





# Silicones for Personal Care

# Personal Care Product Range

*Volatile Fluids*

*Dimethicones*

*Phenyl Modified Fluids*

*Polymer Fluid Blends*

*Dimethicone Copolyols*

*Silicone Crosspolymers*

*Silicone Emulsions*

*Silicone Resins*



# Volatile Fluids

- ❑ Volatile on skin
- ❑ Upon evaporation, impart soft, dry velvety feel, no residue or build up
- ❑ Make up: Volatile carrier in pigment dispersions
- ❑ Aerosol: Replacement for organic solvent
  - Reduce stickiness
  - Non clogging of nozzles
  - No cooling effect on evaporation
- ❑ Stick: Non tacky, apply without drag
- ❑ Sunscreen: Solvent for actives, and dispersing aid for micronized oxides
- ❑ Emulsions: Soft, smooth feel and pleasant application with a unique skin feel



# Volatile Fluids

## *Cyclics*

- ❑ **BRB CM40** - *Cyclotetrasiloxane*
- ❑ **BRB CM50** - *Cyclopentasiloxane*
- ❑ **BRB CM60** - *Cyclohexasiloxane*
- ❑ **BRB CM45** - *Cyclotetrasiloxane & Cyclopentasiloxane*
- ❑ **BRB CM56-S** - *Cyclopentasiloxane & Cyclohexasiloxane*



