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The Director
NICNAS
334-336 Illawarra Road
Marrickville
NSW 2204
New Chemical - Nanotech
NICNAS

Attn: Ms Nicola Hall
Dr Matt Gredley

Dear Director,

Subject : Comment on Nanotech issues by Dupont

We believe DuPont's views as a member of the paint ,specialty chemicals , industrial Polymers, renewable resources and associated chemical industries are representative of these industry sectors.
DuPont believes the balance struck by NICNAS in their proposals to regulate Nanotech in industry is a conservative and intelligent view that uses "Good Science" to wisely apply the precautionary principle where there is no evidence or insufficient evidence of safety. Where there is sufficient evidence supported by good science, it is appropriate to move forward and allow ongoing commercialisation. (as shown by NICNAS draft Attachment 6.1 ,6.2 and 6.3). Only in this way can the community have appropriate assurance management of the risks resulting from Nano technology and gain all of the benefits of nanotechnology without the potential negatives.

DuPont supports the proposed NICNAS process shown in NICNAS draft attachment 7.

Nano technology has been used in the paint, adhesive and specialty chemicals industry (more specifically in emulsion and suspension polymerisation process and in certain pigment dispersions) for almost 50 years without ill effects attributable to its use. Over most of this time, it was never known by its current label "nanotechnology".

The paint, adhesive and related resin manufacturing industries have produced many materials that qualify as nano particles and have passed the test of time in terms of being used safely for over half a century. A key point is that any nano particulate pigment,clay, dispersion , emulsion or resin are short lived after application as a coating, as in order to function they must immediately coalesce and cure to form a film. The coalescence destroys the nano particle in the case of an emulsion polymer or encapsulates the particle in the case of a pigment to become a contiguous part of the coating matrix that protects the article being coated.

Dupont agrees with the NICNAS science based approach, activities and investigations being carried out in response to this issue at this time and notes that many of the comments produced by the public consultation show concern but a lack of understanding about the current detailed investigations into worker and public safety and that is already part of the normal NICNAS process and covered under the NICNAS Act.

The schematic process proposed by NICNAS is thorough and evidence driven and DuPont agrees that the precautionary principle should be applied where sufficient evidence of safety is not provided for materials not previously shown by example to be of low regulatory concern. It is important to recognise that many nano materials that have been used safely for a number of years should be recognised as safe under the conditions of current use. It would not make sense to consume limited resources for these materials to be reassessed, when these resources would be better allocated to areas of more significant risk, unless the nature of the nano scale structure changes.

Yours Faithfully

Leo Hyde
Research and Development Manager
Dupont (Australia) Ltd
12th February 2010

Australian Government
Department of Health and Ageing
NICNAS

National Industrial Chemicals Notification and Assessment Scheme

Proposal for Regulatory Reform of Industrial Nanomaterials

Public Discussion Paper – October 2009

Have Your Say Questionnaire

All submissions will be placed on the NICNAS's website. For submissions made by individuals, all personal details other than your name will be removed from your submission before it is published on the NICNAS website. Confidential material contained within submissions should be clearly marked. Reasons for a claim to confidentiality must be included in the submission coversheet. Where possible confidential material will be redacted from information published on the NICNAS website.

1. What is the significance and/or consequence of this working definition for 'industrial nanomaterials'?

   The working definition for industrial nanomaterials, supplied in the Discussion Paper, is adequate for effective regulatory purposes for people who understand the highlyt comprehensive existing regulatory structure of the NICNAS system which deals with far more detailed chemical systems.
2. Nano technology requires our regulators to understand the toxicology and ecotoxicology interations of man designed particles of specific size. The size – cut off should remain at the globally defined standard of 100nm . Nano particles are Intentionally produced , and that should remain the focus of any NICNAS investigations. Typically NICNAS consider all forms of unintentional by-product materials even though the focus is the specific chemical being investigated. This is the normal manner of assessment by NICNAS and it is comprehensive.
   Mixtures need not be included – Typically grinding of fillers, clays. pigments and metal have created a 1-5% content of nano scale particles amongst larger size particles for over 50 years with no issue. The fact that we have a new name "nano" does not change the evidence incidental nano paerticles have caused no observable issues is a matter of fact over such a long time.
3. 1.2 Definition should not include nano particles that undergo transformation to change their nature therefore no longer behave as nano particles such transformation such as by agglomeration,de-emulsification, reaction to become part of a larger particle or surface or mass
4.

5. How do you think the proposal to limit access to exemptions for nano-forms of new chemicals will contribute to protecting health and the environment?

   IF the exemption is due to good science then it is rational and logical. If data based the exemption should be allowed

6. Describe any ways in which you think self-assessment by an independent third party could be used to effectively achieve the same results?

   This depends on the knowledge independance and ethics of the 3rd party and the absolute requirement for that 3rd party to practice "good science"

7. If in R&D, what, if any, practical issues arise from the proposed administrative amendment for annual reporting of R&D exemptions? Would it require a significant increase in reporting? If so – how much?

   This would be little different to other forms of permit that have reporting requirements and as such there is little issue.

8. What are your views on the impact of the proposal to regulate nano-forms of new chemicals with the above changes to the permit and certificate categories? Can you identify additional advantages or disadvantages?

   The advantage is that after a chemical has gone nthrough a NICNAS schedule of assessment there is clear understanding of the safety in use and any issues with the methiod of use and application will be defined.

9. What are your views on a system that is sufficiently flexible to amend permit conditions where new data indicates a new risk profile?
   Only if the circumstances of the risk profile realistically exist. Nano materials have existed in industry for decades and have stood the test of time. To have restrictions on these or analoges would serve no purpose.

10. What are your views on the impact of the proposal for mandatory once-off, use specific reporting for nano-forms of 'existing chemicals'? Can you identify additional advantages or disadvantages?

    This will only be of advantage if the nano form is a new nano form and is hence a new potential risk. If the nano form has existed for 5 to 20 years without adverse effect when used as recommended by the MSDS then mandatory reporting will not be purposefull.

11. Explain how you think the potential burden of once-off, use specific reporting could or could not balance community expectations in relation to health and environmental standards?

    Reporting has to be relevant to real threat to be of value. To undertake reporting of paint industry , resins, emulsions and particles will achieve very little.

12. What are your views on making the information gathered through streams 1A and 1B publicly available?

13. What are the advantages and disadvantages of the introduction of a system that required a mandatory notification and assessment program for all nano-forms of existing chemicals? What are the reasons for this answer?

    Nano forms that relate to products used by the paint industry for the last number of

decades will serve very little purpose to reassess if they have demonstrated safe use when handled with appropriate PPE.

14. What are current issues that affect the feasibility of such a program?

    The need to review some thousands of materials to see which are relevant and for industries such as the paint industry where the track record is safe use the frustration is that of having to persue low value information that has decades of safe performance as a supporting fact. There are more recent and novel engineered nanotechnology applications outside the paint industry where it may be more profitable for NICNAS to use limited resources to look more closely at recent novel nanotechnology developments.

15. What are your views on making the information gathered from assessments of nano-forms of existing chemicals publicly available?

    Provided that there is no loss of proprietary information the general aspects of such assessments will be of value to help the community understand that not all nanoparticles are of genuine concern

16. How might an integrated approach provide for more effective regulation of industrial nanomaterials compared to the package of options proposed in sections 3a and 3b?