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ExonMobil.

Marcol 52

Medicinal grade White Oil

Product Description

Marcol 52 is a purified mixture of liquid saturated hydrocarbons. It is a colourless, transparent oily liquid and is essentially odourless and tasteless. It is obtained from petroleum through several refining stages, including an ultimate purification by catalytic hydrogenation.

Marcol 52 is manufactured to exceed the purity requirements of the Pharmacopoeias. Due to its superior chemical inertness, it demonstrates better colour and oxidative stability than most mineral and vegetable oils, when stored and used under controlled conditions.

ExxonMobil White Oils are produced and controlled according to the ExxonMobil Product Quality Management System, EN ISO 9000 or equivalent standard.

Applications

Marcol 52 can be used in a variety of food-contact, cosmetic and pharmaceutical applications (*), subject to the applicable laws and regulations in each country (**).

(*) To limit ingestion and aspiration hazards, **Marcol 52** should not be used in nasal, oral or lip care products, or as a food additive other than for food contact materials.

(**) User must check compliance with applicable regulations.

Cosmetics

Marcol 52 is used as a component of a great variety of cosmetic products:

- Cleansers
- Hair care products
- Neutral and protective diluents for other cosmetic ingredients such as essential oils
- Other applications such as make-ups and make-up removers.

Marcol 52 provides many practical advantages to the formulation specialist:

- · Excellent skin compatibility, low irritancy and comedogenicity
- Very good balance between resistance to bacteria and final biodegradability, with minimal environmental impact.

Pharmaceuticals and Veterinary products

Marcol 52 offers a high level of safety, thanks to its high purity (absence of toxic polycyclic aromatics, heavy metals), the complete destruction of germs in the high temperature manufacturing process, and specific packaging and handling procedures. Major uses are:

- Adjuvant in vaccines for animals (cattle, chickens, and pigs) where its low viscosity offers optimal efficacy.
- Gelatine capsule manufacture.

Properties and Specifications

Marcol 52 meets the requirements of the following specifications:

- USA FDA, 21 CFR 172.878 (*) and 21 CFR 178.3620(a), White Mineral Oil
- The Japan's Specifications and Standards for Food additives, Liquid Paraffin (*)
- National Sanitation Foundation (NSF), category H1, registration number 123205
- US Pharmacopeia/National Formulary, most recent edition, Light Mineral Oil monograph
- Purity requirements of European Pharmacopoeia, most recent edition, Light Liquid Paraffin monograph (**)

(*) Information provided for reference only, Marcol 52 should not be used as a food additive other than food contact

(**) **Marcol 52** while not being covered by the European Pharmacopoeia due to its light viscosity, meets all the purity test requirements of this Pharmacopoeia.

CAS number: 8042-47-5

EINECS number: 232-455-8

INCI name (Europe): Paraffinum Liquidum

CTFA Dictionary name (USA): Mineral Oil

Property	Test Method	Typical Value	Specification	
			Min.	Max.
Appearance	Visual	-	Clear and Bright	Clear and Bright
Odor	Olfactory	-	Absent	Absent
Color, Saybolt	ASTM D 156	-	+ 30	-
Kinematic Viscosity @ 40°C, mm2/s	ASTM D 445	-	7.0	8.0
Kinematic Viscosity @ 100°C, mm2/s	ASTM D 445	2.2	-	-
Dynamic Viscosity @ 20 °C, mPa.s	ASTM D 445	12	-	-
Dynamic Viscosity @ 25 °C, mPa.s	ASTM D 445	-	9	11
Density@20 oC, kg/m3	ASTM D 4052	-	825	834
Relative density 15 °C / 15 °C	ASTM D 4052	-	0.828	0.838
Pour Point, oC	ASTM D 97	-	-	- 6
Flash Point, oC	ASTM D 92	-	150	-
Refractive Index, nD20	ASTM D 1218	-	1.457	1.460
Carbon Type, %	ASTM D 2140			
Paraffinic / Naphthenic / Aromatic		67 / 33 / 0	-	-

Typical values may vary within modest ranges and specifications may be subject to change.

Health and Safety

Detailed health and safety information for this product is provided in the Material Safety Data Sheet (MSDS), available upon request through your local sales representative or from <u>www.ExxonMobil.com</u>.

Storage and Handling

Recommended storage and handling procedures for ExxonMobil white oil products are summarised in a separate bulletin available upon request through your local sales representative or from <u>www.ExxonMobil.com</u>

ExxonMobil supplies a range of white oils, process oils, waxes and bitumen and a full range of other lubricants, fuels and chemical products worldwide. Please contact your local ExxonMobil representative, or contact us at www.ExxonMobil.com, for more information on other products.

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2-2013

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