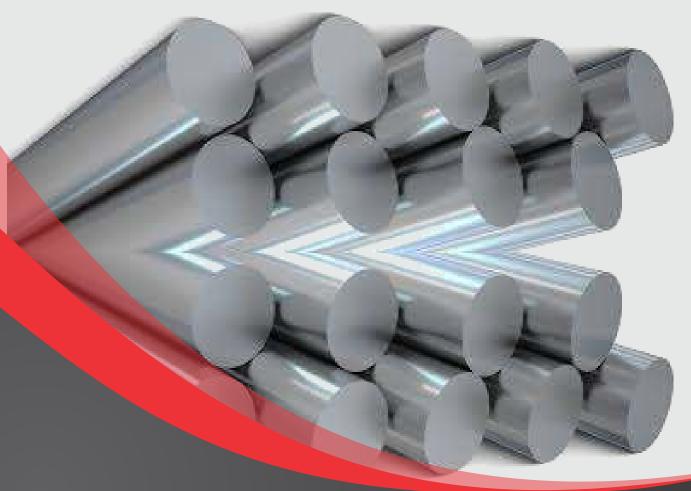


SIDDHIVINAYAK STEEL CORPORATION

A HOUSE OF PRIME QUALITY IMPORTED TOOL AND DIE STEEL



Total Solutions of Your Tooling Needs

<u>REGD. OFFICE:</u> Gala No. 2/A, Rachna Industrial Estate, Near I-Poll Company, Waliv Phata, Vasai (East), Dist Palghar - 401 208.

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www.diesteel.co.in

<u>WAREHOUSE1:</u> Plot No 1919 Mohit Warehouse Kalamboli Dist. Raighar - 400218, <u>WARE HOUSE:</u> 2: 3rdLane Darukhana, Rey Road, Mumbai-400010



ABOUT US

Siddhivinayak Steel Corp holds a leading position in the market segment of high quality tool steel, hot die steel, plastic molding steel and high speed steel.

We work with a motive of meeting the need & requirement of our customers & offer complete satisfaction to them. we can offer our product in customized forms as per detailed specification of our client at competitive prices.

We have complete variety of all the product in a wide range of size in our stocking programe and can deliver various section of round, flat, sheets, square etc.we can also arrange from our various principals any specific grade and quantity which is not part of our stock programe and in minimum possible time.

The material we offer are international industrial standards & are quality tested by quality experts. we have our own cutting facilities & can expertise our consumer specific needs whether it is big or small in Quantity. We source Material from the leading manufacturers from all over the world such as Germany, Japan, Korea, Brazil etc.



PRODUCT DETAIL:
PLASTIC MOULDING STEEL
CORROSION RESISTANCE STEEL
HOT WORK TOOL STEEL
COLD WORK TOOL STEEL
HIGH SPEED TOOL STEEL
NITRATING TOOL STEEL
Ni.Cr.Mo. TOOL STEEL

CARBON STEEL
BALL BEARING STEEL
BERYLLIUM COPPER
ALUMINIUM

ELECTROLYTIC COPPER STAINLESS STEEL

1.2311,1.2738,2711,
1.2316, 1.2083, 1.2085.
H-13, H-11 H-21 1.2714,
D-2,D-3, OHNS EN-31 GRADES.
M-2,M-35 M-42 T-1,T-42,
EN-41B GRADE.
EN-24,EN-353,EN-19,16MnCr5,SAE8620
SAE 4140,42CrMo4, EN-36, 20MnCr5
C-45,C-55 GRADES, M.S.
K-310, SAE 52100 GRADES.
C-17200 GRADE WITH 2% BERYLLIUM
ALUMEC 79,89 HE-30,COMMERCIAL
GRADES
(99.99% PURITY) COMMERCIAL GRADE
SS 410, 420,304,316,316L, 440C ETC.

PLASTIC MOULDING STEEL DIN 1.2311



Steel properties: pre-hardened plastic mould steel, hardness in as delivered condition 280 to 325 HB, good machinability, suitable for texturing, better polishability.

