

Date of issue/ Date of revision : 2010-10-10.

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

### Identification of the substance or preparation

Product name : Nano Avenue Plus

### Use of the substance/preparation

Product use : Hardener for Avenue floor finish.

### Company/undertaking identification

Manufacturer : Nanosol AB  
 Olof Wijksväg 9  
 SE-444 65 Jörlanda, SWEDEN  
 Tel: +46 (0)303 56 329  
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 info@nanosol.se

e-mail address of person responsible for this SDS : jorgen.kaldemark@nanofloor.com

Emergency telephone number of the company : Nanosol AB, +46 (0)303 56 329 (office hours)

Emergency telephone number : 112

## 2. HAZARDS IDENTIFICATION

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : R43  
R52/53

Human health hazards : May cause sensitization by skin contact.

Environmental hazards : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

See section 11 for more detailed information on health effects and symptoms.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances presenting a health or environmental hazard within the meaning of the Dangerous Substances Directive 67/548/EEC or assigned an occupational exposure limit.

Chemical name	CAS number	EC number	%	Classification
Aliphatic polyisocyanate			30-40	R43 [1]
Aliphatic polyisocyanate			30-40	R43 [1] R52/53
<b>See section 16 for the full text of the R-phrases declared above</b>				

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] PBT-substance

[4] vPvB-substance

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Occupational exposure limits, if available, are listed in section 8.

### 4. FIRST AID MEASURES

#### First aid measures

- General** : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do not use solvents or thinners.
- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 5 minutes, keeping eyelids open.
- Ingestion** : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting.

See section 11 for more detailed information on health effects and symptoms.

### 5. FIRE-FIGHTING MEASURES

- Extinguishing media** : Recommended: alcohol-resistant foam, CO<sub>2</sub>, powders, water spray or mist.
- Extinguishing media not to be used** : Do not use water jet.
- Special exposure hazards** : Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Appropriate breathing apparatus may be required. Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

### 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions** : Exclude sources of ignition and ventilate the area. Avoid breathing vapor or mist. Refer to protective measures listed in sections 7 and 8. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Place in a suitable container.
- Environmental precautions** : Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.
- Methods for cleaning up** : The contaminated area should be cleaned immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises (by volume): water (45 parts), ethanol or isopropyl alcohol (50 parts) and concentrated (d: 0,880) ammonia solution (5 parts). A non-flammable alternative is sodium carbonate (5 parts) and water (95 parts). Add the same decontaminant to the remnants and let stand for several days until no further reaction in an unsealed container. Once this stage is reached, close container and dispose of according to local regulations (see section 13).

Note: see section 8 for personal protective equipment and section 13 for waste disposal.

### 7. HANDLING AND STORAGE

Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used.

Examination of lung function should be carried out on a regular basis on persons spraying this preparation.

- Handling** : Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapors in air and avoid vapor concentrations higher than the occupational exposure limits. In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. To dissipate static electricity during transfer, ground drum and connect to receiving

## 7. HANDLING AND STORAGE

container with bonding strap. Operators should wear antistatic footwear and clothing and floors should be of the conducting type.  
Keep container tightly closed. Precautions should be taken to minimize exposure to atmospheric humidity or water. CO<sub>2</sub> will be formed, which, in closed containers, could result in pressurization. Care should be taken when re-opening partly-used containers. Keep away from heat, sparks and flame. No sparking tools should be used.  
Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this preparation. Avoid inhalation of dust from sanding.  
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.  
Put on appropriate personal protective equipment (see section 8).  
Never use pressure to empty. Container is not a pressure vessel.  
Always keep in containers made from the same material as the original one.  
Comply with the health and safety at work laws.

**Storage** : Store in accordance with local regulations. Observe label precautions. Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight. Keep away from sources of ignition. Keep away from: oxidizing agents, strong alkalis, strong acids, amines, alcohols, water.  
No smoking. Prevent unauthorized access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Occupational exposure limits** : Not available

**Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used.**

**Examination of lung function should be carried out on a regular basis on persons spraying this preparation.**

**Exposure controls** : Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. Air-fed protective respiratory equipment must be worn by the spray operator, even when good ventilation is provided. In other operations, if local exhaust ventilation and good general extraction are not sufficient to maintain concentrations of particulates and solvent vapors below the OEL, suitable respiratory protection must be worn. (See Personal Protection.)

