

Lubricants



Metal



Corrugated



Plastic



Film



Glass



Printing



Papercup

Lubricants



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Printing



Paper cup



Paper Cup Production





Paper Cup Production

Michael Hoerauf GmbH&Co.

Lubcon products approved by Michael Hoerauf for model BMP 100

- **Turmopast MA 2** – low speed mechanical
- **Turmogrease Highspeed L 182** – high speed mechanical
- **Turmofluid VDL 100** – vacuum pump
- **Turmosynth VG 68 PC** – punching station
- **Turmogearoil CGLP** – central lubrication system



Paper Cup Production

Punching station

Punching station



Oil

Problems:

- Odor
- Discoloration
- Oil stain
- Certification



Paper Cup Production

Punching station

Punching station

Turmosynth VG 68 PC

- Odorless
- Tasteless
- No stain
- Non toxic

Consumption: 4 liters / hour



TURMOSYNTH VG 68 PC



Year of issue: 08.2019

TURMOSYNTH VG 68 PC is the preferred variant of a food oil.
 After separation of the solids, a well-refining planting filter is formed.

TURMOSYNTH VG 68 PC is a primary oil, approved as lubricant for what an industrial contact with food products cannot be avoided.

Special properties

- For food contact
- High oxidation resistance
- Excellent heat stability of the lubricating film
- Stable film

Product Characteristics	Value	Dimension	Units - Standard
Color	transparent		
Density at 20°C	0,88	g/cm ³	ISO 1171
Kinematic viscosity at 40°C	68	mm ² /s	ISO 22801-2/218
Pour point	< -15	°C	ISO 22801-2/218
Flash point	> 15	°C	ISO 22801-2/218

Application
 For lubricating and food contact in the food and beverage industry as well as in the cosmetic and pharmaceutical industry, where appropriate with reference to the agent.

Packaging units
 200 l drum



ERE

100 000000

LUBCON GmbH | 10000 | Garmisch-Partenkirchen | 82471 | Germany
 Tel: +49 89 3000 10000 | Fax: +49 89 3000 10001 | E-Mail: info@lubcon.com | www.lubcon.com



Paper Cup Production

Turmosynth VG 68 PC



McDonald standard test

eurofins
Consumer Product Testing

Quality Consumer Product Testing Center
An Analytical Laboratory
© 2013 Eurofins

Sample ID: 2020-051730-01
Product: Paper Cup
Client: McDonald's
Address: 1234 Main St, Anytown, USA

Report Date: 10/21/2020
Page: 1/1

Analytical report AR-20-05-051730-01

Sample Code: 799-2020-051730-01

Substance: Paper Cup
Client Sample Code: 799-2020-051730-01
Product Name: Paper Cup
Lot: 123456789
Number of received samples: 10
Requested by: John Doe
Submitted by: Jane Smith
Carrier: ABC
Received date: 10/20/2020
Received location: 1234 Main St, Anytown, USA

TEST RESULTS

Parameter	Value	Unit	Method
Mineral oil content	0.0	mg/kg	ISO 10384
Lead	0.0	mg/kg	ISO 10384
Cadmium	0.0	mg/kg	ISO 10384
Mercury	0.0	mg/kg	ISO 10384
Chromium	0.0	mg/kg	ISO 10384
Copper	0.0	mg/kg	ISO 10384
Zinc	0.0	mg/kg	ISO 10384

