RENOIL[™] WHITE MINERAL OILS



CUSTOMER BENEFITS

Renoil White Oils deliver value through:

- A high degree of purity Colorless, odorless, tasteless. The purity of Renoil White Oils accounts for their frequent use in medicinal and cosmetic products. The low phytotoxicity of Renoil White Oils can make them a preferred component of products applied to agricultural and ornamental plants.
- A wide application range Renoil White Oils are common ingredients of pharmaceuticals and cosmetics.
 The plastics, textile and food industries are major users of Renoil White Oils.

FEATURES

Renoil White Oils are colorless, odorless, tasteless mixtures of saturated paraffinic and naphthenic hydrocarbons that span a viscosity range of 60-550 SUS at 100°F.

These nearly chemically inert oils are virtually free of nitrogen, sulfur, oxygen and aromatic hydrocarbons.

Renoil White Oils contain Vitamin E, a natural antioxidant, to protect quality during handling and storage.

They are clear, bright and free of solids and water.

APPLICATIONS

Renoil White Oils find wide application:

- where direct food contact may occur
- where prolonged contact with human skin is necessary
- · where odor and staining must be minimized
- where outstanding long service under adverse conditions is required

Renoil White Oils must be stored in approved containers to prevent contamination that could jeopardize their food grade status.

Renoil White Oils:

- meet or exceed U.S. Food and Drug Administration (FDA) requirements
 - for food contact applications, 21 CFR 178.3620(a)
 - for direct use in food, 21 CFR 172.878
 - for applications where incidental food contact may occur, 21 CFR 178.3570
 - for use in animal feed, 21 CFR 573.680
 - for use as technical white oils, 21 CFR 178.3620(b)
 - for use as a plasticizer in polymeric substances, 21 CFR 178.3740
- meet all U.S. Pharmacopeia (USP) requirements for mineral oils
- meet all Cosmetic, Toiletry, and Fragrance Association (CTFA) requirements for white mineral oils
- meet all Canadian Food Inspection Agency (CFIA) requirements for white mineral oils
- are certified by NSF and are acceptable as lubricants where incidental food contact may occur (H1) in and around food processing areas and as a release agent (3H) where direct food contact may occur. The NSF Nonfood Compounds Registration Program is a continuation of the USDA product approval and listing program, which is based on meeting regulatory requirements of appropriate use, ingredient review and labeling verification.
- are certified Kosher, Pareve and Halal.
- all European Pharmacopeia (EP) requirements for mineral oils

All trademarks are the property of Renkert Oil, LLC.

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$\mathsf{RENOIL}^{\scriptscriptstyle{\mathsf{TM}}}$ WHITE OILS — CONTINUED



TEST DATA

White Mineral Oil

Typical Properties	Methods	60-W	70-W	90-W	100-W	220-W	350-W	500-W
Gravity API Specific, 25°C/25°C	ASTM D4052	32.1 0.865	33.3 0.854	33.3 0.854	33.8 0.85	31.8 0.86	31.2 0.864	31.0 0.871
Viscosity, Kinematic cSt at 40°C	ASTM D445	10	13	17	20	43	68	95
Viscosity, Saybolt SUS at 100°F	ASTM D2161	62	70	90	105	220	350	550
Flash Point, °C(°F)	ASTM D92	155(311)	177(350)	177(350)	200(392)	225(437)	230(446)	260(500)
Pour Point, °C(°F)	ASTM D5950	-33(-27)	-27(-17)	-15(5)	-12(10)	-12(10)	-12(10)	-12(10)
Color, Saybolt	ASTM D156	30	30	30	30	30	30	30
21 CFR 172.878	FDA	Pass	Pass	Pass	Pass	Pass	Pass	Pass
21 CFR 178.3620 (a)	FDA	Pass	Pass	Pass	Pass	Pass	Pass	Pass

Technical Grade

Typical Properties	Methods	60-T	70-T	90-T	100-T	220-T	350-T	500-T
Gravity API Specific, 25°C/25°C	ASTM D4052	31.6 0.864	33.3 0.854	33.3 0.854	33.8 0.85	31.8 0.86	31.2 0.864	30.5 0.867
Viscosity, Kinematic cSt at 40°C	ASTM D445	10	13	17	20	43	68	105
Viscosity Saybolt SUS at 100°F	ASTM D2161	62	70	90	105	220	350	500
Flash Point, °C (°F)	ASTM D92	157(315)	177(350)	177(350)	200(392)	225(437)	230(446)	267(512)
Pour Point, °C(°F)	ASTM D5950	-33(-27)	-27(-17)	-15(5)	-12(10)	-12(10)	-12(10)	-12(10)
Color, Saybolt	ASTM D156	28	28	28	28	28	28	25
21 CFR 178.3620 (b)	FDA	Pass	Pass	Pass	Pass	Pass	Pass	Pass

Typical test data are average values only. Minor variations which do not affect product performance are to be expected in normal manufacturing. All trademarks are the property of Renkert Oil, LLC.

Contact us for further information about specifications, applications, samples and delivery.

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