



## **NANOPHASE'S NANOPARTICLES AND ENVIRONMENTAL HEALTH & SAFETY**

Nanophase Technologies Corporation manufactures nanocrystalline powders and dispersions, and coats nanoparticles. Our nanoparticles and coatings are primarily metal oxides, a non-hazardous class of chemicals. Nanophase regards its specific guidelines for the safe handling and disposal of its nanocrystalline powders and dispersions as proprietary information. However, we recognize the concerns that have arisen about the safety of nanoparticles and we comment generally as follows:

- Nanophase's facilities for production of our nanoparticles recently achieved ISO 14001 certification, the international standard for environmental management. Nanophase's facilities also are state-of-the-art, based on currently available technology and processes.
- Nanophase is aggressively committed to environmental health and safety. We comply with all permissible exposure limits standards issued by OSHA. Because nanotechnology is an emerging and evolving science, there are no current standards, measurements or personal protective equipment available that are specific to nanoparticle safety. Accordingly, Nanophase relies on nuisance dust standards and general chemical safety to identify safe personal protective equipment and appropriate handling protocols.
- In a dry state, Nanophase's metal oxide nanoparticles form loose agglomerates (typically over 1,000 nanometers) and behave similarly to conventional powders. Conventional methods for monitoring and controlling environmental health and safety are generally considered appropriate for such powders. De-agglomeration to smaller-sized nanoparticles typically will not occur until powders are subjected to sufficient amounts of energy in a suitable medium such as water or organic solvent.
- Nanophase is unaware of any scientific evidence showing that our nanoparticles cause environmental health or safety problems.



- Nanophase's nanoparticles are generally used as a constituent of other products. Nanophase does not purport to address issues pertaining to reactivity, health hazard data, control & protective measures, and precautions for safe handling, use and disposal of such other products that use our nanoparticles as a constituent. Manufacturers of such other products should be contacted for additional information.

Additional information is available to customers upon request and pursuant to an appropriate nondisclosure agreement.

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