



LUBRENZA®

SPECIALTY LUBRICATION &
RELIABILITY SOLUTIONS

ENGINEERED FOR RELIABILITY.

BY **Iron**
STAKE

TECHNICAL PRODUCT GUIDE

SPECIALTY LUBRICANTS & RELIABILITY SERVICES

8 product families · 38 classified grades · 4 industry sectors
NSF H1 registered · ISO VG and NLGI classified · ASTM tested

FOOD GRADE

MINING

MARINE

INDUSTRIAL

ENGINEERED FOR RELIABILITY.

EDITION 1 · JEDDAH, KINGDOM OF SAUDI ARABIA

The range at a glance

8 families, 38 grades, classified by sector and application

Every Lubrenza product carries a four-part code: master brand, family, performance descriptor and ISO or NLGI grade. A maintenance engineer can identify the correct product from the code alone, without a catalogue.

LUBRENZA › EP › GEAR › 220

brand family application ISO VG grade

FAMILY INDEX

FAMILY	DESCRIPTION	GRADES	PRIMARY SECTOR
LUBRENZA FG	Food grade, NSF H1 registered	9	Food & beverage, pharma
LUBRENZA HT	High-temperature chain & bearing	4	Cement, glass, bakery
LUBRENZA EP	Extreme-pressure gear oils & greases	7	Mining, heavy industry
LUBRENZA OG	Open-gear compounds	3	Mills, kilns, dragline
LUBRENZA WR	Wire-rope lubricants & dressings	3	Mining, ports, cranes
LUBRENZA MWF	Metalworking & cutting fluids	4	Fabrication, shipyards
LUBRENZA PROTECT	Corrosion protection & maintenance	4	All coastal & offshore
LUBRENZA MARINE	Cylinder, system & stern tube oils	4	Marine & offshore

CLASSIFICATION STANDARDS APPLIED

ISO VG

ISO 3448 — kinematic viscosity at 40°C, grades 22 to 1500

NSF H1

Registered for incidental food contact, 21 CFR 178.3570

ISO 4406

Fluid cleanliness coding for hydraulic and circulating systems

NLGI

NLGI consistency grades 000 to 3, by ASTM D217 worked penetration

DIN 51517-3

CLP industrial gear oils, FZG load stage ≥ 12

ISO 6743

Family and application classification for lubricants

LUBRENZA FG — food grade, NSF H1

9 grades · registered for incidental food contact · Halal and Kosher certified

Fully synthetic PAO and ester formulations for food, beverage and pharmaceutical production. All grades are NSF H1 registered, Halal certified, and formulated free of mineral oil aromatic hydrocarbons for use where incidental product contact is possible.

PRODUCT CODE	APPLICATION	GRADE	BASE OIL	TEMP RANGE	SPECIFICATION	PACK SIZES
FG GREASE EP 1	Bearings, conveyors, fillers	NLGI 1	PAO	-40 to +160	NSF H1 / D217	400g, 18kg
FG GREASE EP 2	General plant bearings	NLGI 2	PAO	-30 to +160	NSF H1 / D217	400g, 18kg, 180kg
FG GREASE HT 2	Oven and dryer bearings	NLGI 2	PFPE	-20 to +260	NSF H1	400g, 5kg
FG GEAR 220	Enclosed gearboxes, mixers	ISO 220	PAO	-30 to +180	NSF H1 / DIN CLP	20L, 208L
FG GEAR 460	Heavy-loaded reducers	ISO 460	PAO	-25 to +180	NSF H1 / DIN CLP	20L, 208L
FG CHAIN 220	Oven and conveyor chains	ISO 220	Ester	-10 to +250	NSF H1	5L, 20L
FG HYD 46	Hydraulic power packs	ISO 46	PAO	-35 to +120	NSF H1 / HVLP	20L, 208L
FG COMP 68	Air and gas compressors	ISO 68	PAO	-30 to +120	NSF H1 / DIN VDL	20L, 208L
FG RELEASE	Mould, seal and gasket release	Aerosol	PAO	-20 to +200	NSF H1	500ml

COMPLIANCE DOCUMENTATION SUPPLIED WITH EVERY ORDER

- **NSF registration certificate**
Registration number and category for each product
- **Halal certificate**
Issued by an SFDA-recognised certification body
- **Safety data sheet**
GHS format, Arabic and English
- **Technical data sheet**
Full typical test data with ASTM method references
- **Allergen and MOAH statement**
Declaration for audit files
- **Batch certificate of analysis**
Per delivery, on request

Why this segment first

H1 use is driven by SFDA licensing and customer audit, not by preference. Compliance-led demand does not shop on price, and Jeddah hosts the Kingdom's largest food cluster.

