

THIS DATA SHEET REFERS ONLY TO THE LIQUID COATING. WHEN THE COATING IS CURED AND HARDENED IT BECOMES A CROSSLINKED, AMORPHOUS AND STABLE COMPOSITION

MATERIAL SAFETY DATA SHEET

Nano Mold Coating® HC

Version 1 R2

Revision Date: 08-28-2012

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

Product Information

Trade name: Nano Mold Coating

Company: Nanoplas, Inc
1901 Godfrey Ave., SW
Grand Rapids, MI 49509

Telephone: 616-452-3707
Fax: 616-452-5640
Emergency: 616-452-3707

Usage: Semi-Permanent Mold Coating

2. COMPOSTION/INFORMATION ON INGREDIENTS

Chemical Nature:

Modified resin in solvent(s):

Hazardous components:

Chemical Name	Cas-Nr.	Concentration
Polyorganosiloxanes	*****	<100%
Isopropanol	67-63-0	>50%

3. HAZARDS INDENTIFICATION

POTENTIAL HEALTH EFFECTS

Acute Effects

Eye: Direct contact may cause moderate irritation.

Skin: May cause mild irritation.

Inhalation: Vapor may irritate nose and throat. Vapor overexposure may cause drowsiness.

Oral: Overexposure by ingestion may cause effects similar to those listed under repeated exposure.

Prolonged/Repeated Exposure Effects

Skin: Overexposure may injure internally if absorbed. Repeated or prolonged contact may cause defatting and drying of skin which may result in skin irritation and dermatitis.

Inhalation: Product generates methyl alcohol which may cause blindness and damage to nervous system.

Oral: Product generates methyl alcohol which may cause blindness and possibly death if swallowed. Repeated ingestion or swallowing large amounts may injure internally.

Signs and Symptoms of Overexposure

No known applicable information.

Medical Conditions Aggravated by Exposure

No known applicable information.

The above listed potential effects of overexposure are based on actual data, results of studies performed upon similar compositions, component data and/or expert review of the product. Please refer to Section 11 for the detailed toxicology information.

4. FIRST AID MEASURES

Eye: Immediately flush with water for 15 minutes. Get medical attention.

Skin: Remove from skin and immediately flush with water for 15 minutes. Get medical attention if irritation or ill effects develop or persist.

Inhalation: Remove to fresh air. Get medical attention if ill effects persist.

Oral: Get medical attention.

Notes to

Physician: Treat according to person's condition and specifics of exposure.

5. FIRE FIGHTING MEASURES

Flash Point: 84.9 °F / 29.4 °C (Closed Cup)
Autoignition

Temperature: Not determined.

Flammability Limits in Air: Not determined.

Extinguishing Media: On large fires use dry chemical, foam or water spray. On small fires use carbon dioxide(CO₂), dry chemical or water spray. Water can be used to cool fire exposed containers.

Fire Fighting Measures: Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.

Unusual Fire Hazards: Vapors are heavier than air and may travel to a source of ignition and flash back. Static electricity will accumulate and may ignite vapors. Prevent a possible fire hazard by bonding and grounding or inert gas purge.

6. ACCIDENTAL RELEASE MEASURES

Containment/Clean up:

Remove possible ignition sources. Determine whether to evacuate or isolate the area according to your local emergency plan. Observe all personal protection equipment recommendations described in Sections 5 and 8. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbant. Clean area as appropriate since spilled materials, even in small quantities, may present a slip hazard. Final cleaning may require use of steam, solvents or detergents. Dispose of saturated absorbant or cleaning materials appropriately, since spontaneous heating may occur. Local, state and federal laws and regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which federal, state and local laws and regulations are applicable. Sections 13 and 15 of this MSDS provide information regarding certain federal and state requirements.

Note: See section 8 for Personal Protective Equipment for Spills. Call (989) 496-5900, if additional information is required.

