



IMWITOR® 780 K

INCI: Isostearyl Diglyceryl Succinate

-  Non-ionic w/o Emulsifier
-  Wetting agent

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1. Description:

IMWITOR® 780 K is a partial glyceride of isostearic and succinic acid. IMWITOR® 780 K is a clear, slightly yellowish liquid (Iodine color value: < 6) with a neutral odor. The viscosity at 20°C is approx. 1.700 mPas.

2. Chemical and Physical Properties:

Tests	Value	Unit
Acid value	max. 3	mg KOH/g
Saponification value	240 – 260	mg KOH/g
Hydroxyl value	100 – 120	mg KOH/g

3. Application:

IMWITOR® 780 K is soluble in petroleum spirit, ethylalcohol, n-hexane, mineral oil, vegetable and animal fats and oils. IMWITOR® 780 K is insoluble in water, glycerin and propylene glycol.

IMWITOR® 780 K is a non-ionic w/o-emulsifier (HLB value: about 3.7) without unsaturated components. W/O emulsions with high amounts of water can be prepared, especially when oleogels, such as MIGLYOL® gels, are used. In waterfree systems IMWITOR® 780 K increases the wetting, the capacity to absorb water and the wash-off ability.

IMWITOR® 780 K is particularly suitable for emulsifying highly polar oils, such as MIGLYOL® 812 and natural oils.

Cosmetic Functions:

In waterless systems IMWITOR® 780 K increases the wetting, the capacity to absorb water and the wash-off ability.

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Skin Sensitizing Properties of IMWITOR® 780 K and the relevance for classification & labelling




IMWITOR® 780 K has been used for almost 30 years as emulsifier in various applications, including cosmetic and pharmaceutical applications. No indications for sensitizing effects have been observed during that period. However, for regulatory purpose and general safety considerations a standard test to evaluate the skin sensitizing effects of IMWITOR® 780 K has been conducted in May 2007. The preferred test method nowadays to evaluate potential skin sensitizing effects is the Murine Local Lymph Node Assay (LLNA), although discussions are ongoing as to whether the test is suitable for all chemical groups. The LLNA is a reliable test for many substance classes, but conflicting results generated with surfactants and fatty acids lead to the belief that the LLNA has a tendency to overestimate sensitizing potentials, i.e. produce false positive results. However, restrictions due to animal welfare considerations limit the possibilities for comparative testing.



The LLNA test has been conducted according to OECD Guideline 429, following the principles of GLP, with IMWITOR® 780 K using 2 different evaluation methods [i.e. 1) measurement of incorporation of H3-methyl thymidine and 2) cell counting instead of radioactive labelling (IMDS) to differentiate between irritating and sensitizing effects]. Test substance concentrations up to 50% have been used for the assay. With both evaluation methods a very weak sensitizing effect of IMWITOR® 780 K was observed.




Despite the very weak effects from a regulatory perspective a classification as “skin sensitizer” (R-phrase R43) is required, since the EU classification and labelling scheme is purely hazard based.

The actual risk to initiate skin sensitizing effects in man depends on various factors, including the concentration of IMWITOR® 780 K on the final preparation and the use pattern of the formulation. From scientific and risk assessment point of view the very weak sensitizing effects in the LLNA test do not automatically preclude the use of IMWITOR® 780 K.

Thus IMWITOR® 780 K use is suggested for:

-  Facial foundations
-  Body lotions
-  Sun care

-  multitainer with 25 kg
-  Drum with 190 kg

-  Store in a dry place below 25° C
-  Protect from light and moisture
-  Shelf life 3 years

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March 2013

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