



"World Class Products"

SPECIALITY LUBRICANTS
LUBE OILS ★ METAL WORKING FLUIDS
★ RUST PREVENTIVES ★ GREASES



STANVAC - SUPERON GROUP - SPECIALITY LUBRICANTS

Stanvac – Superon group is today, India's leading innovator in the manufacture & marketing of specialised solutions for industrial repair, wear, corrosion, abrasion, electrical insulation, fire suppression, cleaning & degreasing, speciality lubrication.... India's widest variety of such, high performance “*World Class Products*”.

Estd in 1994, with import tie-up's with a number of world leaders, production of indigenized solutions began in 2004.

We today offer a full range of imported & indigenously manufactured speciality lubricants including :

- A. GREASES** - Lithium, lithium complex, bentone, moly, synthetic, silicone, high speed, high temperature....
- B. LUBE OILS** - Hydraulic, gear, chain, turbine...
- C. METAL WORKING FLUIDS** - Water soluble, semi-synthetic, synthetic....
- D. RUST PREVENTIVES** - Oil based, solvent based, water based...

Superior performance is **GUARANTEED** via the scientific tribological ACR approach, enabling better lubrication + cost economy, at **NO RISK** to the equipment.

Partners



ISO Certified Operations



Corporate Office



Plant II, Manesar



Plant III, Gurgaon



Plant-IV, Gurgaon



Bulk Blending



Lube Oil Plant



Grease Plant



Speciality Grease Blending



Tribological Testing



Test Lab



QC Lab



Warehousing

TRIBOLOGICAL ACR – ANALYSIS, COMPARISON & RECOMMENDATION AS PER ASTM D 2596, 2783 & 2266

We offer a unique service to Indian industry, to enable the scientific upgradation of grease/ lube oil performance & wear and friction reduction.

- ★ Tribological **Assessment** of the lubricant in present use.
- ★ Tribological **Comparison** of the lubricant in present use, with a suitable alternative from our range, on following three key points:
 - a) EP Weld Load.
 - b) Wear Scar.
 - c) Coefficient of Friction.
- ★ Tribological **Recommendation** of a suitable lubricant from our range, that will reduce wear & friction levels & enhance the performance of the equipment, scientifically & without any risk to the equipment - a fully reliable and safe methodology to improve lubrication & reduce wear.



Tribological Testing – Four Ball EP Load, Wear & Friction Test Equipment

(A)WHAT PARAMETERS ARE TESTED ?

1. Weld Load

- ★ The load at which the lubricant film ruptures, metal to metal contact takes place, friction & temperature go up & the balls weld together.
- ★ This confirms the EP or load carrying limit of the lubricant as well as its “ anti – scuff ” properties (prevention of pitting /metallic wear due to high load conditions).



2. Wear Scar

- ★ Wear seen on the three stationary balls after being subjected to rotational rubbing, with the fourth ball for 1 hour at fixed load, speed & temperature.
- ★ Depths of the wear scars at the point of contact are measured & an average value confirmed.
- ★ Lower the wear scar, better the anti-wear properties of the lubricant.

3. Coefficient of friction

- ★ Ratio of the force of friction between the balls & the force pressing them together.
- ★ Lower values (both initial, ie. “run-in” & average) confirm smoother surfaces & lower friction levels.
- ★ This results in lower operating temperatures, lesser wear, longer re-lubrication intervals & overall superiority of the lubrication.

Sample comparative reports of Superlith AP3, Castrol AP3 & Servogem EP-2 are as follows:

	Superon Schweisstechnik India Ltd. 191D, Sector-4, Phase-2, IMT Manesar Gurgaon Haryana-122050.India.	<h3 style="margin: 0;">FOUR BALL EP TEST REPORT WELD LOAD</h3>	Report No: GL/13/2010 Date: 10/6/2010								
TEST FOR EXTREME PRESSURE PROPERTY OF LUBRICANT		STANDARD : ASTM D 2596/IP 239									
TEST MATERIALS	1) Test ball: 4 no's, dia 12.7mm, E-52100 AISI steel with EP polished, 25 Grade, HRC 60, 5 Micron Tolerance 2) Name of the Product: <u>SUPERON SUPERLITH AP-3</u> /VS (<u>CASTROL AP-3</u> & <u>IOCL SERVO GEM EP-2</u>)										
Project name: Four ball tester		Customer:		Tested By:							
Type No: ↓		WO No:									
Test No	Normal load in Kg	Duration in seconds	Temperature in Centigrade	Coefficient of Friction	Speed in rpm	Scar Dia in mm of 1 st Ball	Scar dia in mm of 2 nd Ball	Scar dia in mm of 3 rd Ball	Average	Remarks	Computer File
		10+/-0.2s	35+/-2		1500						
1	250	10	35	-	1500	-	-	-	-	Passes	SUPERON SUPERLITH AP-3
2	315	-	35	-	1500	-	-	-	-	Failed	
1	150	10	35	-	1500	-	-	-	-	Passes	CASTROL AP-3
2	160	-	35	-	1500	-	-	-	-	Failed	
1	200	10	35	-	1500	-	-	-	-	Passes	IOCL SERVO GEM EP-2
2	250	-	35	-	1500	-	-	-	-	Failed	
Remarks:											
											 Testing Department



Superon Schweisstechnik India Ltd.
191D, Sector-4, Phase-2, IMT Manesar
Gurgaon Haryana, 122050.India.

FOUR BALL WEAR TEST REPORT WEAR SCAR

Report No: GL/19/1/2010

Date: 18/6/2010

TEST FOR WEAR SCAR PROPERTY OF LUBRICANTS

STANDARD : ASTM D 2266

TEST MATERIALS 1) Test ball: 4 no's, dia 12.7mm, E-52100 AISI steel with EP polished, 25 Grade, HRC 60, 5 Micron Tolerance

2) Name of the Product: **SUPERON SUPERLITH AP-3 V/S (CASTROL AP-3 & IOCL SERVO GEM EP-2)**

Project name: Four Ball Tester

Customer:-

Tested By:

Type No:

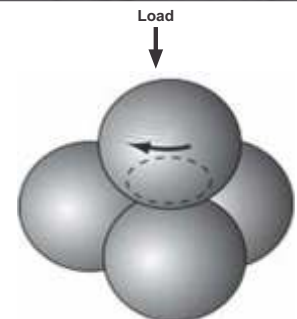
WO No:

Test no	Normal load in Kg	Duration	Temperature in Centigrade	Coefficient of Friction	Speed in rpm	Scar dia in mm of 1 st Ball	Scar dia in mm of 2 nd Ball	Scar dia in mm of 3 rd Ball	Average	Remarks	Computer File
			75								
1	40 kg	60 minutes	75	0.07116	1200	0.43	0.40	0.37	0.40 mm		SUPERON SUPERLITH AP-3
2	40 kg	60 minutes	75	0.09559	1200	0.43	0.57	0.49	0.50 mm		CASTROL AP-3
3	40 kg	60 minutes	75	0.08076	1200	0.48	0.56	0.47	0.50 mm		IOCL SERVO GEM EP-2

Remarks:







COEFFICIENT OF FRICTION TEST REPORT






(B) RELEVANCE OF COMPARATIVE "FOUR BALL" TRIBOLOGICAL TESTING:

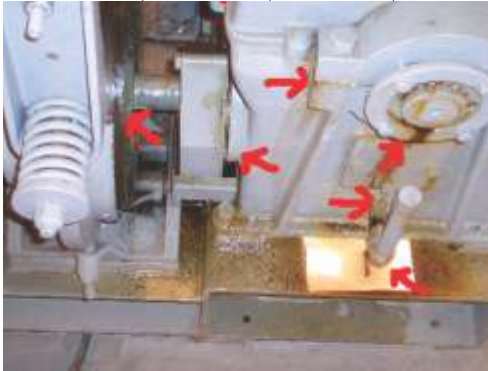


- ★ Load, friction & wear – all three key factors of effective lubrication are scientifically assessed.
- ★ The thereby be selected /developed. Lubrication thus is improved & wear is controlled. A superior lubricant can
- ★ Before any lubricant changeover, Tribological - "Four Ball" comparisons - under the ACR approach are therefore a scientific & safe methodology for achieving superior lubrication without any risk to the customers equipment.

I). HYDRAULIC OILS

S.No	Description	Base Oil type & VI	Base oil viscosity – ISO	Pour point	Flash point	Four ball wear scar, mm	Other	Applications			
01.	<p>CONOCO HC AW HYDRAULIC Premium anti wear - HLP hydraulic fluid for extremely severe application.</p> <ul style="list-style-type: none"> ★ Superior wear protection for hydraulic pumps & motors. ★ Exceptional oxidation & thermal stability. ★ Elimination of sludge & varnish deposits. ★ Excellent water separation properties. ★ Superior form release. ★ Outstanding working lifespan. 	Hydrocracked Group II VI 99	ISO 32, 46, 68 & 100	-34°C	>238°C	Passes FZG gear Test 12	>7500 TOST hours	<p>Hydraulic systems of plastic injection molding machines</p> <ul style="list-style-type: none"> ★ Automated machine tools ★ Lifts & cranes. High precision presses. Off road hydraulics. Diggers, earth movers and snow ploughs. ★ Refuse collection vehicles. Open cat mine machinery. Antiwear hydraulic fluid for plastic injection molding presses. ★ Chain drives. ★ Hydraulic systems on dump trucks, motor graders, bulldozers and forklifts. 			
											
