MATERIAL SAFTY DATA SHEET

CERAMIC NANO COATING FOR EXTERIOR

Effective Date: 25 Aug 2013

Section 1. Identification of the substance/mixture and of the company/undertaking

Product identifier

Product name: - Ceramic Nano Coating for exterior

Relevant identified uses of the substance or mixture and uses advised against
Identified uses

The product is only for industrial and/or professional use, not for any private consumer use.

Product Information : For coating of painted surface, windows, glass, ceramic and porcelain to achieve a self cleaning / easy cleaning surface, anti corrosive coating etc.

For further information, please also consult our Internet site

www.codetha.com

SECTION 2: HAZARDS IDENTIFICATION

The mixture is classified as dangerous in accordance with Directive 1999/45/EC.

Classification of the mixture

Classification : Harmful; Irritant; dangerous for the environment; Flammable;
[R10] Flammable. [R20/21] Harmful by inhalation and in contact with skin. [R38] Irritating to skin. [R52/53] Harmful to aquatic organisms, may cause l ong-term adverse effects in the aquatic environment.

Label elements

Symbol and indication of hazard.

X Harmful

Contain butyl acetate

R-phrase(s)

R10 = Flammable

R20/21 = Harmful by inhalation and in contact with skin

R38 = Irritating to skin

R52/53 = Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrase(s)

S23 = Do not breathe vapour/spray.

S36/37 = Wear suitable protective clothing and gloves.

S38 = In case of insufficient ventilation, wear suitable

Other hazards

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This mixture contains nosubstance considered to be very persistent nor very bioaccumulating (vPvB).

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterization

NAME	CAS NO	PROPORTION
N butyl acetate	**123-86-4.**	**5 -15 %**
SILACON DIOXIDE	**7631-86-9**	**85-95 %**

Section 4. First aid measures

Description of first aid measures

General advice

When symptoms persist or in all cases of doubt seek medical advice. Never give anything by mouth to an unconscious person.

Inhalation

Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician

Skin contact

Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician

Eye contact

Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Ingestion

If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

Most important symptoms and effects, both acute and delayed

Please see practical experience in section 11.

Indication of any immediate medical attention and special treatment needed

If unconscious place in recovery position and seek medical advice.

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media

Universal aqueous film-forming foam, Carbon dioxide (CO2), Dry chemical, Water spray.

Extinguishing media which shall not be used for safety reasons

High volume water jet

Special hazards arising from the substance or mixture

Hazardous combustion products

Fire will produce dense black smoke containing hazardous combustion products. Exposure to decomposition products may be a hazard to health.

Hazardous decomposition products

When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Advice for firefighters

Fire and Explosion Hazards

Flammable liquid. Vapours may form explosive mixtures with air. Remove all sources of ignition. Solvent vapours are heavier than air and may spread along floors

Special Protective Equipment and Fire Fighting Procedures

Wear as appropriate: Full protective flameproof clothing. Wear self contained breathing apparatus for firefighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter drains or water courses.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep in a well-ventilated place. Keep away from sources of ignition. Do not inhale vapours.

Environmental precautions

Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems. Please avoid any emission of volatile organic compounds as possible.

Methods and materials for containment and cleaning up

Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations. Clean preferably with a detergent; avoid use of solvents.

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Reference to other sections

Comply with safety directives (see chapters 7 and 8).

Section 7. Handling and storage

Precautions for safe handling

Safe handling advice

Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits. The product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Preparation may charge electrostatically: always use grounded leads when transferring from one container to another. Operators should wear antistatic footwear and clothing. No sparking tools should be used. Avoid skin and eye
contact. Do not breathe vapours or spray mist. Smoking, eating and drinking should be prohibited in the application area. For personal protection see section 8. Comply with the health and safety at work laws. If material is a coating, do not sand, flame cut, braze or weld dry coating without an appropriate respirator or appropriate ventilation, and gloves.

Advice on protection against fire and explosion

Solvent vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Never use pressure to empty container: container is not a pressure vessel. Always keep in containers of same material as the original one.

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

Observe label precautions. Store between 5 and 25 _C in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage

Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

Do not store together with explosives, gases, oxidizing solids, products which form flammable gases in contact with water, oxidizing products, infectious products and radioactive products.

Section 8 -Exposure Controls and Personal Protection

8.1 Control parameters:

8.1.1 Occupational exposure limits: Not available.

8.1.2 Additional exposure limits under the conditions of use: Not available.

8.1.3 DNEL/DMEL and PNEC-Values: Not available.

8.2 Exposure controls

8.2.1 Appropriate engineering controls:

Should be sufficient to reduce exposures below the workplace standards for butyl acetate established by the national regulations to the lowest level achievable.

