

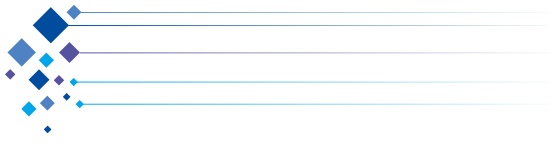
# Performance Par Excellence



Metal Working Fluids

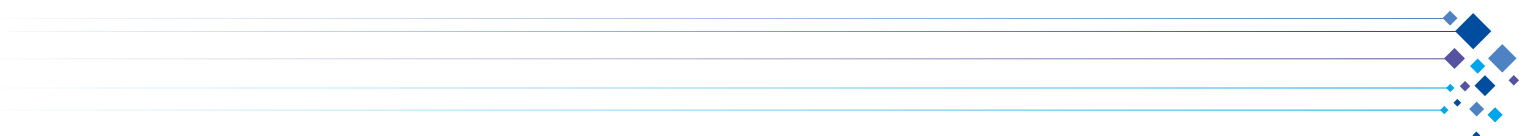
Industrial Oils

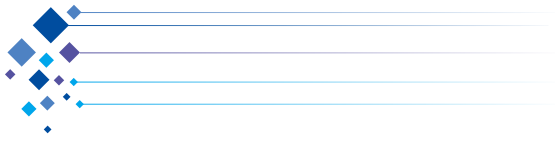




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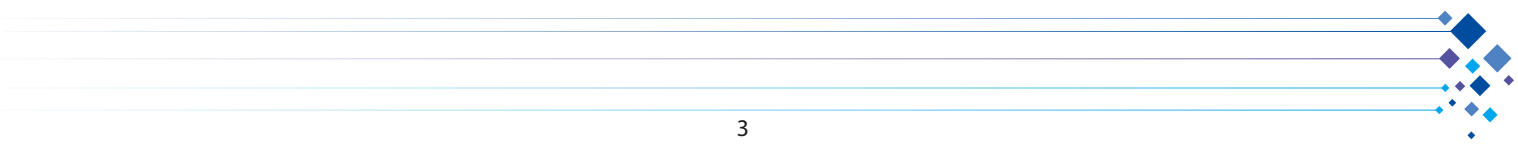
# WIDE RANGE OF INDUSTRIAL OILS



## METAL WORKING FLUIDS

### Partnering tools for better results

These oils protect tools at high temperatures during metalworking. They make for a dependable, stable performance, ensuring quality surface finishes, rust protection, and consistent productivity.



## DIVYOL SOLUBLE CUTTING OIL – PRO CUT SS

### Applications:

Divyol Pro Cut SS is a semi-synthetic, water-miscible cutting fluid containing lower percentage of mineral oil. This amber-coloured heavy duty cutting oil is specially formulated for general to severe machining applications on cast iron, carbon steel and ferrous alloys and for less severe operations on stainless steel. It is suitable for operations like drilling, milling, boring, tapping, reaming, turning and grinding operations. Recommended concentrations are: 3% to 4% for grinding, 5% to 7% for normal operations, and 8% to 12 % for difficult operation.

### Advantages:

Divyol Pro Cut SS cutting oil, when mixed with water, forms a lasting, stable and finely dispersed, translucent emulsion. It imparts good surface finish and provides excellent rust protection. This easy-to-use formulation causes less foaming even in soft water and its balanced EP package helps extend service life of tools.

### Typical properties:

Sr. No.	Characteristics	Test Method	Divyol Pro Cut SS
1	Appearance	Visual	Bright and clear
2	Kinematic viscosity at 40 °C, cSt, min.	ASTM D 445	63.90
3	pH of 5% solution, min	–	9.0
4	Emulsion stability 5% in water	IS:1448:P:98	Complies
5	Emulsion stability 8% in water	IS:1448:P:98	Complies
6	Cast iron corrosion in 400 ppm water	IS:1115: Appendix A	Complies

The above properties are typical values and do not constitute specification of the product.

