



American International Chemical, Inc.

Corporate Offices: (800) 238-0001

Internet: www.aicma.com Email: info@aicma.com

SPECIFICATION SHEET

RETINOL 15D

| Code No. | SCN No. | CAS No. | Effective Date | Product Manager | Rev. No. | Approved By |
|----------|---------|-----------|----------------|-----------------|----------|-------------|
| R15PIL | 2665 | See below | July 15, 2011 | LR | No. 2 | CDS |

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| INCI NAME/CAS #: | Caprylic/capric triglyceride Retinol BHT | CAS #65381-09-1, 73398-61-5 CAS #68-26-8 CAS #97123-41-6, 128-37-0 |
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| CHARACTERISTICS: | Yellowish to pale orange-yellow oily viscous liquid containing 15% retinol in a caprylic/capric triglyceride, stabilized with 1% of BHT. It is practically insoluble in water, but is miscible in fats and oils. |
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| SPECIFICATIONS: | Clarity | Yellow to pale orange yellow |
| | Identification | |
| | UV | Meets requirements |
| | Color development | Develops a transient blue color with antimony trichloride solution in chloroform. |
| | BHT (TLC) | Rf value of blue-green spot matches with reference spot. |
| | UV absorption in IPA (wavelength) | 324.0-327.0 nm max |
| | Absorbance ratio (corrected absorbance at 325 nm to observed absorbance) | 0.85 min |
| | Acid value | 2.0 max |
| | Peroxide value | 10.0 max |
| | Assay (as Retinol) | 0.490 mIU/g min |
| | Residual Solvents | Meets requirements |

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| STOCKING POINTS: | To be determined |
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| PACKAGING: | 1 kg aluminum bottle or 5 kg aluminum bottle |
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| APPLICATIONS: | Anti aging, wrinkle, and sun protection creams |
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| SHELF LIFE AND STORAGE INSTRUCTIONS): | Retinol 15 D is stable for at least 12 months, if stored in original sealed containers at temperatures below 15°C away from light. Once opened, the remaining contents should be kept under an inert gas and used up quickly |
| TECHNICAL PROPERTIES AND HANDLING: | <p>Retinol is a crystalline solid that is sensitive to oxygen, heat, light and heavy metals. It is therefore dissolved in oils, filled under nitrogen, stabilized with antioxidants and stored in aluminum bottles at low temperature.</p> <p>Retinol can crystallize out at low temperatures, but the crystals can be re-dissolved by heating the can up to 50°C. The time needed to re-dissolve the retinal crystals varies and is dependent on the temperature and time of storage. It is therefore impossible to give exact advice how long it takes to dissolve.</p> <p>It is recommended to manufacture retinol formulations under an inert atmosphere and to add retinol together with chelating agents at a temperature not exceeding 40°C. The finished formulation should be filled under inert atmosphere in aluminum collapsible tubes which should be then stored below 20°C during transport and storage.</p> |