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Form: TDS-001 Root Reference: M-1427

Effective date: 04.2019

TECHNICAL DATA SHEET

Zinc ricinoleate

INFORMATION ON SUBSTANCE / MIXTURE

| INCI | Zinc ricinoleate | |
|-----------------------|--------------------------------------------------------------------------------|--|
| Raw material category | Deodorant Agent / Odor Absorber | |
| Description | Residual plant based source (dominant origin of main constituents): castor oil | |
| Manufacturing process | Conversion of zinc oxide and ricinoleic acid | |

TECHNICAL DATA

Composition

| Substance | % |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Zinc ricinoleate (vegetable) | approx. 98.5 % |
| Water | max. 1.5 % |
| Solvents, preservatives and other additives | Water max. 1.5 % - solvent Mixed tocopherols (vegetable based) 0.039 % - antioxidant Soybean oil 0.021 % - solvent for the antioxidant |

Physical and chemical parameters

| Appearance | Solid, pellets |
|---------------|----------------|
| Color | Ivory |
| Odor | Characteristic |
| Solubility | Soluble in oil |
| Iodine value | 76.00-88.00 |
| pH-Value 1 % | 6.00-7.00 |
| Water Content | <=1.50 % |
| Zinc content | 9.2-10.6 % |

Biological parameters

| Total Viable Count | max. 100 cfu/g |
|--------------------|----------------|
| Pathogens* | absent/g |

^{*}Pathogens are: Enterobacteriaceae, Pseudomonas, Enterococci, Candida albicans, Staphylococci

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Contaminants

| Residual solvents | not applicable | |
|--------------------------------|--------------------------------------------------------------------------------------------|--|
| Free amines | not applicable | |
| Nitrosamines | not applicable | |
| Monochloroacetic acid | not applicable | |
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| Dichloroacetic acid | not applicable | |
| 1,4-Dioxane | not applicable | |
| Pesticides | meets the valid regulatory requirements for limits on agricultural pesticides | |
| Total heavy metals | max. 20 ppm | |
| As, Cd, Co, Cr, Hg, Ni, Pb, Sb | Each < 1 ppm | |
| Latex | not to be expected in the product due to the raw materials used and the production process | |
| VOC | < 3 % according to SR (Swiss Right) 814.018 | |

TRANSPORT, STORAGE and SHELF LIFE

| _ | Keep in tightly closed containers in a cool and dry place, protected from light. Stable at usual storage and use conditions. |
|----------------|------------------------------------------------------------------------------------------------------------------------------|
| Shelf Life | 36 months, under good storage conditions |
| Customs tariff | 29181998 |

LEGISLATION

| Allergens* | None of these substances have been intentionally added to cosmetic raw materials or are formed during the manufacturing process. | |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Vegan and vegetarian declaration | It is produced in the strictest absence of any animal derived material of any type. | |
| CMRs | The use in cosmetic products of substances classified as CMR substances, of category 1A or 1B or 2 under Part 3 of Annex VI to Regulation (EC) No 1272/2008 shall be prohibited. Some of the CMR substances mentioned below and listed in Annex VI to Regulation (EC) No 1272/2008 are used as starting materials or solvents for the production of cosmetic raw materials and may require reporting under California Proposition 65 or the Safe Cosmetics Act, SB 484. The presence of these prohibited substances has to be seen as non-intended. It is stemming from impurities of the starting materials or the manufacturing process which is technically unavoidable in good manufacturing practice. | |

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| | CMR substance | Starting material | Maximum concentration | |
|-----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------------|--|
| | Ethylene Oxide | no | - | |
| | Propylene Oxide | no | - | |
| | Octamethylcyclotetrasiloxane (D4) | no | - | |
| | 2-Ethylhexanoic Acid | no | - | |
| | n-Hexane | no | - | |
| | Methyl Chloride | no | - | |
| | Dimethyl Sulfate | no | - | |
| Food Ingredients listed in Annex II of Regulation (EU) No 1169/2011 | None of these substances have been intentionally added to our cosmetic raw materials or are formed during the manufacturing process. | | | |
| GMO | The item contains ingredients derived from rapeseed (including oils and other refined ingredients), but these ingredients are sourced from an "Identity Preserved" program and can be certified NON-GM. However max 0.9 % cross-contamination is possible. Any protein or DNA is not present. Consequently the product will be PCR negative when tested. | | | |
| Irradiation | The product is not irradiated. | | | |
| EINECS | 231-791-2/ 215-798-8/ 232-274-4/ 235-911-4 | | | |
| CAS | 7732-18-5/ 1406-18-4/ 8001-22-7/ 13040-19-2 | | | |
| REACH pre-registration no. | 01-2119956639-19 | | | |
| Regulatory status (chemical reg | gulations) | | | |
| Zinc Ricinoleate | Australia AICS: yes China IECSC: yes Canada DSL/NDSL: yes Taiwan TCSI: yes | | | |
| In the following countries the relevant authorities currently do not require pre-market approval for cosmetic raw materials | Brazil, Japan, South Korea, Philippines, USA | | | |
| Regulatory status (cosmetic reg | gulation) | | | |
| Zinc Ricinoleate | China CFDA: yes Japan JSQI: Besshi Skin Cream up to 5%, Hair Shampoo up to 10% | | | |

^{*}Cosmetic allergens according to Cosmetic Regulation (EC) N° 1223/2009, Annex III; N° 67 - 92 and Food allergens according to Regulation (EU) N° 1169/2011, Annex II.

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DISCLAIMER

All warranty claims in respect to the conformity of our product are subject to our General Terms and Conditions of Sale and Delivery. The data listed above reflects the results of the manufacturer or our supplier quality tests. We do not hereby make any express or implied warranty, whether for specific properties or for fitness for any particular application or purpose. All values are valid for the product when dispatched from the works. We recommend you perform your own quality and or identification checks on receipt.