

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

SAFETY DATA SHEET
Nano Mold Coating® HCF
Version 1
Revision Date: 06-01-2015

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. HAZARDS IDENTIFICATION

OSHA Status: This material is considered hazardous by OSHA Hazard Communication Standard (29 CFR 1910.1200)

Classification: FLAMMABLE LIQUIDS – Category 2
SERIOUS EYE IRRITATION – Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic Effects) – Category 3

GHS Label Elements:



Signal Word: Danger.
Hazard Statements: Highly flammable liquid and vapor. May form explosive mixtures with air. Causes serious eye irritation. May cause drowsiness and dizziness.

POTENTIAL HEALTH EFFECTS

Acute Effects

Eye: Direct contact may cause irritation and burning.

Skin: Mild irritation. Low acute dermal toxicity

Inhalation: Inhalation of vapors irritates the respiratory tract.

Oral: Can cause drowsiness, unconsciousness, gastrointestinal pain, cramps, nausea, vomiting, and diarrhea may also result. The single lethal dose for a human adult = about 250 mls (8 ounces).

Chronic Effects: This product does not contain any ingredient designated by IARC, NTP, ACGIH, or OSHA as probable or suspected human carcinogens.

Signs and Symptoms of Overexposure

No known applicable information.

Medical Conditions Aggravated by Exposure

No known applicable information.

3. COMPOSTION/INFORMATION ON INGREDIENTS

Chemical Nature:

Modified resin in solvent(s):

Hazardous components:

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

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

Fire:

Flash point: 12C (54F) CC

Autoignition temperature: 399C (750F)

Flammable limits in air % by volume:

lcl: 2.0; ucl: 12.7

Listed fire data is for Pure Isopropyl Alcohol.

Explosion:

Above flash point, vapor-air mixtures are explosive within flammable limits noted above. Contact with strong oxidizers may cause fire or explosion. Vapors can flow along surfaces to distant ignition source and flash back. Sensitive to static discharge.

Fire Extinguishing Media:

Water spray, dry chemical, alcohol foam, or carbon dioxide. Water spray may be used to keep fire exposed containers cool, dilute spills to nonflammable mixtures, protect personnel attempting to stop leak and disperse vapors.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode

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.

7. HANDLING AND STORAGE

Use with adequate ventilation 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.

Store in tightly closed containers. Store in an area that is dry, well-ventilated, away from ignition sources, and away from incompatible materials. (see section 10. Stability and Reactivity).

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.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components Exposure Limits

The following products do not contain substances that are considered by OSHA, NPT, IARC, or ACGIH to be "probable" or "suspected" human carcinogens.

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

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.

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Liquid
Color: Colorless
Odor: Slight Odor
Specific Gravity @ 25°C: .998
Viscosity: 1.7 cSt
Freezing/Melting Point: Not determined.
Boiling Point: > 82 °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: 12C (54F) CC
Autoignition temperature: 399C (750F)

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal handling and storage conditions.
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: traces of dimethyl cyclosiloxanes, methylphenylcyclosiloxanes, and formaldehyde.

11. TOXICOLOGICAL INFORMATION

The following products do not contain substances that are considered by OSHA, NPT, IARC, or ACGIH to be "probable" or "suspected" human carcinogens.

Chemical Name	Cas-Nr.	Exposure
Polyorganosiloxanes	Trade Secret	No exposure limits were found for this product.

Isopropanol

Oral rat LD50: 5045 mg/kg; skin rabbit LD50: 12.8 gm/kg; inhalation rat LC50: 16,000 ppm/8-hour; investigated as a tumorigen, mutagen, reproductive effector.

-----\Cancer Lists\-----

---NTP Carcinogen---

Ingredient	Known	Anticipated	IARC Category
------------	-------	-------------	---------------

Isopropyl Alcohol (67-63-0)	No	No	3
Water (7732-18-5)	No	No	None

12. ECOLOGICAL INFORMATION

Environmental Fate and Distribution

Complete information is not yet available.

Environmental Effects

Complete information is not yet available.

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.

14. TRANSPORT INFORMATION

DOT Road Shipment Information (49 CFR 172.101)

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

Hazard Technical Name: Isopropyl Alcohol

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: Isopropyl Alcohol

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: Isopropyl Alcohol

Hazard Class: 3

UN/NA Number: UN 1993

Packing Group: III Hazard Class: Flammable Liquid

15. REGULATORY INFORMATION

Inventory Status	<u>Status</u>
United States (TSCA)	Y
Canada (DSL)	Y
Europe (EINECS/ELINCS)	P
Australia	Y
Japan (MITI)	N
South Korea (KECL)	Y

Y = All ingredients are on the inventory**E = All ingredients are on the inventory or exempt from the listing.****P = One or more of the ingredients fall under the polymer exemption or are on the no longer polymer list. All other ingredients are on the inventory or exempt from listing.****N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing.****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.

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