Mining and heavy industry

HT, EP, OG and WR — 17 grades for high load, dust, shock and heat

LUBRENZA HT — HIGH TEMPERATURE · 4 GRADES

PRODUCT CODE	APPLICATION	GRADE	BASE OIL	TEMP RANGE	SPECIFICATION	PACK SIZES
HT CHAIN 220	Kiln, oven and stenter chains	ISO 220	Ester	-10 to +250	DIN 51502	5L, 20L
HT CHAIN 320	Heavy kiln chains	ISO 320	Ester	-10 to +280	DIN 51502	20L, 208L
HT GREASE 2	Fan and kiln support bearings	NLGI 2	PAO	-20 to +200	DIN 51825 KP2R	400g, 18kg
HT PASTE	Anti-seize assembly paste	Paste	Solid	-30 to +1100	DIN 51502	500g, 5kg

LUBRENZA EP — EXTREME PRESSURE · 7 GRADES

PRODUCT CODE	APPLICATION	GRADE	BASE OIL	TEMP RANGE	SPECIFICATION	PACK SIZES
EP GEAR 150	Light industrial reducers	ISO 150	Mineral	-15 to +100	DIN CLP / FZG 12	20L, 208L
EP GEAR 220	Standard gearboxes	ISO 220	Mineral	-15 to +100	DIN CLP / FZG 12	20L, 208L
EP GEAR 320	Crusher and mill drives	ISO 320	Mineral	-12 to +100	DIN CLP / FZG 13	208L
EP GEAR 680	Heavy mill reducers	ISO 680	Mineral	-10 to +110	DIN CLP / FZG 13	208L
EP GEAR S 320	Extended-drain synthetic	ISO 320	PAO	-35 to +140	DIN CLP / FZG 14	20L, 208L
EP GREASE 1	Central lubrication systems	NLGI 1	Mineral	-25 to +140	DIN KP1N	18kg, 180kg
EP GREASE 2	Pins, bushes, crusher bearings	NLGI 2	Mineral	-20 to +140	DIN KP2N	400g, 18kg, 180kg

LUBRENZA OG AND WR — OPEN GEAR AND WIRE ROPE · 6 GRADES

PRODUCT CODE	APPLICATION	GRADE	BASE OIL	TEMP RANGE	SPECIFICATION	PACK SIZES
OG SPRAY	Girth gear spray systems	NLGI 00	Synth	-10 to +200	Bitumen-free	20L, 208L
OG HEAVY	Running-in and repair films	NLGI 0	Synth	-5 to +200	Graphite/MoS2	20L, 208L
OG PRIMER	Initial gear conditioning	NLGI 0	Synth	-5 to +200	MoS2	20L
WR PEN	Penetrating rope core dressing	ISO 100	Mineral	-20 to +90	Wire rope	20L, 208L
WR COAT	Outer protective rope coating	NLGI 1	Mineral	-15 to +90	Wire rope	18kg, 180kg
WR SPRAY	Field touch-up and inspection	Aerosol	Mineral	-20 to +90	Wire rope	500ml

Marine, metalworking and protection

MARINE, MWF and PROTECT — 12 grades

LUBRENZA MARINE · 4 GRADES

PRODUCT CODE	APPLICATION	GRADE	BASE OIL	TEMP RANGE	SPECIFICATION	PACK SIZES
MARINE CYL 40	2-stroke cylinder, low sulphur	SAE 50	Mineral	-10 to +120	40 BN	208L, bulk
MARINE CYL 70	2-stroke cylinder, high sulphur	SAE 50	Mineral	-10 to +120	70 BN	208L, bulk
MARINE SYS 30	Crosshead system oil	SAE 30	Mineral	-10 to +110	5-6 BN	208L, bulk
MARINE STERN	Stern tube, biodegradable	ISO 100	Ester	-20 to +100	EAL / VGP	20L, 208L

LUBRENZA MWF — METALWORKING FLUIDS · 4 GRADES

PRODUCT CODE	APPLICATION	GRADE	BASE OIL	TEMP RANGE	SPECIFICATION	PACK SIZES
MWF SEMI 5	General machining, emulsion	5-8%	Semi-syn	+5 to +45	Boron-free	20L, 208L
MWF SYN 4	Grinding and surface finishing	3-6%	Synthetic	+5 to +45	Amine-free	20L, 208L
MWF NEAT 22	Heavy cutting and broaching	ISO 22	Mineral	+5 to +60	Chlorine-free	20L, 208L
MWF FORM	Stamping and forming	ISO 46	Mineral	+5 to +60	Evaporative	20L, 208L