ADDITIONAL INFORMATION

All test results are based on the sample provided for testing. The laboratory is not responsible for the accuracy of the results if the sample is not representative of the lot. The laboratory is not responsible for the accuracy of the results if the sample is not properly labeled. The laboratory is not responsible for the accuracy of the results if the sample is not properly stored. The laboratory is not responsible for the accuracy of the results if the sample is not properly handled. The laboratory is not responsible for the accuracy of the results if the sample is not properly transported. The laboratory is not responsible for the accuracy of the results if the sample is not properly received. The laboratory is not responsible for the accuracy of the results if the sample is not properly tested. The laboratory is not responsible for the accuracy of the results if the sample is not properly reported. The laboratory is not responsible for the accuracy of the results if the sample is not properly reviewed. The laboratory is not responsible for the accuracy of the results if the sample is not properly approved. The laboratory is not responsible for the accuracy of the results if the sample is not properly released. The laboratory is not responsible for the accuracy of the results if the sample is not properly distributed. The laboratory is not responsible for the accuracy of the results if the sample is not properly used. The laboratory is not responsible for the accuracy of the results if the sample is not properly disposed of. The laboratory is not responsible for the accuracy of the results if the sample is not properly recycled. The laboratory is not responsible for the accuracy of the results if the sample is not properly disposed of. The laboratory is not responsible for the accuracy of the results if the sample is not properly recycled.

Mineral oil limit

intertek

TEST REPORT

APPLICANT: PCL Lubricants Asia Pacific Corp
Address: 1234 Main St, Anytown, USA
Contact: John Doe
Phone: 1234 5678
Fax: 9876 5432

REPORT NUMBER: INT1234567
DATE: October 20, 2020

SAMPLE DESCRIPTION:
Date of Submission: 10/20/2020
Sample Received Date: 10/20/2020
Date of Testing Started: 10/20/2020
Date of Testing Finished: 10/20/2020

TEST COMPLEXITY:
No. of Samples: 10
No. of Components: 10
No. of Parameters: 10

TEST RESULTS:

Parameter	Value	Unit	Method
Lead	0.0	mg/kg	ISO 10384
Cadmium	0.0	mg/kg	ISO 10384
Mercury	0.0	mg/kg	ISO 10384
Chromium	0.0	mg/kg	ISO 10384
Copper	0.0	mg/kg	ISO 10384
Zinc	0.0	mg/kg	ISO 10384

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Toxic element limit

Lubricants



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Printing



Papercup

Plastic Packaging

Blow forming



Plastic injection molding



Plastic Packaging

Examples



Beverage



Cosmetic



Pharmaceutical



Food container



Toys

Mould Lubrication & Maintenance

Lubrication:

- Turmotemp II/400 CL 2
- Elastolub S 300
- TSG CSX 802 EP
- Turmogrease CAK 1802

Release agent:

- Turmosol K 50
- Turmosol K 52
- Turmsilon K 40

Corrosion protection:

- Turnocor DFW 60
- Turnocor P 12
- Turnowax,
- Turnofluid ED 13 Spray
- Rapid FG 15 Spray

Cleaning / degreasing:

- Turmosynth VG 1
- Turmosynth VG 2
- Lubcon LC 500
- Dispergens EX 40



sliders



Mould



Injection Pins



Plastic Packaging

Machine lubrication/maintenance

General maintenance on the machinery:

- Cleaning agent
- Multipurpose oil spray
- ✓ Turmosynth VG 1 / VG 2 Spray
- ✓ Turmofluid ED 13 Spray
- ✓ ...



Greases for:

- Spindles and guides
- folding units
- bearings
- other sliding surfaces



- ✓ Turmotemp III/400 CL 2
- ✓ Elastolub S 300
- ✓ TSG CSX 802 EP / ALN-Series
- ✓ Turmogrease CAK 1802
- ✓ ...



Gearoil:

- ✓ Turmogearoil PE - serie
- ✓ Turmosynthoil GV - serie
- ✓ Turmosynthoil PG - serie
- ✓ And others depending on OEM-recommendation !



Lubricating and assembly paste for:

- Screws / bolts
- Injection nozzle
- ... ✓ Turmopast TAS FM
- ✓ Turmopast TAS LMI
- ✓ ...