# Volatile Fluids

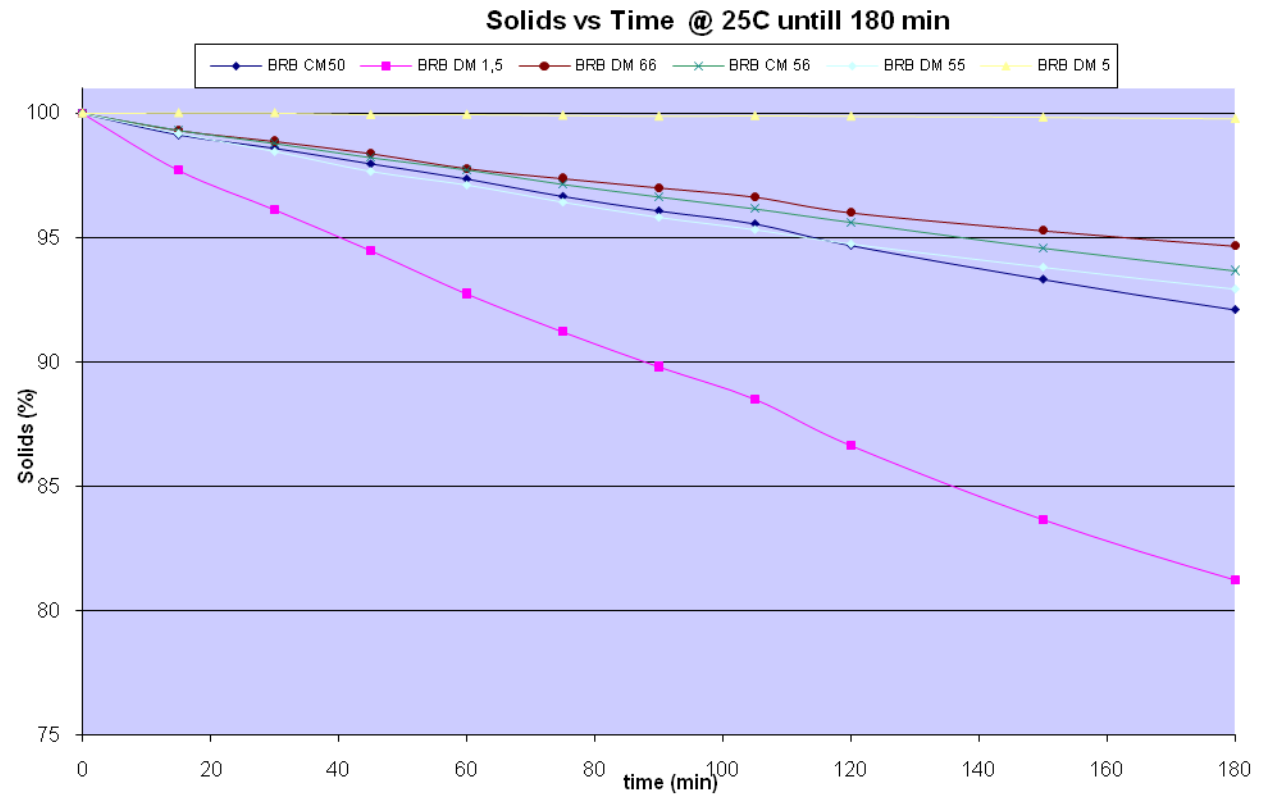
## *linear*

- ❑ **DM 0.65** - *Hexamethyldisiloxane*
- ❑ **DM 1** - *Trisiloxane*
- ❑ **DM 1.5** - *Dimethicone*
- ❑ **DM 2** - *Dimethicone*
- ❑ **DM 55** - *Dimethicone alternative to Cyclopentasiloxane*
- ❑ **DM 66** - *Dimethicone alternative to Cyclopentasiloxane & Cyclohexasiloxane*
- ❑ **BRB 1417** - *Dimethicone & trisiloxane*



# Volatile Fluids

## *Evaporation Characteristics*



# Dimethicones

BRB DM Fluid - Dimethicone 5 to 100.000 cSt

- ❑ Non Volatile
- ❑ Excellent spreadability
- ❑ Sweat and sebum resistance
- ❑ Outstanding emolliency and lubricity
- ❑ Low viscosity dimethicones (5 - 20 cSt): miscible in organic ingredients
- ❑ Middle viscosity dimethicones (50 - 1000 cSt): as oil additive in skin care formulations
- ❑ High viscosity dimethicones (60.000 - 100.000 cSt): long chain polymer to improve combing in Hair Care products





# Phenyl Modified Fluid

- ❑ BRB PTM 20 - Phenyltrimethicone
  - ❑ BRB PTM 34 - Phenyltrimethicone & Dimethiconol
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- ❑ High refractive Index which imparts gloss
  - ❑ Good solubility or compatibility with many organic ingredients
  - ❑ Excellent emolliency and reduced tackiness



# Dimethiconol Blends

- ❑ BRB 1744, 1755 - Cyclotetrasiloxane, Cyclopentasiloxane & Dimethiconol
- ❑ BRB 1736, 1739 - Dimethicone & Dimethiconol
- ❑ BRB 1834/35/39 - Cyclopentasiloxane & Dimethiconol
- ❑ BRB 1844 - Cyclopentasiloxane & Dimethicone
- ❑ BRB 3839 - Cyclopentasiloxane & Dimethicone & Dimethiconol
  
- ❑ Custom made
  
- ❑ Skin Care: Provide a durable, non occlusive barrier coat  
Impart soft velvety feel
  
