

Dow Corning[®] TI-2021 AMS Specialty Fluid

FEATURES & BENEFITS

- Moderate volatility
- Excellent spreadability
- Light, smooth and less dry feel
- Reduces tackiness and greasy feel of organic oils
- Non-occlusive
- Easy to formulate

COMPOSITION

- Caprylic modified trisiloxane
- INCI Name: Caprylyl Methicone
- CAS No: 286938-65-6

REGULATORY SUPPORT

Ingredient Information Package (IIP)

- Ingredient Regulatory Information
- Elemental Impurities
- Summary of Health Data

Formulation ingredient for topical consumer healthcare applications

APPLICATIONS

- *Dow Corning*[®] TI-2021 AMS Specialty Fluid is used in topical formulations due to excellent spreadability, moderate volatility, and compatibility with other organic ingredients. This silicone fluid is currently used in a range of dermatological consumer healthcare or medicated skin care applications as creams, gels and formulations for scalp and hair.

TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

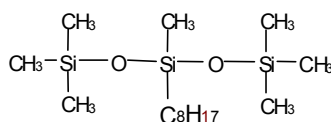
| CTM ¹ | Property | Unit | Result |
|------------------|-------------------------|------|--|
| 0176 | Appearance | | Clear liquid, colorless to light amber |
| 0001 | Specific gravity | | 0.83 |
| 0208 | Non-volatile content | % | 0 |
| 0004 | Viscosity | cP | 2.00–4.00 |
| 0002 | Refractive index | | 1.4105–1.4145 |
| 0006 | Flash point- closed cup | °C | 110 |
| | Surface Tension | mN/m | 20.4 |

¹CTM: Corporate Test Method, copies of CTM's are available on request.

DESCRIPTION

Dow Corning[®] TI-2021 AMS Specialty Fluid is a caprylyl branched trisiloxane as described in Figure 1. The siloxane consists of three silicon atoms which is the shortest dimethicone, and octyl group is attached on the middle silicon.

Figure 1: Chemical formula for *Dow Corning* TI-2021 AMS Specialty Fluid



HOW TO USE

Dow Corning TI-2021 AMS Specialty Fluid is added into the oil phase and mixed until dissolved or dispersed evenly. This material has a flashpoint above 100°C and is compatible with many other organic ingredients. It can help to reduce white residues in formulations containing high level of volatile materials. The recommended use level is between 5% and 20%.

SPECIFIC TESTING

- Infrared identification on each batch
- Tested for elemental impurities according to <232> and ICH Q3D guideline for metal impurities, every 2 years

REGULATORY INFORMATION

Dow Corning TI-2021 AMS Specialty Fluid is produced at a Dow Corning manufacturing site registered as part of Dow Corning's global quality system according to ISO 9001:2008.

Dow Corning can provide an Ingredient Information Package (IIP) containing the following information:

- Ingredient Regulatory Information
- Elemental Impurities
- Summary of Health Data

HANDLING

PRECAUTIONS

PRODUCT SAFETY

INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON THE DOW CORNING WEBSITE AT DOWCORNING.COM, OR FROM YOUR DOW CORNING SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CORNING CUSTOMER SERVICE.

USABLE LIFE AND STORAGE

When stored between 0°C and 40°C (32°F and 104°F) in the original unopened containers, this product has a usable life of 24 months from the date of production.

PACKAGING INFORMATION

These products are available in 15 kg cans and 168 kg drums.

Samples are available in 100 ml bottles.

LIMITATIONS

This product is neither tested nor represented as suitable for specific pharmaceutical use. However, should you wish to use this product in a pharmaceutical application, please contact Dow Corning to discuss such potential use.

It is the user's role responsibility to ensure that their intended use of these materials complies with all regulatory and legal requirements applicable to such use in each relevant jurisdiction including targeted geographic regions of manufacture and supply.