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# DIVYOL SOLUBLE CUTTING OILS – CUT 200 / 300 / 400 / 500 / 800 / 1000

**Applications:**

Divyol Soluble Cutting Oils of grades 200, 300, 400, 500, 800 and 1000 are specially formulated for working on ferrous materials. These blends can be used in severe operations like turning, drilling, milling etc. Of these Divyol Cut 800 and Divyol Cut 1000 can be used in water of 800 and 1000 ppm hardness. The emulsions are to be prepared by adding oil to water and not vice-versa. It is advisable to prepare the emulsions just before use or not later than the same day.

**Standards:**

Divyol Soluble Cutting Oils are blended with select bactericides and conform to IS:1115-1986 performance specifications.

**Advantages:**

Divyol Soluble Cutting Oil prevents rusting of the work piece and machine tool beds, thereby extending their service life. The blend's bactericidal additives ensure a stable emulsion for a reasonable duration. It also imparts good surface finish to the work piece. It causes no foaming or staining and is operator-friendly.

**Typical properties:**

Sr. No.	Characteristics	Test Method	Divyol Soluble Cutting Oils					
			Cut 200	Cut 300	Cut 400	Cut 500	Cut 800	Cut 1000
1	Appearance	Visual	Bright and clear	Bright and clear	Bright and clear	Bright and clear	Bright and clear	Bright and clear
2	Kinematic viscosity at 40 °C, cSt, min.	ASTM D 445	20	20	20	20	25	25
3	Copper corrosion at 100 °C for 3 hrs.	ASTM D 130	1a	1a	1a	1a	1a	1a
4	Cast iron corrosion	IP:125	Complies	Complies	Complies	Complies	Complies	Complies
5	Emulsion stability and frothing	ASTM D 1479	Complies	Complies	Complies	Complies	Complies	Complies

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## DIVYOL SOLUBLE CUTTING OIL – SYNTH CUT HEAVY / LIGHT COOLANT

### Applications:

Divyol Synth Cut Heavy and Light are synthetic coolants suitable for grinding ferrous metals, especially cast iron. However, their use with cupric alloys should be avoided.

Cleanliness essential: before introducing Divyol Synth Cut Heavy/Light solution into a new system, the system should be thoroughly cleaned of all impurities and flushed with a mixture of 80% water and 20% Divyol Synth Cut Heavy/Light. These Oils form a translucent solution. These synthetic, water soluble coolants are fast becoming popular choice in the engineering industry because of their superior rust preventive properties as compared to mineral oil-based coolants.

### Advantages:

Divyol Synth Cut Heavy and Light coolants provide excellent cooling and lubrication of the grinding system. They also protect ferrous components from rusting, thus reducing machine down time. The blends, being synthetic, are able to resist bacterial degradation, thus ensuring a stable emulsion for a longer period, even in hard water. There is also no discoloration or unpleasant odour from the emulsion. Divyol Synth Cut Heavy and Light coolant fluids are not only efficient and user-friendly, they are also eco-friendly.

### Typical properties:

Sr. No.	Characteristics	Test Method	Divyol Synth Cut	
			Heavy	Light
1	Appearance	Visual	Bright and clear	Bright and clear
2	Copper corrosion at 100 °C for 3 hrs. max.	ASTM D 130	1a	1a
3	Odour	-	Acceptable	Acceptable
4	Sulphated Ash % Wt	-	0.94	0.90
5	pH 3% emulsion	-	8.7	8.5
6	Cast iron corrosion	IP:125	Complies	Complies

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## DIVYOL SOLUBLE CUTTING COOLANT – BIOSYNTH MA

### Applications:

Divyol Biosynth MA is a semi-synthetic cutting oil for use on ferrous, non-ferrous and alloy metals. It is widely considered an efficient coolant for turning, milling, grinding and various other operations involving cast iron.