8.2.2 Individual protection measures, such as personal protective equipment :

Eye/face protection: Chemical type googles, safety glasses with splash shields, or suitable face shields should be used.
Hand protection: Repeated exposure may cause skin irritation and/or sensitization. Wear impermeable gloves. e.g. PVC, Nitril. Handle in accordance with sensible hygiene and safety practice.
Skin Protection: Hand protection should comply with AS 2161, Occupational protective gloves Selection Use and Maintenance. Recommendation: PVC, neoprene or nitrile rubber gloves.
Body protection: Suitable protective clothing and eye protection should be in accordance with national, or regional standards and regulations.
Respiratory protection: Ventilation and respiratory protection must be used. In addition to engineering controls and safe work practices, personal protective equipment may be needed. Personal respiratory protection equipment appropriate for this material can range from (1) a reusable cartridge half face mask with organic solvent cartridge filter and particulate filter (2) a supplied air system depending on the scope of work. A respiratory protection program that must be followed whenever workplace conditions warrant respirator use. Respirator Decision Logic may be useful in determining the suitability of various types of respirators. Persons should not be assigned to tasks requiring the use of respirators unless it has been determined they are physically able to perform the work and are trained to use the equipment.
8.2.3 Environmental exposure controls: Avoid discharge into the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties
Appearance: Clear liquid with suspended fine particles
Colour: Not applicable
Odour: Fragrant mint like odor.
Odour threshold: No data available
pH: Not determined
Melting point/range: -95°C
Boiling point/range (°C) : 56°C
Flash point (°C) : -20°C
Evaporation rate: No data available
Flammability (solid, gas): No data available
Ignition temperature (°C) : No data available
Upper/lower flammability/explosive limits: No data available
Vapour pressure (20°C) : No data available
Vapour density: 2.0 Heavier than air
Relative Density (20°C): No data available
Water solubility (g/l) at 20°C : Mostly soluble
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Viscosity, dynamic (20 °C): No data available

9.2 Physical hazards: Highly flammable liquid and vapour.
9.3 Other information:
Fat solubility(solvent– oil to be specified) etc :Not available
Bulk Density: Not available

Dissociation constant in water : Not available
Oxidation-reduction Potential: Not available
Specific Gravity: 0.79
Volatile Content: 98%

Section 10 -Stability and Reactivity

Chemical Stability: Stable under normal use conditions
Conditions to Avoid Heat, sparks, flame and build up of static electricity.
Incompatibility (Material To Avoid): acids, alkalines, oxidants, reductants
Hazardous Decomposition: does not decompose with normal use.

SECTION 11: TOXICOLOGICAL INFORMATION
General: From our experience and the information provided to us this product does present any adverse health effects if the product is handled in accordance with this Material Safety Data Sheet and product label.
Ingestion: May cause nausea, vomiting, headache, dizziness and gastric irritation
Eye Contact: May cause irritation and watering. High concentration of vapours may cause irritation.
Skin Contact: Contact with the skin may result in irritation
Inhalation: Where the material is used in a poorly ventilated area, at elevated temperature or in confined spaces, vapor may cause irritation to the mucous membranes of the respiratory tract. May cause headaches, dizziness and nausea.

SECTION 12: ECOLOGICAL INFORMATION
Ecological No ecological problems are expected to occur when the product is handled and used with.
Information: due care and attention
Ecotoxicity: Avoid contaminating waterways.

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal Considerations t Whatever cannot be saved for recovery or recycling should be disposed of according o relevant local authority, state and federal government regulations.

SECTION 14: TRANSPORT INFORMATION

Transport only in accordance with the requirements of the Carriage of Dangerous Goods by Road and Rail (Classification, Packaging and Labeling), ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport.

UN number

ADR/RID; IMDG; ICAO/IATA: 1263

UN proper shipping name

ADR/RID; IMDG; ICAO/IATA: PAINT

Transport hazard class(es)

Hazard class

ADR/RID; IMDG; ICAO/IATA: 3

Subsidiary hazard class

ADR/RID; IMDG; ICAO/IATA: Not applicable.

Labels

Special Provisions

ADR/RID : 640E

Hazchem Code

ADR/RID: 3Y

EmS

IMDG: F-E,S-E

Packaging group

ADR/RID; IMDG; ICAO/IATA: III

Environmental hazards

ADR/RID; IMDG; ICAO/IATA: none

Marine pollutant

IMDG: **no**

Special precautions for user

please see section 6 – 8

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

Deliveries shall only be made based on appropriate packaging and in compliance with traffic laws.

Section 15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

No information available.

Chemical Safety Assessment

No safety checks were carried out on the mixture.

Section 16. Other information

This MSDS contains only safety-related information. For other data see product literature.

DISCLAIMER: The information contained in this Material Safety Data Sheet (MSDS) is believed to be correct and was obtained from sources we believe are reliable. However, since data, safety standards and government regulations are subject to change and the conditions of handling and use, or misuse are beyond our control, we make no warranty either expressed or implied, with respect to the completeness or accuracy to the information contained herein. Nanotech Products makes no representations, guarantees or warranties of any kind as to the accuracy, suitability for particular applications, hazards connected with the use of the material, or the results to be obtained from the use thereof. User assumes all risks and liability of any use, processing or handling of any material, variations in methods, conditions and equipment used to store, handle or process the material and hazards connected with the use of the material are solely the responsibility of the user and remain at their sole discretion. Compliance with all applicable federal, state, and local laws and regulations remains the responsibility of the user, and the user has the responsibility to provide a safe work place, to examine all aspects of its operation and to determine if or where precautions, in addition to those described herein, are required.