Applications: plastic moulds, mould frames for plastic mould and pressure casting moulds and recipient sleeves.

| C(%) | Si(%) | Mn(%) | P(%) | S(%) | Cr(%) | Mo(%) |
|-------------|-------------|-------------|-------|-------|-------------|-------------|
| 0.35 ~ 0.45 | 0.20 ~ 0.40 | 1.30 ~ 1.60 | 0.035 | 0.035 | 1.80 ~ 2.10 | 0.15 ~ 0.25 |

DIN 1.2738

Steel properties: pre -hardened plastic mould steel with 1% Nickle condition 280 to 325 HB, good machinability, suitable for texturing, good polishability also available with hardness of 360 - 400HB

Applications: Large plastic moulds with deep engravings and intensive impacts on the core. 1.2738 is the logical development of 1.2311, a pre – hardened plastic mould steel for use in large moulds, which also have to display high core strength. The additional nickel content to 1 % increase through hardening. 1.2738 is a micro –alloyed, vaccum – degassed steel with the following excellent features: good machinability, outstanding polishability, good texturing properties.

| C(%) | Si(%) | Mn(%) | P(%) | S(%) | Cr(%) | Mo(%) | Ni(%) |
|-------------|-------------|-------------|-------|-------|-------------|-------------|-------------|
| 0.35 ~ 0.45 | 0.20 ~ 0.40 | 1.30 ~ 1.60 | 0.035 | 0.035 | 1.80 ~ 2.10 | 0.15 ~ 0.25 | 0.90 ~ 1.20 |



CORROSSION RESISTANCE STEEL

DIN 1.2316

Steel properties :Increased corrosion resistance in comparison to Formadur 2083, good polishability. Usually this steel grade is supplied in a quenched and tempered condition with a working hardness of approx. 300 HB. Also available with hardness of 360 - 400 HB.

Applications: Moulds for processing plastics with corrosive reactions

| C(%) | Si(%) | Mn(%) | P(%) | S(%) | Cr(%) | Mo(%) | Ni(%) |
|-------------|-------------|-------------|------|------|---------------|-------------|-------------|
| 0.33 ~ 0.45 | 0.95 ~ 1.00 | 1.00 ~ 1.30 | 0.03 | 0.03 | 15.00 ~ 17.00 | 1.00 ~ 1.30 | 0.90 ~ 1.00 |

DIN 1.2083 ESR (ELECTRO SLAG REMELTING)

Steel properties: Corrosion-resistant, good polishability. Annealed condition Also available with hardness of 300HB.

Applications: Moulds for processing plastics with corrosive reactions.

| | C(%) | Si(%) | Mn(%) | P(%) | S(%) | Cr(%) | |
|---|-------------|-------------|-------------|-------|-------|---------------|--|
| | | | | | | | |
| 1 | 0.38 ~ 0.45 | 0.95 ~ 1.00 | 0.95 ~ 1.00 | 0.030 | 0.030 | 12.50 ~ 14.50 | |
| ı | | | | | | | |









PLASTIC MOULDING STEEL(P20 HH)

DIN 1.2711 (36 – 40 Hrc)

Steel properties: Pre-hardened plastic mould steel, hardness as-delivered condition 370-410 HB Increased compressive strength in comparison to 1.2738, good polishability.

Applications: Plastic moulds with increased demands on compression strength and wear resistance.

| C(%) | Si(%) | Mn(%) | P(%) | S(%) | Cr(%) | Mo(%) | Ni(%) | V(%) |
|-------------|-------------|-------------|-------|-------|-------------|-------------|-------------|-------------|
| 0.50 ~ 0.60 | 0.15 ~ 0.35 | 0.50 ~ 0.80 | 0.025 | 0.035 | 0.60 ~ 0.80 | 0.25 ~ 0.35 | 1.50 ~ 1.80 | 0.07 ~ 0.12 |

2% BERYLLIUM COPPER (C17200 GRADE 38 -40 HRC

UNS C17200 beryllium copper alloys are ductile and produced in mill hardened and heat treatable tempers. These alloys are used for all applications, which require high strength, stiffness and good conductivity. The tensile strength of C17200 copper is over 1380 MPa (200ksi)

| Element | Content (%) |
|---------|-------------|
| Cu | 97.9 |
| Be | 1.9 |
| Co | 0.20 |



FOR TABLET DIES

COLD WORK TOOL STEEL

(D-2) DIN 1.2379



Steel properties :12 % ledeburitic chromium steel. Combines maximum wear resistance, good toughness, outstanding cutting edge retention and tempering resistance. It can be nitrided after special heat treatment.

Applications: Threading rolls and dies, cold extrusion tools, trimming, cutting and stamping tools for sheet thicknesses up to 6 mm, precision cutting tools for sheet thicknesses up to 12 mm, cold pilger mandrels, circular-shear blades, deep-drawing tools, pressure pads and highly wear-resistant plastic moulds.

| C(%) | Si(%) | Mn(%) | P(%) | S(%) | Cr(%) | Mo(%) | V (%) |
|-------------|-------------|-------------|-------|-------|-------------|-------------|-------------|
| 1.50 ~ 1.60 | 0.10 ~ 0.40 | 0.15 ~ 0.45 | 0.030 | 0.030 | 11.0 ~ 12.0 | 0.70 ~ 1.20 | 0.90 ~ 1.10 |

(D-3) DIN 1.2080

Steel properties: 12 % ledeburitic chromium tool steel with extreme wear resistance.

