

## CIXON

- |                                  |                 |
|----------------------------------|-----------------|
| 1. Specific Gravity at 15.5/15.5 | : 0.7 to 0.75   |
| 2. Distillation range            |                 |
| IBP°C Min                        | : 65            |
| FBP                              | : 110-120       |
| 3. Flash Point                   | : 110-120       |
| 4. Moisture                      | : 500 PPM Max   |
| 5. Aromatic Content              | : 4% Max by Wt. |

## ORTHO XYLENE

1. Appearance	:	Bright and clear
2. Ortho xylene content	:	95% by wt Min.
3. Meta + Paraxylene, wt%	:	3 Max
4. Non – Aromatics, wt%	:	1.5 Max.
5. Flash Point, °C Min.	:	24
6. Boiling Point, °C	:	144
7. Density		
at 4°C	:	0.880 gm/ml
at 25°C	:	0.876 gm/ml
8. Molecular wt	:	106

## ACETIC ACID

1. Molecular Weight	:	60.05
2. Acetic Acid Content	:	99.5% by wt, Min.
3. Acetadehyde content	:	0.05% by wt, Max.
4. Formic Acid Content	:	0.15% by wt, Max.
5. Water content	:	0.5% by wt, Max.
6. Colour	:	25 Platinum Cobalt, Max
7. Freezing Pint	:	15.6°C, Min.
8. Suspended matter	:	Substantially free.

## BUTYL ACETATE

1. Butyl Acetate Content, Min.	:	97% by wt.
2. Specific Gravity at 20/20°C	:	0.879 to 0.883
3. Acidity as Acetic Acid, Max	:	0.03%
4. Water Content	:	Miscible without Turbidity with 19 volume of 60 of API Gasoline at 20°
5. Distillation Range		
IBP Min	:	119°C.
DP Max.	:	130°C.
6. Colour, Platinum Cobalt Scale, Max.	:	15
7. Suspended matter	:	Substantially free

## ETHYL ACETATE

1	Molecular Weight	:	88.1
2	Specific Gravity at 20/20°C	:	0.8975 to 0.9018
3	Ethyl Acetate Content, Min.	:	0.02% by wt.
4	Water Content	:	Miscible without Turbidity with 19 volume of 60 of API Gasoline at 20°
5	Distillation Range		
	IBP Min	:	74°C.
	DP Max.	:	80°C.
6	Colour, Platinum Cobalt Scale, Max.	:	15
7	Suspended Matter	:	Substantially free.

## BUTANOL

1	Specific gravity at 20/20°C	:	0.8100 to 0.8120.
2	Acidity as Acetic Acid, Max	:	0.005% by wt.
3	Water Content, Max	:	0.15% by wt.
4	Distillation Range	:	Shall entirely distill within a 2.5°C range which shall include 117°C the boiling point
5	Colour, Platinum Cobalt Scale, Max.	:	15.
6	Suspended matter	:	Substantially free.

## ALPROL (BASE OIL)

	N12	N32	N100	N150	N220	N320	N450	N500
APPEARANCE	BRIGHT & CLEAR							
Colour, ASTM Max.	1.5	1.5	4	6	6	6	5	5
Density @ 29.5°C	0.865	0.873	0.885	0.983	0.906	0.887	0.898	0.899
Flash Point, COC °C Min	160	190	224	240	240	240	270	270
Pour Point, °C Max	0	0	0	0	0	0	0	0
Viscosity, Kinematic, cSt @ 40°C	9.5-19.5	29-34	90-105	140-180	245	300-340	414-505	520
@ 100°C	3.5	5.1	10.6	12-17	17.5-23	23.5	30	29.8-33
Viscosity Index Min	95	95	95	90	90	90	90	90