LUBRENZA PROTECT — CORROSION PROTECTION · 4 GRADES

PRODUCT CODE	APPLICATION	GRADE	BASE OIL	TEMP RANGE	SPECIFICATION	PACK SIZES
PROTECT FILM	Long-term outdoor storage	Film	Wax	-30 to +80	24 months	20L, 208L
PROTECT WAX	Underbody and chassis coating	Wax	Solvent	-30 to +80	36 months	5L, 20L
PROTECT PEN	Penetrating release and free-up	Aerosol	Mineral	-20 to +90	Multi-use	500ml
PROTECT DRY	Dry film, non-tacky, indoor	Film	Synth	-20 to +80	12 months	500ml, 20L

PACKAGING AND SUPPLY MATRIX

PACK FORMAT	CAPACITY	TYPICAL FAMILY	PALLETISATION	LEAD TIME
Aerosol	500 ml	PROTECT, WR, FG RELEASE	12 per carton	Ex-stock
Cartridge	400 g	EP, HT, FG greases	24 per carton	Ex-stock
Pail	5 / 20 L	All liquid families	36 per pallet	Ex-stock
Keg	18 kg	Grease families	24 per pallet	5-7 days
Drum	208 L	All liquid families	4 per pallet	Ex-stock
Grease drum	180 kg	EP, FG greases	4 per pallet	7-10 days
IBC / bulk	1000 L +	Marine, EP, MWF	Direct delivery	10-14 days

Classification and target tables

For specification, cross-reference and audit use

ISO VG VISCOSITY GRADES — ISO 3448

ISO VG	MID-POINT CST AT 40°C	RANGE CST AT 40°C	TYPICAL APPLICATION	LUBRENZA GRADE
VG 32	32	28.8 - 35.2	Hydraulics, light circulating	FG HYD 32
VG 46	46	41.4 - 50.6	Hydraulics, compressors	FG HYD 46
VG 68	68	61.2 - 74.8	Compressors, light gears	FG COMP 68
VG 150	150	135 - 165	Light industrial gearing	EP GEAR 150
VG 220	220	198 - 242	Standard industrial gearboxes	EP GEAR 220
VG 320	320	288 - 352	Crusher and mill drives	EP GEAR 320
VG 460	460	414 - 506	Heavily loaded reducers	FG GEAR 460
VG 680	680	612 - 748	Heavy mill and kiln reducers	EP GEAR 680

NLGI GREASE CONSISTENCY — ASTM D217

NLGI	WORKED PENETRATION 0.1 MM	CONSISTENCY	TYPICAL APPLICATION	LUBRENZA GRADE
NLGI 000	445 - 475	Fluid	Gear couplings, central systems	—
NLGI 00	400 - 430	Semi-fluid	Open gear spray, enclosed gears	OG SPRAY
NLGI 0	355 - 385	Very soft	Centralised systems, cold start	OG HEAVY
NLGI 1	310 - 340	Soft	Central lubrication, low temp	EP GREASE 1
NLGI 2	265 - 295	Normal	General bearings, most plant use	EP GREASE 2
NLGI 3	220 - 250	Firm	Vertical shafts, high speed	—

ISO 4406 TARGET CLEANLINESS BY SYSTEM TYPE

SYSTEM TYPE	TARGET ISO CODE	FILTRATION	CONSEQUENCE IF EXCEEDED
Servo / proportional hydraulics	15/13/10	3 micron	Valve stiction, erratic control
High-pressure hydraulics	17/15/12	5 micron	Pump wear, shortened seal life
General hydraulics	18/16/13	10 micron	Accelerated component wear
Bearing circulating systems	16/14/11	5 micron	Surface fatigue, spalling
Industrial gearboxes	19/17/14	10 micron	Tooth pitting, oil oxidation
Diesel engines	18/16/13	10 micron	Liner and ring wear

Oil analysis and condition monitoring

The service that separates Lubrenza from a distributor

Every supply contract includes a scheduled sampling programme. Samples are tested to recognised ASTM and ISO methods, trended over time, and reported with a clear action against each asset. The lubricant follows the engineering, not the other way round.