Applications: Cutting tools for sheets up to 4 mm thickness, trimming dies, blanking dies for paper and plastics, shear blades and rotary shear blades for sheet thicknesses up to 2 mm, drawing and deep-drawing tools. Woodworking tools, stone pressing tools, pressure pads and highly wear-resistant plastic moulds, profile rolls.

| C(%) | Si(%) | Mn(%) | P(%) | S(%) | Cr(%) | |
|-------------|-------------|-------------|-------|-------|-------------|--|
| 1.90 ~ 2.20 | 0.10 ~ 0.60 | 0.20 ~ 0.60 | 0.030 | 0.030 | 11.0 ~ 13.5 | |



COLD WORK TOOL STEEL (Suitable for Tablet Dies)

DIN 1.2510 (AISI-O1OHNS)

Steel properties: Good cutting edge retention, high hardenability and dimensional stability during heat treatment..

Applications: Blanking and stamping dies for cutting sheets up to 6 mm thickness, threading tools, drills, broaches, gauges, measuring tools, plastic moulds, shear blades, guide rails.

| C(%) | Si(%) | Mn(%) | P(%) | S(%) | Cr(%) | W(%) | V(%) |
|-------------|-------------|-------------|-------|-------|-------------|-------------|------|
| 0.85 ~ 1.00 | 0.10 ~ 0.50 | 1.00 ~ 1.40 | 0.030 | 0.040 | 0.50 ~ 0.70 | 0.50 ~ 0.70 | 0.30 |

Other Grade also available CASE HARDNING STEEL EN-36 Nitrading steel EN-41B for Screw & barrel



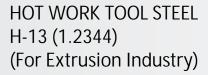
EJECTOR PIN MATERIAL

SAE-52100 / EN-19 / SAE-8620 / 20MNCR5/16MNCR5/H-13

SIZE: 1.00mm - 25.00mm











Steel properties: High hot-wear resistance and hot tensile strength as well as good toughness, thermal conductivity and insusceptibility to hotcracking. Can be water-cooled to a limited extent.

Applications: Besides applications typical for the area of hot-work steels, this grade is mainly used for aluminium extrusion dies

Hardness HB: max 230

| | C(%) | Si(%) | Mn(%) | P(%) | S(%) | Cr(%) | Mo(%) | V(%) |
|----|-----------|-------------|-------------|-------|-------|-------------|-------------|-------------|
| 0. | 32 ~ 0.45 | 0.80 ~ 1.20 | 0.20 ~ 0.50 | 0.030 | 0.030 | 4.75 ~ 5.50 | 1.10 ~ 1.75 | 0.80 ~ 1.20 |

H-13 Flat ESR Quality (1.2344) for Aluminium Pressure Die Casting

H-13 ESR is the most refined material with the traditional VD route. The quality of material increase the toughness, highly increase the micro-cleanness level.

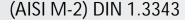
High recommend the use of AISI-H-13 ESR grade for Aluminium Pressure Die Casting & other component subjected to high working temperatures and high pressure strength. H-13 is fully ultrasonic inspected with 100% positive results as per NDT Standards.

H-13 Tool steel is the most popular steel grade for various industries. The main features of high alloyed Cr-Mo-V Hot Work tool steel is high wear resistance to thermal shock and the heat cracking, good mechanical characteristics & toughness in hot condition. H13 apears excellent machinability with constant hardness during production activities.





HIGH SPEED STEEL







Steel properties: Standard high-speed steel grade. Its well-balanced alloy composition forms the basis of its high toughness and good cutting edge retention, rendering it suitable for a large variety of applications.

Applications: For all metal-cutting tools for roughing or finishing such as twist drills, diverse milling cutters, thread dies, broaches, reamers, countersinks, thread chasers, circular saw segments, shaping tools and woodworking tools. Also highly suitable for cold-forming tools such as cold extrusion rams and dies, as well as cutting and precision cutting tools, plastic moulds with elevated wear resistance and screws.

| C(%) | Si(%) | Mn(%) | P(%) | S(%) | Cr(%) | W(%) | V(%) | Mo(%) |
|-------------|-------------|-------------|----------|----------|-------------|-------------|-------------|-------------|
| 0.86 ~ 0.94 | 0.20 ~ 0.45 | 0.20 ~ 0.40 | 0.030Max | 0.030Max | 3.80 ~ 4.50 | 6.00 ~ 6.70 | 1.70 ~ 2.00 | 4.70 ~ 5.20 |

(AISI M-35)-DIN 1.3243

Steel properties: The cobalt content in this high-performance high-speed steel results in high red hardness and tempering resistance. As a consequence, this grade is particularly suitable for conditions involving thermal stresses and discontinuous cutting.

