

1. What is white oil?

White oil, often referred to as mineral white oil, or baby oil, and was first imported into the U.S. around 1905 and first produced in the U.S. in 1914 at the beginning of World War I. White oil is manufactured from mixtures of highly refined paraffinic and naphthenic hydrocarbons derived from crude oil and are extremely pure and versatile.

2. How is white oil manufactured?

It can be extracted by (1) either traditional solvent refining, followed by processes of sulfuric acid treatment, dewaxing and hydrotreating, or (2) the more modern way of hydrocracking process followed by dewaxing and hydrotreating to remove all impurities. The end result is a product that is free from sulfur and other harmful ingredients, making it very pure, odorless, tasteless and water white.

3. What are some examples of consumer products that contain white oil as an ingredient?

- Food & meat packs in grocery stores • Baby oils
- Protective coating on raw fruits and vegetables • Creams & lotions
- Egg shell sealant • Hair conditioners & shampoos
- Dog and cat food • Furniture polishes
- Animal medications • Makeup
- Liquid soaps • Kitchen cleaners

4. Can white oil also be used for lubricating conveyor bearings in meat packing plants and bottling plants?

White oil is used in the manufacturing of food-grade lubricants used in food and beverage plants. Products such as ConocoPhillips Food Machinery Oil and Pure FM Grease are specifically formulated for use in applications such as: mixers, chain drives, sliding surfaces, hydraulic system pivot points and conveyor rollers.

5. Is white oil regulated by the government?

White oil has such a wide range of usage that special federal and industry standards were established for their use. The main governing body is the Food and Drug Administration, which applies the following federal regulations to white oils:

- 21 CFR 172.878, applies to white oil subject to direct food contact
- 21 CFR 178.3620, applies to white oil subject to indirect food contact
- 21 CFR 573.680, applies to white oil used for animal feed, medication & care

Prior to 1999, the U.S. Department of Agriculture (USDA) approved and certified lubricants for use in the food processing industry as either H-1 (incidental food contact) or H-2 (no possibility of food contact). Since then, NSF International has assumed responsibility for registering food-grade lubricants. ConocoPhillips White Oil is NSF H-1 registered.

6. Are there other regulatory agencies responsible for the quality of white oil?

The United States Pharmacopoeia (USP) and National Formulary (NF) also regulate the quality of white oil.

7. What is the USP and what does it regulate?

The United States Pharmacopoeia is an independent, science-based public health organization. It is the official public standards-setting authority for all prescription and over-the-counter medicines, dietary supplements, and other healthcare products manufactured and sold in the United States. USP sets standards for the quality of these products and works with healthcare providers to help them reach the standards.

8. What is NF and what does it regulate?

The National Formulary (NF) is the official national register covering pharmaceutical ingredients and nutritional supplements.

9. How do I know which product to choose for my application?

White oil grades meeting NF standards range in viscosity from 6.0 to 20.0 cSt @ 40°C (50 to 100 SUS @ 100°F). The recommended products are grades 50/60, 65/75 and 80/90. White oil grades meeting USP standards range in viscosity from 32.0 to 100.0 cSt @ 40°C (200 to 550 SUS @ 100°F). The recommended products are grades 200/215 and 340/365. The chart to the right will help you to determine the right product for your application.

10. Is Technical Grade White Oil the same as White Oil?

No. Technical Grade White Oil complies with FDA regulations 21CFR 178.3620 and 573.680. They do not comply with 21 CFR 172.878, which means they cannot be used where direct

food contact with the oil is possible. They range in viscosities from 5.0 to 150 cSt @ 40°C (40 to 550 SUS @ 100°F). They are used as lubricants and release agents in nonfood applications, such as adhesives, defoamers, resin-bonded filters, rubber, textiles, fibers, metallic articles and machinery. Technical Grade White Oil functions as a conditioning agent, dust suppressant, moisture barrier, diluent and dehydrating agent. ConocoPhillips Lubricants White Oil can be used in applications calling for Technical Grade White Oil.