AL-W High-Performance Grease



Special lubricant | also for underwater applications

WEICON AL-W offers effective protection against aggressive liquids such as sea or waste water, both in the maritime sector and wet operations. The lubricant is suitable for roller and slide bearings even in mixed friction operation, for joints, levers, sliding guides, spindles, spline shafts, open gears, worm gears, chains and wire cables – at all sliding speeds permitted for grease lubrication.

Characteristics		
Base oil		Mineral oil
Base thickener		Special calcium soap
Silicone-free		yes
Colour		beige
Short description	DIN 51502	KPL 1-2 E -25
Consistency classification	DIN 51818	NLGI grade 1-2
Minimum shelf life	at room temperature	24 mon.
Physical properties		
Density	(+20°C) DIN 51757	0,94 g/cm³
viscosity of base oil (40 °C)	DIN 51 562	100 mm²/s
viscosity of base oil (+100 °C)	DIN 51 562	9 mm²/s
Cone penetration	DIN ISO 2137	285 - 315 1/10 mm
Thermal parameters		
Temperature resistance		-25 °C to +80 °C
Dripping point	IP 396	> 100 °C
Heat capacity	DIN EN ISO 22007-4	1,762 J/(g·K)
Thermal conductivity	DIN EN ISO 22007-4	0,494 W/m·K
Temperature conductivity		0,296 mm²/s

Mechanical properties after curing		
Water resistance	DIN 51807	0 - 40
EMCOR-corrosion test	DIN 51802 (3% NaCl solution)	0 / 0
Salt spray test	German Armed Forces regulation 336 h/35 °C, 5 % NaCl	no corrosion
Four ball weld test property load	DIN 51350	3.200 N
Four ball weld test weld load	DIN 51350	3.400 N
Four ball weld test calotte value	DIN 51350 (1min/1000N)	0,7 mm
Rotation speed parameter		450.000
Electrochemical parameters		
Dielectric strength	DIN EN 60243-1 (20°C)	9,5 kV/mm
Approvals / Guidelines		
ISSA Code		53.052.10/11
IMPA Code		450437/38
MIL-Spec	complies with	MIL-PRF-85336B / MIL-PRF-24139A
Complies with		German Bundeswehr TL 9150-0066, NATO Code G-460

Instructions for use

When using WEICON products, the physical, safety-related, toxicological and ecological data and regulations in our EC safety data sheets (www.weicon.com) must be observed.

Application

The AL-W High-Performance Grease can be applied in the desired quantity to the component that you wish to lubricate with the Processing Spatula or the Contour Spatula Flexy. The content of the 400 g cartridges can be easily injected with a hand lever grease gun, e.g. in accordance with DIN 1283.

Storage

WEICON High-Performance Greases should be stored in a dry indoor environment at room temperature. Unopened containers can be stored at temperatures from +18 °C to +28 °C. Opened containers should be resealed airtight.

Accessories

10000147	Cleaner Spray S, 500 ml, transparent
10000347	Cleaner S, 5 L, colourless, transparent
10039119	Fast Cleaner, 500 ml, colourless, transparent
10055297	Industrial Cleaner, 500 ml
10010887	Processing Spatula short, 1 PCE
10022562	Processing Spatula long, 1 PCE
10010066	Contour Spatula Flexy, 1 PCE
10065455	Brush 35, long, Adhesive, 1 PCE

Recommended equipment

Grease gun
Angle grinder
Lint-free cloth

Note
The specifications and recommendations given in this technical data sheet must not be seen as guaranteed product characteristics. They are based on our laboratory tests and on practical experience. Since individual application conditions are beyond our knowledge, control and responsibility, this information is provided without any obligation. We do guarantee the continuously high quality of our products. However, own adequate laboratory and practical tests to find out if the product in question meets the requested properties are recommended. A claim cannot be derived from them. The user bears the only responsibility for non-appropriate or other than specified applications.

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AL-W High-Performance Grease

Available sizes

10016748	AL-W High-Performance Grease, 0,4 kg, beige
10016750	AL-W High-Performance Grease, 1 kg, beige
10016754	AL-W High-Performance Grease, 5 kg, beige
10016756	AL-W High-Performance Grease, 25 kg, beige

Conversion table

(°C x 1.8) + 32 = °F	Nm x 8.851 = lb·in
mm/25.4 = inch	Nm x 0.738 = lb·ft
µm/25.4 = mil	Nm x 141.62 = oz·in
N x 0.225 = lb	mPa·s = cP
N/mm^2 x 145 = psi	N/cm x 0.571 = lb/in
MPa x 145 = psi	kV/mm x 25.4 = V/mil

	AL-W High-Performance Grease	AL-M High-Performance Grease	AL-F High-Performance Grease	AL-T High-Performance Grease	AL-H High-Performance Grease	Silicone Grease	Silicone Grease HV
Rolling bearings	x	x	x	x	x		
Sliding bearings	x	x	x	x	x		
Chains	x						
Joints	x	x	x	x	x	x	x
Levers	x	x	x	x	x	x	x
Sliding guides	x	x	x	x	x	x	x
Linear guide systems				x	x	x	x
Spindles	x	x	x	x	x	x	x
Spline shafts	x	x	x	x			
Camshafts		x	x				
Springs		x					
Open gears	x	x	x				
Worm gears	x	x	x				
Cables	x						

To the product detail page:

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Miscibility of WEICON Allround Lubricant with other greases

The best results when using WEICON Allround Lubricant high-performance greases can only be achieved after complete removal of all grease residues. In practice, however, complete removal of such grease residues is sometimes impossible. In these cases, it is necessary to test whether the WEICON product intended for use is generally compatible with the grease still present. This test must be carried out on the basis of the two main components of the grease (base oil and thickener). Both main components must be miscible (compatible).

