi7)

This grade is delivered and hardened and tempered condition (last tempering temperature at least 580 °C). Aluminium alloyed nitriding steel for large cross-sections. Suitable for piston rods, extruders, cylinders, gear wheels, rings.



## Special Alloys

### 1. Powder Metallurgical Steel

Grades	C	Cr	Mo	V	W	Co
PERFO POWDER PM 4	1.40	4.20	5.00	4.10	5.80	-
PERFO POWDER PM 10	2.45	5.30	1.30	9.80	-	-
PERFO POWDER PM 15	1.60	4.00	-	5.00	12.00	5.00
PERFO POWDER PM 23	1.28	4.00	5.00	3.10	6.40	-
PERFO POWDER PM 30	1.28	4.20	5.00	3.10	6.40	8.50
PERFO POWDER PM 39	1.60	4.80	2.00	5.00	10.50	8.00
PERFO POWDER PM 53	2.48	4.20	3.10	8.00	4.20	-
PERFO POWDER PM 60	2.30	4.20	7.00	6.50	6.50	10.50

Grades	Application
PERFO POWDER PM 4	Suitable for cold work applications.
PERFO POWDER PM 10	Suitable for cold applications, knives and high wear component.
PERFO POWDER PM 15	Suitable for high performance cutting molds. This grade can be used different PVD coating types.
PERFO POWDER PM 23	Suitable for high performance needed cold work cutting tools. This grade can be used different PVD coating types.
PERFO POWDER PM 30	Suitable for cold work cutting tools. This grade can be used different PVD coating types.
PERFO POWDER PM 39	Suitable for high performance needed cutting tools and cold work tools. This grade can be used different PVD coating types.
PERFO POWDER PM 53	Suitable for cold work applications as powder pres, industrial knives used for powder press, paper and wood cutting.
PERFO POWDER PM 60	Unlike the other, this grade provides high wearing resistance and high compressive strength.

SPECIAL ALLOY



## Special Alloys

2. Uncommon Steels  
For Special Purpose

Birleşik can supply requested chemical compositions and size.

	Grade	C	Si	Cr	Mo	V	W	Co
% Chemical	1.2350.11	0.50	0.90	7.90	1.50	1.70	-	-
Composition	1.2965	1.12	1.10	7.75	1.50	2.40	1.10	-
	1.2378	2.25	0.25	12.30	0.90	2.10	-	-
	1.3342	1.00	0.40	4.20	4.80	1.80	6.20	-

## Special Alloys

3. Nickel Alloys

	Ni	Cr	Mn	Mo	W	Co	Si	P	S	V	Cu	Al	Ti	Nb	F	C	Other	
ALLOY C22 (2.4602)	Balance	20.00- 22.50	0.50 Max.	12.50- 14.50	2.50- 3.50	2.50 Max.	0.08 Max.	0.02 Max.	0.02 Max.	0.35 Max.						2.00- 6.00	0.015 Max.	
ALLOY C276 (2.4819)	Balance	14.50- 16.50	1.00 Max.	15.00- 17.00	3.00- 4.50	2.50 Max.	0.08 Max.	0.04 Max.	0.03 Max.	0.35 Max.						4.00- 7.00	0.01 Max.	
ALLOY 400 (2.4360)	Min. 63.00		2.00 Max.				0.50 Max.		0.024 Max.		28.00- 34.00					2.50 Max.	0.30 Max.	
ALLOY K500 (2.4375)	Min. (Ni+Co) 63.00		1.50 Max.				0.50 Max.		0.01 Max.		27.00- 33.00	2.30- 3.15	0.35- 0.85			2.00 Max.	0.25 Max.	
ALLOY K600 (2.4816)	Min. 72.00	14.00- 17.00	1.00 Max.				0.50 Max.		0.015 Max.		0.50 Max.					6.00- 10.00	0.15 Max.	
ALLOY K625 (2.4856)	Min. 58.00	20.00- 23.00	0.50 Max.	8.00- 10.00		1.00 Max.	0.50 Max.	0.015 Max.	0.015 Max.			0.40 Max.	0.40 Max.			5.00 Max.	0.10	3.15-4.15 (Nb+Ta)
ALLOY 718 (2.4668)	50.00- 55.00	17.00- 21.00	0.35 Max.	2.80- 3.30		1.00 Max.	0.35 Max.	0.015 Max.	0.015 Max.		0.30 Max.	0.20- 0.80	0.65- 1.15	4.75- 5.50	2.00- 6.00	Balance	0.08 Max.	
ALLOY 825 (2.4858)	38.00- 46.00	19.50- 23.50	1.00 Max.	2.50- 3.50		1.00 Max.	0.50 Max.	0.02 Max.	0.015 Max.		1.5- 3.00	0.20 Max.	0.60- 1.20			Min. 22.00	0.025 Max.	
ALLOY 925 (UNS 9925)	42.00- 26.00	19.55- 22.50	1.00 Max.	2.50- 3.50			0.50 Max.		0.03 Max.		1.50- 3.00	0.10 0.50	1.90- 2.40	0.50 Max.	Min. 22.00	0.03 Max.		