02.	<p>SUPERON HYDRO AW General purpose antiwear hydraulic oil.</p> <ul style="list-style-type: none"> ★ Good thermal & oxidation stability. ★ Good antiwear properties. ★ Excellent demulsibility. ★ Control foam & air release properties. ★ Meets BIS 10522, DIN 51502- AW, FZG Test 10 stage pass. 	Mineral VI 95	ISO 32, 46, 68,100,150, 220,320,460	-9°C	>210°C	Passes FZG gear Test 10	3000 hours	<ul style="list-style-type: none"> ★ Service station lifts. ★ Hydraulic presses, shears, jacks and punches in machine shops. ★ High-line repair trucks (multi-viscosity grades only) meets the performance requirements of: <ul style="list-style-type: none"> – DIN 51254 Part 2, Antiwear Hydraulic Oils, Type HLP (single grades) – DIN 51524 Part 3, Antiwear Hydraulic Oils, Type HVLP (multi-viscosity grades) – ISO 11158:1997 for Hydraulic Fluids, Family H (all grades) – BIS 10522 & 11656 			
											
03.	<p>SUPERON HYDRO HLPD Heavy duty HLP type hydraulic oils.</p> <ul style="list-style-type: none"> ★ High Anti-wear properties. ★ Increased pump life. ★ Excellent demulsibility. ★ Extended seal life. ★ FZG Test 12 stage pass BIS 11656, DIN 51524 PART 2 	Hydro treated mineral VI > 112	ISO 32, 46, 68,100,150, 220,320,460	- 15°C	>230°C	Passes FZG gear Test 12	6000 hours	<ul style="list-style-type: none"> – ISO 11158:1997 for Hydraulic Fluids, Family H (all grades) – BIS 10522 & 11656 			
											
04.	<p>SUPERON HYDRO XLP Heavy duty high viscosity index hydraulic oil for on- and off road highway mobile hydraulic systems.</p> <ul style="list-style-type: none"> ★ Premium heavy duty anti-wear hydraulic oils. ★ Improve system cleanliness. Eliminate blockages of servo valves/filters. ★ Reduces friction and improves energy savings. ★ Wide temperature application. ★ Very good anti rust properties. 	Hydro treated mineral oil. VI > 130	ISO 32, 46, 68,100	- 21°C	>230°C	Passes FZG gear Test 12	>7500 hours				

S.No	Description	Base Oil type & VI	Base oil viscosity – ISO	Pour point	Flash point	Four ball wear scar, mm	Other	Applications
05.	SH HYDROTHERM SERIES Anti-leak synthetic hydraulic fluid. <ul style="list-style-type: none"> ★ Superior anti - wear. ★ Polymer additives prevent leakages & foam suppressants eliminate foaming. ★ High VI - long life & anti - leak properties. ★ Reduces operating temperatures. 	Synthetic VI 131	ISO 46 & 68	-34°C	>228°C	0.40 mm	40/40/0(20) Demulsibility	Heavily loaded hydraulic systems prone to over heating & leakages, operating at high pressures.... Wagon tippers, mining, cement...
								
06.	SUPERON SLIDEWAY LUBRICANTS <ul style="list-style-type: none"> ★ Excellent Anti -stick-slip characteristics: Overcome stick-slip problems with slow moving machine tool slides and tables. ★ Protects metals against staining and corrosion. ★ Excellent extreme pressure and anti-wear properties. ★ Provides strong adhesion to metal surfaces. 	Mineral oil VI >97	ISO 68 & 220	L(-) 9°C	>220°C	315 kg Passes FZG gear test 12	Demulsibility Test 40-40-0(20)	Machine tool slideways, tables and feed mechanisms. Meet application requirement of planers, grienders, horizontal boring machines, shapers, jig bores, and milling machines. DIN 51517 Parts 3 Cincinnati Lamb (Milacron) P-47
								





II). GEAR OILS








07.	CONOCO HC EP GEAR Premium extreme pressure hydrocracked paraffinic AGMA - EP gear oil. <ul style="list-style-type: none"> ★ Excellent EP & antiwear. ★ Excellent deposit control & oxidation resistance. ★ Excellent water separating properties to minimise formation of emulsions & foaming. ★ Will prevent & minimise leakages. 	Hydrocracked paraffinic VI 96	ISO 320 AGMA 6EP (Also available in other grades)	-18°C	>254°C	0.30 mm	Passes 12 stage FZG gear test	All types of industrial gear drives where full EP performance are required, Heavily loaded bearing, circulating and splash-lubricated systems, industrial reduction gear systems operating such as high load, elevated temperatures, lubricated for life systems. Applications where high micro pitting resistance is crucial-Flender gear boxes, worm gears exposed to low temperatures. Enclosed spur, bevel, helical herringbone and planetary gear sets. Cement, steel, paper mills, etc. ANSI/AGMA Standard 9005-E02 <ul style="list-style-type: none"> ★ Cincinnati Machine P-63 (2 EP), P-76 (3EP), P-77 (4 EP), P-74 (5 EP), P-59 (6 EP), P-35 (7 EP) ★ DIN 51517 Part-3, Lubricating Oils, Type CLP ★ German Steel Industry SEB 181226, Type CLP ★ ISO 12925-1:1996, Type L-CKC ★ U.S. Steel 224.
		"Leakage Control"						
08.	SUPERON GEAR SP High performance industrial gear oils <ul style="list-style-type: none"> ★ Prolong gear life ★ Optimum gear performance. ★ High resistance to oxidation. ★ Good demulsibility, ★ Good load carrying properties. ★ DIN 51517 part 3, US STEEL 224, BIS 1118 (API GL-4) 	Hydro treated mineral oil >95	ISO 100,150, 220,320, 460,680 & 1000	-18°C	>230°C	0.38mm	250 kg FZG >12 PASS	 

S.No	Description	Base Oil type & VI	Base oil viscosity – ISO	Pour point	Flash point	Four ball wear scar, mm	Load	Applications
09.	<p>SUPERON SS GEAR XP Semi synthetic industrial gear oil, performance close to PAO based gear oils.</p> <ul style="list-style-type: none"> ★ Excellent phosphorous retention ★ Improved & extended wear protection. ★ Clean gear performance under temp & oxidation. ★ Extended gear life. ★ Drain period >15000 hrs ★ Special chemical prevent the formation of sludge/varnishes <p>Also available : Brugarolas Beslux Gear XP</p>	Semi-Synthetic VI 130	ISO 100,150, 220,320, 460	(-) 30°C	>230°C	0.3mm	315kg FZG >12 PASS	
10.	<p>SUPERON GEAR SYN G Premium high performance synthetic gear oils with extended drain period of more than 25000 hrs</p> <ul style="list-style-type: none"> ★ Extended drain intervals. ★ Superior antiwear properties. ★ Excellent EP properties. ★ Exceptional high temp & thermal stability. ★ Energy conservation. ★ Seal compatible. ★ Clean gear performance. <p>Also available : Sentinel S-Viscotherm Series</p>	Synthetic VI >150	ISO 100,150, 220, 320, 460, 680,1000	(-) 42°C	>230°C	0.3mm	315kg FZG >12 PASS	
11.	<p>SUPERON SUPER WG Superior gear oil based on PAG chemistry for worm gears.</p> <ul style="list-style-type: none"> ★ Longest fluid life. ★ Superior antiwear properties. ★ Exceptional high temp & thermal stability. ★ Reduce gear box temperature-Energy conservation. ★ Seal compatible. ★ Drain period >25000hrs. <p>Also available : Sentinel S-WGO Series</p>	Polyglycols VI >200	ISO 100,150, 220, 320, 460	(-) 42°C	>230°C	0.3mm	200kg FZG >12 PASS	<p>Enclosed reduction gear systems operating under severe operating conditions, such as high load, very low or elevated temperatures and wide temperature variations.</p> <ul style="list-style-type: none"> ★ Worm gears. ★ Particularly recommended for certain 'lubricated-for-life' systems. ★ Bearing and circulation systems such as calendars, where high bulk oil temperatures are found. ★ Plain and rolling element bearings. 
III). HIGH SPEED SPINDLE / MACHINE OILS								
12.	<p>SUPERSPIN Premium High speed spindle oil for lubrication of machine tools, spindles in textile etc.</p> <ul style="list-style-type: none"> ★ Produced from low aromatic, light colour paraffinic oils. ★ Extended oxidation stability. ★ Reduced system maintenance. ★ Resistance to sludge formation. ★ Good antiwear properties. ★ Very good demulsibility. <p>Also available : 90600T Spindle Lube as an alternative to OKS 600T.</p>	Low viscosity paraffinic oils	Available in ISO 2, 5, 10/12 and 22	L - 12°C	>90°C	Rust preventive test: pass	Copper strip corrosion: 1a	High speed spindles used in textile industries, machine circulation systems, precision trace machine, lathes, grinders, sensitive lab instruments.



