

Wacker-Belsil® TMS 803

Trimethylsiloxysilicate

Characteristics

Wacker-Belsil® TMS 803 is the co-hydrolysis product of tetraalkoxysilane (Q unit) and trimethylethoxysilane (M unit). The chemical structure of Wacker-Belsil TMS 803 can be seen as a three-dimensional network of polysilicic acid units, which are endblocked with trimethylsilyl groups. Some residual ethoxy and hydroxy functions are present. The average molecular weight can be adjusted precisely via the ratio of M to Q units. This ratio is 0.66 for Wacker-Belsil TMS 803. Wacker-Belsil TMS 803 is a white powder manufactured in such a way that it is substantially free of volatile impurities, mainly aromatic solvents such as toluene. In keeping with its low content of fine dust particles and its uniform spherical particles, Wacker-Belsil TMS 803 exhibits excellent rheological properties (flowability).

Wacker-Belsil TMS 803 can be compounded with polydimethylsiloxanes.

Applications

This highly cross-linked silicone resin is primarily used for its film-forming attributes.

In sunscreen, skin care and color cosmetic applications, the trimethylsiloxysilicate Wacker-Belsil TMS 803 is an excellent water-resistant additive and helps to hold pigments in place. It prevents agglomeration and maintains the free-flowing characteristics in loose-powder products.

In hair care compositions, the silicone resin provides volume and body, while imparting humidity resistance to the hair.

Storage

Wacker-Belsil TMS 803 has a shelf life of at least 12

months when stored at room temperature in the tightly closed original container. The 'Best use before end' date of each batch appears on the product label.

Storage beyond the date specified on the label does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality assurance reasons.

Safety Information

Detailed safety information is contained in each material safety data sheet, which can be obtained from our sales offices.

Product data

Properties	Characteristics
Bulk density, approx., [g/cm ³]	0.3
Average particle size, [µm]	100
Ignition point, [°C]	390
INCI name	Trimethylsiloxysilicate

Additional Information

Solubility

Ingredient	Wacker-Belsil TMS 803	Ingredient	Wacker-Belsil TMS 803
Mineral Oils/Waxes		Emulsifiers/Ethoxylated Oils	
C9-13 Isoparaffin	✓	PEG-75 Lanolin Oil	•
Mineral Oil, high-visc.	•	PEG-7 Glyceryl Cocoate	•
Mineral Oil, low-visc.	•	PPG-5-Laureth-5	•
Ester Oils/Waxes		Alcohols & Water	
Ethyl Acetate	✓	Octyl Dodecanol	•
C12-15 Alkyl Benzoate	•	Oleyl Alcohol	•
Isopropyl Myristate	✓	Propylene Glycol	•
Decyl Oleate	•	Isopropanol	✓
Oleyl Oleate	•	Alcohol	✓
Ethylhexyl Stearate	P	Glycerol	•
Myristyl Lactate, Myristyl Alcohol	•	Water	•
Dicaprylyl Ether	✓		
		Silicone Fluids	
Triglycerides		Wacker-Belsil® CM 040	✓
Castor Oil	•	Wacker-Belsil® DM 0.65	✓
Olive Oil	•	Wacker-Belsil® DM 1 plus	✓
Wheatgerm Oil	•	Wacker-Belsil® DM 10	✓
Lanolin Oil	•	Wacker-Belsil® DM 1000	✓
		Wacker-Belsil® PDM 20	✓
UV Filters		Wacker-Belsil® PDM 1000	•
Ethylhexyl Stearate	P	Lauryl Dimethicone	•

✓ = Soluble (> 10%)

P = Partially soluble (1 – 10%)

Δ = insoluble

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The data presented in this leaflet are in accordance with the present state of our knowledge, but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this leaflet should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. The recommendations do not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the products for a particular purpose.

The management system has been certified according to ANSI/ISO/ASQ Q9001 and ANSI/ISO 14001.

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