

**NANOBYK-3812**

Version 5

Revision Date 05/06/2015

Print Date 05/13/2015

**SECTION 1. IDENTIFICATION**

Product name : NANOBYK-3812

**Manufacturer or supplier's details**

Company : BYK USA Inc.  
524 South Cherry Street  
Wallingford CT 06492

Telephone : (203) 265-2086

Visit our web site : [www.byk.com](http://www.byk.com)

E-mail address : [ehs.byk.usa@altana.com](mailto:ehs.byk.usa@altana.com)

Emergency telephone number : 203-265-2086; CHEMTREC 1-800-424-9300 / +1 703-527-3887

**Recommended use of the chemical and restrictions on use**

Recommended use : Additive for absorption of UV light

Restrictions on use : Refer to Section 15 for any restrictions that may apply

**SECTION 2. HAZARDS IDENTIFICATION****GHS Classification**

Flammable liquids : Category 4

Aspiration hazard : Category 1

**GHS Label element**

Hazard pictograms :



Signal word : Danger

Hazard statements : H227 Combustible liquid.  
H304 May be fatal if swallowed and enters airways.

Precautionary statements : **Prevention:**  
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P280 Wear protective gloves/ eye protection/ face protection.

**Response:**  
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.  
P331 Do NOT induce vomiting.  
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

**Storage:**

## NANOBYK-3812

Version 5

Revision Date 05/06/2015

Print Date 05/13/2015

P403 + P235 Store in a well-ventilated place. Keep cool.  
P405 Store locked up.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

None known.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Dispersion of cerium oxide nanoparticles

**Hazardous components**

Component	CAS-No.	Concentration (%)
Alkanes, C11-15-iso-	90622-58-5	>= 54 - < 55

### SECTION 4. FIRST AID MEASURES

- If inhaled : Remove to fresh air. Administer artificial respiration if necessary. Get medical aid as soon as possible.
- In case of skin contact : Remove contaminated clothing. Wash thoroughly with soap and water.
- In case of eye contact : Immediately flush with plenty of water for at least 20 minutes. Get medical aid.
- If swallowed : Do not induce vomiting; aspiration hazard. Dilute with 1-2 glasses of water. Get medical aid. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into lungs. Never give anything by mouth to an unconscious person.
- Most important symptoms and effects, both acute and delayed : No information available.

### SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical

**NANOBYK-3812**

Version 5

Revision Date 05/06/2015

Print Date 05/13/2015

Unsuitable extinguishing media	: No information available.
Specific hazards during firefighting	: Will not explode on mechanical impact. Cool closed containers exposed to fire with water spray.
Hazardous combustion products	: Carbon oxides
Further information	: Keep away from heat and sources of ignition. Keep away from oxidizing agents.
Special protective equipment for firefighters	: In the event of fire, wear self-contained breathing apparatus.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures	: Eliminate all sources of ignition. Ventilate area if indoors. Wear self-contained breathing apparatus and full protective clothing.
Environmental precautions	: Prevent spilled material from entering the ground, water and/or air by using appropriate containment methods.
Methods and materials for containment and cleaning up	: Stop leak. Dike and contain spill. Absorb with suitable material and remove with sparkless shovel and/or scoop.

**SECTION 7. HANDLING AND STORAGE**

Advice on safe handling	: Avoid contact with skin and eyes. Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Keep container closed when not in use. Handle as an industrial chemical.
Conditions for safe storage	: Keep in a dry, cool and well-ventilated place. Keep product and empty container away from heat and sources of ignition. Take measures to prevent the build up of electrostatic charge.
Materials to avoid	: Keep away from strong acids. Keep away from strong bases. Keep away from oxidizing agents.

**NANOBYK-3812**

Version 5

Revision Date 05/06/2015

Print Date 05/13/2015

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

**Engineering measures** : Use with local exhaust ventilation.**Personal protective equipment**

Respiratory protection : Use an air purifying respirator with organic vapor (OV) cartridges. When there are exposures to mists (both solid and/or liquid droplets), a Class 1 particulate respirator (APF 10) is required (N, P, or R 100 filter) with the OV cartridge.

Hand protection  
Material : Neoprene gloves

Eye protection : Safety glasses with side-shields

Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.  
Clean long legged, long sleeved work clothes.  
If splashing is possible, wear chemically resistant protective clothing.**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : dispersion

Colour : yellow - brown

Odour : solvent-like

Odour Threshold : No data available

pH : No data available

Melting point/range : No data available

Boiling point/boiling range : No data available

Flash point : 149 °F (65 °C)  
(1,013 hPa)  
Method: 49 (Pensky-Martens)

Evaporation rate : No data available

**NANOBYK-3812**

Version 5

Revision Date 05/06/2015

Print Date 05/13/2015

Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Relative Density/Specific Gravity	:	No data available
Density	:	1.096 g/cm <sup>3</sup> (68 °F (20 °C)) Method: 1 (20°C coating pycnometer)
Bulk density	:	Not applicable
Solubility(ies)	:	
Water solubility	:	immiscible
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Viscosity	:	
Viscosity, dynamic	:	5 mPa.s (68 °F (20 °C)) Method: 11 (NV, 20°C)
Viscosity, kinematic	:	4.56 mm <sup>2</sup> /s (68 °F (20 °C))
Surface tension	:	No data available
Sublimation point	:	No data available

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	Stable; polymerization will not occur
Possibility of hazardous reactions	:	No data available
Conditions to avoid	:	None known.

