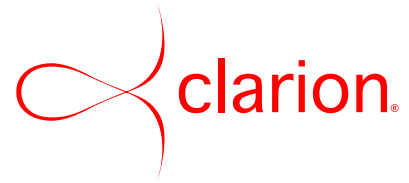


CLARION® Food Machinery A/W Oils



OVERVIEW



- Designed specifically for use as lubricants for food processing equipment.
- Formulated with a high purity white mineral oil and additive system for food processing applications.
- Does not contain any natural products derived from animals, nuts or genetically modified organisms (GMOs).
- Suitable for use where vegetarian and nut-free food is prepared.

FEATURES & BENEFITS



- Colorless, odorless, tasteless, non-staining lubricants that provide excellent wear, rust, and oxidation protection.
- Meet the requirements of U.S. FDA regulation 21 CFR 178.3570 for incidental food contact.
- NSF H1 registered for use in food processing plants under the jurisdiction of the USDA.
- Certified under NSF/ANSI Standards 60 and 61 (ISO 32 and 68 grades only).
- Certified as Kosher (Passover) with the Union of Orthodox Jewish Congregations of America (U).*
- Certified as Halal with the Islamic Food and Nutrition Council of America (M).*



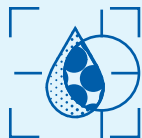
Certified to
NSF/ANSI Standard
60 and 61

Clarion Food Machinery
A/W 32 and A/W 68 Oils
(ONLY)

APPLICATIONS

- General purpose lubricants for machinery that processes, packages, or transports food for human consumption.
- Recommended for medium pressure hydraulic systems and circulating systems in food processing, canning, and bottling operations. Can also be used in air line lubrication applications.
- ISO 68 and 100 grades may be used in food machinery worm gears, spur gears, and valves.

PROPERTIES



Typical Properties for CLARION Food Machinery A/W Oils:

ISO Grade	32	46	68	100
Material Code	633541009	633542009	633543009	633544009
Gravity, °API ASTM D4052	31.5	31.4	31.1	29.9
Density, lb/gallon	7.23	7.23	7.25	7.30
Flash Point, COC, °C (°F) ASTM D92	202 (396)	206 (402)	242 (468)	250 (482)
Pour Point, °C (°F) ASTM D97	-18 (0)	-16 (3)	-9 (15)	-7 (19)
Viscosity ASTM D445				
cSt at 40°C	32.8	46.7	64.15	100
cSt at 100°C	5.56	6.96	8.52	11.0
Viscosity Index ASTM D2270	107	105	103	105
Color ASTM D1500	L1.0	L1.0	L1.0	L1.0
Water Separability, mL-mL-mL (min) ASTM D1401				
@ 130°F	40-40-0 (5)	40-40-0 (5)	40-40-0 (10)	-
@ 180°F	-	-	-	40-40-0 (5)
Rust Test ASTM D665A	Pass	Pass	Pass	Pass
Four-Ball Wear, ASTM D4172				
mm @ 20kg	0.32	0.32	0.32	0.34
mm @ 40kg	0.40	0.40	0.40	0.42
Vickers Pump Wear, mg ASTM D2882	15	15	15	15
FZG Scuffing Load Capacity ASTM D5182	11	11	>12	>12
ANSI/AGMA 9005-E02	-	-	2EP	3EP
Oxidation Stability, hr ASTM D943	>8000	>8000	>8000	>8000
Tackifier	No	No	No	Yes
Kosher*	Ⓢ	Ⓢ	Ⓢ	Ⓢ
Halal*	Ⓜ	Ⓜ	Ⓜ	Ⓜ
NSF Registered (Registration Number)	H1 (124625)	H1 (124628)	H1 (124632)	H1 (124620)
NSF/ANSI Standard 60 Certified	✓	-	✓	-
NSF/ANSI Standard 61 Certified	✓	-	✓	-
FDA, 21CFR 178.3570	✓	✓	✓	✓

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*Excludes product delivered by bulk transport.