



**RAINWORKS INVISIBLE SPRAY
MATERIAL SAFETY DATA SHEET**
(Version 1.0 - "Blue Morpho")

**WATER AND OIL REPELLENT IMPREGNATION AGENT FOR POROUS
WOOD TYPES AND NATURAL STONE**

1 Chemical Product and Company Information

1.1 Trade name: Rainworks Invisible Spray

1.2 Description:

- Golden-colored liquid solvent-based superhydrophobic & oleophobic coating, invisible when dry, effective for 2-18 months on all absorbent substrates.

1.3 Distributor: Shenanigans LLC, dba Rainworks
1914 Occidental Ave S
Seattle, WA 98134
E-mail: contact@rain.works

1.4 Manufacturer: Nanex Company
Kleine Bogaardstraat 57
9990 Maldegem
Belgium
E-mail: info@nanexcompany.eu

1.5 Emergency telephone numbers:
Distributor: +1 (425) 285-7254
Manufacturer: +32(0)476 38 67 62

2 Composition and information on ingredients

2.1 Classification of the mixture

Classification according to directive 1272-2008-EC

Flammable liquid of category 3 with H226

Mixture with aspiration toxicity category 1 with H304

2.2 Labelling elements

Labelling according to directive 1272-2008-EC

Hazard indications:

**Signal word:**

Danger

Hazard indication(s):

H226: Flammable liquid and vapour

H304: May be fatal if swallowed and enters airways

EUH066: Repeated exposure may cause skin dryness or cracking

Safety recommendations:

P210: Keep away from heat. No smoking.

P233: Store in a tightly closed container.

P240: Ground/bond container and receiving equipment.

P241: Use explosion-proof electrical/ventilating/light/.../equipment.

P242: Use non-sparking tools only.

P243: Take precautionary measures against static discharge.

P280: Wear protective gloves/protective clothing/eye and face protection.

P301+P310: If swallowed: call a poison centre or contact a physician.

P303+P361+P353: If on skin (or hair), Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P331: Do not induce vomiting.

P332+P313: If skin irritation occurs: Seek medical advice.

P370+P378: In case of fire: use sprayed water, foam, dry chemical powder or carbon dioxide (CO₂).

P403+P235: Store in a well ventilated place. Keep cool.

P405: Store in a locked area.

P501: Dispose of content and packaging according to local regulations.

2.3 Other hazards:

Physical chemical hazards:

The product can accumulate static charges which can cause an ignition of sparks. The product can release fumes which can form easily inflammable mixtures. The accumulation may inflame and/or explode if ignited.

Health hazards:

Repeated exposure can cause dry or cracked skin. Slightly irritating to the skin.

Environmental hazards:

Can be irritating for eyes, nose, throat and lungs.

No additional hazards. The product does not meet the criteria for PBT or zPzB according to REACH annex XIII

3 Composition and information about the components.

3.1 Substances: not applicable. This product is a mixture

3.2 Mixtures:

Components of the mixture:

Ingredients	CAS-nbr.	EC-nbr.	Registration-index	Conc.	GHS_CLP classification	H-phrases
Fluoropolymers *	-	-	-	<2 %	-	
Alkanes,C11-C12, iso-alkanes, <2 % aromatics	64742-48-9	265-150-3	01-211947 2146-39	Up to 100 %	Asp.Tox.1 Flam.liq.3	H304 EUH066 H226

* The mixture contains partially fluorinated copolymers.
Concentration in weight percentage

Note: See section 16 for the full text of the H-phrases

Classification: STOT SE3 with H336 is not applicable for concentrations smaller than 10%, present <4%.

EUH066: Repeated exposure may cause skin dryness or cracking.

EU-H phrases are additional European hazard indications.

4 First aid measures

4.1 First Aid: Inhalation:	Protect from further exposure. People offering help should prevent exposure of themselves or others. Use adequate breathing protection. In case of irritation of the respiratory tract, dizziness, nausea or unconsciousness, call for medical assistance immediately. When breathing has stopped, use an emergency ventilator or apply mouth-to-mouth resuscitation.
Skin contact	Wash immediately with water and soap and rinse with a lot of water. Remove spoiled clothing and wash before reuse.
Eye contact	Remove contacts. Rinse immediately and thoroughly with plenty of water (minimum 5

	minutes). Call for Medical assistance when symptoms of irritation develop.
If swallowed	DO NOT INDUCE VOMITING! Calm the victim. Call IMMEDIATELY for medical assistance or transport to a hospital.

4.2 Important symptoms and effects: No important symptoms or effects.

4.3 Indication of any immediate medical care and special treatment: If the product is swallowed, it can be aspirated into the lungs and cause chemical pneumonia. Give suitable treatment. The mixture contains a micro-emulsion of water based fluorinated copolymers. Inhalation of aerosols or sprayed product may cause irritation of the respiratory tract. The severity of the condition and the symptoms can be of several hours, days or weeks, depending on the degree of exposure. It is important to take the necessary measures to prevent exposure to sprayed product by the adaptation of the construction and the installation of an efficient extraction system.