IV). TURBINE, COMPRESSOR, REFRIGERATION, BEARING, VACUUM PUMP & FOOD GRADE OILS

S.No	Description	Base Oil type & VI	Base oil viscosity – ISO	Pour point	Flash point	Four ball wear scar, mm	Load	Other	Applications
13.	SUPERON TURBO RO Premium high performance lubricant for turbines, compressors & vacuum pumps.	Hydro treated mineral oil VI>110	ISO 32, 46, 68, 100, 150 & 220	L(-) 12°C	>230°C	Demulsibility Test 40-40-0(10)	–	TOST > 7000 hrs	Steam and solar turbines. Vacuum pumps and compressors where highly refined mineral oil is recommended.
	<ul style="list-style-type: none"> ★ Extended oxidation life-long fluid life and reduced system maintenance. ★ Rust inhibitors providing excellent rust protection. ★ Containing anticorrosion agents to protect copper alloys. ★ Resistance to sludge formation. ★ Excellent filterability. 								MAG P-38, P-55, P-54 and P-57 General Electric GEK 32568, GEK 107395, GEK 46506. Siemens TLV 901304, Alstom HTGD 90117 Solar ES9-224, AGMA 9005 E02-RO ISO 8068, AIST 125.
									
14.	SCO - COMPRESSOR THERM SERIES 8000 hours duty cycle synthetic compressor oils.	Synthetic VI 175	ISO 68 (Also available in other viscosity grease)	-40°C	+243°C	0.50 mm	–	0.04% (Conrads-on carbon rating) Long drain - passes >8000 hours oxidation test.	Heavy duty cycle compressor - reciprocating, rotary, centrifugal, lube, screw... as well as vacuum pumps.
	<ul style="list-style-type: none"> ★ Will prevent carbon & resin build - up. ★ Will not foam & form hard varnishes. ★ Will reduce wear & operating temperatures. ★ Long drain - oxidation test, 8000 hours. 								
									
15.	S - MPO BEARINGTHERM Multi-use R & O synthetic oil.	Synthetic VI 100	ISO 100 (Also available in other viscosity grades)	-34°C	+220°C	0.50 mm	–	0.05% Conradson carbon rating	Oil lubricated bearings, conveyor chains machine tool ways, small precision gearing....
	<ul style="list-style-type: none"> ★ Superior oxidation inhibitors prevent sludging & deposit formation. ★ High EP for superior wear protection. ★ Polymer additive prevents dripping & leakages. ★ Excellent water demulsibility. ★ Long drain. ★ Reduces operating temperature. ★ Silicone free. 								
" Oil lubricated ID fan " 									
16.	SCO REF Synthetic refrigeration compressor oil.	Synthetic VI 148	ISO 68 (Also available in other viscosity grades)	-48°C	+222	0.50 mm	–	Nil cloud point	Suitable for refrigeration compressor using R12, R22 R114 & Ammonia.
	<ul style="list-style-type: none"> ★ Ultra low pour point. ★ Zero wax content. ★ High VI & thermal stability. ★ High chemical stability in the presence of refrigerants. ★ Improved wear protection. ★ No deposit formation both in low & high temperatures. 								
 "Refrigeration Compressor"									

S.No	Description	Base Oil type & VI	Base oil viscosity – ISO	Pour point	Flash point	Four ball wear scar, mm	Load	Other	Applications
17.	S- NT- GO 90-140 NON-TOX GEAR OIL NSF H - 1 certified synthetic anti - leak gear oil. <ul style="list-style-type: none"> ★ Non - toxic blend of USP fluids. ★ Superior film strength & EP properties. ★ Anti - wear, anti - leak anti - foaming properties. ★ Also suitable for worm gear drives, brass /bronze parts. 	Synthetic VI 124	ISO 320 (Also available in other viscosity grades)	-32°C	+270°C	0.34 mm	100 Lb's Timken ok load	Passes FZG gear test, 12+	Food, pharma, breweries, distilleries, meat packaging plants, potable water plants...
 									
Also available : Brugarolas Beslux Gear Atox Series.									
18.	SNT AA1 SERIES NSF H - 1 certified Non - Toxic multi - use oil. <ul style="list-style-type: none"> ★ Water white, clear bright, blend of U.S.P. fluids. ★ Excellent thermal & chemical stability. ★ High VI - long working life. 	Synthetic VI 139	ISO 68 (Also available in other viscosity grades)	-43°C	+220°C	-	-	Passes foam sequence test	Food, pharma, poultry, meat packaging, dairies....
 									
Also available : Brugarolas Beslux Atox Series									
V). HIGH TEMP. CHAIN OILS									
19.	TTF 500 / STENTERLUBE 100 Synthetic high temperature chain oil. <ul style="list-style-type: none"> ★ High VI - long life. ★ Ultra low carbon residue. ★ Ultra high wear protection. ★ Operating temperature range: -32°C to +225°C. 	Clear, Pale yellow Synthetic VI 124	ISO 100	-32°C	+257°C	0.41 mm	-	40/40/0(15) Demulsibility	Stenter chains, high temperature furnaces & ovens...
 <p>"Stenter Chains"</p>									
20.	TTF 1000 / STENTERLUBE 220 Heavy duty synthetic high temperature chain oil. <ul style="list-style-type: none"> ★ High VI - long life. ★ Ultra low carbon residue. ★ Ultra high wear protection. ★ Operating temperature range: -29°C to +250°C. 	Clear, Pale yellow Synthetic VI 128	ISO 220	-29°C	+290°C	0.41 mm	-	40/40/0(15) Demulsibility	Lithographing ovens, paint shop conveyors, textile tenter frames...
 <p>"High Temperature Conveyors"</p>									
21.	SUPERGAURD 320 Heavy duty high temp chain oil specially designed for elevated temperature upto 300°C. <ul style="list-style-type: none"> ★ Leaves no residue at elevated temperature. ★ Protects chains & conveyors from wear. ★ Improves efficiency of chains thus reduce the maintenance cost. ★ Doesn't form carbon residue or vanishes. ★ Keep chains & conveyors clean. ★ Operating temp -20°C to 300°C. 	Clear, Pale yellow Synthetic VI 130	ISO 320	-30°C	>280°C	0.4 mm	> 12 stage FZG test pass	-	Industrial chains & conveyors operating at elevated temperatures. Paint shop conveyors, textile industries, food baking ovens, metal heat treatment ovens, kiln frames etc.
									
Also available: a) 60300 VHT Super Chain Lube as an alternative to Mosil 300 VHT. b) 90352 /2 Super Conveyor Lube HT as an alternative to OKS 352/2.									

VI). METAL WORKING FLUIDS-NEAT CUTTING OILS

S.No.	Description	Base Type & VI	Base Oil Viscosity	Pour Point	Flash Point	Other	Applications	
								
22.	XUPER CUT NC 43341	<ul style="list-style-type: none"> ★ Contain active Sulphur. ★ High cutting speeds. ★ Heavy duty application. ★ Only for ferrous metals. ★ Extended tool life. ★ Increased dimensional accuracy. ★ High surface finish with excellent cooling properties. ★ Excellent EP properties. 	ISO 15	ISO 15	>150°C	Copper strip corrosion: 4 C	Recommended for ferrous metals, deep hole drilling, gear hobbing, gear shaving operations, broaching of medium carbon steel for automotive components etc.	
23.	XUPER CUT NC 4106							ISO 28
24.	XUPER BROACH 411							ISO 15
25.	XUPER CUT NC 4135	<ul style="list-style-type: none"> ★ Contains non-active Sulphur. ★ Non staining & non corrosive to cuprous metals. ★ Excellent cooling properties. ★ Improved tool life. ★ NC 4981 is chlorine and heavy metal free environment friendly formulation. 	Highly refined mineral with synthetic additives	ISO 100 & 220	ISO 14	> 150 °C	Copper strip corrosion: 1 b	Recommended for ferrous & non ferrous metals. Machining for medium alloyed steel. Wide ranges of cutting applications. Light operations on capstan and turret lathes. XUPER CUT NC 4981 is designed for honing and super finishing of ferrous and non-ferrous metals.
26.	XUPER CUT NC 4152				ISO 25			
27.	XUPER CUT NC 4154				ISO 35			
28.	XUPER CUT NC 4155				ISO 65			
29.	XUPER CUT NC 4981				ISO 5			
30.	<p>SUPER TAP Chlorine free, environment friendly high performance tapping oils.</p> <ul style="list-style-type: none"> ★ Excellent lubricating, cooling and anti-welding properties. ★ Reduces friction and wear to ease tapping. ★ Increased tool life. ★ Free from chlorine & hazardous materials. ★ Resists smoking far better than conventional oils. 			L (-) 9°C	> 210 °C	Copper strip corrosion: 1 b	All automotive tapping and threading applications. Outstanding performance on in pipe threading both internal and external threads.	

