



THOMSON RESEARCH ASSOCIATES, INC.

## Public consultation on potential candidates for substitution

### NON-CONFIDENTIAL comments

**Substance** : Polyhexamethylene biguanide Hydrochloride ; PHMB (1415; 4.7)  
**Supported PTs** : PT1, PT2, PT4, PT5, PT6  
**EC Number** : Not allocated (polymer)  
**CAS Number** : 32289-58-0 and 1802181-67-4  
**eCA** : France

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## COMMENTS

This submission is made in response to the public consultation on Polyhexamethylene biguanide with a mean number-average molecular weight ( $M_n$ ) of 1415 and a mean polydispersity Index (PDI) of 4.7.

We are submitting the below comments to inform why PHMB should not be designated as a candidate for substitution.

We are using PHMB since 2012.

The main application(s) of biocide products containing PHMB are control of bacteria.

Regarding the possible alternative to PHMB, there are a number of actives but present greater safety hazards such as flammable formulations, but the problems encountered with this/these substances are.

### Economical considerations

- PHMB efficacy allows uses at lower concentration level than some other biocides.
- PHMB also is replacing other biocides of higher toxicity or with chronic effects that are already being replaced and phased-out.

### Safety during use for operators as well as for end users

- lower vapour tension than some other biocide actives.
- PHMB known to be of low risk for human health (it is a preservative approved by SCCS for contact lenses solutions, body wipes and other cosmetic products up to 0.1% (1000 mg/kg))
- it is not flammable



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Practical advantages

- PHMB residues in professional areas can easily be neutralised/destroyed before being drained to sewage network and
- PHMB enters in aqueous-based formulations/products, making them easy to apply with water.

Total impurity content:

- Mean content of 4.3%, meaning that PHMB brings 95.7% of Active ingredient on average

To summarise our remarks

The possible alternatives solutions with other biocide active substances do not meet all the benefits provided by the PHMB:

- a) It is a cost effective active
- b) That provides effective protection
- c) With safety advantages such as a lack of flammability.