### Occupational exposure controls

**Respiratory system** : By spraying: air-fed respirator.  
By other operations than spraying, in well ventilated areas, air-fed respirators could be replaced by a combination charcoal filter and particulate filter mask.

**Recommended** : organic vapor (Type AX) and particulate filter,P3

**Skin and body** : Personnel should wear antistatic clothing made of natural fibers or of high-temperature-resistant synthetic fibers.

**Hands** : Wear suitable gloves. Recommended: Silver Shield gloves.  
The recommendation for the type or types of glove to use when handling this product is based on information from the following source: Composition/information on ingredients. breakthrough time: Please contact your glove supplier to get the information.  
Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

**Eyes** : Use safety eyewear designed to protect against splash of liquids.

### Environmental exposure controls

Do not allow to enter drains or watercourses.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state</b>	: Liquid.
<b>Flash point</b>	: Closed cup: 97°C (206,6°F) [ASTM 6450]
<b>Relative density</b>	: 1,1 g/cm <sup>3</sup>
<b>VOC content</b>	: 35 % 382 (g/l).
<b>Dry content (%)</b>	: 65

## 10. STABILITY AND REACTIVITY

<b>Conditions to avoid</b>	: Stable under recommended storage and handling conditions (see section 7). In a fire, hazardous decomposition products may be produced.
<b>Materials to avoid</b>	: Keep away from: oxidizing agents, strong alkalis, strong acids, amines, alcohols, water. Uncontrolled exothermic reactions occur with amines and alcohols. The product reacts slowly with water, resulting in the production of carbon dioxide. In closed containers, pressure buildup could result in distortion, expansion and, in extreme cases, bursting of the container.
<b>Hazardous decomposition products</b>	: Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen, hydrogen cyanide, monomeric isocyanates.

## 11. TOXICOLOGICAL INFORMATION

### Toxicokinetics

Based on the properties of the isocyanate components and considering toxicological data on similar preparations, this preparation may cause acute irritation and/or sensitization of the respiratory system, leading to an asthmatic condition, wheezing and tightness of the chest. Sensitized persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability. Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. Repeated or prolonged contact with irritants may cause dermatitis. If splashed in the eyes, the liquid may cause irritation and reversible damage.

Contains Aliphatic polyisocyanate, Aliphatic polyisocyanate. May produce an allergic reaction.

## 12. ECOLOGICAL INFORMATION

There is no data available on the preparation itself.

Do not allow to enter drains or watercourses.

The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and is classified for eco-toxicological properties accordingly. See sections 3 and 15 for details.

**PBT** : No.  
P: Not available B: Not available T: No.

**vPvB** : Not available

## 13. DISPOSAL CONSIDERATIONS

Do not allow to enter drains or watercourses. Residues in empty containers should be neutralized with a decontaminant (see section 6).

Dispose of according to all federal, state and local applicable regulations.

**European waste catalogue (EWC)** : 08 01 11

**Hazardous waste** : Yes.

## 14. TRANSPORT INFORMATION

**Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

### Land - road/railway

**Transport document name** : -

**Packing group** : -

### Sea

**Proper shipping name** : -

## 14. TRANSPORT INFORMATION

Special provisions	: Not available
Marine pollutant substances	: Not available
Packing group	: - Not available
Marine pollutant	: No.
Emergency schedules (EmS)	: Not available

### Air

Proper shipping name	: -
Special provisions	: Not available
Packing group	: -
Proper shipping name	: -
Packing group	: -

This product is not regulated for carriage according to ADR/RID, IMDG, ICAO/IATA.

## 15. REGULATORY INFORMATION

EU regulations : The product is classified and labelled for supply in accordance with the Directive 1999/45/EC as follows:

Hazard symbol or symbols :



Irritant

Risk phrases : R43- May cause sensitization by skin contact.  
R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases : S24- Avoid contact with skin.  
S37- Wear suitable gloves.

Contains : Aliphatic polyisocyanate  
Aliphatic polyisocyanate

The information in this Safety Data Sheet is required pursuant to Annex II to Regulation (EC) No 1907/2006.

Industrial use : The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

## 16. OTHER INFORMATION

Full text of R-phrases referred to in sections 2 and 3 - Europe : R43- May cause sensitization by skin contact.  
R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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### Notice to reader

The information in this SDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.