VII). METAL WORKING FLUIDS-WATER SOLUBLE

							
31.	XUPER KOOL SL	<ul style="list-style-type: none"> ★ Water soluble cutting oils. ★ Excellent milky emulsion and extra long sump life. ★ Superior corrosion protection. ★ Good flushing properties. ★ High degree of bacterial & fungal resistance. ★ Low foaming tendency. ★ Reduces machine downtime. ★ The better lubricity and cooling properties improve the tool life. ★ Exceeds BIS 1115 specs. 	(-)9°C	>150°C	pH value 8.5-9.5	Refracto meter reading 5 % emulsion 5.8+/-0.2	Suitable for machinery operations where emulsifying oils are generally used- Turning, Drilling, Grinding, Boring and Milling operations.. XUPERKOOL SL is economical to use designed for machining of ferrous metals. XUPER KOOL SL- STRONG is extreme pressure version of XUPER KOOL SL. XUPER KOOL SLP is designed for ferrous and non ferrous metals.
32.	XUPER KOOL SL-STRONG						
33.	XUPER KOOL SLP						


S.No.	Description	Base Type & VI	Base Oil Viscosity	Pour Point	Flash Point	4 Ball wear scar	EP load	Applications
34.	XUPER KOOL BC 4100	<ul style="list-style-type: none"> ★ Semi synthetic soluble cutting oil. ★ Highly stable micro emulsion. ★ Excellent tramp oil rejection. ★ High degree of bacterial & fungal resistance. ★ Excellent corrosion protection even at low concentration. ★ Excellent multi metal properties. ★ Improved tool life due to excellent lubricity. ★ Extra long sump life. 		(-) 3°C	>150°C	pH value 8.0-9.2	Refracto meter reading 5 % emulsion 3.2+/-0.2	Machining & grinding of ferrous and non-ferrous materials. Well suited for heavy duty and difficult operations such as deep hole drilling, broaching, reaming, creep-feed grinding & high speed machining. XUPER KOOL BC 4200 economical to use. XUPER KOOL BC 4100 is premium semi synthetic suitable for ferrous & non ferrous. XUPER KOOL BC 4300 is high oil content (50 % by wt) semi synthetic oil.
35.	XUPER KOOL BC 4200							
36.	XUPER KOOL BC 4300							
37.	XUPER KOOL SYN	<ul style="list-style-type: none"> ★ 100% synthetic grinding coolants. ★ Free from mineral oils. ★ Maintains corrosion protection even in hard water. ★ Low foaming in all water conditions to ensure continuous grinding performance. ★ Settles chips quickly to prevent grinding wheel build up and maintain a clean working environment. 				pH value 8.8 - 9.3	Refracto meter reading 1.7	Suitable for surface, cylindrical, internal and centre-less grinding and is also used for honing, milling, turning, boring, drilling, tapping and gear hobbing on cast iron, low carbon and alloy steel.
38.	SUPER EDM 2 Electric discharge oil	<ul style="list-style-type: none"> ★ High purity, narrow cut hydrocarbons. ★ Due to low viscosity, erosion particles flush away from work area. ★ Allows rapid setting of metal particles. ★ High flash point allows safe and fast metal removal. ★ Highly transparent provides visibility of work area. ★ Resistance to oxidation extends oil life. ★ Low foaming tendency. 		(-) 3°C	>100°C	-	Copper strip corrosion: 1 a	Electric discharge machining operations. EDM in tools and die industries. EDM machine in mold industry.

VIII). RUST PREVENTIVE OILS




39.	RUSTCARE DWX 30 L	<ul style="list-style-type: none"> ★ Non staining solvent based rust preventive oils. ★ Provides varying degree of protection based on customer requirements. ★ Excellent water separation. ★ Fast drying, low flash point. ★ Excellent coverage improves the consumption. ★ Exceeds BIS 1154 specification. ★ Protective can be removed by industrial cleaners or solvents. 	Film thickness : 0.5 micron Coverage : 125 m ² /L	Indoor : 3 months Outdoor : 1 month	General purpose industrial de-watering rust preventive oil. Protection of wires, tubes, rods. Protection during storage of machine tools as final protective and machined components in stores or shops. bare sheets, wheel rings auto parts and machined components.
40.	RUSTCARE DWX 32 L		Film thickness : 1.5 micron Coverage : 110 m ² /L	Indoor : 4 months Outdoor : 1 month	
41.	RUSTCARE DW 4901		Film thickness : 6 micron Coverage : 40 m ² /L	Indoor : 12 months Outdoor : 6 month	
42.	RUSTCARE DW 4902		Film thickness : 7 micron Coverage : 50 m ² /L	Indoor : 9 months Outdoor : 4 month	
43.	RUSTCARE DWX 432		Film thickness : 4 micron Coverage : 65 m ² /L	Indoor : 24 months Outdoor : 12 month	
44.	RUSTCARE 4630	<ul style="list-style-type: none"> ★ Oil based rust preventive oil where solvent based are unacceptable. ★ Free from heavy metals. ★ Forms oily film on the surface. ★ Compatible other lubricating oils. ★ Before application surface must be clean and dried. 	KV @ 40 °C - 20 cst	Indoor : 4 months Outdoor : 1 months	Short term inter operational protective or components before wrapping, temporary protection of ferrous bar, rod, strip. It can also use as flushing oil for the internal protection of engines, gear boxes and machinery.
45.	RUSTCARE 46302		KV @ 40 °C - 100 cst	Indoor : 7 months Outdoor : 1-2 months	

IX). GENERAL USE LITHIUM GREASES:

S.No	Description	Appearance	Thickener	Base Oil Type & ISO Viscosity	NLGI Grade	Worked Penetration	Drop Point	Weld Load (Kgs) / Timken ok load(Lb's)	Applications
46.	SUPERLITH AP3 Premium quality longlife, multi- purpose lithium grease. ★ Excellent water resistance. ★ High oxidation stability. ★ Superior structural & roll Stability. ★ High level of anti rust & anti corrosion properties. ★ Operating temperature range: -20°C to 130°C.	Smooth & buttery - light brown 	Lithium	Mineral ISO 150 - 220	3 (Also available) 2,1,0,00,000)	220 - 250	>180°C	>250 Kgs	Long life lubrication of plain & anti friction bearings with extended, re - lubrication intervals & wear protection: electric motors, pumps, centralised lubrication....
47.	SUPERLITH EP2 Extreme pressure, multi-purpose lithium grease. ★ EP grease for boundary lubrication conditions. ★ Prevents wear, localised welding seizure... ★ Excellent shear stability & load carrying capacity. ★ Operating temperature range: -20°C to 130°C.	Smooth & buttery - brown to dark brown	Lithium	Mineral ISO 100	2 (Also available) 1,0,00,000)	265 - 295	>180° C	>200 Kgs	Plain & anti friction bearings in industrial & heavy earth moving equipments, gear couplings, electric motors...exposed to high load & high wear conditions.
48.	SUPERLITH MP-3 Multipurpose high performance industrial grease for anti-friction & plain bearing lubrication ★ Excellent anti-wear properties. ★ Resists water washout. ★ Resistance to oxidation. ★ Protects from rusting. ★ Extended service life. ★ Operating temperature range : -20°C to 130°C	Smooth & buttery-Light brown	Lithium	Mineral ISO 100	3, 2 (Also available) 1,0,00,000)	220-250 (3) 265-295 (2)	>180°c	160 kgs	Lubrication for antifriction and plain bearings. As general purpose grease in steel plants, heavy engineering units, textile mills, paper mills, petrochemical units etc. Meets BIS 7623-1993,US steel 372.

X). EXTREME PRESSURE, TEMPERATURE & WATER RESISTANT MULTI - USE GREASES

49.	70602 (2) MULTI USE LC 220 High performance, universal, temperature & water resistant EP grease. ★ Excellent anti wear, anti rust, oxidation stability & water wash - our resistance. ★ Consistent, reliable long life multi use greasing of both conventional sleeve bearings as well as ball & roller bearings. ★ Operating temperature range : -25°C to +160°C Also available : 70602(2)	Smooth tacky brown	Lithium complex	Mineral ISO 220	2 1	265 - 295 310 - 340	> 280°C	> 600 Kgs	Universal long life grease for general industrial equipment - textile, motors, pumps, conveyors, construction & off highway, cranes, stackers.... 
				"Textile Machinery"					
				Multiuse LC 220 (Blue) as an alternative to Mobil XHP 222					

S.No	Description	Appearance	Thickener	Base Oil Type & ISO Viscosity	NLGI Grade	Worked Penetration	Drop Point	Weld Load (Kgs) / Timken ok load(Lb's)	Applications
50.	70602(HL) HEAVY DUTY LC 460 Heavy duty, high performance, multi use grease. ★ Excellent EP & anti wear properties. ★ High load carrying capacity. ★ Excellent resistance to oxidation, water, shear stability... ★ Protects against corrosion. ★ Operating temperature range: -25° to +160°C	Smooth tacky brown	Lithium complex	Mineral ISO 460	2	265 - 295	>280°C	600 Kgs	Excellent multi use heavy duty grease for all high load, wet, hot lubrication applications at slow /medium speeds: paper, steel, cement, textile, chemicals.... "High Temperature Bearings"
51.	SL 123R UNITHERM High performance synthetic universal grease. ★ Superior high temperature oxidation & thermal stability - long life. ★ Withstands extreme pressure & shock / impact loads. ★ High water wash out resistance. ★ Operating temperature range: -10° to +180°C	Smooth red	Synthetic	Synthetic ISO 460	2 (Also available 1,00,000)	265 - 295	None	80 Lb's Timken ok load	Multi use plain & anti - friction bearings, centralised lube systems, grease lubricated gears & couplings... "Heavy Duty Fans"
52.	SL WPG AQUATHERM Synthetic polymer reinforced, water resistant grease. ★ Superior tenacity, will not pound - out sling - out, dissolve out or melt out. ★ Unmatched fresh & sea water resistance. ★ Operating temperature range: -29° to +180°C	Blue green, stringy,	Synthetic	Synthetic ISO 460	2	265 - 295	None	75 Lb's Timken ok load	All type of slow medium speed (upto 1000 /1500 rpm), bearings, slides, cams, gears.... Exposed to both "dusty" & wet conditions - paper, marine, textile, water & effluent treatment, bottling & washing equipment.... "Washing Line"



XI). SEMI – FLUID GREASES: CENTRALISED LUBRICATION, LEAKY GEAR DRIVES...

