BIODEGRADABILITY report:
VIROCID

FL/100702/VIROCID

1. Identification of the test laboratory

   CIRLAM, Oostkaai 38, 8900 Ieper, Belgium

2. Test

Legal informations for CEE biodegradability for ingredients concerning VIROCID and internal tests of biodegradability

3. Results:

   - Certificate of biodegradability of VIROCID – value of tests BOD5-28/COD And the ratio BOD/COD:

   VIROCID is "readily biodegradable"

A-Primary and Ultimate biodegradability

VIROCID is a virocid disinfectant containing different raw materials with non-ionic–anionic surfactants concerned by detergent's Law No. 648/2004.
Primary biodegradability and Ultimate Biodegradability of each raw materials is well known above the norms according the OECD standard 301-302 series ,in conformity with the biodegradability of the European law
We consider with the % of each disinfecting raw material -non ionic surfactants-etc that , our formule has a primary biodegradability more 90% in a period less one month.(common use of biodegradability with the European law).

The biodegradation potential of disinfecting raw materials was evaluated in the OECD 301 protocol .

All the results of each raw material in the OECD 301A pass these criteria and require 70% removal of DOC within the 28 days of the test. (74 to 94%)

B-Internal tests

The value of BOD5-28 and COD of a scenario test had confirmed the excellent value of ultimate biodegradability of the formula :

We test at 0,1 % the mixtures of VIROCID in a sludge waters with a excess of germs for the biodegradability (a normal concentration after use in the waste waters) (normal conditions for a biocide)
The COD of the mixture was 352 mg O2/g the first day .

After the neutralisation/dilution at pH 7.25 , the **COD** value was **95** mg/O2 /g
In these conditions , the BOD5 of the pure product was 60 mg O2/g (the first day).
The **BOD20** was stable after 20 days till 28 days and provides **70** mg O2/g

Thus the **ratio BOD20-28/COD is 0.74 gives a excellent value** of "readily biodegradable product".
The OCDE methods provides that a formulation with a ratio BOD28/COD > 0.6 is a product "readily biodegradable" during the normal period of a test , 28 days
NB: BOD =biological oxygen demand
COD = chemical oxygen demand

C-Conclusion

VIROCID contains dus a serie of biodegradable raw materials and surfactants in accordance with detergent law N°648/2004 and is very biodegradable for the users for the treatment plants and the environment.
We conclude that the BOD evolution > 74 % od COD (28 d) (OECD 301) (aerobic , sludge of river) provides a excellent proof of " readily biodegradability".
This term "readily biodegradability" means that the VIROCID has a primary biodegradability of more 90% after 28 days (max. length of the test of the OECD methods) in a sludge water.

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