OEM in the market:

ARBURG

ENGEL



FANUC

KRAUSS MAFFEI

 **Sumitomo**
SHI DEMAG

HUSKY[®]

And many others

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Paper cup



Metal Packaging

Lubricants



Metal Packaging

Problem:





LUBCON - Solution



TLB 2000



Chain Lube System



**High Performance
Pin Chain Oil**



Metal Packaging



Metal Packaging

High temperature Chain oils:

- **Turmofluid 15B / 40 B** - highly experienced HT-oil
- **Turmosynthoil EPA 270** – high performing HI oil

Best performance in combination with our TLB 2000 with suction unit

Potential:

> 1.000 liters per plant





References:

- Alltube (Karl Höll), Germany
- Ball Beverage Packaging, Austria
- CCL Container, USA and Mexico
- Exal, USA
- Montebello, USA
- Ball Beverage Packaging, Italy
- Can-pack, Romania

3 Piece Can



Metal Packaging

Can Seamer



Seaming Roller

Metal Packaging

Turmosynthgrease ALN 1002

Turmosynthgrease AL 1002

Turmosynthgrease A 1002



Interval: 4 hours

Consumption:

**800 grams per day
per machine**

Canbody Welder





Metal Packaging

Lubricants

Can Feeder Bearing

Chains

Turmotemp II/400 FG

Turmofluid LMI 300
Turmosynth VG 2

Conveying System



Chains

Turmofluid LMI 300
Turmosynth VG 2

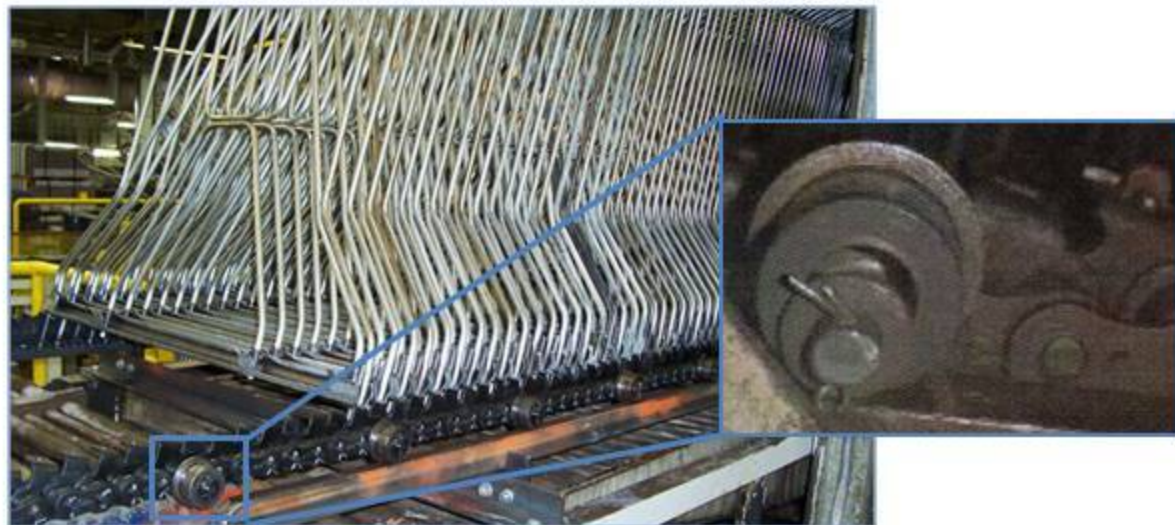
Lithograph Oven





Metal Packaging

Wicket Type Drying Oven



Chain

Turmofluid 40 B

Turmosynthoil HTC

Bearing

DMK HT 250



Lubricants



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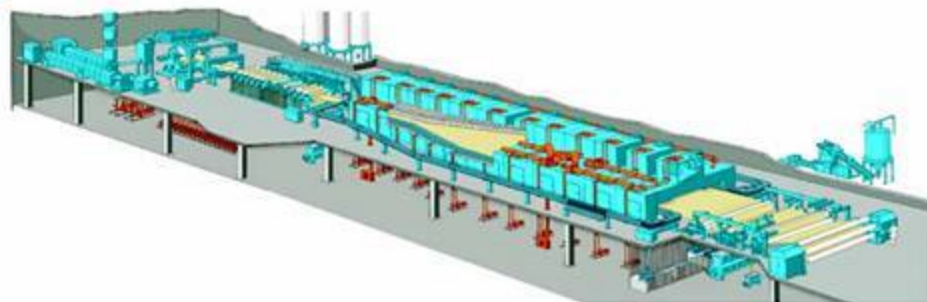