**NANOBYK-3812**

Version 5

Revision Date 05/06/2015

Print Date 05/13/2015

Incompatible materials : Acids and bases  
Strong oxidizing agents

Hazardous decomposition products : None expected

**SECTION 11. TOXICOLOGICAL INFORMATION****Information on likely routes of exposure**

Inhalation  
Ingestion  
Eyes  
Skin Absorption  
Skin contact

**Acute toxicity****Product:**

Acute oral toxicity : Remarks: No data available

**Skin corrosion/irritation****Product:**

Remarks: No data available

**Serious eye damage/eye irritation****Product:**

Remarks: No data available

**Respiratory or skin sensitisation****Product:**

Remarks: No data available

**Carcinogenicity****IARC**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**ACGIH**

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

**OSHA**

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**NANOBYK-3812**

Version 5

Revision Date 05/06/2015

Print Date 05/13/2015

**NTP** No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**Repeated dose toxicity**

**Product:**

Remarks: Prolonged skin contact with ingredients may cause dermatitis. This product contains dispersed nano-particles. Since the toxicological effects of this nano-particle have not been explored, protect employees from all potential routes of exposure.

**Experience with human exposure**

**Product:**

Inhalation:

Symptoms: High concentrations of vapors may be irritating to the respiratory tract. May cause headaches, dizziness, nausea and vomiting. May cause CNS depression (drowsiness, loss of coordination and fatigue).

Skin contact:

Symptoms: Contact may cause irritation.

Eye contact:

Symptoms: Contact may cause irritation.

Ingestion:

Symptoms: Ingestion may irritate the digestive tract; high dosages may cause CNS depression.

**Further information**

**Product:**

Remarks: No data available

**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Product:**

Toxicity to fish : Remarks: No data available

**NANOBYK-3812**

Version 5

Revision Date 05/06/2015

Print Date 05/13/2015

**Persistence and degradability****Product:**

Biodegradability : Remarks: No data available

**Bioaccumulative potential****Product:**

Bioaccumulation : Remarks: No data available

**Mobility in soil**

No data available

**Other adverse effects**

No data available

**Product:**

Regulation 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances

Remarks This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : There is no data available for this product.

**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

EPA Hazardous Waste Code(s) : Not applicable.

Waste from residues : Dispose of in accordance with applicable local/municipal, state/provincial and federal regulations.

**SECTION 14. TRANSPORT INFORMATION****International Regulation****IATA-DGR**

Not regulated as a dangerous good

**IMDG-Code**

Not regulated as a dangerous good

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.



**NANOBYK-3812**

Version 5

Revision Date 05/06/2015

Print Date 05/13/2015

**National Regulations****49 CFR**

Not regulated as a dangerous good

Container sizes: 55 gallon drums, 5 or 6-gallon pails, 2oz/16oz samples

**SECTION 15. REGULATORY INFORMATION****EPCRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 302 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a SARA 302 RQ.

**SARA 311/312 Hazards** : Acute Health Hazard  
Fire Hazard**SARA 302** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.**Clean Air Act**

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

**Non-volatile (Wt)** : 46.8 %  
Method: 23 (20min/150°C)  
DIN EN ISO 3251  
Non-volatile information is not a specification.**Massachusetts Right To Know**

No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know**

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90622-58-5

**NANOBYK-3812**

Version 5

Revision Date 05/06/2015

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Cerium oxide isostearate 346608-13-7

**New Jersey Right To Know**

Alkanes, C11-15-iso- 90622-58-5

Cerium oxide isostearate 346608-13-7

**New Jersey Trade Secret  
Registry Number for the  
product (NJ TSRN)** : Not applicable**California Prop 65**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

CONEG Heavy Metal: We confirm that we use packaging and/or packaging components in which the sum of the incidental concentration levels of lead, mercury, cadmium and hexavalent chromium do not exceed 100 parts per million by weight.

**The components of this product are reported in the following inventories:**

TSCA : We certify that all of the components of this product are either listed on the TSCA Inventory or are not subject to the notification requirements per 40 CFR 720 30(h).

Section 4 / 12(b) : Not applicable

DSL : The following component(s) is/are not listed on the DSL:

CEPA Category : Chemical  
Weight percent : 46.0 %  
NSN Filed : None  
Max. NSN Required : Schedule 5**SECTION 16. OTHER INFORMATION**

Revision Date : 05/06/2015

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.