5 Measures for fire fighting

Extinguishing media <i>Suitable extinguishing media:</i> <i>Unsuitable extinguishing media:</i>	Foam, dry chemical powder, carbon dioxide or sprayed water. Do not point water beam directly on the source of the fire to avoid spreading of the fire.
Particular hazards for fire fighting Hazardous combustion products:	In case of fire, carbon monoxide and carbon dioxide can be released next to smoke, fumes and incomplete combustion products.
Recommendations for fire-fighters: Instructions for fire fighting: Unusual fire hazards:	Use (sprayed) water to cool neighbouring packaging and constructions. Do not allow extinguishing water to enter sewers, soil or surface waters. Inform authorities when it happens. Take measures to collect extinguishing water. Use standard protection gear and wear a self-contained breathing apparatus in confined areas. It is a hazardous product. Depending on the severity of the fire, fire fighters should consider using the protection indicated in section 8.

Flammability properties Flash point: Upper flammability limit: Lower flammability limit:	>40 °C Method: ASTM D-93 UEL 7,0 volume % in air LEL 0,6 volume % in air
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6 Accidental release measures

6.1 Personal precautions Protective gear and emergency procedures Notification: Protective measures:	In case of accidental release, inform authorities and apply the applicable legislation. Avoid contact with spoiled product. If the toxicity or the flammability of the product requires it, alert or evacuate all people in the vicinity and downwind. Additional protective measures might be necessary, depending on the specific circumstances and/ or the expert assessment of the rescuers.
6.2 Environmental precautions	Seal leaks when possible without risk. Impound spoiled product as much as possible with inert materials. Do not allow substance to flow into water ways, sewerage systems, basements or confined areas.
6.3 Methods of cleaning up: On the ground On water	Eliminate all sources of ignition, do not smoke, no open fires, no sparks. Seal leak when possible without risks. All installations in contact with the product must be grounded. Do not touch or step into spoiled product. A foam for vapour suppression can be used to fight fumes. Prevent spreading over a big area by impounding or occlusion. A water spray can reduce the amount of fumes but cannot prevent an ignition in a confined area. Big leaks should be extracted mechanically by means of a pump or vacuum cleaner. Clean away residues or smaller leaks with inert absorbents for petroleum products. Forms a floating layer on water. Eliminate all sources of ignition. Seal leak if possible without danger. Warn all other navigation. When the flash point is more than 10°C above the environmental temperature, use floating oil screens. If the conditions allow it, remove the material from the surface by skimming or with suitable absorbents. When the flash point

	is lower than 10°C above the environmental temperature. Use floating oil screens to protect riverbanks and let the product evaporate. Only use dispersants after consulting an expert.
<p>The recommendations concerning the water and soil pollution for this product are based on the most probable pollution scenarios. Geographic characteristics, wind, temperature and in the case of water pollution, the waves, the direction and speed of the current, can nonetheless influence the right choice of the measures to be applied. Therefore the local experts need to be consulted.</p> <p>Note: local regulations can prescribe specific measures or subject to certain conditions.</p>	
6.4 Reference to other sections	See section 5 for information concerning fire fighting. See section 2 for important hazards. See section 4 for first aid. See section 6 for personal protection. See sections 8 and 13 as well.

7 Handling and storage

7.1 Precautions for safe handling of the mixture:

Avoid inhalation of the product and contact with eyes, skin and clothing. Wear suitable protective gear (see section 8). Prevent small spills and leaks to prevent slipping. This product can accumulate electrical charge which can cause an electric spark potentially inducing an ignition. Apply suitable grounding. Grounding cannot completely eliminate the danger of static accumulation. Refer to local applicable norms as a guide. Additional references are the American Petroleum institute 2003 (protection against ignition arising out of static, lightning and stray currents) or the national fire protection agency 77 (recommended practise on static electricity) or the Cenelec CLC/TR 50404 (electrostatics – code of practise for the avoidance of hazards due to static electricity).

Charge and discharge temperature:

ambient temperature

Transport temperature:

ambient temperature

Static accumulator:

this product is a static accumulator. The liquid is typically assumed to be a non-conductive, static accumulator when its conductivity is lower than 100 pS/m and is assumed to be a semi-conductive, static accumulator when its conductivity is

lower than 10.000 pS/m. Whether the liquid is a semi-conductive or not, the precautionary measures are the same. A couple of factors, such as p.e. the temperature of the liquid, contaminants, anti-static additives and filtration can have a strong influence on the conductivity of a liquid.