Papercup



Printing

Film Packaging



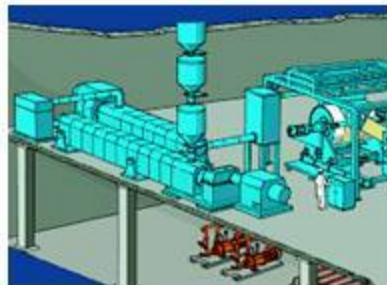
Film stretching



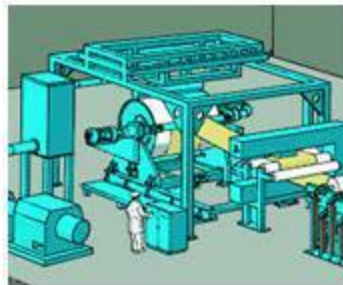
Film blowing

Film Packaging

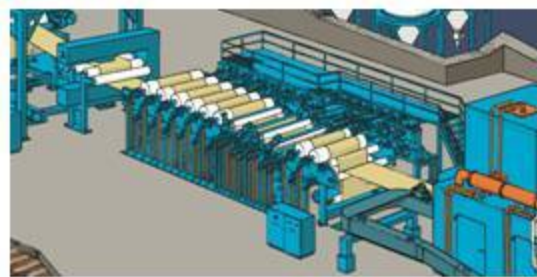
Film stretching



Extrusion

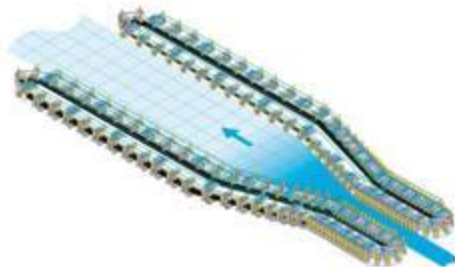


Casting & cooling



**Machine direction
orientation (MDO)**

**Transverse direction
orientation (TDO)**

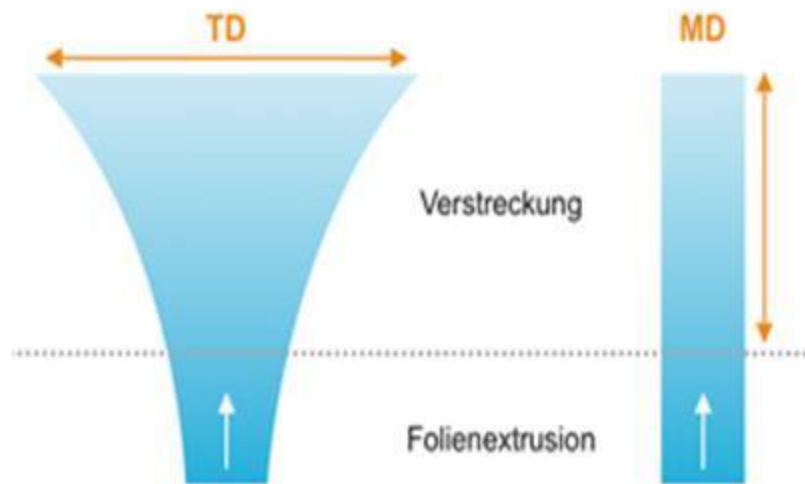


High temperature grease

Film Packaging

BOPP

BO(PP) Anlage



BO = biaxially oriented





PP = Polypropylen

PA = Polyamid

PET = Polyethylenterephthalat





Extruder Motor Bearing

Classification by Brückner				
	5	6	7	8
	Turmogrease N 4601	Turmotemp II/400 KL	Turmogrease NHF 2002	Turmogrease PU 702



