SECTION 1: Identification of the substance or mixture and of the company

1.1 Product identifier

Product form: Liquid
Product name: NANO-ECOLINE INFUSION
UFI: X6G7-C4AG-QE2W-D18A
Item no.: HS-INF-304

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

Identified uses: For industrial use by professional users
Water repellent agent for concrete and smooth mineral surfaces

Uses advised against: Not identified.

1.3 Details of the supplier providing the safety data sheet

Manufacturer: NANO ENZO B.V.
De Eenruiter 6
3833 SB Leusden
The Netherlands
T +31 85 007 9900
info@nanoenzo.nl www.nanoenzo.com

1.4 Emergency number: 112

+31 88 75 8000 NVIC, the National Information Center – Utrecht.

SECTION 2: Possible dangers

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]:

Health hazards: Irritating to skin (Category 2).
H315: Causes skin irritation.

2.2 Labelling elements

Signal words: Warning

Hazard statement(s): H315: Causes skin irritation.

Safety instructions
Prevention
P264: Wash thoroughly after handling.
P280: Wear protective gloves.

Response:

P302+P352: IF ON SKIN: Wash with plenty of water and soap.
P332+P313: If skin irritation occurs: Get medical advice/attention.
P362+P364: Take off contaminated clothing and wash before reuse.

2.3 Other hazards

Results of PBT and vPvB assessment
Not a PBT or vPvB substance according to the criteria of the REACH Regulation.

Endocrine-disrupting properties - toxicity
The substance/mixture does not contain any components that exhibit endocrine-disrupting properties in quantities of 0.1% or more in accordance with REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605.

Endocrine-disrupting properties - ecotoxicity
The substance/mixture does not contain any components that exhibit endocrine-disrupting properties in quantities of 0.1% or more in accordance with REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605.

SECTION 3: Composition/information on ingredients

3.1 Substances

General information: HECOLITH® Concrete protection

Chemical name	Concentration	CAS	EC No.	REACH Registration No.	M factor:	Notes
Triethoxyisobutyl-silan	98	17980-47-1	402-810-3	01-0000015254-76	There are no data available.	

* All concentrations are given as percentages by weight.
# There are occupational exposure limits for this substance.

Classification

Chemical name	Classification	Notes
Triethoxyisobutyl silane	Classification: Skin Irrit.: 2: H315; Additional information on the label: None known. Specific concentration limit: None known. Acute toxicity, oral: LD 50: > 5,000 mg/kg Acute toxicity, inhalation: LC 50: 5.88 mg/l Acute toxicity, dermal: LD 50: > 2,000 mg/kg	No data available.

CLP: Regulation No. 1272/2008.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: Remove contaminated, soaked clothing immediately.

Inhalation: After inhaling aerosols or mists: Move to fresh air.
If symptoms persist, seek medical attention.

Skin contact: Wash off immediately with plenty of water. If skin irritation persists, consult a doctor.

Eye contact: Immediately rinse thoroughly with plenty of water for at least 5 minutes
with plenty of water, using an eye wash solution if necessary.
If symptoms persist, consult an ophthalmologist.

Ingestion: Rinse mouth with water. Immediately drink plenty of water in small sips (dilution effect). Seek medical assistance
.

Personal protection for first aiders: No data available.

4.2 Most important acute and delayed symptoms and effects

Symptoms: None known.

Hazards: None known.

4.3 Indications for immediate medical attention and special treatment

Treatment If necessary, treat the irritation. After ingesting large amounts of the substance: administer activated charcoal.
Acceleration of gastrointestinal passage

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: Water spray, mist spray, CO2, dry extinguishing agents or alcohol-resistant foam

Unsuitable extinguishing media: Full water jet.

5.2 Special hazards arising from the substance or mixture Standard measures for chemical fires.
:

5.3 Firefighting instructions

Firefighting instructions:	Firefighting water must not be allowed to enter the sewage system, subsoil or waterways. Ensure that there are sufficient firefighting water retention facilities. Fire residues and contaminated firefighting water must be disposed of in accordance with local official regulations. Firefighting water retention in Germany: See §20 AwSV.
Special protective equipment for firefighting:	In case of fire: Wear self-contained breathing apparatus .

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures Procedures:	Wear personal protective equipment. Ensure adequate ventilation.
6.1.1 Not for emergencies Trained personnel:	No data available.
6.1.2 Emergency personnel:	No data available.
6.2 Environmental protection measures:	Do not allow to enter wastewater, soil, waterways, groundwater or sewage systems.
6.3 Methods and material for containment and cleaning up:	Absorb with inert liquid-binding material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Fill into labelled, tightly sealable containers. Dispose of in accordance with regulations .
6.4 Reference to other sections:	For personal protective equipment, see Section 8. For information on disposal can be found in Section 13.

SECTION 7: Handling and storage:

7.1 Precautions for safe handling

Technical measures: Ensure adequate ventilation.

Handling:	Process outdoors or in a well-ventilated area. Observe the usual precautions when handling chemicals. The personal protective equipment used must comply with the requirements of Regulation (EU) 2016/425 and amendments (CE marking).If workplace exposure limits are exceeded and/or if large quantities are released (leaks, spills, dust), the specified respiratory protection must be used. If there is a possibility of skin/eye contact, the specified hand protection/eye protection/body protection must be used. Do not inhale vapours or aerosols. Avoid contact with skin and eyes.
Measures to avoid contact:	No data available.

7.2 Conditions for safe storage, taking into account incompatibilities

Conditions for safe storage:

Product has medium conductivity (static conductivity 100-10,000 pS/m) Liquids with low conductivity (static conductivity <100 pS/m) or medium conductivity (static conductivity 100 pS/m - 10000 pS/m) can become dangerously electrostatically charged and thus pose a corresponding ignition hazard.