HEALTH AND ENVIRONMENTAL INFORMATION

To support customers in their product safety needs, Dow Corning has an extensive Product Stewardship organization and a team of Product Safety and Regulatory Compliance (PS&RC) specialists available in each area.

For further information, please see our website, dowcorning.com or consult your local Dow Corning representative.

LIMITED WARRANTY INFORMATION – PLEASE READ CAREFULLY

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that our products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

Dow Corning's sole warranty is that our products will meet the sales specifications in effect at the time of shipment.

Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, DOW CORNING SPECIFICALLY DISCLAIMS ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY.

DOW CORNING DISCLAIMS LIABILITY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

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Table 1: Compatibility Data

| | 10% Dow Corning TI-2021 Specialty Fluid | 50% Dow Corning TI-2021 Specialty Fluid | 90% Dow Corning TI-2021 Specialty Fluid |
|--|--|--|--|
| Esters: | | | |
| Isononyl Isononanoate | C | C | C |
| Cetyl Ethylhexanoate | C | C | C |
| Isopropyl Myristate | C | C | C |
| Pentaerythrityl Tetraistearate | C | C | C |
| Glycerides: | | | |
| Triethylhexanoin | C | C | C |
| Caprylic/Capric Triglyceride | C | C | C |
| Polyglyceryl-2 Triisostearate | C | C | C |
| Fatty Alcohols/Acids: | | | |
| Stearyl Alcohol | C | NC | NC |
| Isostearyl Alcohol | C | C | C |
| Oleyl Alcohol | C | C | C |
| Stearic Acid | C | C | C |
| Lauryl Alcohol | C | C | C |
| Octyl Dodecanol | C | C | C |
| Hydrocarbons: | | | |
| Mineral Oil | C | C | C |
| Hydrogenated Polyisobutene | C | C | C |
| Isodececane | C | C | C |
| Isohexadecane | C | C | C |
| Isoparaffin | C | C | C |
| Hydrophilics: | | | |
| Water | NC | NC | NC |
| Alcohol | C | C | C |
| Isopropyl Alcohol | C | C | C |
| Glycerin | NC | NC | NC |
| Propylene Glycol | NC | NC | NC |
| Butylene Glycol | NC | NC | NC |
| Vegetable Oils: | | | |
| Simmondsia Chinensis (Jojoba) Seed Oil | C | C | C |
| Olea Europaea (Olive) Fruit Oil | C | C | C |
| Almond oil | C | C | C |
| Castor oil | C | NC | NC |
| Coconut oil | C | C | C |
| Corn oil | C | C | C |
| Palm oil | C | C | C |
| Sesame oil | C | C | C |
| Soybean oil | C | C | C |
| Sunflower oil | C | C | C |

C=Compatible, NC=Non Compatible

Compatibility Data (continued)

| | 10% Dow Corning TI-2021 Specialty Fluid | 50% Dow Corning TI-2021 Specialty Fluid | 90% Dow Corning TI-2021 Specialty Fluid |
|---|--|--|--|
| Miscellaneous: | | | |
| Beeswax | C | C | C |
| Euphorbia Cerifera (Candelilla) Wax | NC | NC | C |
| Petrolatum | C | C | NC |
| Lanolin Oil | C | C | C |
| Sunscreen Actives | | | |
| Ethylhexyl Methoxycinnamate | C | C | C |
| Dow Corning Materials: | | | |
| Dimethicone 5 cSt | C | C | C |
| Dimethicone 350 cSt | C | C | C |
| Cyclopentasiloxane | C | C | C |
| Phenyl Trimethicone | C | C | C |
| Cyclopentasiloxane (and) Dimethiconol | C | C | C |
| Dimethicone (and) Dimethiconol | C | C | C |
| Cyclopentasiloxane (and) Dimethicone Crosspolymer | C | C | C |
| Cyclomethicone (and) Trimethylsiloxysilicate | C | C | C |
| Cyclopentasiloxane (and) Dimethicone Crosspolymer | C | C | C |

C=Compatible, NC=Non Compatible

Figure 2: Volatility Chart