MDO Roller Bearing

Classification by Brückner				
	5	6	7	8
	Turmogrease L 802 EP plus	Turmotemp PW 1802	Turmogrease L 802 EP plus	-



MDO Motor Bearing

Classification by Brückner				
	5	6	7	8
	Turmogrease N 4601	Turmotemp II/400 KL	Turmogrease NHF 2002	Turmogrease PU 702







MDO Cardan Joint






Classification by Brückner				
	1	2	3	4
	Turmogrease LC 1802 EP	Turmogrease L 802 EP plus	Turmogrease L 802 EP plus	Turmogrease LC 252



MDO Rotary Feed-through

Classification by Brückner				
	Turmogrease N 4601	Turmotemp II/400 KL	Turmogrease NHF 2002	Turmogrease PU 702

TDO Chain Wheel Bearing

Classification by Brückner				
	Turmogrease N 4601	Turmotemp II/400 KL	Turmogrease NHF 2002	Turmogrease PU 702

TDO Clip

Classification by Brückner				
	Turmogrease N 4601	Turmotemp II/400 KL	Turmogrease NHF 2002	Turmogrease PU 702



Film Packaging

TDO - BOPP



TDO Roller chain

Turmoilmoil HTC series

Consumption: 200 liter / month

e.g. Turmoilmoil HTC 220
(„slow“ running filmstretching
machines ~ 380 m/min)
(*Experiences in India*)



Film Packaging

TDO - BOPP


TDO Width Adjustment Spindle



Classification by Brückner	5	6	7	8
	Turmogrease N 4601	Turmotemp II/400 KL	Turmogrease NHF 2002	Turmogrease PU 702

TDO Fan Motor Bearing



Classification by Brückner	5	6	7	8
	Turmogrease N 4601	Turmotemp II/400 KL	Turmogrease NHF 2002	Turmogrease PU 702



Film Packaging

TDO - BOPP

Pneumatic, Hydraulic & PFPE Cleaner

1.7 Pneumatic Oils

Classification by Brückner	
DIN 51502	CL
ISO VG	15
	Turmofluid HLPD 10

1.8 Hydraulic Oils

Classification by Brückner				
	1	2	3	4
DIN 51502	HLP 32	HLP 46	HLP 68	HLPHC 68
ISO VG				
	High temperature oils			
	Turmofluid HLP32	Turmofluid HLP46	Turmofluid HLP68	Turmofluid GV 68