### Advantages:

Divyol Biosynth MA offers a significant number of benefits compared to conventional mineral based cutting oils. Besides being effective as lubricant and coolant for a good duration, it is also user-friendly: if the operator's hand comes in contact with the oil, it causes no itching. Being of synthetic blend, it also resists bacterial degradation, prevents rusting (especially on ferrous components) and ensures stable emulsion for a reasonably long period, even in hard water (of up to 500 ppm hardness). There is no unpleasant odour or discoloration of the emulsion. Its good EP properties enable superior surface finish, whereas mineral based products have been found wanting due to inadequate flushing. It also has good anti-foaming properties and reduces machine downtime. Lastly, they are nitrite free making them eco-friendly.

### Typical properties:

Sr. No.	Characteristics	Test Method	Divyol Biosynth MA
1	Appearance	Visual	Bright and clear
2	Colour	ASTM D 1500	Brownish
3	Kinematic viscosity at 40 °C, cSt, min.	ASTM D 445	70
4	PH 3% solution in T/W	ASTM D	9.50
5	Cast iron corrosion	IP:125	Complies
6	Emulsion stability 3% solution	ASTM D 1479	Complies

The above properties are typical values and do not constitute specification of the product.

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## DIVYOL SOLUBLE CUTTING COOLANT – BIOSYNTH G1000 / G2000 / G3000

### Applications:

Divyol Biosynth G1000, G2000 and G3000 are specially formulated semi-synthetic cutting oils for ferrous, non-ferrous and alloy metals. These coolants are suitable for turning, milling, grinding and various other operations involving cast iron, especially for grinding ferrous metals.

Divyol Biosynth G2000 and G3000 are recommended for all types of coolant systems except high pressure ones like VMC.

While using Divyol Biosynth G1000, water hardness must be maintained at above 100 ppm.

Clean system essential: before introducing any grade of Divyol Biosynth into a new system, the system should be thoroughly cleaned of all impurities and flushed with a mixture of 80% water and 20% Divyol Biosynth of the same grade.

### Advantages:

Divyol Biosynth has the added advantage of operator safety compared to conventional mineral oil-based cutting oils. If the operator's hand comes in contact with the fluid, it causes no itching. Being a synthetic blend, it also resists bacterial degradation, prevents rusting (especially on ferrous components) and ensures stable emulsion for a reasonably long period. There is no unpleasant odour or discoloration of the emulsion. Its mild EP properties enable superior surface finish, whereas mineral based products have been found wanting due to inadequate flushing. Being nitrite free, they are also eco-friendly.

### Typical properties:

Sr. No.	Characteristics	Test Method	Divyol Biosynth		
			G 1000	G 2000	G 3000
1	Appearance	Visual	Bright and clear	Bright and clear	Bright and clear
2	Colour	ASTM D 1500	Greenish	Greenish	Greenish
3	Kinematic viscosity at 40 °C, cSt min.	ASTM D 445	25 – 60	50.00	45.00
4	PH 3% solution in T/W	ASTM D	9.12	9.00	9.00
5	Cast iron corrosion	IP:125	Complies	Complies	Complies
6	Emulsion stability 3% solution	ASTM D 1479	Complies	Complies	Complies

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## DIVYOL BROACHING OILS – NO. 1 / M

### Applications:

Divyol Broaching Oils No.1 and M are specially formulated blends of highly refined mineral oil base stocks, chlorine, fat and sulphur as extreme pressure additives. These oils act chemically at elevated temperatures forming a solid metallic film, while simultaneous cooling imparts a surface finish to the component. The robustness of Divyol Broaching Oil makes it ideal for use in cutting operations where extreme lubrication is required, especially in broaching and gear cutting of steel, stainless steels and nickel alloys. It is suitable also for broaching of medium carbon steel of automotive components as well as shaving and gear cutting operation where anti-chip welding properties are most essential.

