

Ihr Zeichen

Ihre Nachricht vom

Unser Zeichen

Datum

April 2<sup>nd</sup> 2014

## Communication of important health and safety information

Sun Chemical has recently been advised of an impending substance hazard reclassification following new toxicological testing. The substance, N-vinylcaprolactam, also known as 1-vinylhexahydro-2H-azepin-2-one, NVC and VCap [CAS number 2235-00-9], is used as a reactive diluent in a number of our screen and digital UV-curing printing inks. We shall be making changes to the labels and Safety Data Sheets of affected products, and you should start to receive the revised information shortly. However, please be aware that materials already in the supply chain are classified based on the previous information.

### What has happened ?

Our suppliers of this substance have informed us that as a result of toxicological testing required for REACH, the classification of NVC has changed from harmful to toxic, due to specific effects on the liver and respiratory tract following repeated exposure. Mixtures containing 10% or more of the substance will also be classified as toxic (risk phrase R48/23 *Toxic: danger of serious damage to health by prolonged exposure through inhalation*; hazard phrase H372 *Causes damage to organs (liver, respiratory system) through prolonged or repeated exposure*). It is not classified as carcinogenic, mutagenic or toxic for reproduction (CMR). In addition, NVC has a Derived No Effect Level (DNEL) for workers of 0.17 mg/m<sup>3</sup> by inhalation, which can be taken as the workplace Occupational Exposure Limit (OEL).

### What action has Sun Chemical taken ?

We have examined our use of NVC and determined which products are affected. We will be communicating to advise customers of the new information. We are making the changes to our regulatory software system to incorporate this latest information on our product labels and Safety Data Sheets. We have also undertaken exposure monitoring and re-examined our risk assessments and control measures to ensure that this material can be used safely. However, our monitoring data is still limited and we are expecting customers to assist in this process.

In addition, because the revised hazard classification now means that NVC falls within the scope of the exclusion criteria of the EuPIA Exclusion List for printing inks and related materials, we have embarked on a programme to identify alternative materials with a lower hazard. However, we anticipate that replacement will not be easy, and there are likely to be some differences in technical performance when the alternative products become available.

Geschäftsführer:  
Rudolf Baumhoer,  
John Philip Law  
Sitz der Gesellschaft 90451 Nürnberg  
Amtsgericht Nürnberg HRB 9556  
USt.-Id. Nr. DE 811221042  
Citibank Frankfurt  
BLZ 502 109 00 Konto-Nr. 215 177 017  
S.W.I.F.T.-BIC: CITIDEFF  
IBAN: DE80 502109000215177017

Blatt 2 zu unserem Schreiben vom April 2nd 2014

an EHS Communication

Which products are affected ?

NVC is used in a wide range of UV curing screen printing inks. NVC is only used in UV-curing products.

The substance appears as N-vinylcaprolactam in Section 3 of the Safety Data Sheet of affected products.

Not all inks in specific products ranges are affected. Sun Chemical representatives will advise customers individually of specific products containing NVC.

Are the affected products still safe to use ?

Hazard is a measure of the potential to cause harm, and is an intrinsic property of the substance. Risk is a measure of the likelihood of harm being caused, and is a function of the hazard and the exposure. Our workplace monitoring and risk assessment indicates that NVC can be handled safely in the production of printing inks, and during application (printing) in the laboratory. In addition, the manufacturer's REACH Chemical Safety Report and Exposure Scenarios indicate that NVC can be used safely during formulation (PROC 5) and use in coatings (PROC 7 and PROC 10), as long as suitable chemically resistant gloves are used together with a good standard of general ventilation (not less than 3 – 5 air changes per hour). However, we believe that some monitoring of your particular application processes would be valuable to generate data to confirm that the exposures and risks are under control.

These UV-curing products are already classified as irritants, and dermal exposure should be adequately controlled using existing measures. Consequently, if appropriate control measures, good industrial hygiene practices and adequate risk assessments are already in place, this new substance hazard should not result in an increased risk, and the affected products may still be used safely, pending reformulation. NVC reacts to form part of the crosslinked print matrix during the UV-curing process, so exposure from the cured print should not be a concern.

Where can I get more information ?

Please contact your local Sun Chemical sales representative or Customer Technical Service representative, and refer to the Safety Data Sheet.

Sun Chemical  
**Andy Boon**

Dr Andy Boon  
Global Director for Toxicology and Product Safety