### • DIN 1.3342

A special high speed steel which has a better wear resistnace and reaches higher hardness level if you compare others.  
Instead of 1.3343

### • DIN 1.2360.11

Has very high toughness even for 60 - 62 HRC.  
Instead of 1.2367

### • DIN 1.2378

Very well wear resistance. Brick ceramic moulds. Powder pressing moulds.  
Instead of 1.2080 and 1.2379

### • DIN 1.2965

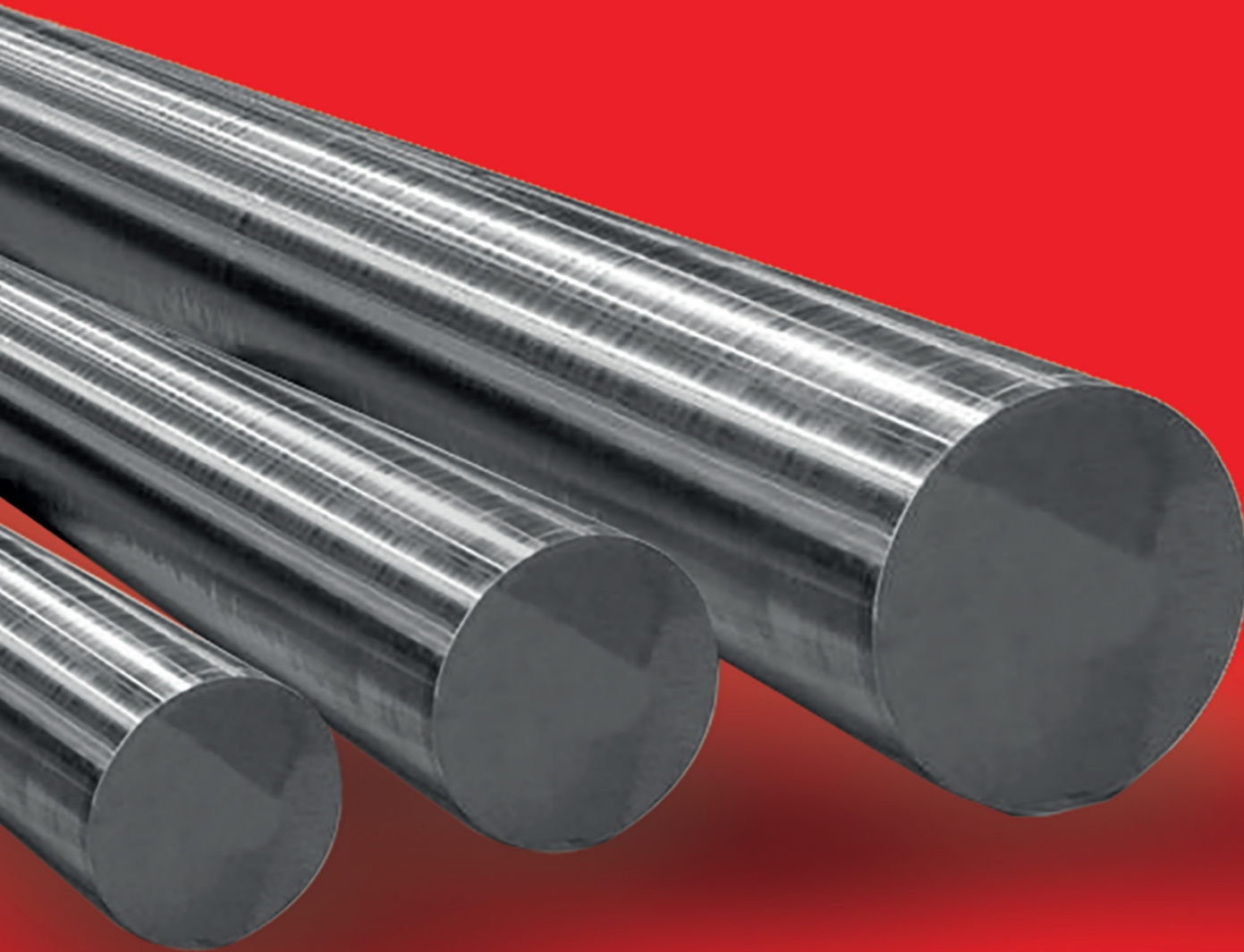
Very well wear toughness and wear resistance, be able to reach 64 HRC.  
Hot and Cold Work Tooling

