

Cyclo-2345 (d5/d6) Cyclomethicone

Blend of Decamethylcyclopentasiloxane (d5) & Dodecamethylcyclohexasiloxane (d6) INCI Name: Cyclomethicone



*Cyclo-2345 d5/d6
Cyclomethicone offers a
slower evaporation rate than
d4 or d5 Cyclomethicones.*

Cyclo-2345 (D5/D6) Cyclomethicone is a polydimethylcyclosiloxane that is composed of approximately 75% Cyclopentasiloxane (CAS #541-02-6) and approximately 25% of Dodecamethylcyclohexasiloxane (CAS# 540-97-6). The fluid is clear, tasteless, essentially odorless, non-greasy and non-stinging.

Due to their varying rates of evaporation, low surface tensions (high spreadability), and non-greasy feel, Cyclomethicones are used as base fluids, carrying agents and wetting agents in a wide range of personal care products. Cosmetic applications include: room sprays, body sprays, antiperspirants, skin creams, skin lotions, suntan lotions, bath oils, hair care products etc. The Cyclomethicone component (D5) evaporates faster than the Cyclomethicone component (D6). We can adjust the percentage of the components to adjust the evaporation rate and residence time on the skin.

Cyclomethicone Fluids are California VOC Exempt and will not contribute to ozone-depletion and global warming. They are being used as replacements for Non-VOC petroleum-based solvents.

For stronger solvent alternatives, we offer the Cyclo-244 and Cyclo-245 which have comparable evaporation rates to naphtha solvents, odorless mineral spirits (OMS) as well as some of the isoparaffinic solvents. If a slower evaporation rate is desirable, Cyclo-2345 may be a better selection. All Cyclomethicones are compatible with most substrates, including metals and plastics.

Properties

- Clear, colorless, odorless fluid
- Volatile carrier (100% evaporation at room temperature)...leaves no residue or buildup.
- Cosmetic grade...excellent for bases fluids in cosmetic formulations such as body sprays and room sprays
- Compatible with a wide range of Cosmetic ingredients...takes greasiness out of cosmetic oils.
- Low surface tension (high spreadability)
- Low heat of vaporization...non-stinging fluid.
- Will not cool skin when it evaporates
- Excellent lubricity before evaporation.
- Can vary rate of evaporation to adjust residence time on the skin.
- Imparts a soft-silky feel to the skin
- Miscible with virtually all polydimethylsiloxane fluids and most petroleum based fluids
- Soluble in most anhydrous alcohols, waxes, oils (except castor), hydrocarbon oils, esters and silicone fluid.
- Insoluble in water

VOC Status (CARB VOC) Status

Cyclo-2245 (d5) Cyclomethicone California (CARB) VOC Exempt. It is finding wide use as a replacement for petroleum based solvents that do not meet VOC compliancy.

- VOC Exempt Solvent for low solvency applications
- VOC Exempt Dry Cleaning Solvent
- Additive to bring non-VOC formulations into compliancy.

CAS Information

Decamethylcyclopentasiloxane 541-02-6... > 60% by weight
Dodecamethylcyclohexasiloxane 540-97-630 <30% by weight

Product Data

Product Code	Cyclo-2345
Chemical Name	Cyclomethicone
CAS No's.	CAS 541-02-6 CAS 540-97-6
Appearance	Colorless liquid
Specific gravity @25°C	0.960
Viscosity at 25 at 25°C	4.5cSt
Refractive index	1.398
Surface tension	20.8
Flash point-closed cup	82°C
Freeze point	-50°C
Boiling point @ 760mmHg	217°C
Evaporation rate: butyl acetate =1	<1
Heat of vaporization @25°C	157kJ/kg

Packaging

1-gallon.....	3.45kg
5-gallon pail.....	17 kg
55-gallon drum.....	190 kg
F.O.B. Phila, PA U.S.A.	

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