7.2 Safe storage conditions, including incompatible products

The choice of storage container can have an influence on the static accumulation and its draining. Keep the packaging closed. Handle the packages with care. Open the package slowly in order to control a potential pressure release. Store in a well ventilated cool area. All fixed containers need to be grounded to avoid static charges.

Storage temperature:

ambient temperature

Suitable packaging:

1000 l IBC and smaller packaging

Suitable materials and coating:

polypropylene, polyethylene, carbon steel stainless steel and inorganic zinc coatings.

Unsuitable materials and coatings:

Vinyl coatings, natural and butyl rubber, ethylene-propylene-diene monomer (EPDM), polystyrene.

7.3 Specific end use:

see section 1 for identified end uses

8 Exposure control – personal protection

8.1 Control parameters and exposure limits

Hydrocarbons, C11-C12, iso-alkanes, <2% aromates:

177 ppm or 1200 mg/m³, source Exxon-Mobil

8.2 Measures for exposure control:

The degree of protection and the type of required protective gear depend on the exposure conditions such as the applications, the types of handling and the ventilation. The information about the choice of protective gear is based on a normal foreseeable use of the product.

General protective gear to be considered:

An efficient explosion proof ventilation system has to be installed in order not to exceed the exposure limits.

Respiratory protection

If despite the precautionary measures, the concentration of pollution in the air cannot be maintained at an acceptable level for the health of the employees, it might be necessary to use an approved respiratory apparatus.

Half face masks with a gas filter of type A, brown, for organic fumes/solvents. In case of high concentrations, provide an approved air-supplied breathing apparatus.

Refer to section 4.3 for applications of the sprayed product.

Hand protection

Wear chemical resistant safety gloves: nitrile rubber and viton are recommended. EN 420 and EN 374 provide general data and a list with glove types.

Eye protection

Wear sealed safety glasses with side protection or a facial screen.

Skin and corporal protection.

Suitable chemical and oil resistant protective clothing is recommended.

Specific hygienic measures

Respect a good personal hygiene, wash hands before eating, drinking and/or smoking. Wash or replace work clothing regularly. Check personal protective gear regularly and replace when necessary.

Environmental control

Follow the applicable environmental regulations with regard to the limitation of exhaust into air, water and soil. Take the necessary control measures to prevent or limit emissions.

9 Physical and chemical properties

Appearance	Liquid
Colour	Light brown
Odour	Little, hydrocarbons
Odour threshold	No data available
pH	N/A
Melting point	No data available
Freezing point (°C)	No data available
Stability	Stable until boiling point
Boiling point (°C)	From 150°C to 220°C
Decomposition temperature (°C)	N/A
Vapour pressure (kPa)	0,07 kPa
Vapour density:	>1, relative to air
Solubility in water	Low, <0,1 weight%
Viscosity	1 – 2,3 mm ² /s at 20°C
Flash point (°C):	>56 °C
Self ignition temperature (°C):	>200 °C
Explosion limits:	
Upper (°C) LEL	0,6 vol. %
Lower (°C): UEL	7,0 vol. %
9.2 Further information	
User temperature:	0°C to 35°C
Specific density (Kg/dm³):	0,756 Kg/ dm ³ at 15 °C

10 Stability and reactivity

Reactivity:	the fluoro monomer will polymerize over time.
Chemical stability:	Stable under normal circumstances.
Potentially hazardous reactions:	none known
Conditions to avoid:	open flames and highly energetic ignition sources.
Materials to avoid:	strong oxidants
Hazardous decomposition products:	product does not decompose at ambient temperature.

11 Toxicological information

Information about toxicological effects:

Inhalation:	Acute toxicity: rat, 8 h LC50 > 5000 mg/m ³ fumes, minimal toxicity.
Oral toxicity:	Acute toxicity: rat, LC50 > 5000 mg/Kg, minimal toxicity. When the liquid is swallowed, some drops may be aspirated into the lungs (aspiration), which may cause pneumonia.
Skin irritation:	Slightly irritating to skin in case of repeated or long-lasting contact.
Eye irritation:	Can cause discomfort in the eyes, but will not damage eye tissue.
Carcinogens:	Is not listed as carcinogenic
Toxic substances for propagation:	Probably not toxic for propagation.
Lactation:	Is probably not harmful through breastfeeding
Specific Target Organ Toxicity (STOT):	
Single exposure:	Does probably not cause any organ damage.
Repeated exposure:	Does probably not cause any organ damage.

12 Ecological information

The information given is based on available data about the product, the ingredients present in the product and similar products.

12.1 Toxicity

Is not expected to be toxic for aqueous organisms.

12.2 Persistence and degradability

Biodegradability:	is expected to be intrinsically biodegradable.
Hydrolysis:	transformation by hydrolysis is not expected to be significant.

Photolysis: transformation by photolysis is not expected to be significant.