### • DIN 1.2888

Hot work tool steel with 10% cobalt. Even 700 °C it saves 48 HRC.  
Instead of 1.2367, 1.2344 and 1.2365

# BİRLEŞİK POWER OF STEEL

We are in 12.000 companies in 5 continents where development, innovation, high performance and technological transformation are present. We will continue to bring the technological metals of the future to our industry simultaneously...



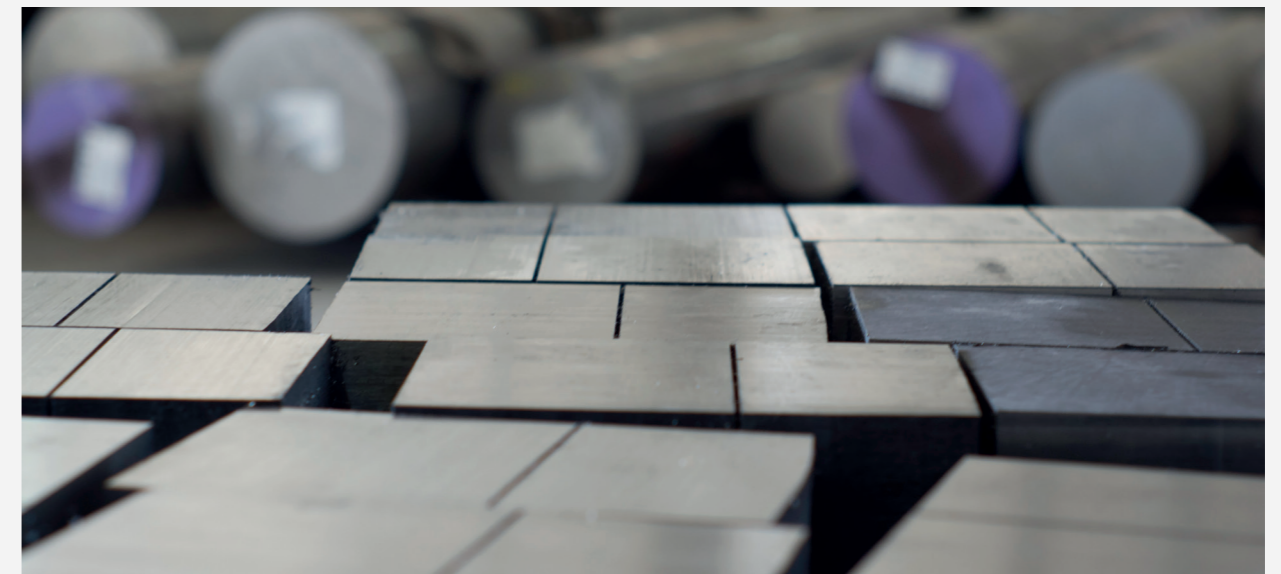
## Special Alloys

### 4. Stainless Steel

Grades	C	Cr	Mo	V	Others	Properties
1.4125	1.10	17.00	0.60	-	-	Moderate corrosion resistance good strength and the ability to obtain and keep excellent hardness HRC 60 and wear resistance.
1.4112	0.90	18.00	1.10	0.10	-	Moderate corrosion resistance good strength and the ability to obtain and keep excellent hardness HRC 58 and wear resistance.
1.4057	0.20	16.00	-	-	Ni 2.30	High polishability.
1.4841	0.10	25.00	-	-	Ni 2.30 Si 2.20 Mn 1.50	Steel is heat resistance up to 1000 C.
1.4542	0.05	16.00	-	-	Ni 3.75 Cu 3.30	Corrosion resistance is excellent.
1.4528	1.10	17.50	1.20	0.10	1.50 Co	

#### • DIN 1.4125 (X105CRM017)

This material will achieve the highest hardness of the available hardenable stainless steels. It possesses good corrosion resistance, particularly in the hardened and tempered condition. The material is magnetic in all conditions.





We develop our advanced technology and high value added products with high efficiency by minimizing our carbon footprints.

## Special Alloys

### 5. Duplex Steel

Duplex Steel has high amount of chromium and a slight amount of nickel. It is called "Duplex" because it combines both austenitic (chromium - nickel) and ferritic (chromium only) molecular structures).