## BASE OIL

<u>Characteristic</u>	<u>ASTM METHOD</u>	<u>500SN</u>	<u>BRIGHT STOCK150</u>
Appearance	Visual	C&B	C&B
Viscosity, @ 40°C, cst	D-445	90-105	-
Viscosity, 100°C, cst	D-445	-	31-33
VI, min	D-2270	95	95
Pour Pt, Max °C	D-97	-9	-6
Flash Pt, (COC), Min °C	D-92	230	300
Colour, Max	D-1500	4.0	6.5



SOLVENT C – 9

ANALYTICAL ITEMS	UNIT	METHOD	SPECIFICATIONS		RESULTS
			MIN	MAX	
DENSITY @ 15 DEG.C	KG/L	ASTM D4052	860	890	874.7
COLOUR SAYBOLT		ASTM D156	+25		+30
FLASH POINT (ABEL)	°C	IP 170	34		41.5
AROMATICS	%VOL	ASTM D1319	99		>99
DISTILLATION @ 760 MMHG		ASTM D1078			
IBP	°C		150		158.1
DP	°C			170-185	171.1
RECOVERED @ 155°C	%			10	NIL

### **SOLVENT HEPTON**

- |                       |   |                    |
|-----------------------|---|--------------------|
| 1. Flash point, °F    | : | Less than 50       |
| 2. Density            | : | 0.71 to 0.77 gm/ml |
| 3. Distillation Range | : |                    |
| IBP                   | : | Approx 55 to 65    |
| FBP                   | : | Approx 120 to 130  |
| 4. Aliphatics         | : | 60 to 65%          |
| 5. Toluene            | : | 28 to 38%          |

## MINERAL TURPENTINE OIL (HPCL)

1. Colour (Saybolt) Min	:	21
2. Colour (ASTM) Max	:	-
3. Density at 15 °C gm/ml	:	Not limited but to be reported
4. Flash Point (Abel) °C Min	:	30
5. Distillation Range		
a) IBP °C Min	:	125
b)FBP (MAX)	:	240
c) Dry Point °C max	:	-
6. Aromatic Content % by Volume	:	40 Max
7. Residue on evaporation mg/100 ml max :		5
8. Copper strip corrosion for 3 hrs. at 50 °C :		Not worse than No.1

Hp Solvent Mineral Turpentine 2445 confirming to ISI Specification No. is 1745:1978

**INDIAN OIL CORPORATION LTD.,**  
**SPECIFICAION FOR MTO (I.O.C. KOYALI)**  
**IS : 1745-1978**

CHARACTERISTICS	Solvent 125/240	Solvent 145/202 (Low Arrawals)	Method of test
Colour (saybolt), Min Colour (ASTM), Max Density at 15°C, g/ml Flash point (Abel), Min Distillation range : a) Initial boiling point, Min b) 50% by Vol. recovered at, in °C c) 95% by Vol. recovered at, in °C d) Final Boiling Point, Max Dry point, Max Aromatic content, % by Vol Sulphur Total, % by mass, Max. Copper strip corrosion for 3 hrs. at 50°C Residue on evaporation mg/100 ml Max.	+21  Not limited but to be reported 30°C  125°C Not limited but to be reported Not limited but to be reported 240°C - 40 Max - Not worse than No. 1P:15  5	+20 -  35°C  145°C   205°C - 40 Max   5	P:14 P:12 P:16 P:20 P:18      P : 23 or P : 48 P : 34 or P : 83   P:29 (Airjet)

## RCF – METHANOL

### SPECIFICATIONS :

Methanol content	% by wt. min.	99.85
Density at 20C	gm/cc min.	0.792
	max.	0.795
Water	% by wt. max.	0.05
Dustillation range at 760 mm. of Hg.	% by wt. max. (64.5 °C to 65.5 °C)	1°C
Colour	Hazen Max	15
Residue on evaporation	ppm. Max.	10
Acidity as Formic Acid	ppm. Max.	30
Acetone (Aldehyde/Ketone)	% by wt. max.	0.015
Miscibility with water	Miscible in all proportions without development of turbidity.	
Carbonisable matter	APHA Max	50
Permanganate test	Passes test	
Sulphur total	max. ppm	10

Corrosive Sulphur Passes Test as per ASTMD 130-94

Conforms to IS : 517 : 1967 and BS : 506 : 1966.