Atmospherical oxidation: is not expected to decompose rapidly in contact with air.

12.3 Bioaccumulation:

no data available.

12.4 Mobility in the soil:

very volatile, will spread fast in the air. The fluoropolymer can separate to the sediment and the fraction of solids in waste water.

12.5 Results of PBT and zPzB evaluation:

the product does not contain substances known as PBT and/or zPzB.

12.6 Other hazardous effects:

no adverse effects are expected.

Further ecological information:

according to 1999/13/EC, this product is classified as a Volatile Organic Substance; VOS content 693,4 g/l.

Ecological data

The following data are valid for Alkenes, C11-C12, iso-alkanes, <2% aromatics, concentration >95% in the mixture.

Ecotoxicity:

test	duration	organism	results
Aquatic acute toxicity	48 hours	Daphnia magna	EL0 1000 mg/l *
Aquatic acute toxicity	72 hours	Pseudokirchneriella subcapitata	EL0 1000 mg/l *
Aquatic acute toxicity	72 hours	Pseudokirchneriella subcapitata	NOELR 1000 mg/l *
Aquatic acute toxicity	96 hours	Oncorhynchus mykiss	LL0 1000 mg/l *
Aquatic acute toxicity	21 days	Daphnia magna	NOELR \geq 1 mg/l *

Media	test	duration	results
water	biodegradability	28 days	31,3 % degraded *

*data of similar products

13 Disposal considerations

The disposal recommendations are valid for the product in the state in which it is delivered. When disposed, the applicable laws and regulations need to be respected and the state of the product to be disposed needs to be taken into consideration.

Disposal methods**Product:**

The product has to be destroyed according to national and local legal regulations, by a legally certified processor of hazardous waste products.

Contaminated packaging

The used package is only meant for the packaging of the product. After use, thoroughly clean out the package and bring it to the local recycling according to national laws.

Warning: empty packages may contain residues of hazardous materials and can as such be dangerous. Do not refill empty packages or do not clean them without clear instructions. Empty packages completely before safely storing them. Do not put packages under pressure, do not cut, drill holes, saw or shear them, do not expose them to heat, fire, sparks, static electricity or other ignition sources. This may lead to explosions causing personal injuries or even death.

Waste code number

The waste code number has to be determined in accordance with the European waste code list of 2000/532/EC in consultation with the waste processor/ manufacturer/ authorities.

14 Transport information**Transport / more information****Road and Rail Ways (ADR/RID)**

14.1 UN number:	3295
14.2 UN official transport name:	hydrocarbons, liquid, N.O.S.
14.3 transport hazard class:	3
14.4 packaging group	III
14.5 environmental hazards:	none
14.6 special precautions for user:	
Classification code:	F1
Label:	3
Hazard ID number:	30
Hazchem EAC:	3Y

Maritime transport (IMDG)

14.1 UN number:	3295
14.2 UN official transport name:	hydrocarbons, liquid, N.O.S.
14.3 transport hazard class:	3
14.4 packaging group	III
14.6 special precautions for user:	
Label:	3
EMS number:	F-E, S-D
Transport document:	UN3295 hydrocarbons, liquid, N.O.S., 3, VG III, (>40°C)

Air transport (IATA)

14.1 UN number:	3295
14.2 UN official transport name:	hydrocarbons, liquid, N.O.S.
14.3 transport hazard class:	3
14.4 packaging group	III

14.5 environmental hazards:	none
14.6 special precautions for user:	
Label:	3
Transport document:	UN3295 hydrocarbons, liquid, N.O.S., 3, VG III

15 Regulatory information

Regulatory status and applicable laws and regulations.

15.1 Specific safety, health and environmental regulations and laws for the substance or the mixture.

Applicable EC directives and regulations

98/24/EC, on the protection of the health and safety of workers from the risks related to chemical agents at work.

1272/2008/EC, on classification, labelling and packaging of substances and mixtures.

453/2010/EC, amended 1999/45/EC

1999/45/EC, concerning the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous preparations

15.2 Chemical safety evaluation

REACH information: a chemical safety evaluation was executed for one or more substances present in the product.

16 Further information

Text of H-phrases referenced in section 3:

H226	Flammable liquid and vapour
H304	May be fatal if swallowed and enters airways
H336	May cause drowsiness or dizziness
EUH066	Repeated exposure may cause skin dryness or cracking

Page VIB:	upper right corner, first line
Revision VIB:	upper right corner, second line
Revision date:	upper right corner, third line
Date previous revision:	upper right corner, fourth line
Name of manufacturer:	Nanex
Revised parts:	changes with reference to previous versions are marked with “#”.
Sources of information:	Original VIB and specifications from the manufacturers

Further information

Date updated: March 24, 2016 for Rainworks Invisible Spray 1.0, “Blue Morpho”

This version replaces all previous versions.

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 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.