53.	70602 (GL) SUPER FLOW (SF) 220 Multi purpose superior featured, semi - fluid grease. ★ Excellent EP & anti wear properties. ★ Excellent water resistance. ★ Non channeling. ★ Excellent pumpability & anti - leak features. ★ Superior working life, oxidation resistance, shear stability... ★ Smooth flowing - will not harden, clog centralised lube lines. ★ Operating temperature range: -32°C to +120°C.	Smooth tacky brown	Lithium complex	Mineral ISO 220	0 00 000	355 - 385 400 - 430 445 - 475	>180°C	500 Kgs	Bearings, slides & parts lubricated with centralised lube systems textile, printing & packaging, ceramic... Gear box lubrication - preventing & reducing leakages, saving energy... "Centralised Lube System"
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S.No	Description	Appearance	Thickener	Base Oil Type & ISO Viscosity	NLGI Grade	Worked Penetration	Drop Point	Weld Load (Kgs) / Timken ok load(Lb's)	Applications	
54.	SSF 8M FLUIDTHERM Synthetic semi-fluid MoS ₂ grease. <ul style="list-style-type: none"> ★ Ultra low friction & high wear protection. ★ Will not channel. ★ Long life. ★ Anti leak properties. ★ Operating temperature range: -40°C to +205°C. 	Dark - metallic, tacky	Inorganic	Synthetic ISO 460	00	400 - 430	None	100 Lb's Timken ok load	Slow speed leaky gear drives, slides, cams open gears. Note: Not suited for worm drives or gear drives having bronze /brass parts.	
										"Mining Equipment"
55.	60200 WG WORM GEAR GREASE Multi use synthetic semi-fluid grease. <ul style="list-style-type: none"> ★ Reduces fatigue & wear under extreme dynamic loads & high operating speeds. ★ Excellent oxidation stability & anti - rust. ★ Withstand high speeds & high temperatures. ★ Very low starting torque. ★ Operating temperature range: -40°C to +160°C. 	Beige	Lithium 12 OH	Synthetic ISO 120	00	400 - 430	>180°C	250 kgs	Textile worm gear drives, gear couplings, printing machinery, high speed gears & moving parts in tools, internal grinders...	
										"Textile Worm Gear Drive"

XII). HIGH TEMPERATURE GREASES

56.	SUPER BENTONE 220 HT(XX) Non-melting MoS ₂ high temperature grease. <ul style="list-style-type: none"> ★ Excellent high load & high temperature capabilities. ★ MoS₂ provides anti wear & protection in boundary lubrication conditions. ★ Excellent resistance to water wash - out, mild acids & alkalis. ★ Operating temperature range: -20°C to +250°C. 	Smooth greyish black	Inorganic	Mineral ISO 220	2	265 - 295	None	315 kgs	Especially suited for the lubrication of plain as well as anti friction bearings operating between 200° - 250°C : Textile calendar roll bearings, paper mills, PVC filling machines, hot air exhausters /blowers, high temperature stuffing boxes, power plant soot blowers, steel mill EOT cranes for soaking pits, rolling mill billet feeder bearings, bogie cars in sintering plant, track rollers of earth moving equipment....	
			"Rolling Mill Billet Feeder"							
NB: Also available without MoS ₂										
57.	60500G SUPER BENTONE 460 Heavy duty, high temperature, high load EP grease. <ul style="list-style-type: none"> ★ Non melt /non drip type long life grease with excellent metal adhesion. ★ Fortified with - excellent anti - wear, anti rust & anti - oxidation additives. ★ Blended with MoS₂ for protection in critical applications. ★ Operating temperature range: -20°C to +250°C. 	Smooth, grey black	Inorganic	Mineral ISO 460	2	265 - 295	None	400 kgs	Slow speed, high temperature & high load bearings - textile stenter blowers, roto arm bearings, of roto moulding machines, high temperature conveyors, agitator mixers, furnace doors & hinges, planetary mixers...	
										"Roto Moulding Machinery"




S.No	Description	Appearance	Thickener	Base Oil Type & ISO Viscosity	NLGI Grade	Worked Penetration	Drop Point	Weld Load (Kgs) / Timken ok load(Lb's)	Applications
58.	70502 (HL) HIGH TEMP LC 460 Synthetic high temperature long - life grease. ★ Excellent EP, anti wear & anti rust. ★ High viscosity - high VI base oil. ★ Excellent water resistance. ★ Superior oxidation stability even at elevated temperatures. ★ Operating temperature range: -55°C to +170°C.	Smooth tacky off white	Lithium complex	Synthetic PAO ISO 460	2	265 - 295	>280°C	500 Kgs	Steel mill concastr bearings, dry end paper mill bearings, textile machinery...
							"Dry End Paper Mill Bearings"		
59.	SG 400 HT PYROTHERM 220 Multi use synthetic high temperature grease. ★ Non - melting sub micronised MoS ₂ fortified for EP & anti wear protection. ★ Excellent high temperature service lifespan. ★ Will not form carbon deposits. ★ Operating temperature range: -39°C to +200°C.	Amber smooth	Synthetic	Synthetic ISO 220	2	265 - 295	None	80 Kgs Timken ok load.	Ovens, tenter frames, paint shop conveyors, hot air fans & blowers... Upto 3000 rpm & 150-180°C.
							"Kiln ID Fans"		
60.	SG 500 HT PYROTHERM 320 Heavy duty synthetic high temperature grease. ★ Non melting. ★ High MoS ₂ % for superior EP & anti wear protection. ★ Long service life at elevated temperatures. ★ Will not form carbon deposits. ★ Operating temperature range: -40°C to +225°C.	Dark metallic	Synthetic	Synthetic ISO 320	2	265 - 295	None	80 Lb's Timken ok load	For longer life & higher anti wear protection than SG 400 HT. Performs upto 3000 rpm & 200°C.
							"Rolling Mill"		
61.	DSF 3000 PYROTHERM ULTIMA Extreme high temperature resistant synthetic grease. ★ Non melting. ★ Fortified with sub micronised MoS ₂ . ★ Will not oxidize even at severe high temperatures. ★ Operating temperature range: -40°C to +300°C.	Blue smooth	Synthetic	Synthetic ISO 1500	1 ½	290 - 320	None	50 Lb's Timken ok load	Slow speed extreme temperature. applications: Kilns, furnaces, conveyors... >200°C.
							"Annealing Furnace"		

XIII). MOLY GREASES

S.No	Description	Appearance	Thickener	Base Oil Type & ISO Viscosity	NLGI Grade	Worked Penetration	Drop Point	Weld Load (Kgs) / Timken ok load(Lb's)	Applications
62.	90410 SUPERMOLY PLUS High performance moly grease with OMC ² anti-friction additives ★ Excellent EP, anti-wear, water & corrosion resistant. ★ Very high load carrying capacity with weld load in excess of 400 kgs (4000N). ★ Extends re-lubrication lifespans. ★ Operating temperature range: -10°C to +120°C.	Smooth grey black	Lithium	Mineral ISO 100	2	265 - 295	>180 C	400 Kgs	Universal long life anti-wear grease best suited to conditions where high load's, dusty, wet & humid environments combine - textile, steel, paper, mining, construction, bottling... Dn factor 3,50,000.
"Sulzer Looms Cams and Slides"									
Also available : 60100 Supermoly 100 as an alternative to Mosil 100.									
63.	217 MOLY 460 Heavy duty moly grease. ★ Extra tacky, water resistant & inhibited against rust & corrosion. ★ Very good mechanical stability & resistance to shear. ★ Excellent E.P. properties. ★ High dropping point. ★ Excellent water resistance. ★ Operating temperature range: -25°C to +160°C.	Tacky grey black	Lithium complex	Mineral ISO 460	2	265 - 295	>260°C	800 Kgs	Multi use - steel, paper, construction, mining, highway... slow speed bearings, in wet, dry conditions, high vibration conditions.... will not squeeze out....
"Two for one twister"									
64.	SL-M2 UNITHERM(MO) Heavy bodied synthetic moly grease. ★ Temperature & water resistant. ★ Optimum anti-wear properties. ★ Unaffected by water, steam or most acids & alkalies. ★ Ultra high load resistance. ★ Operating temperature range: -29°C to +260°C.	Dark metallic	Synthetic	Synthetic ISO 460	2	265 - 295	None	100 Lb's Timken ok loda.	Multi-use high load grease, universally useable at slow medium speeds (upto 1700 rpm) & also in hot /wet conditions.