- ❑ Hair Care: Most commonly used as cuticle coat

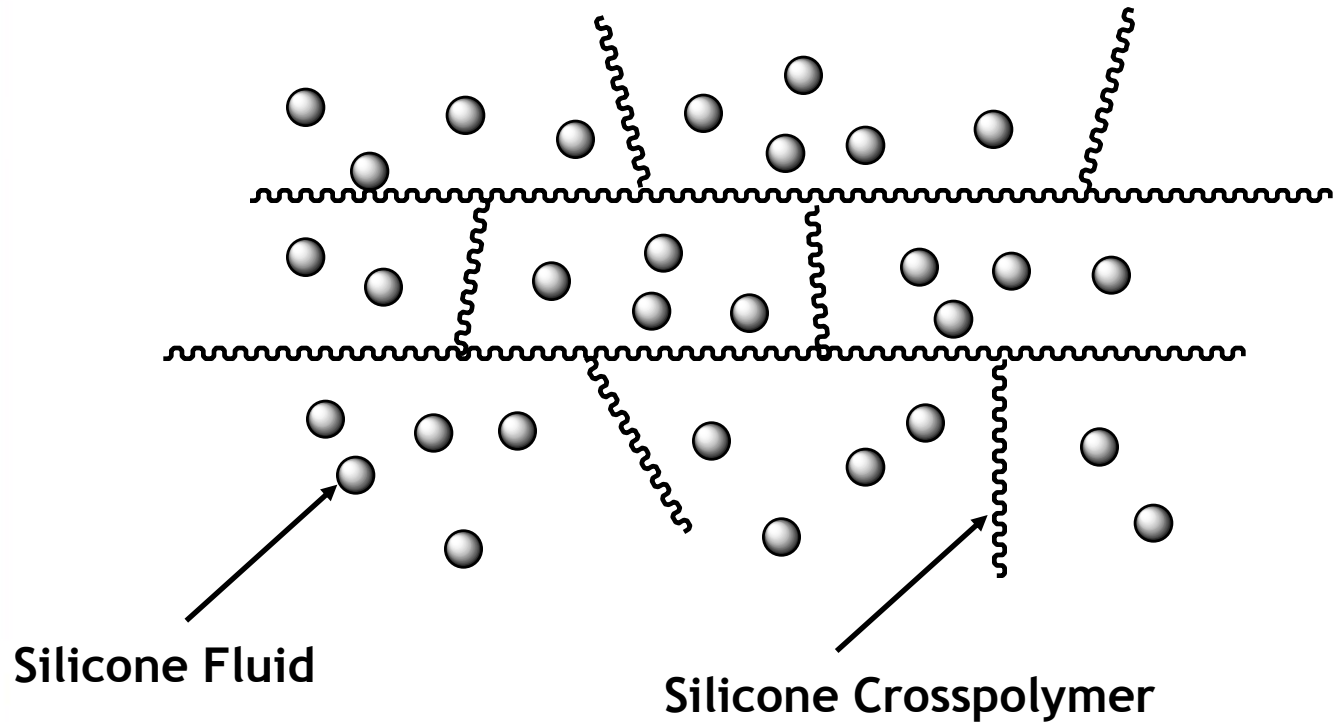


# Dimethicone Copolyols

- ❑ BRB 523 - PEG/PPG-18/18 Dimethicone
- ❑ BRB 526 - PEG-12 Dimethicone
- ❑ BRB 6373 - Cyclopentasiloxane and PEG/PPG-18/18 Dimethicone
  
- ❑ Custom made
  - ❑ Acts as wetting agent, emulsifier
  - ❑ Compatible with a wide range of cosmetic ingredients
  - ❑ Acts as surfactant for stable foaming
  - ❑ Hair Care: Resin plasticizer in styling products
  - ❑ Skin Care: Provides humectancy and emolliency



# Silicone Crosspolymer



# Silicone Crosspolymer

*Clear to slightly translucent cross-linked silicone elastomer gel*

- ❑ ***BRB SG 106, 116, 117***
  - ✓ ***Cyclopentasiloxane & Dimethicone Vinyl Dimethicone Crosspolymer***
- ❑ ***BRB SG 506, 516, 517***
  - ✓ ***Dimethicone & Dimethicone Vinyl/ Dimethicone Crosspolymer***
- ❑ ***Custom Made***



# Silicone Crosspolymer

- ❑ Compatible with a variety of lipophilic active ingredients such as fragrances, sunscreens, vitamins etc.
- ❑ Cold Processable
- ❑ Easy to formulate
- ❑ Acts as thickening agent for water-in-oil and water-in-silicone formulations, cyclomethicones and other silicone fluids
- ❑ Provides dry smoothness and a light silky, non-greasy skin feel
- ❑ Enhances the aesthetics of cyclomethicones
- ❑ Reduces tackiness of formulations
- ❑ Quick absorption
- ❑ Non-animal tested