STANDARD TEST PACKAGE

TEST	METHOD	REPORTS ON	ALARM TRIGGER
Kinematic viscosity 40/100°C	ASTM D445	Oil degradation, wrong-grade top-up	±10% of new
Viscosity index	ASTM D2270	Base oil quality, shear stability	Drop > 15 points
Total acid number	ASTM D664	Oxidation, additive depletion	+2.0 mg KOH/g
Total base number	ASTM D2896	Remaining alkalinity, engine oils	< 50% of new
Water by Karl Fischer	ASTM D6304	Ingress, seal and cooler failure	> 500 ppm
Particle count	ISO 11500	Cleanliness, ISO 4406 coding	2 codes above target
Wear metals by ICP	ASTM D5185	Fe, Cu, Cr, Pb, Al, Sn wear rates	Trend rate of change
Oxidation / nitration	ASTM E2412	Thermal stress, blow-by	> 25 Ab/cm
Flash point	ASTM D92	Fuel dilution, contamination	Drop > 20°C

SAMPLING FREQUENCY BY ASSET CRITICALITY

ASSET CLASS	EXAMPLES	SAMPLING INTERVAL	REPORT TURNAROUND
Critical, no spare	Mill drives, main engines, kiln reducers	Monthly	48 hours
Critical, spared	Process pumps, compressors, gearboxes	Quarterly	5 working days
Important	Hydraulic packs, conveyors, fans	6 monthly	5 working days
General	Auxiliary drives, small reducers	Annually	10 working days

QUARTERLY RELIABILITY REPORT

Lubricant consumption by asset, against baseline · condition trend per sample point
Failures avoided and interventions triggered · SKU count and inventory value
Documented cost avoided, in riyals, signed off with your maintenance manager

Which products go where

Cross-reference by industry and equipment type

Food & beverage

Fillers, cappers, conveyors	FG GREASE EP 1 / EP 2
Oven and proofer chains	FG CHAIN 220
Mixers and enclosed drives	FG GEAR 220 / 460
Air compressors	FG COMP 68
Hydraulic packs	FG HYD 46

Mining & minerals

Ball and SAG mill girth gears	OG SPRAY / OG HEAVY
Crusher pins and bushes	EP GREASE 2
Dragline and hoist ropes	WR PEN / WR COAT
Mill and crusher reducers	EP GEAR 320 / 680
Kiln support bearings	HT GREASE 2

Marine & offshore

Two-stroke cylinders	MARINE CYL 40 / 70
Crosshead system	MARINE SYS 30
Stern tube, EAL required	MARINE STERN
Deck cranes and ropes	WR COAT / EP GREASE 2
Topside corrosion	PROTECT FILM / WAX

General industry

Industrial gearboxes	EP GEAR 150 / 220
Machining and grinding	MWF SEMI 5 / SYN 4
Anti-seize assembly	HT PASTE
Plant bearings	EP GREASE 2
Asset storage protection	PROTECT DRY

What we bring that a distributor cannot

- **Engineering-led, not trading-led**

Our people come from maintenance and reliability. We are comfortable in a plant, on a rig and in front of a technical audit.

- **Full technical documentation**

Every grade ships with a data sheet carrying typical test values and ASTM method references, plus GHS safety data sheets in Arabic and English.

- **Backed by Iron Stake**

Endorsement by Iron Stake, an established parent company gives new customers the financial reassurance a start-up supplier cannot offer alone.

- **Authorised distribution**

Contracted distributor for TotalEnergies, Petromin and ADNOC under written distribution agreements — secured supply and product availability behind a specialist technical service.

- **In-Kingdom value add**

Local blending, filling and technical service build local content, which is scored directly in tendering with the national operators and major contractors.

- **Jeddah-based, Kingdom-wide**

Positioned in the largest food manufacturing cluster in the Kingdom and on the Red Sea trade artery, with reach to the Eastern Province and the mining regions.

- **Measured on your uptime**

Quarterly reports document consumption, condition trend and cost avoided. We are judged on your reliability, not on our tonnage.

THE PROMISE

Protect equipment. Optimize performance. Deliver value.

Three commitments, measured and reported every quarter — not a slogan.

CONTRACTED DISTRIBUTION PARTNERS





LUBRENZA®

SPECIALTY LUBRICATION &
RELIABILITY SOLUTIONS

ENGINEERED FOR RELIABILITY.

Start with a lubrication survey.

No obligation and no purchase required. Our engineers will audit one production line or one fleet and return a written register of every lubrication point, the correct grade for each, and the annual cost of running it as it is today against running it correctly.

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WHATSAPP

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