

## EuPIA information note for customers

### N-vinyl caprolactam

N-vinyl caprolactam (NVC) is used in certain sectors of the printing ink market and was introduced as a replacement to n-vinyl pyrrolidone as a safer alternative, particularly in view of its very low volatility which means that - in normal conditions of use - it is highly unlikely that the exposure limits will be exceeded.

Recent communications from suppliers of the above raw material have advised a change of classification of this substance as set out below:



Acute Toxicity Cat. 4 (oral)

H302 - Harmful if swallowed.

Skin Sensitizer Cat. 1B

H317 - May cause an allergic skin reaction.

Eye Damage/Irritation Cat. 2

H319 - Causes serious eye irritation.



**Specific Target Organ Toxicity -  
Repeated Exposure Cat. 1**

H372 - Causes damage to organs (Liver,  
Respiratory system) through **prolonged or  
repeated exposure.**

**DANGER**

Any products containing NVC from EuPIA members should all now be labelled in accordance with the above. The new critical worker Derived No Effect Limit (DNEL) of 0.17 mg/m<sup>3</sup>, control measures and classification should also be incorporated in revised Safety Data Sheets.

The change in Specific Target Organ Toxicity means that NVC now falls within the criteria of the EuPIA Exclusion List<sup>1</sup>, and as such members were expected to seek a replacement. Normally six months would be recommended for this; however, since technical equivalents were less readily available for NVC, the EuPIA Technical Committee exceptionally set an extended timeframe for its substitution, which was reviewed at EuPIA TC meetings in March and October 2014.

All EuPIA members have carried out substitution projects, or are in the process of attempting to find alternative formulations. Whilst this has proved possible in most applications, additional time is needed to complete customer testing; it is also apparent that in one specific and highly delineated use (i.e. inkjet in the digital UV area) this substitution is currently not feasible for the majority of members.

The EuPIA Technical Committee has therefore agreed the following position:

- EuPIA members will not manufacture any **screen inks** containing NVC after 31 March 2015 nor supply these after 30 June 2015.
- For **digital inkjet inks**, a temporary exemption is granted allowing continued use of NVC. Application of this exemption is conditional on EuPIA members being able to demonstrate safe use by their employees and customers, i.e. having evidence that exposure to NVC does not exceed DNELs and legal workplace exposure limits. EuPIA TC will continue to monitor developments and may amend or revoke this exemption whenever appropriate.

<sup>1</sup> Available at <http://www.eupia.org/index.php?id=3>

In the meantime customers should follow recommendations from their suppliers, and may rest assured that EuPIA will continue to act in the best interests of safe use of their members' products, and that compliance with the Exclusion List will be maintained as an important part of the documentation and formulation practice.

EuPIA TC, 2015-03-11  
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