# BRB Personal Care Emulsions

- ❑ BRB 1282S - Amodimethicone & Cetrimonium Chloride & Trideceth-12
- ❑ BRB 1018 - Dimethiconol & TEA-dodecylbenzenesulfonate
- ❑ BRB 8519 - Dimethicone (and) Laureth-23 (and) Laureth-2 (and) Salicylic acid
- ❑ BRB 9719 - Dimethicone (and) Laureth-4 (and) Laureth-23 (and) Salicylic acid

## Hair Care:

- ❑ Emulsions of silicone for easy formulation into hair treatment products
- ❑ Concentration easily adjusted by dilution with water
- ❑ Protective coating upon drying
- ❑ Imparts soft and silky feel
- ❑ Improves wet and dry combing



# BRB Personal Care Emulsions

## BRB 1282S Aminofunctional emulsion

- ❑ Hair care emulsion for Conditioners and Hair Treatment formulations
- ❑ A very good conditioning additive for Leave-on and styling products
- ❑ Benefits: easier dry & wet combing, less flyaway, less static built-up, hair volume
- ❑ Low D4 content (~0.1%)





# BRB Personal Care Emulsions

## BRB 1018: High viscosity dimethiconol emulsion

- ❑ Dimethiconol Gum (1MM-1.6MM mPas) emulsion made by Emulsion-polymerisation
- ❑ A very good additive for 2-in-1 shampoos and conditioner products. Will improve the wet and dry combing and impart a soft feel to the hair when used in rinse-off conditioners.
- ❑ Deposit on hair in combination with cationic polymers (e.g. hydroxypropyltrimoniumchloride) which flocculates upon dilution)
- ❑ Flocculation deposits insoluble actives on hair (silicones, fragrances etc.)
- ❑ Use of quat may be avoided by combining it with a large particle size product or aminofunctional emulsions



# BRB Personal Care Emulsions

## BRB Dimethicone Emulsions BRB 8519 and BRB 9719

- ❑ BRB Dimethicone Emulsions are for use in a variety of hair care and skin care applications where the benefits of a high viscosity dimethicone are desired
- ❑ In shampoos and conditioners they will provide good wet and dry combing in addition to imparting a soft silky feel to the hair without build up even after repeated wash cycles.
- ❑ When formulated into shower gel, it provides conditioning benefits for both skin and hair and is thus ideal for dual body and hair shower products.
- ❑ In skin products, it will generally provide the typical silicone feel - non-tacky, luxuriant soft silky feeling.



# Trimethylsiloxysilicates

- ❑ **BRB TMS** - **Trimethylsiloxysilicate**
  - ❑ **BRB TMS-50C** - **Cyclopentasiloxane & Trimethylsiloxysilicate**
  - ❑ **BRB TMS-30D** - **Dimethicone & Trimethylsiloxysilicate**
  - ❑ **Custom made**
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- ❑ Protective film upon drying
  - ❑ Increases glide and reduces tackiness in deodorant applications
  - ❑ Improves spreading
  - ❑ Gives long lasting effect



# Alkyldimethicones



**BRB 2834: Bis-PEG-18 methyl ether dimethyl silane**

**BRB 2836: Stearyl dimethicone**

**BRB 2835: Cetyl dimethicone**

**BRB Caprylyl methicone**

- Modify the feel of products (lubricity, lip-stick/soap bar mould release)
- Better organic compatibility
- Create barrier properties to enhance moisturizing in creams & lotions water resistance
- Liquid or waxy appearance
- Reduces surface tension in W/O emulsions, aiding the formulation of “greener” products

# BRB Personal Care

We would like to offer you:

- Greater flexibility
- A wide range of products
- Worldwide coverage

We are:

- Highly experienced in tailor made solutions
- Highly experienced in toll manufacturing





**Ambition**

**Flexibility**

**Innovation**