XIV). HIGH SPEED GREASES




65.	SUPER SPEED 5000 Non-EP, ultra high speed synthetic grease. ★ Ultra high speed (>2m DN speed factor). ★ Rust & corrosion inhibited. ★ Long life, high VI base oil. ★ Operating temperature range: -54°C to +149°C.	Amber /light yellow, smooth	Polyurea	Synthetic ISO 22	2	265 - 295	>250°C	-	High speed, long life precision roller & ball bearing lubrication - drills, grinders, lathes, milling machines, rollers, high speed motors, alternators, generators, starters textile machinery.
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S.No	Description	Appearance	Thickener	Base Oil Type & ISO Viscosity	NLGI Grade	Worked Penetration	Drop Point	Weld Load (Kgs) / Timken ok load(Lb's)	Applications
66.	90475 HS SUPERSPIN HS Ultra high DN factor synthetic, 12 Hydroxystearate, bearing grease. ★ 1,000,000 DN Factor. ★ Suitable for bearing operating at ultra high speed & low breakaway torques. ★ Very low internal friction & starting resistance.	Light coloured white	Lithium 12 OH	Synthetic ISO 32	2	265 -295	>180°C	Teflon fortified	Textile machinery, cnc machine tools, internal grinding machines, high speed spindles, metal to plastic or plastic to plastic sliding surfaces, electronic assemblies...
	★ Resists throw off & oil separation at high speeds. ★ Operating temperature range: -50°C to 149°C								 " Open – End Spinning Machine "
67.	G. BESLUX PLEX BAR L-2/S Barium complex ultra high speed synthetic grease. ★ High resistance to oxidation, water, vapors, acids, alkaline solutions. ★ Speed value - >1m. ★ Operating temperature range: -40°C to +150°C.	Cream /Ivory	Barium complex	Synthetic ISO 22	2	265 - 295	>220°C	–	High speed bearings operating in wet /moist conditions spindles, cams, joints, turbines....
									 "High Speed Internal Grinder"
68.	70602 HS MOTOR LUBE EP High performance heavy duty electric motor grease. ★ Excellent anti wear & EP properties. ★ Outstanding oxidation stability & water resistance. ★ Especially suited to sealed for life electric motor bearings. ★ Operating temperature range: -25°C to +150°C. Also available : Super Teflon 100 as an alternative to Rolgard PTFE Grease	Smooth, tacky brown	Lithium complex	Mineral ISO 100	2 3	265 - 295 220 - 250	>260°C	500 Kgs	Heavy duty high HP, electrical motor lubrication.
									 "HT Motors"

XV). NSF H-1 CERTIFIED FOOD GRADE GREASES

69.	G. BESLUX CAPLEX M-2 ATOX NSF H-1 certified multi use food grade grease. ★ Excellent water resistance. ★ White solid lubricant fortified. ★ High adherence. ★ Operating temperature range: -20°C to +150°C.	White	Aluminium complex	High VI, white medicinal oil ISO 100	2	265 - 295	>250°C	–	Food conveyor chains, sildeways, water valves & taps... general food & pharma industry lubrication...
									 
70.	SL WR2 FOODTHERM 150 NSF H-1 certified multi use food grade grease. ★ Excellent resistance to water, steam, acids, salts, alcohol, beverages, starches, jellies flour... ★ White solid lubricants. ★ Non melting. ★ Long working life. ★ Operating temperature range: -26°C to +204°C.	White opaque	Synthetic	Synthetic ISO 150	2	265 - 295	None	75 Lb's Timken ok load.	Bearings, slides cams dairies, food plants, pharma, meat packaging, distilleries & breweries upto 1500 rpm.
									 





XVI). SILICONE GREASES

S.No	Description	Appearance	Thickener	Base Oil Type & ISO Viscosity	NLGI Grade	Worked Penetration	Drop Point	Weld Load (Kgs) / Timken ok load(Lb's)	Applications
71.	60012SN SUPER SILICONE SN 320 Multi-use silicone bearing grease ★ Ideally suited to high speed & extreme high as well as low temperature applications. ★ Outstanding water repellancy - excellent lubrication in wet & humid applications. ★ Low torque - long life lubrication. ★ Chemically inert. ★ Operating temperature range: -40°C to +200°C.	Light beige	Lithium 12 Hydroxy stearate	Silicone fluid 250 - 300 cst	2	265 - 295	210°C	160 kgs	High speed textile machinery bearings (Schlafhorst ring spinning & roving arbour bearings ...), " O " ring & oil seal lubrication. Water & chemical resistant lubrication. Steam joints, submersible pump bearings, water turbines, class ' H ' insulation electric motors, washing & dyeing machines, washing & bottling Line conveyors...
									
72.	91110 /6 SUPER SILICONE 12500 Silicone valve & packing grease. ★ Non toxic, neutral to plastic & rubber oil seals, 'o' rings. ★ Thermally stable. ★ Resistant to hot & cold water, acetone, glycerine, ethylene glycol, ethanol, methanol...	Water white	Inorganic	Silicone fluid 12500 cst	1½	290 - 320	None	–	Lubrication & protection of stop cocks, valve seals, 'o' rings, rubber seals & plastics components... Cold & hot water valves... packing grease sealant... " O " Ring Protection
									
73.	60200 VG SUPER HIGH VAC High vacuum silicone grease. ★ Highly adhesive & water repellent. ★ Withstands vacuum upto 10 ⁶ Torr. ★ Chemically inert. ★ Excellent sealant cum lubricant. ★ Operating temperature range: -40°C to +200°C	Tacky light grey, translucent paste	Inert silica polymer	Silicone fluid 45000 cps	3	220 -250	None	> 450V/mil Dielectric strength	High vacuum systems, stop cocks, sealant for air line, control valves, pneumatic systems, 'o' ring, gasket & valve lubricant, damping medium for electronic equipment, cable lubricant.... "High Vacuum Systems"
									

XVII). SPECIALITY GREASES, ANTISEIZES, THREAD SEALANTS...

74.	60060 PMG KILN GREASE Extreme temperature heavy duty solid lubricant compound. ★ Highly concentrated dispersion of micronised MOS ₂ for extreme temperature & load resistant lubrication. ★ Extremely resistant to propane, butane, natural gas... chemically inert. ★ Non - carbonising base carrier, blended with EP & anti - wear, evaporates and deposits solid lubricating film. ★ Operating temperature range: -30°C to +425°C. (solid lubrication)	Soft black paste	Inorganic	Synthetic High VI	0 – 1	300 – 400	None	Non - carbonising carrier base	Klin trolley /Autoclave trolley bearings & bushings, furnace doors, gas valves & cocks... "Autoclave Trolley"
									

S.No	Description	Appearance	Thickener	Base Oil Type & ISO Viscosity	NLGI Grade	Worked Penetration	Drop Point	Weld Load (Kgs) / Timken ok load(Lb's)	Applications
75.	60200 HR SUPERHEX Solvent resistant grease. ★ Operates effectively in presence of most solvents, even such as hexane.... ★ Excellent EP rust & water resistance. ★ Operating temperature range: -20°C to +100°C.	Yellow, Off White	Synthetic	Synthetic	1 - 2	265 - 330	>120°C	-	Bearings, bushings joints... in soyabean oil solvent extraction, vegetable oil, chemical plants.... "Soyabean Solvent Extraction Plant "
76.	60424 CG SUPER CONDUCT 32 Electrically conductive synthetic grease. ★ Prevents voltage drops & severe arcing in high voltage contacts & joints. ★ Thermally stable. ★ Prevents wear & corrosion. ★ Chemically inert, Non corrosive. ★ Operating temperature range: -20°C to +300°C.	Black	Inorganic	Synthetic Blend ISO 32	1 - 2	280 - 330	None	-	High voltage 11 & 33 kv electrical contacts & joints, breakers, switches, relays, battery terminals, busbar connections in chlor - alkali plant's, electroplating plants... "High Amperage Busbar Joints"
77.	90200 MOLY PLUS MoS ₂ assembly paste with OMC ² anti friction technology. ★ Prevents seizing, wear, stick up... in press fitting, threaded connections, guides & slideways... ★ Ultra low friction. ★ Resistant to water, oil, gasoline, chemicals, hydraulic media. ★ Provides emergency lubrication during start - up's & stop's in heavily loaded equipment. ★ Operating temperature range: -35°C to 450°C (630°C solids). Also available : 60050 GM Molytec EP as an alternative to Mosil GM 50.	Grey paste	Inorganic	Mineral - high VI	2	265 - 295	None	Additives- MoS ₂ - Graphite White solids - OMC ² Technology Passes <0.10 Co-Efficient of friction & press fit tests.	Heavy press fitting wheels, bearings... wearing in lubrication of plain bearings, gear wheels, cranes shafts,... Prevents stick slip in guides & slideways... Lubrication of valve spindles & slow speed slides... as an antiseize paste in threaded assemblies.
78.	90240 COPPER PLUS Copper based metallic antiseize paste with OMC ² anti friction technology. ★ Prevents corrosion & seizing. ★ Totally resistant to fresh & salt water. ★ Free of lead & lead compounds. ★ Provides optimum ratio between screw pre loading & screw tightening torque - guarantees non destructive disassembly. ★ Electrically conductive. ★ Operating temperature range: -30°C to +1100°C (Solids).	Copper - brown metallic paste	Inorganic	Synthetic	2	265 - 295	None	Additives- Copper - MoS ₂ - Other solid lubricants- OMC ² Technology	Threaded connections exposed to high temperatures - engines, superheated steam lines, exhaust pipes, combustion chamber connections, gas & oil burner mounting bolts... "Moly Assembly Paste"
79.	TEFLOX HD Teflon based thread sealing paste. ★ Provides positive sealing on all types of threaded joints in both metallic & plastic lines water, steam, oils, fuel, LPG. ★ Non toxic - non drying. ★ Suitable for both fine & coarse threads from -55°C to +345°C. ★ Passes 100 hours salt spray test.	Cream	Inorganic	Mineral	1	310 - 340	None	-	All types of threaded joints & connections.