### Advantages:

Divyol Broaching Oils No.1 and M have a high flash point ensuring greater operator safety with zero health hazards. Their unique combination of light bodied base oils and select additives gives the oils excellent EP resistance. These qualities result in excellent heat dissipation, quick chip flush out, smooth polished surfaces of finished components and longer service life of broaches. They cover most of product application range and prove to be reliable and economical in usage requiring minimum top-up.

### Typical properties:

Sr. No.	Characteristics	Test Method	Divyol Broaching Oils	
			No. 1	M
1	Appearance	Visual	Bright and clear	Bright and clear
2	Flash point COC, °C, min.	ASTM D 92	175	170
3	Kinematic viscosity at 40 °C, cSt , min.	ASTM D 445	17.5	17.9
4	Chlorine	IS:1448 P:50	Yes	Yes
5	Sulphur	-	Yes	Yes
6	Fats	-	Yes	Yes
7	Saponification value mg KOH/g	IS:1448 P:55	3.5	3.5
8	Cu Corrosion at 100 °C, 3 hrs.	IS:448 P:15	4c	4c
9	4 Ball, EP weld load, kg	ASTM D 2783	1200	1200

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## DIVYOL HONING OILS

### Applications:

Divyol Honing Oils of grade 980 and 981 are very low viscosity oils with excellent lubricity for machining operations, like honing, turning, drilling, tapping, broaching and boring of all ferrous and non-ferrous metals and their alloys, where non-staining type, light coloured, low viscosity oil is required. They are especially recommended for honing or micro finishing applications on toughened steels, e.g. bearing steels and nickel alloys. They are also suitable for light drawing and forming applications of aluminium components.

### Standards:

Divyol Honing Oils of grade 980 and 981 meet performance standards as per IS:3065 Type I Grade II.

### Advantages:

Divyol Honing Oils are most efficient at swarf flushing and possess good heat carrying capacity. They impart excellent surface finish to machined components and improve critical tolerances. Their low viscosity and excellent surface coverage reduces drag-out. The blend causes a negligible odour and less misting resulting in better visibility of work piece. Regular usage leads to maximum cutting rates and service life of the abrasive and honing stone, even when working on difficult materials like stainless steel.

### Typical properties:

Sr. No.	Characteristics	Test Method	Divyol Honing Oils	
			DIVYOL HONE OIL 980	DIVYOL HONE OIL 981
1	Appearance	Visual	Bright and clear	Bright and clear
2	Colour	ASTM D 1500	Red	Red
3	Flash point COC, °C min.	ASTM D 92	120	115
4	Pour point, °C max.	ASTM D 97	-3	3
5	Kinematic viscosity at 40 °C, cSt, min.	ASTM D 445	4.5	5
6	Polar compounds (1%)	-	Yes	Yes
7	Copper strip corrosion	IS:1448 P:16-1976	1a	1a
8	Acidity, mg KOH/g	IS:1448 P:2-1967	0.3	0.3

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# DIVYOL NEAT CUTTING OILS – ST CUT 154 / 155 / 156

## Applications:

Divyol ST Cut 154, 155 and 156 are non -staining type neat cutting oils recommended for heavy duty applications like gear hobbing, thread cutting and less severe machining operations on high tensile steel and some alloys.

Divyol ST Cut 154 and 155 are recommended for cold forging operation of high tensile nuts.

Divyol ST Cut 156 is recommended for cold forging operations of high tensile bolts and rivets.

## Standards:

Divyol ST Cut 154, 155 and 156 are special blends comprising highly refined virgin base stocks of medium viscosity and fatty oils. The blends are further fortified with chlorinated additives and inactive sulphur. They meet performance specifications as per IS:3065: 1985, Type I Grade II.

## Advantages:

Divyol ST Cut 154, 155 and 156 have high performance additives that give the blends their EP properties and enable maximum surface coverage (wetting characteristics). They also possess higher heat dissipation capacity and impart a superior surface finish. They can be used for multiple operations and result in longer service life of tools.

