



PRODUCT DATA SHEET



BEL-RAY[®] NO-TOX[®] SYNTRA OIL

Bel-Ray No-Tox Syntra Oil is a series of full synthetic PAO-based, premium H1 rated food grade, high performance lubricants. It is available in 11 grades from ISO VG 15 to 1000. It is designed to give exceptional wear and corrosion protection for hydraulic, gear, chain, compressor, bearing and other applications found in the "clean" industries such as food, beverage, pharmaceutical and personal care products.

Applications

- ◆ Suitable for multi-service applications
- ◆ Hydraulic pumps, motors and actuators - vane, piston, radial piston and gear
- ◆ Compressors and vacuum pumps
- ◆ Enclosed gears including spur, bevel and worm gears
- ◆ Circulating systems, chains, bearings, spindles, joints and others

Features and Benefits

- | | |
|------------------------------------|---|
| ◆ NSF H1 registered | Use where incidental food contact may occur. |
| ◆ Bacteriological protection | Effectively inhibits the growth of certain bacteria, yeast and mold in the lubricant. |
| ◆ Fully synthetic | Long life, extended drain intervals. |
| ◆ Elastomer compatible | Long seal life, less leakage. |
| ◆ Outstanding anti-wear properties | Excellent equipment protection. |
| ◆ Rust and oxidation protection | Reduces sludge and varnish build-up. |

General Description

Bel-Ray No-Tox Syntra Oil is water-white in color, odorless and tasteless. It exhibits excellent anti-wear properties, high Viscosity Index, exceptional water separability, foam resistance and excellent rust and oxidation protection properties. **Bel-Ray No-Tox Syntra Oil** is also filtered through a 2-micron filter system to achieve the highest cleanliness standards. ISO VG 15 to 100 is filtered to a minimum ISO 4406:1999 cleanliness level of 16/14/12. ISO VG 150 to 1000 is filtered to a minimum ISO 4406:1999 cleanliness level of 18/15/12.

Bel-Ray No-Tox Syntra Oil, formulated with the highest quality synthetic oils and food grade additives, meets NSF H1 and FDA requirements for materials that may have incidental contact with food as defined under Title 21 CFR, 178.3570. It is Kosher and Pareve approved, as well as Halal certified.

Product No. 64233, 64234, 64235, 64236, 64237, 64238, 64239, 64240, 64241, 64242, 64243

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With continual research and development, Bel-Ray Company, Inc. reserves the right to change the information contained herein. The Company is not responsible for misuse or misapplication of its products.

BEL-RAY® NO-TOX® SYNTRA OIL

TYPICAL PROPERTIES

<u>Product No.</u>	<u>64233</u>	<u>64234</u>	<u>64235</u>	<u>64236</u>
ISO Viscosity Grade	15	32	46	68
Viscosity, ASTM D445				
@ 40°C, cSt	15.6	31.4	45.8	67.8
@ 100°C, cSt	3.69	6.04	7.85	10.5
Viscosity, ASTM D2161				
@ 100°F, SUS	84.7	161	234	347
@ 210°F, SUS	38.7	46.5	52.5	61.9
Viscosity Index, ASTM D2270	125	142	142	143
Pour Point, ASTM D97				
°C	-68	-63	-60	-59
(°F)	(-90)	(-81)	(-76)	(-74)
Rust Test, ASTM D665, Procedure A & B	Pass	Pass	Pass	Pass
Foam Test, ASTM D892				
Sequence I, II, III, ml/ml	Nil	Nil	Nil	Nil
Falex EP Test, ASTM D3233 Method B				
Non-seizure Load, lbf	2000	2000	2000	2000
4-Ball Wear Test, ASTM D4172				
@ 1200 rpm, 40 kg, 1 hr, 75°C				
Scar Diameter, mm	0.40	0.40	0.40	0.40
Vickers Vane Pump Test, ASTM D7043				
Total Mass Loss, mg	<15	<15	<15	<15
FZG Visual Test, ASTM D5182				
Failure Load Stage	--	--	--	--
Specific Gravity, ASTM D1298, 60/60°F	0.810	0.835	0.838	0.841
Color	Colorless to Pale Yellow	Colorless to Pale Yellow	Colorless to Pale Yellow	Colorless to Pale Yellow

BEL-RAY® NO-TOX® SYNTRA OIL

TYPICAL PROPERTIES

<u>Product No.</u>	<u>64237</u>	<u>64238</u>	<u>64239</u>	<u>64240</u>
ISO Viscosity Grade	100	150	220	320
Viscosity, ASTM D445				
@ 40°C, cSt	102	150	220	320
@ 100°C, cSt	14.6	19.3	26.1	34.6
Viscosity, ASTM D2161				
@ 100°F, SUS	523	768	1138	1662
@ 210°F, SUS	77.9	97.8	128	168
Viscosity Index, ASTM D2270	148	148	151	153
Pour Point, ASTM D97				
°C	-55	-53	-47	-45
(°F)	(-67)	(-63)	(-53)	(-49)
Rust Test, ASTM D665, Procedure A & B	Pass	Pass	Pass	Pass
Foam Test, ASTM D892				
Sequence I, II, III, ml/ml	Nil	Nil	Nil	Nil
Falex EP Test, ASTM D3233 Method B				
Non-seizure Load, lbf	2000	2000	2000	2000
4-Ball Wear Test, ASTM D4172				
@ 1200 rpm, 40 kg, 1 hr, 75°C				
Scar Diameter, mm	0.40	0.40	0.40	0.40
Vickers Vane Pump Test, ASTM D7043				
Total Mass Loss, mg	--	--	--	--
FZG Visual Test, ASTM D5182				
Failure Load Stage	12+	12+	12+	12+
Specific Gravity, ASTM D1298, 60/60°F	0.849	0.850	0.852	0.854
Color	Colorless to Pale Yellow	Colorless to Pale Yellow	Colorless to Pale Yellow	Colorless to Pale Yellow

BEL-RAY® NO-TOX® SYNTRA OIL

TYPICAL PROPERTIES

<u>Product No.</u>	<u>64241</u>	<u>64242</u>	<u>64243</u>
ISO Viscosity Grade	460	680	1000
Viscosity, ASTM D445			
@ 40°C, cSt	460	674	1000
@ 100°C, cSt	45.8	61.2	84.1
Viscosity, ASTM D2161			
@ 100°F, SUS	2397	3527	5249
@ 210°F, SUS	221	295	406
Viscosity Index, ASTM D2270	156	159	165
Pour Point, ASTM D97			
°C	-42	-39	-33
(°F)	(-44)	(-38)	(-27)
Rust Test, ASTM D665, Procedure A & B	Pass	Pass	Pass
Foam Test, ASTM D892			
Sequence I, II, III, ml/ml	Nil	Nil	Nil
Falex EP Test, ASTM D3233 Method B			
Non-seizure Load, lbf	2000	2000	2000
4-Ball Wear Test, ASTM D4172			
@ 1200 rpm, 40 kg, 1 hr, 75°C			
Scar Diameter, mm	0.40	0.40	0.40
Vickers Vane Pump Test, ASTM D7043			
Total Mass Loss, mg	--	--	--
FZG Visual Test, ASTM D5182			
Failure Load Stage	12+	12+	12+
Specific Gravity, ASTM D1298, 60/60°F	0.856	0.856	0.859
Color	Colorless to Pale Yellow	Colorless to Pale Yellow	Colorless to Pale Yellow