Alkalinity to Phenolphthalein Passes B S S

Passes Copper Corrosive Test and meets aviation grade.

## MIX XYLENE – RELIANCE MAKE

Sl. No .	PARAMETER	Method No. ASTM	UNIT	SPECIFICATION	RESULTS
1.	Appearance (#)	D-4176		Clear liquid free of sediment & haze observed at 18 to 26°C	Clear Liquid free of sediment & haze observed @ 25°C
2.	Colour (#)	D-1209	APHA	20 max.	<10
3.	Relative Density @ 15.56 / 15.56°C	D-4052		0.865-0.877	0.8718
4.	Total aromatics HC	D-6563	% wt	99 min	99.91
	Benzene		% wt	0.5 max	<0.01
	Toluene		% wt	1 max	0.78
	Ethyle Benzene		% wt	@ @	52.09
	Mixed Xylenes		% wt	@ @	46.02
	C9 & heavies ##		% wt	@ @	1.02
	Non Aromatics		% wt	1 max	0.09
5.	Distillation Range	D-850	°C		
	IBP TO DP			7 max	4.0
	IBP			136 min	136.8
	DP			143 max	140.8
6.	Acid Wash Colour	D-848	-	6 max.	-1
7.	Acidity	D-847	mgKOH/100 ml	Not detected	Nil
8.	Cu Corrosion	D-849		To pass (1A or 1B)	Passes
9.	Total Sulphur (#)	D-3120	Wt. ppm	1 max	<0.5
10	Flash Point (Able CC)	IP-170	°C	23 min	26

**HIGH DENSITY POLYTHENE**  
**G-LENE**  
**TYPICAL PROPERTIES**

Grade	MFI (gm/10 min.) (2.16 kg.) At 190°C	Density (gm/cm <sup>3</sup> )	Mol. Wt. Distributi on	Application
<b>INJECTION MOULDING</b>				
I 58A 180	18	0.958	Narrow	Houseware-buckets, tubes etc.
I 65A 130	13	0.965	Narrow	Houseware-pails, toys, sundry goods, tote boxes, large frozen food containers
I 68A 055	5.5	0.968	Narrow	Industrial containers, bottles, crates, vegetable crates.
I 68U 055	5.5	0.968	Narrow	Outdoor application such as containers, shipping crates, luggage etc.
<b>BLOW MOULDING</b>				
B 59A 003	0.35	0.959	Wide	Small containers such as Detergent bottles, cosmetic bottles
B 63A 003	0.3	0.963	Medium	Medium sized containers for Kerosene
B 55HM 0003 (HMHDPE)	0.03	0.955	Wide	Large containers for storage & transport of chemicals, non edible oil, etc.,
<b>RAFFIA</b>				
W 54A 011	1.1	0.954	Narrow	Stretched tape for waven bags and fabrics, jumbo bags, tarpaulins, etc.
<b>MONOFILAMENT</b>				
M 54 A 001	0.8	0.954	Narrow	Rope, nets, general purpose monofilament
<b>PIPE</b>				
P 54A 001	0.11	0.954	Very wide	Small/medium pipes for water supply system
P 61A 0004	0.04	0.961	Very wide	Large pipes for civil, sewage application
<b>FILM</b>				
F 56HM 0004	0.04	0.956	Very wide	Merchant bags, carry bags, frozen food bags, tissue-like film
F 50HM 0003	0.03	0.950	Very wide	Ultra thin films, wraps, heavy duty bags

## INDUSTRIAL GREASES

1. LITHIUM SOAP GREASES	LITHON 2,3, EP 1, EP 2	LITHON M2	LITHOPLEX 2,3
2. CALCIUM SOAP GREASES	LIMAPLEX 0, 1, 2	PLUTEK1,2	DRAFLUBE 1, 2
3. NON-SOAP GREASES	TISONA 2	TISONA M2	