## Typical properties:

Sr. No.	Characteristics	Test Method	Divyol ST Cut		
			154	155	156
1	Appearance	Visual	Bright and clear	Bright and clear	Bright and clear
2	Colour	ASTM D 1500	Brownish	Brownish	Brownish
3	Kinematic viscosity at 40 °C, cSt, min.	ASTM D 445	35 – 40	33 – 36	65 – 75
4	Flash point COC, min	ASTM D 92	190	180	190
5	Pour point, °C, max.	ASTM D 97	-6	-3	-3

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## DIVYOL NEAT CUTTING OIL – CUT 5

### Applications:

Divyol Cut 5 is a neat cutting oil recommended for grinding, honing, super-finishing and light duty cutting operations. It can also be used as replacement to water-miscible emulsions in conventional machining. It is widely used for machining on ferrous materials, aluminum alloys and yellow metals.

### Advantages:

Divyol Cut 5 enables higher heat dissipation and imparts excellent surface finish to work pieces. It can be used for multiple operations. Its usage leads to longer service life of tools and it is environment-friendly. The product is biodegradable in soil and water, non-toxic for humans or the environment and not an irritant to the skin if it comes in contact with the oil. The product is label free.

### Typical properties:

Sr. No.	Characteristics	Test Method	Divyol Cut 5
1	Appearance	Visual	Bright and clear
2	Colour	ASTM D 1500	00.5
3	Kinematic viscosity at 40 °C cst	ASTM D 445	5.26
4	Flash point °C (COC) min.	ASTM D92	110
5	Pour point °C max.	ASTM D97	-9

The above properties are typical values and do not constitute specification of the product.

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## DIVYOL NEAT CUTTING OILS – ST CUT 10 TO 50M

### Applications:

Divyol ST Cut is a series of high performance multipurpose neat cutting oils formulated with high quality refined mineral oils and select additives to ensure cost effective machining operations. These non-staining and non-corrosive products are designed for light and moderate duty metal working operations, especially recommended for surface and flute grinding of hardened parts. They are also recommended for machining operations of high tensile stainless steel as well as nickel-chromium alloys on automates, gear cutting, hobbing, drilling/reaming and thread cutting machines. These oils are widely used as an economical replacement of soluble cutting oils for obtaining a better finish on ferrous and non-ferrous metals.

### Standards:

Divyol ST Cut series of cutting oils conform to performance specifications as per IS3065: 1985 Type I & II Grade.

### Advantages:

Divyol ST Cut series of fluids give superior surface coverage which improves their cooling ability. They impart a better surface finish to metal components after machining and are non-corrosive and non-staining on non-ferrous metals. They help extend service life of the cutting tools.

### Typical properties:

Sr. No.	Characteristics	Test Method	Divyol ST CUT										
			10	10L	12	23M	25	25M	26	28	35	45	50M
1	Appearance	Visual	Bright and clear	Bright and clear	Bright and clear	Bright and clear	Bright and clear	Bright and clear	Bright and clear	Bright and clear	Bright and clear	Bright and clear	Bright and clear
2	Flash point, COC, °C, min.	ASTM D 92	150	150	150	196	140	170	190	190	160	190	228
3	Pour point, °C, max.	ASTM D 97	+8	-21	-3	-6	8	-6	-3	-3	6	3	-6
4	Kinematic, viscosity at 40 °C, cSt, min.	ASTM D 445	12	13.05	7.92	28.36	22 – 25	38.09	28.11	31.80	40 – 45	35 – 45	49.80

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# DIVYOL STAINLESS STEEL WIRE DRAWING OILS – FN42 / FN202 / FN204

**Applications:**

Divyol Stainless Steel Wire Drawing Oils FN42, FN202 and FN204 are highly sulphurised, low and medium viscosity fluids recommended for steel wire drawing applications as well as cold forming and heading operations on ferrous and non-ferrous metals. The blends are also suitable for forming large fastener plugs and bolts in heading machines where high EP properties are expected. They are widely used for formation of ferrous metals and high alloy steels. This versatility is due to the blends’ EP qualities. Divyol Stainless Steel Wire Drawing Oils are best used in neat form and not recommended for use on copper or cuprous metals.