Miscibility of base oils

Base oil	Mineral oil (AL-M, AL-W, AL-F, AL-T)	Polyalphaole-fins (AL-H)	Ester	Polyglycol	Silicone (methyl)	Silicone (phenyl)	Polyphenyl ether	Perfluoro-polyether oil
Mineral oil (AL-M, AL-W, AL-F, AL-T)	---	++	++	0	0	+	0	0
Polyalphaolefins (AL-H)	++	---	++	0	0	0	0	0
Ester	++	++	---	++	0	++	++	0
Polyglycol	0	0	++	---	0	0	0	0
Silicone (methyl)	0	0	0	0	---	+	0	0
Silicone (phenyl)	+	0	++	0	+	---	++	0
Polyphenyl ether	0	0	++	0	0	++	---	0
Perfluoropolyether oil	0	0	0	0	0	0	0	---

++ = miscible + = limited resistance 0 = not miscible

Date: 13/06/2024

Miscibility of thickeners

Thickener	Ca soap (anhydrous) (AL-W)	Ca-complex soap	Li soap (AL-F)	Li-com-plex soap	Li/Ca soap (AL-M)	Na soap	Gels*	Ba-com-plex soap	Al-complex soap (AL-H, AL-T)	Polyurea
Ca soap (anhydrous) (AL-W)	---	++	++	++	++	0	++	++	0	++
Ca-complex soap	++	---	++	++	++	0	++	++	0	++
Li soap (AL-F)	++	++	---	++	++	0	++	++	0	++
Li-complex soap	++	++	++	---	++	0	0	++	++	0
Li/Ca soap (AL-M)	++	++	++	++	---	0	++	++	0	++
Na soap	0	0	0	0	0	---	++	++	0	++
Gels*	++	++	++	0	++	++	---	++	0	++
Ba-complex soap	++	++	++	++	++	++	++	---	++	++
Al-complex soap (AL-H, AL-T)	0	0	0	++	0	0	0	++	---	++
Polyurea	++	++	++	0	++	++	++	++	++	---

++ = miscible 0 = not miscible

Date: 13/06/2024

WEICON lubricants and their behaviour towards sealing materials (elastomers)

	Product						
Elastomers	**AL-T**	**AL-M**	**AL-W**	**AL-H**	**AL-F**	**Silicone Grease**	**Silicone Grease HV**
ACM acrylate rubber	++	++	++	++	++	++	++
CR chloroprene rubber	+	+	+	+	+	++	++
CSM chlorosulphonated PE rubber	++	++	++	++	++	++	++
EPDM ethylene propylene diene rubber	--	--	--	--	--	++	++
FKM fluoro rubber	++	++	++	++	++	++	++
NBR nitrile butadiene rubber	++	++	++	++	++	++	++
NR natural rubber	0	--	--	--	--	++	++
SBR styrene butadiene rubber	0	--	--	--	--	++	++
SQM/MVQ silicone rubber	++	++	++	++	++	++	++

++ = resistant + = limited resistance 0 = not tested, preliminary tests or resistance tests are recommended -- = not resistant

Date: 13/06/2024

WEICON lubricants and their behaviour towards plastics

	Product						
Plastic	**AL-T**	**AL-M**	**AL-W**	**AL-H**	**AL-F**	**Silicone Grease**	**Silicone Grease HV**
ABS	++	++	++	++	++	++	++
CA cellulose acetate	++	++	++	++	++	++	++
EPS expanded polystyrene	++	++	++	++	++	++	++
PA polyamide	++	++	++	++	++	++	++
PC polycarbonate	--	--	--	+	--	++	++
PE polyethylene	++	++	++	++	++	++	++
PE-UHMW polyethylene with ultra high molecular weight	++	++	++	++	++	++	++
PE-LD polyethylene with low density	++	++	++	++	++	++	++
PET polyethylene terephthalate	+	+	+	++	+	++	++
POM polyoxymethylene	++	++	++	++	++	++	++
PP polypropylene	++	++	++	++	++	++	++
PPO polyphenylene oxide	++	++	++	++	++	++	++
PS polystyrene	+	+	+	++	+	++	++
PTFE polytetrafluoroethylene	++	++	++	++	++	++	++
PUR polyurethane	+	+	+	++	+	++	++
PVC polyvinyl chloride	++	++	++	++	++	++	++
TPE thermoplastic elastomers	0	0	0	0	0	++	++

++ = resistant + = limited resistance 0 = not tested, preliminary tests or resistance tests are recommended -- = not resistant

Date: 13/06/2024

The stated resistances are based on laboratory tests and literature references. Due to the large number of raw materials used on the one hand and the complex chemical and morphological structure of the polymers on the other, no guarantee can be given. In critical applications, we recommend carrying out tests and/or consulting our application technology department.