

OILKEMIA 5S CC Polymer

Toxicology Studies

INCI NAME: Caprylic/Capric Triglyceride (and) Hydrogenated C6-20 Polyolefin (and) HDI/Trimethylol Hexyllactone Crosspolymer

TEST

Caprylic/Capric Triglyceride

RESULTS

See CIR reports

Final Report 12/05/2017
 IJT 22(Suppl. 1):1-35, 2003
 JEPT 4(4):105-120, 1980

CONCLUSION

Safe as used

The Hydrogenated C6-20 Polyolefin (and) HDI/Trimethylol Hexyllactone Crosspolymer are manufactured as an entangled polymer that can't be physically separated, the remainder of this document reflect data on this polymer portion of this product.

***In vitro* Eye Irritation**

The objective of this study was to evaluate the potential irritant and corrosive properties of the test item to the eye. The Bovine Corneal Opacity and Permeability (BCOP) test method can identify chemicals inducing serious eye damage and chemicals not requiring classification for eye irritation or serious eye damage. Study was based on the OECD Guideline 437.

Macroscopic examination

No notable opaque spots or irregularities were observed on the item-treated corneas.

Not an irritant

***In vitro* Irritancy Score**

The mean *In Vitro* Irritancy Score (IVIS) of the test item-treated corneas was: 0.

***In vitro* Skin Corrosion**

An *in vitro* skin corrosivity test was performed in a reconstructed human epidermis model. EPISKIN™ is designed to predict and classify the corrosive potential of chemicals. The corrosivity of the test item was evaluated according to the OECD Guideline 431.

Cell Viability (%)

Negative control = 100% (reference)
 Positive control = 0.3%
 Test Item = 106.2%

Non-Corrosive

This study measures cell viability following exposure to the test item, a negative and a positive control. A measurement of greater than 35% cell viability is considered negative for skin corrosion.

Lubrizol Advanced Materials, Inc. / 9911 Brecksville Road, Cleveland, Ohio 44141-3247 / TEL: 800.379.5389 or 216.447.5000

The information contained herein is being furnished for informational purposes only, upon the express condition that the User makes its own assessment of the appropriate use of such information. While the information contained herein is believed to be reliable, no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for a particular application or the results to be obtained herefrom. Lubrizol Advanced Materials, Inc. ("Lubrizol") cannot guarantee how any products associated with this information will perform in

combination with other substances or in the User's process. Due to variations in methods, conditions and equipment used commercially in processing these materials, no warranties or guarantees are made as to the suitability of the information or products for the applications disclosed. Lubrizol shall not be liable and the User assumes all risk and responsibility for any use or handling of any material beyond Lubrizol's direct control. LUBRIZOL MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO,

THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. It is the User's sole responsibility to determine if there are any issues relating to patent infringement of any component or combination of components relating to the supplied information. **Nothing contained herein is to be considered as permission, recommendation, nor as an inducement to practice any patented invention without permission of the patent owner.**

For further information, please visit: www.lubrizol.com/personal-care

TEST

***In vitro* Skin Irritation**

Skin irritation potential was predicted by measurement of cytotoxicity using the EpiSkin™ reconstructed human epidermis (RhE) model (OECD Guideline 439). The study design measures cell viability following exposure to the test item, a negative and a positive control. A measurement of greater than 50% cell viability is considered negative for skin irritation.

Skin Sensitization

A skin sensitization study was conducted on a polymer with chemical compositions representative of the polymer in OILKEMIA 5S Polymer. The data is expected to be predictive of the skin sensitizing potential of this polymer.

Skin sensitization was evaluated using the globally accepted Buehler test method (OECD Guideline 406). Testing was conducted on the polymer at 100% (undiluted) in both induction and challenge phase. During the induction phase, occluded patches were applied for 6 hours once per week for 3 weeks on 10 test subjects. After patch removal, the sites were evaluated at 24 hrs post removal for dermal reactions. Two weeks after the last induction exposure a challenge dose was applied (occluded patch, 6 hrs exposure). Skin reactions were measured at 24 and 48 hours after patch removal.

***In vitro* Mutagenicity**

The mutagenic potential of this polymer was assessed using a bacterial/microsome test system (AMES). *Salmonella typhimurium* strains TA98, TA100, TA1535, TA1537 and *Escherichia coli* WP2uvrA were treated with the test material both with and without metabolic activation.

A preliminary test was carried out to select appropriate dose levels for use in the main study. The test material was non-toxic to the strains of bacteria used up to the maximum dosage of 5000 µg/plate and therefore was tested up to this maximum dose.

Reference: OS374382/OLK1003

RESULTS

Cell Viability (%)

Negative control = 100% (reference)
Positive control = 6%
Test Item = 97%

No signs of irritation or contact sensitization were detected in test subjects during the study.

CONCLUSION

Not an irritant

Not a sensitizer

Non-mutagenic

No significant increases in the frequency of revertant colonies were recorded for any of the bacterial strains, at any dose level either with or without metabolic activation.

Lubrizol Advanced Materials, Inc. / 9911 Brecksville Road, Cleveland, Ohio 44141-3247 / TEL: 800.379.5389 or 216.447.5000

The information contained herein is being furnished for informational purposes only, upon the express condition that the User makes its own assessment of the appropriate use of such information. While the information contained herein is believed to be reliable, no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for a particular application or the results to be obtained herefrom. Lubrizol Advanced Materials, Inc. ("Lubrizol") cannot guarantee how any products associated with this information will perform in

combination with other substances or in the User's process. Due to variations in methods, conditions and equipment used commercially in processing these materials, no warranties or guarantees are made as to the suitability of the information or products for the applications disclosed. Lubrizol shall not be liable and the User assumes all risk and responsibility for any use or handling of any material beyond Lubrizol's direct control. LUBRIZOL MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO,

THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. It is the User's sole responsibility to determine if there are any issues relating to patent infringement of any component or combination of components relating to the supplied information. **Nothing contained herein is to be considered as permission, recommendation, nor as an inducement to practice any patented invention without permission of the patent owner.**

For further information, please visit: www.lubrizol.com/personal-care