**Advantages:**

Divyol Stainless Steel Wire Drawing Oils offer superior surface coverage (wettability) which enhances their cooling ability. Their high sulphur content helps form a high strength molecular sulphide film at the point of contact between the metal surface and the die. This film reduces friction and withstands high temperatures, thus protecting the die from wear and also providing excellent surface finish. Though they are mainly used for stainless steel wire drawing operations, they meet a wide range of requirements, thus helping reduce the number of grades in use. These oils also do not emit unpleasant fumes and hence, are approved by machine operators.

**Typical properties:**

Sr. No.	Characteristics	Test Method	Divyol Stainless Steel Wire Drawing Oils		
			FN 42	FN 202	FN 204
1	Appearance	Visual	Bright and clear	Opaque (Semi-solid)	Bright and clear
2	Flash point COC, °C, min.	ASTM D 92	190	180	180
3	Pour point °C, max.	ASTM D 97	-3	-3	-3
4	Kinematic viscosity at 40 °C, cSt, min.	ASTM D 445	38	36	40
5	Saponifiable matter	P:55 of IS:1448	YES	YES	YES

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# DIVYOL GUN DRILLING OILS – NO. 1 / 1A / 1F / 2

## Applications:

Divyol Gun Drilling Oils 1, 1A, 1F and 2 are heavy-duty oil blends recommended for deep hole drilling, boring, broaching, gun drilling, tapping, milling, threading and honing operations of cast iron, steel and high-speed steel alloys. These oils are also used in machine tool industries, vertical machining centers, conventional lathe machine, milling and radial drilling machine and in multi spindle drilling. These oils were specially formulated to meet the higher performance levels required by some machine manufacturers and end-users. The high loading conditions encountered in the working of ferrous metals required the use of highly effective additives which have been incorporated in this formulation. Each grade in it comprises low viscosity base oils and select additives for required oiliness, extreme pressure performance and quick chip removal. Their low viscosity and the consequent higher thermal conductivity help maintain the tool edge temperatures within limits, thus ensuring better job finish and longer service life of tools.

## Advantages:

Divyol Gun Drilling Oils 1, 1A, 1F and 2 enable reduced friction and good anti-weld properties at the chip-tool interface, resulting in extended cutting tool life and good surface finishes on the machined parts. They enable excellent performance in the most difficult machining operations and also permit clear view of the work piece.

## Typical properties:

Sr. No.	Characteristics	Test Method	Divyol Gun Drilling Oils			
			NO 1	NO 1A	NO 1F	NO 2
1	Colour, max.	Visual	Bright and clear	Bright and clear	Bright and clear	Bright and clear
2	Appearance	Visual	Semi-transparent	Semi-transparent	Semi-transparent	Semi-transparent
3	Odour	Smell	Acceptable	Acceptable	Acceptable	Acceptable
4	Kinematic viscosity at 40 °C, cSt, min.	ASTM D 445	11	17.5	15.27	37.41
5	Flash point COC, °C, min.	ASTM D 92	160	160	170	180
6	Type	–	Sulphurised	Sulphurised	Sulphurised	Sulphurised
7	Chlorine	–	Yes	Yes	Yes	Yes

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## DIVYOL NEAT CUTTING OILS – ST CUT 52 / 53 / 54 / 55 / 67

### Applications:

Divyol ST Cut 52, 53, 54, 55 and 67 are a premium series of oil formulated with select refined base oils and a combination of high performance additives comprising sulphur, fat and performance chemicals. These oils are designed for lubrication and cooling of metal surfaces in severe operating condition on tough ferrous metals. They are recommended for most metal working operations, e.g. gear cutting, broaching and threading on ferrous metals and alloys, except on non-ferrous and cuprous metals.

### Standards:

Divyol ST Cut of grades 52, 53, 54, 55 and 67 conform to IS: 3065: 1985 type 3 Grade III performance standards.