7. HANDLING AND STORAGE

Use with adequate ventilation. Traces of benzene (carcinogen) may form if heated in air above 300 F (149 C). Provide ventilation to control vapor exposure within inhalation guidelines when handling at elevated temperatures. Review the OSHA benzene regulation for detailed information on safe handling requirements. Product evolves flammable methyl alcohol when exposed to water or humid air. Provide ventilation during use to control exposure within Section 8 guidelines or use air-supplied or self-contained breathing apparatus. Avoid eye contact. Avoid skin contact. Do not breathe vapor. Keep container closed. Do not take internally.

Static electricity will accumulate and may ignite vapors. Prevent a possible fire hazard by bonding and grounding or inert gas purge. Keep container closed and away from heat, sparks, and flame. Keep container closed and store away from water or moisture.

Engineering measures

Local Ventilation: Recommended.
General Ventilation: Recommended.

Personal protective equipment

Eyes: Use proper protection - safety glasses as a minimum.

Skin: Wash at mealtime and end of shift. Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse. Chemical protective gloves are recommended.

Suitable Gloves:

Avoid skin contact by implementing good industrial hygiene practices and procedures. Select and use gloves and/or protective clothing to further minimize the potential for skin contact. Consult with your glove and/or personnel protective equipment manufacturer for selection of appropriate compatible materials.

Inhalation:

Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. IH personnel can assist in judging the adequacy of existing engineering controls.

Suitable Respirator:

General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators.

Storage

Requirements for storage areas and containers: Keep in an area equipped with solvent resistant flooring. Keep containers tightly closed in a dry, cool well ventilated place.

Storage Temperature: 60°-75°F

Other data: Stable under recommended storage conditions.

Personal Protective Equipment for Spills

Eyes: Use full face respirator.

Skin: Wash at mealtime and end of shift. Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse. Chemical protective gloves are recommended.

Inhalation/Suitable Respirator:

Respiratory protection recommended. Follow OSHA Respirator Regulations (29 CFR 1910.134) and use NIOSH/MHSA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Precautionary Measures: Avoid eye contact. Avoid skin contact. Do not breathe vapor. Keep container closed. Do not take internally. Use reasonable care.

Comments: Traces of benzene (carcinogen) may form if heated in air above 300 F (149 C). Provide ventilation to control vapor exposure within inhalation guidelines when handling at elevated temperatures. Review the OSHA benzene regulation for detailed information on safe handling requirements. Product evolves flammable methyl alcohol when exposed to water or humid air. Provide ventilation during use to control exposure within Section 8 guidelines or use air-supplied or self-contained breathing apparatus.

When heated to temperatures above 150 degrees C in the presence of air, product can form formaldehyde vapors. Formaldehyde is a potential cancer hazard, a known skin and respiratory sensitizer, and an irritant to the eyes, nose, throat, skin, and digestive system. Safe handling conditions may be maintained by keeping vapor concentrations within the OSHA Permissible Exposure Limit for formaldehyde.

Note: These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions. For further information regarding aerosol inhalation toxicity, please refer to the guidance document regarding the use of silicone-based materials in aerosol applications that has been developed by the silicone industry (www.SEHSC.com).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components Exposure Limits

Chemical Name	Cas-Nr.	Exposure
Polyorganosiloxanes	*****	No exposure limits were found for this product.
Isopropanol	67-63-0	NIOSH Recommended exposure limit 400ppm.(REL): Recommended exposure limit 980 mg/m3

* Methyl alcohol forms on contact with water or humid air. Provide adequate ventilation to control exposures within guidelines of OSHA PEL: TWA 200 ppm and ACGIH TLV-skin: TWA 200 ppm, STEL 250 ppm.

Isopropanol *Niosh (REL)

NIOSH Short term exposure limit 500 ppm
 NIOSH Short term exposure limit 1,225 mg/m3
 OSHA Z1 Permissible exposure limit 400 ppm
 OSHA Z1 Permissible exposure limit 980 mg/m3
 ACGIH time weighted average 200 ppm
 ACGIH Short term exposure limit 400 ppm

Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:

Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

US NFPA Codes

Health	Fire	Reactivity	Special
2	3	0	N/E

(N/E) - None established

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

TWA: 10 STEL: 15 (ppm) from ACGIH (TLV) [1995]
TWA: 41 STEL: 62 (mg/m3) from ACGIH [1995]
Consult local authorities for acceptable exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Liquid
Color: Colorless
Odor: Not available
Specific Gravity @ 25°C: 1.05
Viscosity: 1.7 cSt
Freezing/Melting Point: Not determined.
Boiling Point: > 65 °C
Vapor Pressure @ 25°C: Not determined.
Vapor Density: Not determined.
Solubility in Water: Not determined.
pH: Not determined.
Volatile Content: Not determined.
Flash Point: 84.9 °F / 29.4 °C (Closed Cup)
Autoignition Temperature: Not determined.
Flammability Limits in Air: Not determined.