## INDUSTRIAL SPECIALITIES

1. METAL CUTTING FLUIDS	
2. METAL CUTTING FLUIDS	WATER MIX CUTTING FLUIDS PREPARATION OF SOLUBLE OIL EMULSION CHECKING OIL CONCENTRATION CONTROL OF OFFENSIVE ODOUR IN SOLUBLE OIL EMULSION
3. METAL CUTTING FLUIDS	WATER HARDNESS KOOLKUT 40 KOOLKUT 60
4. METAL CUTTING FLUIDS	KOOLKUT EP 66 KOOLKUT 70 KOOLKUT 80
5. METAL CUTTING FLUIDS	SYNTHKOOL 100
6. METAL CUTTING FLUIDS	STRAIGHT CUTTING FLUIDS STRAIGHT CUTTING FLUIDS (OILLESS TYPE) TRIMOFIN 14 TRIMOFIN 15 TRIMOFIN 16 & 18
7. METAL CUTTING FLUIDS	STRAIGHT CUTTING FLUIDS (NON-STAINING TYPE) TRIMOFIN 20 TRIMOFIN 21 TRIMOFIN 23 TRIMOFIN 25 TRIMOFIN 26 TRIMOFIN 27
8. METAL CUTTING FLUIDS	STRAIGHT CUTTING OIL (STAINING TYPE) TRIMOFIN 54 TRIMOFIN 55 TRIMOFIN 56 TRIMOFIN 58
9. METAL CUTTING FLUIDS	TRIMOL 225
10. METAL CUTTING FLUIDS	HP HOT ROLLING OIL
11. METAL ROLLING OILS	ROLMET N 34 ROLMET 40 ROLMET V 45 ROLMET C 12
12. QUENCHING OILS	METAQUENCH METAQUENCH 39, 40 METAQUENCH 42 METAQUENCH 43
13. QUENCHING OILS	METAQUENCH 44 METAQUENCH 85 METAQUENCH 86

14. RUBBER PROCESS OILS	ELASTO 165
	ELASTO 245
	ELASTO 255
	ELASTO 541
	ELASTO 590
	ELASTO 710
15. RUST PREVENTIVES	ELASTO 715
	RUSTOP
16. RUST PREVENTIVES	OIL FILM TYPE
	RUSTOP 285, RUSTOP 286, RUSTOP 287, RUSTOP S
	GREASY-FILM TYPE
	RUSTOR 387, RUSTOP 388
	SOLVENT CUT BACK TYPE
17. METAL DRAWING COMPOUNDS	RUSTOP 173, RUSTOP 184, RUSTOP 274, RUSTOP 276
	DRAWMET 15
	DRAWMET 22
	DRAWMET 44
	DRAWMET 66
18. HEAT TRASFER FLUIDS	HYTHERM 500
	HYTHERM 600
19. OTHER PRODUCTS	UNIPRO 36
	UNIPRO 37
	UNIPRO 38
	HP CONKOTE
20. OTHER PRODUCTS	HP SPRAY OIL E
	GRAMOL 40
	HP SULFOTAN
	CEMOL 35

## LUBRICATION FREQUENCY

Periodic lubrication holds well in cases of 'once through' lubrication or 'topping up' In the absence of the machinery manufacturer's recommendations about the frequency of the lubrication. You may consult the following lubrication frequency table that is based on our experience with our lubricants used in various types of machine parts. It may serve as a general guideline for your plant:-

LUBRICATION POINTS	LUBRICATION FREQUENCY
Grease nipple, cup and Automatic grease lubrication	18 to 24 Months.
Open gears	15 day of 8 Hours/Day Working
Bearings (Plain and Antifriction)	24 months
Enclosed gears (Spur, worm, bevel and helical)	3000 hours
Ring Oil bearings	1500 hours
Coupling (geared)	1500 to 2000 hours
Hydraulic system	9 months of 8 hours/Day Working
Compressors	6 months of 8 hours/Day Working