### Advantages:

Divyol ST Cut of grades 52, 53, 54, 55 and 67 have proven to be excellent general purpose straight cutting oils with a satisfactory performance over a wide range of machine tool speeds and cutting depths. Their high weld load properties enable machining under the most arduous metal working operations on tough ferrous metals, resulting in longer service life of cutting tools.

They impart an excellent surface finish on worked metal components. They cause very low active sulphur drop-outs, leading to sustained EP properties. They are cost-effective in operations, helping to reduce maintenance costs, which in turn has made them industry favourites and reduced the number of cutting oil grades in use.

### Typical properties:

Sr. No.	Characteristics	Test Method	Divyol ST Cut				
			52	53	54	55	67
1	Colour, max.	ASTM D 1500	2.0	4.0	4.0	4.0	5.0
2	Appearance	Visual	Bright and clear	Bright and clear	Bright and clear	Bright and clear	Bright and clear
3	Flash point, COC, °C, min.	ASTM D 92	165	180	180	180	180
4	Pour point, °C, max.	ASTM D 1500	-3	-3	-3	-3	-3
5	Kinematic viscosity at 40 °C, cSt min.	ASTM D 445	24.0	30 – 38	35	36 – 40	62 – 74
6	Copper strip corrosion 3 hrs. at 100 °C, max.	ASTM D 130	4	4	4	3	3
7	EP weld load kg	–	800	800	800	800	800

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## DIVYOL NEAT CUTTING OILS – ST CUT OIL 677 / 678

**Applications:**

Divyol ST Cut Oils 677 and 678 are non-staining type neat cutting oil blends recommended for cold forging operation of small, medium and big size stainless steel fasteners.

**Standards:**

Divyol ST Cut Oil blends are formulated using highly refined virgin base stocks of medium viscosity and fatty oils besides inactive sulphur and chlorinated additives. These formulations meet the performance standards as per IS 3065- 1985, TYPE II, Grade 3 (RE-AFFIRMD 1995).

**Advantages:**

Divyol ST Cut Oil blends, both 677 and 678, have higher heat dissipation capacity and give maximum surface coverage (wetting) of worked metals. Select additives give the blends superior EP properties. They impart excellent surface finish, cause no staining and lead to longer service life of tools. These oils can be used for multiple operations.

**Typical properties:**

Sr. No.	Characteristics	Test Method	Divyol	
			ST CUT 677	ST CUT 678
1	Appearance	Visual	Bright and clear	Bright and clear
2	Colour	ASTM D 1500	Dark brown	Dark brown
3	Specific gravity at 29.5 °C	ASTM D 1298	0.878	0.895
4	Kinematic viscosity at 40 °C, min., cst	ASTM D 445	55 – 65	60 – 80
5	Flash point °C (COC) min.	ASTM D 92	160	190
6	Pour point °C max.	ASTM D 97	-3	-3
7	Saponification value, mg KOH/g	P:55 of IS:1448	Nil	15
8	Contains:			
	inactive sulphur	–	Yes	No
	chlorine	–	No	Yes

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ISO 9001:2015, ISO 14001:2015, ISO 45001:2018, GMP Certified, NABL Accreditation and Government Recognized Three Start Export House

**Registered Office**

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Email: [sales@gandharoil.com](mailto:sales@gandharoil.com) | Website: [www.gandharoil.com](http://www.gandharoil.com)

**Branch Offices and Depots**

Pune | Baroda | Indore | Raipur | Udaipur | Jaipur | Delhi | Faridabad | Ghaziabad | Sonapat | Manesar | Haridwar | Patna | Hyderabad | Mangalore | Bangalore  
Guwahati | Varanasi | Hapur | Dharamtar | Jaigarh | Kandla | Surat (Magdalla) | Navlakhi | Krishnapatnam | Vishakapatnam | Gangavaram

**Plants**

Taloja | Silvassa | Sharjah