**Product Description**

**T-Lite SF**
- **Chemical Name:** Titanium dioxide coated with Aluminum and Dimethicone/Methicone copolymer
- **INCI name:** Titanium Dioxide (and) Hydrated Silica (and) Dimethicone/Methicone Copolymer
- **UV Protection:** Long and short UVA and UVB protection
- **Appearance:** White powder
- **Prior to Coating:** 94.0–100.5%
- **Solubility:** Oil dispersible

**T-Lite SF-S**
- **Chemical Name:** Titanium dioxide coated with Silica, Aluminum and Dimethicone/Methicone copolymer
- **INCI name:** Titanium Dioxide (and) Hydrolyzed Silica (and) Dimethicone/Methicone Copolymer (and) Aluminum Hydroxide
- **UV Protection:** Long and short UVA and UVB protection
- **Appearance:** White powder
- **Prior to Coating:** 94.0–100.5%
- **Solubility:** Oil dispersible

**Regulatory Information**
- US Food and Drug Administration (FDA) Category I approved sunscreen active ingredient, allowed with all other Category I sunscreens except Avobenzone.
- Oil-dispersible, US Pharmacopeia (USP) grade, and manufactured according to current Good Manufacturing Practices (GMP).

**Formulation Benefits**
- Both grades provide excellent transparency and SPF protection at high concentrations, 8–10%.
- Easy to disperse, photostable (non-photocatalytic) and compatible with other ingredients.
- Can be used at high temperatures (80–100°C) and high shear.
- Works synergistically with organic filters.
- Very oil dispersible, USP grade, and compatible with stearates.

**Recommended Use Levels**

<table>
<thead>
<tr>
<th>Approximate SPF</th>
<th>Ingredients</th>
</tr>
</thead>
<tbody>
<tr>
<td>31-33</td>
<td>3% Uvinul N539, 5% T-Lite</td>
</tr>
<tr>
<td>18-20</td>
<td>8% Ti-Lite</td>
</tr>
<tr>
<td>8-11</td>
<td>5% T-Lite</td>
</tr>
</tbody>
</table>

Generally 1% T-Lite = 1.7 to 2.2 SPF units

Test and then adjust based on SPF/Critical Wave Length.

**BASF Cosmetic Solutions**

Our portfolio of cosmetic ingredients includes UV filters, active ingredients, surfactants, emulsifiers, and cosmetic polymers. With this range of high quality products we are supporting the cosmetics industry in the production of high-value consumer products such as sunscreen products, skin care creams and lotions and hair care products. In addition to our cosmetic ingredients we offer a comprehensive range of aroma chemicals that are used by the Flavor and Fragrance industry, among others, in the manufacture of fragrance compounds for cosmetics, detergents and household cleaning products.

**About BASF**

We make the cosmetics better.™

We make a lot of the products you buy better.

We don’t make the cosmetics.

© 2005 BASF Corporation

We don’t make the cosmetics.™

Helping Make Cosmetics Better™

The Chemical Company

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Transparency

Stearates and iron oxides. It is transparent, gentle and provides a

and it provides synergy with organic filters and compatibility with

of flexibility. It is a highly stable ingredient that does not degrade,

®

T-Lite Microfine Titanium Dioxide

Broad-spectrum (UVA and UVB) protection

T-Lite SF-S is a high-performance product with unique

transparency.

High Compatibility and Stability

multifunctional form of TiO2 in both types of emulsion products. It can be easily

dispersed with high shear mixing in a wide variety of commonly

used emollients as well as liquid organic UV absorbers.

High Compatibility and Stability

of sun protection products

Protection against harmful UVB radiation

Protection against broad-spectrum UV radiation without

resulting in sunburn, premature skin-aging and photo
carcinogenesis.

Innovative Formulations

stable, non-whitening formulations up to 10 percent

to pass through.

T-Lite microfine titanium dioxide blocks UV rays by scattering,

reflecting, and chemically absorbing the incoming radiation. It can successfully scatter UVA and UVB radiation from 290 nm

to 320 nm while allowing larger wavelengths (visible) to pass through.

Phase C

Chlorophyllin, 500 mg

Fragrance

50.00

Phase F

Hydroxide (and) Dimethicone/Methicone Copolymer)

T-Lite™ SF (Titanium Dioxide (and) Aluminum

Hydroxide (and) Dimethicone/Methicone Copolymer)

Phase B

Magnesium Aluminum Silicate

Xanthan Gum

Propylene Glycol

Glycerin

Phase D

Hydroxyethyl Acrylate/Sodium Acryloyldimethyl Taurate

Copolymer (and) Squaric Acid (and) Polystyrene 62

Acrylates/Acrylamide Copolymer (and) Mineral Oil (and) Polyisobutene 6.7

Phase E

ODM Hyaluron (and) Isotolyl Butylcarbamate

2.00

Phase G

EDETA

®

BD (Disodium EDTA)

3.00

Phase B

Magnesium Aluminum Silicate

Xanthan Gum

Propylene Glycol

Glycerin

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Hydroxide (and) Dimethicone/Methicone Copolymer)

T-Lite™ SF (Titanium Dioxide (and) Silica Hydrate

1.50

Phase C

Hydroxide (and) Dimethicone/Methicone Copolymer)

T-Lite™ SF-S (Titanium Dioxide (and) Aluminum

Hydroxide (and) Dimethicone/Methicone Copolymer)

Phase C

Hydroxyleoleic Acid/Sodium Oleoyl Sulfuric Acid/10-Taurine

Copolymer (and) Squaric Acid (and) Polystyrene 62

Acrylates/Acrylamide Copolymer (and) Mineral Oil (and) Polyisobutene 6.7

Phase E

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