10. STABILITY AND REACTIVITY

Chemical Stability: Stable.
Hazardous
Polymerization: Hazardous polymerization will not occur.
Conditions to Avoid: None.

Materials to Avoid: Oxidizing material can cause a reaction. Water, moisture, or humid air can cause hazardous vapors to form as described in Section 8.

Hazardous Decomposition Products:

Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: Carbon oxides and traces of incompletely burned carbon compounds. Silicon dioxide. Formaldehyde.

11. TOXICOLOGICAL INFORMATION

Special Hazard Information on Components Teratogens

CAS Number 67-56-1

Wt % 1-2%

Component Name Methyl alcohol

12. ECOLOGICAL INFORMATION

Environmental Fate and Distribution

Complete information is not yet available.

Environmental Effects

Complete information is not yet available.

Fate and Effects in Waste Water Treatment Plants

Complete information is not yet available.

Ecotoxicity Classification Criteria:

Hazard Parameters (LC50 or EC50) High ≤ 1 Medium >1 and ≤ 10 Low >100
Acute Aquatic Toxicity (mg/L)

Acute Terrestrial Toxicity ≤ 100 >100 and ≤ 2000 >2000

This table is adapted from "Environmental Toxicology and Risk Assessment", ASTM STP 1179, p.34, 1993.

This table can be used to classify the ecotoxicity of this product when ecotoxicity data is listed above. Please read the other information presented in the section concerning the overall ecological safety of this material.

13. DISPOSAL CONSIDERATIONS

RCRA Hazard Class (40 CFR 261)

When a decision is made to discard this material, as received, is it classified as a hazardous waste? Yes

Characteristic Waste:

Ignitable: D001

TCLP: D018

State or local laws may impose additional regulatory requirements regarding disposal. Call (989) 496-6315, if additional information is required.

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14. TRANSPORT INFORMATION**DOT Road Shipment Information (49 CFR 172.101)**

Proper Shipping Name: Flammable liquids, n.o.s.

Hazard Technical Name: Methanol

Hazard Class: 3

UN/NA Number: UN 1993

Packing Group: III

Hazard Label(s): Flammable Liquid

Ocean Shipment (IMDG)

Proper Shipping Name: FLAMMABLE LIQUID, N.O.S.

Hazard Technical Name: Methanol

Hazard Class: 3

UN/NA Number: UN 1993

Packing Group: III

Hazard Label(s): flammable liquid

Air Shipment (IATA)

Proper Shipping Name: Flammable liquid, n.o.s.

Hazard Technical Name: Methanol

Hazard Class: 3

UN/NA Number: UN 1993

Packing Group: III

Hazard Class: Flammable Liquid

15. REGULATORY INFORMATION

Contents of this MSDS comply with the OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA Status: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

EPA SARA Title III Chemical Listings

Section 302 Extremely Hazardous Substances (40 CFR 355):

None.

Section 304 CERCLA Hazardous Substances (40 CFR 302):

CAS Number	67-56-1
Wt %	3.0
Component Name	Methyl alcohol

Section 311/312 Hazard Class (40 CFR 370):

Acute: Yes
Chronic: Yes
Fire: Yes
Pressure: No
Reactive: No

Section 313 Toxic Chemicals (40 CFR 372):

CAS Number	67-56-1
Wt %	3.0
Component Name	Methyl alcohol

Note: Chemicals are listed under the 313 Toxic Chemicals section only if they meet or exceed a reporting threshold.

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16. OTHER INFORMATION

Further information

The information provided in the 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 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.

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