



KETTTLITZ-Dispergator FD

- technical leaflet -

Kettlitz-Dispergator FD is a highly effective processing aid for compounds in alimentary contact. It has been developed referring to the regulations of FDA and BfR XXI (former BGVV resp. BGA regulation). It is a combination of zinc salts and hydrocarbons in surface active agents. Kettlitz-Dispergator FD shows excellent compatibility to all polymers commonly used in rubber industry. The recommended dosage is abt. 3 phr.

Due to the use of a special carrier combination Dispergator FD has no melting point and can therefore be used in internal mixers as well as on open mills. As a result excellent dispersion of the components and an outstanding processability of the finished compounds are achieved.

In compounds based on natural rubber Dispergator FD works as a physical peptizing agent and influences the mastication results positively.

Properties

Chemical Characteristics	combination of zinc salts and hydrocarbons in surface active agents
Appearance	white granules
Density at 20 °C (g/cm ³)	approx. 0.99 (mathematically)
Bulk Density (g/ml)	approx. 0.43
Ash Content (%) (1 h, 950 °C)	7.8 ± 1.5
Physiol. Behavior	see safety data sheet
Storage Stability	3 years under suitable storage conditions
Packing	paper bags containing 20 kg net

INSTITUT FRESENIUS

INSTITUT FRESENIUS - Postfach 1261 - 65220 Taunusstein

KETTLITZ-CHEMIE GmbH & Co. KG
Mr.Christian Hoppe
Industriestr. 6

86643 Rennerthofen

Order No.: 149106

Client No.: 10001533

Gabriele Götttsch/no

Tel. +49 06128/ 744-151, Fax -201

goettsch@rud.fresenius.com

Competence Center Non Food

INSTITUT FRESENIUS
Chemische und Biologische
Laboratorien AG
Im Maisel 14
65232 Taunusstein

Taunusstein, February 2, 2004


Your Order : Kettlitz – Dispergator FD
Your reference : Mr. Hoppe
Date of order : 16.02.2004
Sample No. : -


Kettlitz DISPERGATOR FD

referring to your request dated February 16, 2004 we checked the formula of your product „Dispergator FD“ (16.02.2004) for conformity. According to your information the product shall be used in rubber products (i.e. Butyl rubber). The formula was checked against the positive list of recommendation XXI of the plastic commission of the german BfR (former BgVV). The product shall be added to rubber formulations up to an amount of 3%.

The „Kettlitz Dispergator FD“ meets in its composition the positive lists of the recommendation XXI. When the amount added to the rubber formulation does not exceed 3% all restriction for maximum quantities will be kept by this product. All ingredients of this product must meet the purity criterias as given in recommendation XXI.

Yours sincerely
INSTITUT FRESENIUS AG


Gabriele Götttsch


Andrea von Rhein

19.02.04L:\LMBG\Atteste 2004\Kettlitz-Chemie_149106_engl.doc

page 1 of 1

INSTITUT FRESENIUS
Chemische und
Biologische
Laboratorien AG

Im Maisel 14
65232 Taunusstein
Postfach 12 61
65220 Taunusstein

+49 6128 744-3
Fax -98 90
info@fresenius.com
www.fresenius.com

Vorstand
Dr. Uwe Schwien (Vors.)
Matthias Oepermann
Werner Unger
Aufsichtsratsvorsitzender
Ludwig Fresenius

HRB: 16078 Amtsgericht Wiesbaden, Außenstelle Bad Schwalbach
Ust.-Id.-Nr. DE811165451
Prüfergebnisse beziehen sich auf die untersuchten Proben.
Die Veröffentlichung und Vervielfältigung unserer Prüfberichte und
Gutachten zu Werbezwecken sowie deren auszugsweise
Verwendung in sonstigen Fällen bedürfen unserer schriftlichen
Genehmigung.