S.No	Description	Appearance	Thickener	Base Oil Type & ISO Viscosity	NLGI Grade	Worked Penetration	Drop Point	Weld Load (Kgs) / Timken ok load(Lb's)	Applications
80.	GLANDEX (EP) EP gland packing sealant dressing. ★ Solid lubricant MoS ₂ & graphite fortified. ★ Improves sealing & prevents wear. ★ Operating temperature range: -32°C to +400°C.	Black tacky	Synthetic	Synthetic	–	–	None	–	Use on packing in pumps & valves,... handling hydrocarbons, LPG aromatics, natural gas, aqueous solutions, acids, caustics.
									
81.	70602 RP SUPER ROLL PRESS 1000 Ultra high base oil viscosity, heavy load grease. ★ Heavy oil film provides excellent protection against heavy loads at slow speeds. ★ Superior water, oxidation rust & anti-wear resistance. ★ Operating temperature range: -25°C to +130°C.	Smooth - tacky black	Lithium Complex	Mineral ISO 1000	2 00	265 – 295 400 – 430	>260°C >200°C	800 Kgs	Cement mill roller press bearings, heavy turntable bearings, slow moving industrial & rolling element bearing, sponge iron briquetting press bearings, heavy earth moving pins & bushes...
									 <p style="text-align: right;">"Roller Press Bearings"</p>
82.	INERTA PFPE 232 PFPE base fluid PTFE thickened grease. ★ Excellent thermal stability for prolonged high temperature service. ★ Chemically inert. ★ Non - flammable. ★ High VI & low pour - point useable at extremely high & low temperatures. ★ Operating temperature range: -27°C to +288°C.	Buttery white	PTFE	Synthetic PFPE ISO 460	2	265 - 295	-	620 Kgs	Conveyors, high temperature fans & blowers, ... Assembly lube on 'o' rings & elastomers... chlorine & oxygen valves & pumps...
									
XVIII). WIRE ROPE & OPEN GEAR LUBES									
83.	70302 1000/2 SUPER GEAR 1000 Graphite & moly fortified open gear lubricant. ★ Excellent film adhesion. ★ Excellent anti - wear EP, anti - rust & water -wash resistance. ★ Suited to open gear applications in high load, dusty & high water wash - out areas. ★ Operating temperature range: -25°C to +160°C.	Black - tacky	Lithium complex	Mineral ISO 1000	2 00	265 - 295 400 - 430	>260°C >200°C	800 Kgs 800 Kgs	NLGI 2 - Manual application on highly loaded open gears - cement, mining ... NLGI 00 - Manual or centralised spray greasing on heavily loaded girth gears, cement mills, coal based power plant's sponge iron plants...
									 <p style="text-align: center;">NB: Also available Petron series of ultra heavy duty sprayable open gear lubes.</p>

S.No	Description	Appearance	Thickener	Base Oil Type & ISO Viscosity	NLGI Grade	Worked Penetration	Drop Point	Weld Load (Kgs) / Timken ok load(Lb's)	Applications
84.	70202 SUPER WIRE ROPE Semi - fluid MoS ₂ wire rope grease * Excellent load bearing, anti - wear corrosion & water repelling properties. * Fast wetting action - penetrates deeply into wire rope strands & protects. * Tough outer film protects ropes & sheaves. * Excellent rust preventive properties. * Solid lubricant additive including moly, enhance film strength.	Synthetic tacky - black	Organic clay	Synthetic blend 1000 cst	Semi - Liquid	500 - 550	None	300 Kgs	Wire - rope lubrication. - Mining, marine, construction...

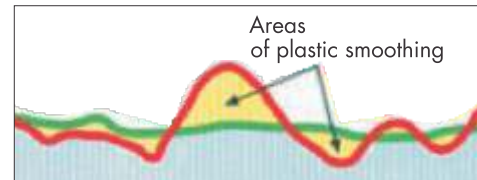


S.No	Description	Appearance	Base Oil Type & VI	Base oil Viscosity – ISO	Pour point	Flash point	Four ball wear scar, mm	Other	Applications
85.	ST WR 2 WIRETHERM 680 Heavy synthetic wire rope lube. * Resists wear & oxidation. * Excellent in marine, chemically corrosive (acid & alkali). * Superior water wash out resistance. Also available ST WR 1 WIRETHERM 150.	Heavy tacky film	Synthetic VI 100	ISO 680	-18°C	+243°C	0.44 mm	40/40/0(30) Demulsibility	For heavy duty wire ropes especially those installed in "wet" conditions.



XIX). LUBE OIL ADDITIVES

86. JB HDI Surface penetrative, metal smoothening anti - friction lube oil additive. * Reduces power consumption. * Reduces bearing heat & wear. * Protects parts against wear, acids, corrosion, dust, dirt. * Compatible with any type /brand of petroleum oil or grease. * Provides emergency lubrication & protection under conditions of boundary lubrication /abnormal lubrication failure.	<p style="text-align: center;">DOSAGE RATIOS:</p> Bearings: Oil Lubricated - 2%. v/v. Grease - 6% w/w Hydraulics: 2% v/v. Repeat treatment wherever fluid is charged /topped up or every 1000 hours. Gear Drives: 6% w/w every 2000 Hours. Air Compressors: 2% v/v every 300 Hours. Refrigeration Compressors: 2% v/v every 2500 Hours. Wire Ropes: 25% w/w. Air tools: 1% v/v Neat Cutting Oils: 2% v/v.	Synthetic, solid free high-performance organo metallic additive concentrate . Functional principal: Viewed under a microscope, all metal surfaces are rough and are subject to continual wear and loss of substance due to friction. Unique additives render metal surfaces smoother due to thermoplastic flow deformation through organo-metallic compounds. The flow deformation is controlled individually, depending on the load the metal surface is subjected to.
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■ original surface ■ smoothed surface

- * Improved surface finish quality through sealing of the metal surface.
- * Improved lubricating film.
- * Reduced thermal load.
- * Reduced friction (by up to 50% in mixed friction area).
- * Reduced loss of substance.
- * Reduced wear.