Classification by Brückner			PFPE-Cleaner	
	13	14		
			Turmotempoil 480	



Lubricants



Metal



Corrugated



Plastic



Film



Glass



Printing



Papercup



Glas Packaging



**High temperature
machine oil**

**High temperature
bearing grease**

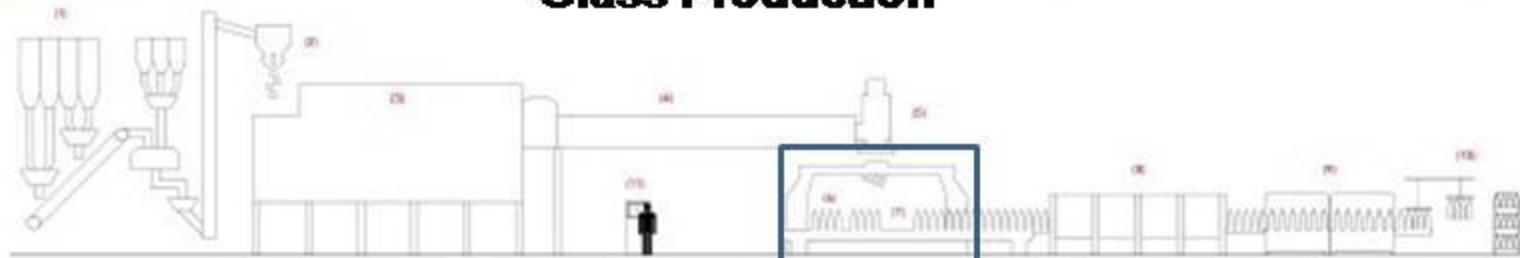


Glass Packaging



Glass Packaging

Glass Production



Forming



2 - 4 forming machines per plant

6 / 8 / 10 / 12 forming section

Glass Packaging



Central lubrication system

Consumption:

6 sections – 30 l / month

8 sections – 40 l / month

10 sections – 50 l / month

12 sections – 60 l / month



We have the solution
the future has a name



Technical Information LUBRICANT CONSULT GMBH
 Gumbertstraße 12 · D-42697 Solingen · Germany · Telefon: +49 41 26 76 50-0 · Fax: +49 41 26 76 50-17 · Internet: www.lubcon.com

TURMOGLAS BK 220 Exakt: 15.01.2003

LUBCON Special Oil

TURMOGLAS BK 220 is a special synthetic oil for the lubrication of rubber glass ware production machines. TURMOGLAS BK 220 develops a great sliding, wear and corrosion protecting, temperature and oxidation resistant lubricating film.

Technical Data	TURMOGLAS BK 220
Colour	Inconspicuous reddish-brown
Base oil	ester / synthetic hydrocarbons
Density at +20°C	0,917 g/cm ³
Viscosity DIN 51561	
at +40°C	220 mm ² /s
at +100°C	28 mm ² /s
Viscosity Index VDI DIN ISO 2281	101
Pourpoint DIN ISO 3016	approx. -34°C
Flash point	+ 260°C
Ignition temperature	+ 320°C
Application temperature range	-20°C up to +200°C
Water pollution class	1

Application

Due to its favourable viscosity class TURMOGLAS BK 220 is compatible on nearly all common central lubrication systems. A mixture with mineral oil based products is possible.

Original Packaging

207 ltr., 6 x 33 ltr., 60 ltr. resp. 200 ltr. single drum

The products are subject to severe controls of reproduction and cannot be sold with the specifications set forth by our customers. Due to the multitude of different manufacturing systems, we cannot assume any liability for the products in each case. Therefore, we recommend to perform field tests. We accept no liability in any case.

Turmoglas BK 220

- Special high temperature oil
- Up to 270°C
- Ester/SHC-oil



Competitor

Brand	Product	Base oil
Klüber Lubrication	Klubersynth HM 2-220	Synthetic
Castrol	Viscogen G	Synthetic
Shell	Tellus 100 Omala 460	Mineral
Mobil	Mobil DTE 27 Mobilgear 460	Mineral

Lubricants



Metal



Corrugated



Plastic



Film



Glass



Printing



Papercup

Corrugated Packaging



High temperature bearing grease



Cleaning oil



Cutting oil

Corrugated Packaging

High temperature bearing grease



Modul facer



Preheater

Turmotemp LP 2502

SINTONO MEGA 2 – H1-alternative

Potential:

10 - 60 cartridges / corrugating machine per year

Approved by

- BHS
- Agnati
- Friese
- MHI



Corrugated Packaging

Turmotemp LP 2502

- Unique lubricant without PTFE
- Miscible with all PFPE/PTFE pastes
- Especially for roller bearings
- Relubrication intervall 500 working hours/30 g
- No special cleaning agent

Consumption: 30 g per bearing

Interval: 500 hours (with PFPE/PTFE pastes 300 hours!)