Applications Heavy-duty milling cutters of all kinds, highly stressed twist drills and taps, profile knives, machining of high-strength materials, broaches.

| C(%) | Si(%) | Mn(%) | P(%) | S(%) | Cr(%) | W(%) | V(%) | Mo(%) | Co(%) |
|-------------|-------------|-------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|
| 0.88 ~ 0.96 | 0.20 ~ 0.40 | 0.20 ~ 0.40 | 0.030 Max | 0.030 Max | 3.80 ~ 4.50 | 6.00 ~ 6.70 | 1.75 ~ 2.15 | 4.70 ~ 5.20 | 4.55 ~ 5.50 |

FOR FORGING INDUSTRY

DIN 1.2714 (DB-6)



Steel properties: Tough die steel with high tempering resistance and good through-hardening properties. This grade is usually supplied in quenched and tempered to a working hardness of 355 to 400HB

Applications: Standard steel for forging dies of all types, press dies, extrusion dies, retainer plates, armoured trim dies, hot-shear blades and tool holders.

| C(%) | Si(%) | Mn(%) | P(%) | S(%) | Cr(%) | V(%) | Mo(%) | Ni(%) |
|-------------|-------------|-------------|-------|-------|-------------|-------------|-------------|-------------|
| 0.50 ~ 0.60 | 0.10 ~ 0.40 | 0.60 ~ 0.90 | 0.030 | 0.030 | 0.80 ~ 1.20 | 0.05 ~ 0.15 | 0.35 ~ 0.55 | 1.50 ~ 1.80 |

SAE 4340 (En24)

Steel properties: SAE 4340 steel properties offer good ductility in the annealed condition, allowing it to be bent or formed. Fusion and resistance welding is also possible with our 4340 alloy steel. For highly stressed parts it is excellent choice. SAE 4340 alloy steel can also be machined by all customary methods.

Applications: EN24 steel is widely used in gears, pinions, shafts, and spindles in the automotive and machine tool industries. Production of parts such as locomotives, cranes, rolling mills, coal cutters, etc. Die casting and hot metal processing, such as mold support, racks and gears, needle angle die casting, Hot stamping of stamping dies, aluminum and steel stamping die beds, low temperature nuts, bolts and rivets. Widely used in plastics, rubber molds, hobs and combination mold buckles, mold stop pins, etc.

| C(%) | Si(%) | Mn(%) | P(%) | S(%) | Cr(%) | Mo(%) | Ni(%) |
|-------------|-------------|-------------|-------|-------|-------------|-------------|-------------|
| 0.36 ~ 0.44 | 0.10 ~ 0.35 | 0.45 ~ 0.70 | 0.035 | 0.040 | 1.00 ~ 1.40 | 0.20 ~ 0.35 | 1.30 ~ 1.70 |

Plastic Mould Steel

| DIN STANDARD | BRAZIL | EN | SLOVANIA | ITALY | | JIS | S. KOREA | TAIWAN | CZECH REP. | CHINA | AMERICAN |
|-----------------|-----------|--------------|----------|------------|--------|-----------|----------|---------------|---------------|--------|----------|
| 1.2738 | VP20ISO | 40CrMnNiMo64 | UTOPNIN | KEYLOS2738 | 1.2738 | HPM MAGIC | HP4A(D2) | GMP20+Ni(ESR) | LDHN | VTJ21 | P-20Ni |
| 1.2311 | VP20ISOF | 40CrMnM7 | UTOPNEX | KEYLOS2311 | 1.2311 | HPM7 | HP4A(D1) | GMP20 (ESR) | GS3D | YTJ20A | P-20 |
| 1.2316 | - | - | - | - | - | - | - | - | - | - | - |
| NAK 80 | - | - | - | - | - | PCM40S | - | - | - | - | - |
| 1.2312 | VP20ISOFS | 40CrMnMoS86 | UTOP | KEYLOS2312 | 1.2312 | _ | - | - | GS3S | - | P-20+Su |
| 1.7225 | - | 42CrMo4 | - | - | - | - | - | - | - | 4140 | EN-19 |
| 1.6582 | V4340 | En24 | - | - | - | - | - | - | BOZD | 4340 | EN-24 |
| 1.3505 | V52100 | 100CrMn6 | - | - | - | - | _ | - | KLZ | 52100 | EN-31 |
| 1.2327 | | K-310 | | | | _ | _ | - | _ | - | _ |