ACR STATUS AS ON 01/10/2013

S.NO.	DATE	COMPETITOR PRODUCT	SUPERIOR SUPERON PRODUCT IDENTIFIED POST ACR
LITHIUM-GENERAL PURPOSE GREASE			
1.	03.08.2010	SHELL MULTI SERVICE	SUPERLITH MP-3
2.	03.06.2011	SHELL ALVANIA RI2	SUPERLITH MP-2
3.	13.10.2012	SHELL GADUS S3 V 100	SUPERLITH MP-3
4.	11.02.2013	KLUBER BE 41-402 BH	SUPERLUBE 4042
LITHIUM GREASE-HIGH PERFORMANCE			
5.	18.06.2010	CASTROL AP-3	SUPERLITH AP-3
6.	01.07.2010	EXXON MOBIL EP#0	SUPERLITH AP#0
7.	08.07.2010	BALMER LAWRIE SUPERTEC PD-2	SUPERLITH 220
8.	16.11.2011	OKS , SPECIAL INDUSTRIAL GREASE	SUPERLITH AP3 SG
9.	04.04.2010	AFB-LF GREASE	SUPERLITH AP2
10.	16.11.2012	LUBRIPLATE 630-2	SUPERLITH AP2 (SG)
11.	22.11.2012	SHELL GADUS S1V160	SUPERLITH AP-3
12.	15.02.2013	KLUBER LUBE BE 41-402	SUPERLUBE 4042
13.	28.03.2013	HARMONIC GREASE SK-1A	SUPERDRIVE SK-2
14.	09.08.2013	MOLYGRAPH SG 180	SUPERLUBE 4042
LITHIUM GREASE-EXTREME PRESSURE			
15.	08.07.2010	SERVO GEM EP#2	SUPERLITH EP#2
16.	21.07.2010	SERVO GEM EP-00	SUPERLITH EP-00
17.	26.03.2011	MOBILUX EP-1	SUPERLITH EP-1
18.	27.04.2011	LANTHEX EP-2	SUPERLITH EP-2
19.	28.08.2010	CASTROL EPL-0	SUPERLITH 25810 XPL -0
LITHIUM COMPLEX. MINERAL. ISO 220			
20.	19.11.2011	SHELL RETINAX LX 2	70602 (2) MULTI USE LC 220
21.	16.12.2011	EXXON MOBIL XHP 222	70602 (2) MULTIUSE LC 220 (BLUE)
22.	28.03.2012	OMEGA 77	8077 SUPERSYN UNIVERSAL
23.	15.03.2013	LE 3752	70602 (2) MULTIUSE LC 220 BLUE
24.	11.09.2013	MOBILITH SHC 220	8077 SUPERSYN UNIVERSAL
LITHIUM COMPLEX. MINERAL. ISO 460			
25.	01.09.2010	ROCOL SAFIRE	70602 (HL) HEAVY DUTY LC 460
26.	17.11.2011	TIMKEN PREMIUM	70602 (HL) HEAVY DUTY LC 460
27.	05.01.2012	KLUBERPLEX MH 416-82 BH	70602 (HL) HEAVY DUTY LC 460
28.	05.01.2012	OKS ALCOM 460	70602 (HL) HEAVY DUTY LC 460
29.	06.07.2012	BECHEM HIGHLUB FA 67-400	70602 (HL) HEAVY DUTY LC 460
30.	27.08.2012	CASTROL TRIBOL 4020/460/2	70602 (HL) HEAVY DUTY LC 460
POLYUREA BASE GREASE			
31.	29.07.2010	SHELL STAMINA EP-2	SUPERON 208 ALL PURPOSE 220
32.	27.08.2010	EMALUBE PU NLGI#1	70402 (HL) HIGH TEMP PU 460 NLGI#1
33.	27.06.2011	KLUBERQUIET BOH 72-102	SUPERON SUPERQUIET 100
34.	27.07.2011	BECHEM EMALUBE M	SUPERON 70402 HI HIGH TEMP PU 460
35.	25.08.2011	KLUBER STABUTHERM GH 461	SUPERON 70402 (HL) PU 460
36.	29.12.2011	BECHEM BERUTOX FH 28 KN	SUPERON SUPERTOX HF 100
37.	30.03.2012	OMEGA 85 SHEAR SENSATION PLUS	8085 SUPERSYN UNIVERSAL (HT)
38.	03.07.2012	BECHEM BERUTOX M 21 KN	G.BESLUX KOMPLEX H 1/2
39.	07.02.2013	SKF LGHP 2	205 EMG 100
40.	25.09.2013	MOLYKOTE 160LT	SUPERLITH 220-3M
LITHIUM COMPLEX-MOTOR LUBRICATION			
41.	08.10.2010	MOBIL UNIREX N3	70602 (HS) MOTOR LUBE EP-100#3
42.	30.12.2011	BECHEM SW2 HIGH SPEED GREASE	SUPERON SM2 HIGH SPEED GREASE
43.	25.06.2012	ROLGARD PTFE GREASE	SUPERON SUPER TEFLON 100 GREASE
44.	19.07.2012	ROLLGUARD ETEF GREASE	SUPERON TEFLON 100 GREASE
ROLLER PRESS GREASE			
45.	12.06.2010	KLUBERPLEX MH 682 BH/ OMEGA 201	70602 RP SUPER ROLL PRESS 1000
46.	31.03.2011	KLUBERPLEX MH 682 BH	70602 RP SUPER ROLL PRESS 1000
47.	02.09.2011	SHELL JB2	70602 RP SUPER ROLL PRESS 1000
48.	26.04.2013	SUGARPRESS BR 1000	SUPERMILL PRESS 1000
49.	18.05.2013	CASTROL TRIBOL 3020/1000-2	70602 (ED) EXTREME DUTY LC 1000
50.	10.09.2013	BUCH ROLL PRESS	70502 (HL) HIGH TEMP LC 460 (M)
51.	12.09.2013	BUCH WPG	SUPER WB2 SYN
SEMI FLUID GREASE-CENTRALIZED LUBRICATION			
52.	28.05.2010	ITW EZ 602 GL -000	70602 SUPER FLOW 220 GL-000
53.	12.03.2011	MOTUL ANLITH EP-00	70602 GL SUPERFLOW 220#00
54.	16.11.2011	CENTOPLEX GLP 200#000 BH	SUPERFLEX GLX 200#000
55.	12.10.2012	MOLYGRAPH MPG 0 EPLF	SUPERFLEX GLX 200 #0
BENTONE BASE GREASE			
56.	26.03.2011	ROCOL SAPPHIRE HI-PRESSURE	SUPERON SUPERBENTONE HT (XX) PREMIUM
57.	26.04.2011	MOLYDUAL GREASE SE1	SUPERBENTONE HT (XX)
58.	09.11.2011	VEEDOL ARMOL 2	SUPERBENTONE HT XX

S.NO.	DATE	COMPETITOR PRODUCT	SUPERIOR SUPERON PRODUCT IDENTIFIED POST ACR
MOLY BASE GREASE			
59.	04.02.2012	MOLYGRAPH BRB 30	SUPERON SRB 100 GREASE
60.	07.02.2013	SELCO SG 460	SUPERON STENTER GREASE SYN 46
ALLUMINIUM SPEED GREASE			
61.	22.12.2012	LEMONOLEC 4702	SUPER AL 120
HIGH SPEED GREASE			
62.	12.03.2011	BECHEM BERUTOX FB 22	G.BESLUX PLEX BAR L2/S
63.	30.05.2011	KLUBER ISOFLEX NBU 15	G.BESLUX PLEX BAR L2/S
64.	07.11.2011	OKS 475 HS	90475 HS SUPERSPIN HS
65.	18.05.2013	MOLYKOTE G 2001	90475 HS SUPER SPIN HS
SYNTHETIC GREASE			
66.	23.06.2012	LMW HPG (OEM RECOMMENDED)	SUPERON SUPERLUBE LB 100 GREASE
67.	12.01.2013	MOLYKOTE BG 20	SUPER SYN 200 BG
68.	05.03.2013	LE 1250	SL 123R UNITHERM
69.	20.04.2013	LE 1275	SL 123R UNITHERM
FOOD GRADE GREASE			
70.	21.05.2013	MOLYKOTE G 4500	G.BESLUX CAPLEX M2 ATOX
LITHIUM COMPLEX. OPEN GEAR LUBRICATION			
71.	14.07.2011	MOLYGRAPH M 1000 GIRTH GEAR	70302 /1000 /2 SUPER GEAR
72.	12.08.2011	KLUBER GIRTH GEAR GREASE	SUPERON 70302 SUPER GEAR 1000
73.	19.12.2011	CASTROL MOLUB ALLOY 936 SF HEAVY	70302 /1000 /0 SUPER GEAR GREASE
74.	22.02.2012	KLUBER GRAFLOSCON C SG ULTRA	SUPERON SUPERFLOW SG-C-O EXTRA
75.	07.03.2012	OKS 1000	70302 1000 0 SUPER GEAR GREASE
76.	23.04.2012	BECHEM BERULIT SM SUPER	SUPERON 70302 1000/00 SUPER GEAR GREASE (M)
77.	30.04.2012	MOLYGRAPH LONGLIFE 2 PREMIUM GREASE	70302 /200 /2 SUPER GEAR 200
WIRE ROPE GREASE			
78.	05.06.2012	MOLYGRAPH WIRE ROPE CRG 100	70202 SUPER WIRE ROPE #1
ANTISEIZE GREASE			
79.	07.12.2012	MOLYKOTE P-74	SUPERON ANTISEIZE MF-874
HYDRAULIC OILS			
80.	20.09.2010	SHELL TELLUS 32	CONOCO HC AW HYDRAULIC 32
81.	15.10.2012	BPCL HYDRAULIC OIL 68	CONOCO HC AW HYDRAULIC OIL 68
GEAR OILS			
82.	18.08.2010	CASTROL ALPHA SP 320	CONOCO HC EP GEAR 320
83.	02.07.2010	EXXON MOBIL SHC 630	CONOCO SYNCON EP GEAR 220
84.	15.10.2012	BPCL MAK MOBIL 320	CONOCO HC EP GEAR 320
85.	22.05.2013	SHELL OMALA S4GX320	SUPER SYN G 320
CHAIN OILS			
86.	21.11.2011	SELCO SF 600	STENTERLUBE 220
87.	06.11.2012	ROCOL CHAINGUARD 230	STENTER LUBE 220 /60300 VHT SUPER CHAIN
88.	28.02.2013	LE 9963	SUPERGUARD 960
TURBINE OILS			
89.	05.06.2012	MOLYKOTE ® L 0610	SUPERON TURBO RO 100
90.	18.08.2012	SL TURBINE 68	SUPERON TURBO 68
91.	26.02.2013	LEYBOLD N 62	SUPERON TURBO RO 100
92.	23.08.2013	VACUUM OIL HV-20	SUPERON TURBO RO 100
SLIDEWAY MACHINE OILS			
93.	17.02.2012	SHELL TONA F 68	SUPERON SLIDEWAY D 468
94.	25.05.2012	TOTAL DROSERA IN 68	SUPERON SLIDEWAY D 468
WATER RESISTANCE GREASE			
95.	23.04.2012	KLUBER MICROLUBE GBU – Y131	SUPERON SUPERLUBE LB 130
96.	23.06.2012	HPG	SUPERON SUPERLUBE LB 100
97.	03.11.2012	KLUBERPLEX BEM 41-132	SUPERLUBE LB130 #2
MISCELLANEOUS			
98.	16.10.2012	CASTROL NEAT CUT 730 HDO	SUPERON GUN DRILL OIL 800
99.	27.07.2011	MOLY GRAPH SGLT 325 SLIP SEAL	SUPERON 400 SLIP SEAL
100.	08.08.2011	KLUBER SLIP SEAL GREASE	SUPERON SLIP SEAL GREASE (SP)
101.	08.03.2013	CASTROL ILOFORM PN 204	SUPERDRAW 4204
102.	13.04.2013	KLUBERSYNTH 100 KV	SUPERON SUPER SGW 100
103.	23.08.2013	OMEGA 22	8022 SUPER SYN UNIVERSAL



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