Sintono Mega 2



Corrugated Roll Surface Cleaner



Corrugated Packaging

Turmocut LMI 18
Turmocut LMI 22



- Smokeless cleaning
- Removes starch residues
- Prevents pitting formation
- Excellent corrosion protection



Slitter



Cutting disc



Felt pad



Grinding stone



Corrugated Packaging

Cutting Oil

Turmocut® SR 15

- H1 registered
- Excellent lubricating characteristics
- Reduced temperature
- Dissolves starch and keeps knives cleaner and sharper
- Extends knife life with less maintenance
- Increase productivity

**30 Million
Linear Meters
Disc Life**

Linear, Spindle and Chain



Corrugated Packaging

Turmofluid ED 13

- Does not attract dust
- Excellent penetration
- Protection against corrosion





Corrugated Packaging

BOBST Die Cutter Chains



LubeChainSystem



**LUBCON® EasyMatic
Turmofluid ED 13**

Corrugated Packaging

Cleaner





Corrugated Packaging

Competitors

High temperature grease:

BHS:	CoruLUB Perflu V250 High Temp (PFPE/PTFE) (sometimes Turmotemp LP 2502)
DuPont:	Krytox 226 FG (PFPE/PTFE)
KV:	Triboflon MYA242 FG (H1) (PFPE/PTFE)
Lubrilog:	Fluostar 2L / Fluostar 2LF (PFPE/PTFE)
Nye:	NYECORR 140 (PFPE/PTFE)
Klüber:	Klübertemp GR AR 555; Klübertemp HM 83-402; Klübertemp RHB 83-202 (PFPE/PTFE) Klüber Noxub BN 2420 (PFPE/sodium complex soap)

Cutting oils / cleaning oils / corrosion protection

BHS:	coruLUB HYSYN V32 Food (PAO – H1)
Lubrilog:	Lubrilog LA 15 / Lubrilog LA 68 (white oil – H1)
Klüber:	Klübersynth MZ 4-17 (ester oil/PAO) Klüber Summit HySyn FG32 (PAO – H1)

And many others

Lubricants



Metal



Corrugated



Plastic



Film



Glass



Printing



Papercup

Package Printing



Experience in more than 300 KBA machines world wide with LUBCON products (with or without H1 approval)

RA 145 - 154

B-4 Overview of lubricants – Suppliers and products with H1 approval

Machine	Supplier	Product	Quantity
1	Shell (Shell Lubricants)	Shell Lubricants	2000
2	Shell (Shell Lubricants)	Shell Lubricants	2000
3	Shell (Shell Lubricants)	Shell Lubricants	2000
4	Shell (Shell Lubricants)	Shell Lubricants	2000
5	Shell (Shell Lubricants)	Shell Lubricants	2000
6	Shell (Shell Lubricants)	Shell Lubricants	2000
7	Shell (Shell Lubricants)	Shell Lubricants	2000
8	Shell (Shell Lubricants)	Shell Lubricants	2000
9	Shell (Shell Lubricants)	Shell Lubricants	2000
10	Shell (Shell Lubricants)	Shell Lubricants	2000
11	Shell (Shell Lubricants)	Shell Lubricants	2000
12	Shell (Shell Lubricants)	Shell Lubricants	2000
13	Shell (Shell Lubricants)	Shell Lubricants	2000
14	Shell (Shell Lubricants)	Shell Lubricants	2000
15	Shell (Shell Lubricants)	Shell Lubricants	2000
16	Shell (Shell Lubricants)	Shell Lubricants	2000
17	Shell (Shell Lubricants)	Shell Lubricants	2000
18	Shell (Shell Lubricants)	Shell Lubricants	2000
19	Shell (Shell Lubricants)	Shell Lubricants	2000
20	Shell (Shell Lubricants)	Shell Lubricants	2000



NOTE

All lubricants listed on this page have been extensively tested on KBA printing presses and meet all requirements for in-house operation. A comprehensive warranty can therefore only be given when the lubricants are made by the OEM (KBA) or Lubcon is used. Other H1 lubricants can be requested from the KBA service department. All these H1 are not to be used for other applications than intended.

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