Corrosion Resistant Stee —

| DIN STANDARD | BRAZIL | AUSTRIA | SWEDEN | EN | SLOVANIA | ITALY | JIS | S. KOREA | TAIWAN | CZECJ REP. | CHINA | AMERICAN |
|-----------------|---------|---------|--------|--------|----------|------------|---------|----------|-------------|---------------|--------|----------|
| 1.2083 | VP420IM | M310 | STAVAX | 42CR13 | PK4E | KEYLOS2083 | SUS420F | HEMS1A | GMP420(ESR) | AK4R | YTG136 | 420 |
| PHX Supra | _ | _ | _ | _ | - | - | _ | - | - | _ | - | - |

High Speed Steel —

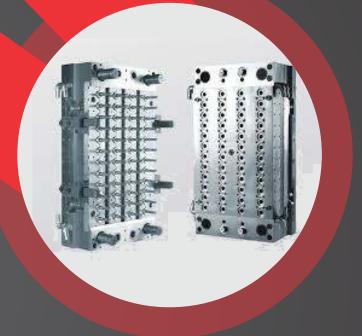
| DIN STANDARD | BRAZIL | AUSTRIA | SLOVANIA | JIS | CZECH REP. | CHINA | AMERICAN |
|-----------------|--------|---------|----------|-------------------------|---------------|--------------|----------|
| 1.3343 | VWM2 | \$600 | BRM2 | SKH51 MAX SP W6Mo5Cr4V2 | | M-2 | |
| 1.3243 | VK5E | S705 | BRCMO | SKH55 | MAX SP 75D | W6Mo5CrV2Co5 | M-35 |
| 1.3247 | VKM42 | \$500 | BRCMO2 | SKH59 | MAXES 42 | W2Mo9Cr4VC08 | M-42 |
| 1.3207 | VK10E | \$700 | BRU | SKH57 | RADECO M10 | | T-42 |

Hot Work Steel—

| DIN STANDARD | BRAZIL | AUSTRIA | EN | SLOVANIA | ITALY | JIS | S. KOREA | TAIWAN | CZECH REP. | CHINA | AMERICAN |
|-----------------|----------|---------|--------------|--------------|-------------|-------|----------|----------------|------------|-------|----------|
| 1.2344 | VM13IM | W302 | X40CrMoV5-1 | UTOP MO2-EFS | ESKY0S2 | SKD61 | STD6I | GMH13 (ESR) | TLI EFS | YTR5 | H-13 |
| 1.2343 | TENAX300 | W300 | X38CrMoV5-1 | UTOP MO1-EFS | _ | - | - | GMH11 | TLH EFS | YTR50 | H-11 |
| 1.2365 | VCM | W320 | 32CrMoVi2-28 | UTOP 33-EFS | - | SKD7 | - | GMH10 (ESR) | _ | YTR65 | H-10 |
| 1.2714 | VMO | W500 | 56NiCrMoV7 | UTOP EX2 | ESKY0S2 731 | SKT4 | - | GMKT4 | TBN EX | YTR6A | L6 |

Cold Work Steel -

| DIN STANDARD | BRAZIL | AUSTRIA | SWEDEN | EN | SLOVANIA | ITALY | JIS | S.KOREA | CZECH REP. | CHINA | AMERICAN |
|-----------------|--------|---------|--------|---------------|----------|-------------|-------|---------|------------|-----------|----------|
| 1.2379 | VD2 | K110 | XW-41 | X155CrVMo12-1 | OCR12VM | DUYO \$2379 | SKD11 | STD11 | 2002K | Cr12Mo1V1 | D-2 |
| 1.2080 | _ | K100 | - | X210Cr12 | OCR12VM | - | SKD1 | - | 2002 | Cr12 | D-3 |
| 1.2510 | VND | K460 | - | 100MnCrW4 | OW4 | - | SKS3 | _ | STABIL K | 9CrWMn | O-1 |
| DC 53 | - | _ | - | - | - | - | - | _ | - | - | _ |
| 1.2357 | _ | - | - | - | - | - | - | - | - | - | S-7 |



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EN-41B GRADE.
EN-24,EN-353,EN-19,16MnCr5,SAE8620
SAE 4140,42CrMo4, EN-36, 20MnCr5
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