The Duplex Structure gives this family of stainless steels a combination of attractive properties such as strength, toughness and ductility, corrosion resistance, stress corrosion, cracking resistance and coyt.

#### • 1.4462 / ALLOY 2205

Alloy 2205 is a duplex stainless steel with high general, localized and stress corrosion resistance properties in addition to high strength and excellent impact toughness. There is no doubt that Duplex 2205 has superior corrosion resistance than 316L in many chloride containing environments and has been involved with many applications where Duplex 2205 replaced 316L because of better corrosion performance.

Alloy 2205 is particularly suitable for application covering the -50 °F /+600 °F temperature range.

Grade	C	Si	Mn	P	S	Cr	Mo	Ni	Fe
38.00-46.00	19.50-23.50	1.00 Max.	2.00 Max.	0.035	0.015	21 3.50	2.50 3.50	4.50 6.50	Balanced

#### • 1.4460

Grade	C	Si	Mn	P	S	Cr	Mo	Fe
1.4460	0.05 Max.	1.00 Max.	2.00 Max.	0.035	0.030	25.00 28.00	4.50 6.50	Balanced

#### • SUPER DUPLEX / 1.4410 / ALLOY 32750

Super duplex Alloy 32750 has excellent corrosion resistance to a wide variety of media, with outstanding resistance to pitting and crevice corrosion in seawater and other chloride containing environments, with Critical Pitting Temperature exceeding 50 °C.

Grade	C	N	Cr	Ni	Mo	Fe
1.4460	0.05 Max.	1.00 Max.	2.00 Max.	0.035	0.030	Balanced

#### • SUPER DUPLEX / 1.4501 / ALLOY 100

This steel provides higher strength than both 22% Cr Duplex Stainless Steel. It is suited to a variety of application in industries such as chemical processing, oil & gas and marine environments. 1.4501 is listed in NACE MR 01 75 for sour service and having gained ASME Approval for Pressure Vessel Applications.



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