Germany: TRGS 727, Technical Rules for Hazardous Substances – Prevention of Ignition Hazards due to Electrostatic Charges

EU: PD CLC/TR 60079-32-1:2019-01-25, Explosive areas Electrostatic hazards

USA: NFPA 77, Recommended Practice on Static Electricity Take measures against electrostatic charging, keep ignition sources away. Store containers tightly closed in a cool, well-ventilated place. Protect from moisture.

Safe packaging materials: No data available.

Storage class: 10: Flammable liquids that do not fall under any of the above categories
LGK are to be assigned

7.3 Specific end uses:

For more detailed information, see the Exposure description.

SECTION 8: Exposure controls/personal protective equipment

8.1 Parameters to be monitored

Occupational exposure limits

There are no occupational exposure limits for any of the components.

Biological limits

No biological exposure limits are specified for the ingredient(s).

DNEL values

Comments: DNEL/DMEL values are not available.

PNEC values

Critical component	Environmental compartment	PNEC values	Comments
Triethoxyisobutylsilane	Sediment (seawater)	1.4 mg/kg	
	Sediment (freshwater)	14 mg/kg	
	Soil	2.7 mg/kg	
	Aquatic (seawater)	0.017 mg/l	
	Predator	33.3 mg/kg	Oral
	Sewage treatment plant	100 mg/l	
	Aquatic (freshwater)	0.17 mg/l	

8.2 Exposure limits and monitoring

Suitable technical control measures: Ensure adequate ventilation.

Individual protection measures, e.g. personal protective equipment

Eye/face protection: Safety goggles

Hand protection: Material: Polychloroprene (CR) Penetration time: >= 480 min Glove thickness: 0.5 mm
Material: Fluorinated rubber (FKM) Penetration time: >= 480 min Glove thickness: 0.4 mm
Guideline: Source: GESTIS substance database (hazardous substance information system of the German social accident insurance institutions)
Additional information: Protective gloves must be selected specifically for the workplace. Workplace-specific suitability should be clarified with the protective glove manufacturers. The information is based on our own tests, literature references and/or information from glove manufacturers, or is derived by analogy from similar substances. It should be noted that the daily usage time of a chemical protective glove in practice can be significantly shorter than the permeation time determined in accordance with EN 374 due to many influencing factors (e.g. temperature).

Skin and body protection: Suitable protective clothing – use disposable clothing if necessary.

Respiratory protection: In the event of dust/vapours/aerosols or if limit values (e.g. MAK) are exceeded: Use respiratory protection with a suitable filter (filter type ABEK) or wear a self-contained breathing apparatus. Only use respiratory protection with a CE mark including a four-digit test number. The respiratory protection filter class must be adapted to the maximum pollutant concentration (gas/vapour/aerosol/particles) that may arise when handling the product. If the concentration is exceeded, insulating equipment must be used. Observe the wearing time limit for respiratory protection.

Hygiene measures: Do not eat, drink or smoke while working. Wash hands and/or face before breaks and at the end of work.
Remove contaminated, soaked clothing immediately. Wash contaminated clothing before wearing again.

Environmental protection measures: See section 6.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties Appearance

Physical state:	Liquid
Form:	liquid
Colour	colourless
Odour:	solvent
Odour threshold:	No data available.
Freezing point:	< -72 °C (OECD 102)

Boiling point:	Approximately 186 °C (1,013 hPa) (DIN 51751)
Flammability:	non-flammable
Upper/lower flammability or explosion limits	
Upper explosion limit (%):	(DIN 51649) 8.47% (V)
Explosion limit - lower (%):	(DIN 51649) 0.39 %(V)
Flash point:	63 °C (DIN EN ISO 2719)
Auto-ignition temperature:	240 °C (1,013 hPa, DIN 51794)
Decomposition temperature:	No data available.
pH value:	No data available.
Viscosity	
Dynamic viscosity:	No data available.
Viscosity, kinematic:	1.4 mm²/s(20 °C, QSAR)
Flow time:	No data available.
Solubility(ies)	
Solubility in water:	immiscible, decomposition by hydrolysis
Solubility (other):	No data available.
Resolution speed:	No data available.
Partition coefficient (n-octanol/water) - log Pow:	3.6 (QSAR) > 2.03 Literature
Dispersion stability:	No data available.
Vapour pressure:	33 Pa (20 °C) (OECD 104) dynamic method 49 Pa (25 °C) (OECD 104) dynamic method
Relative density:	0.88 (20 °C) (OECD 109)
Density:	Approximately 0.88 g/cm² (20 °C) (DIN 51757)
Bulk density:	No data available.
Relative vapour density:	No data available.

9.2 Other information

Explosive properties:	(EEC method 92/69/EEC, A 14) Not explosive.
Oxidising properties:	Not expected based on the structure.

SECTION 10: Stability and reactivity

10.1	**Reactivity:**	No dangerous reactions known when proper handling.
10.2	**Chemical stability:**	Stable under specified storage conditions.
10.3	**Possibility of hazardous reactions:**	No dangerous reactions known.

10.4	**Conditions to avoid:**	Keep away from heat and ignition sources. Keep away from moisture. Ethanol produced during conversion may form acetaldehyde in the presence of oxygen and heat. Material may form acetaldehyde when heated with inorganic pigments in the presence of air .
10.5	**Incompatible materials:**	Water.
10.6	**Hazardous decomposition products:**	Ethanol during hydrolysis. Alcohol formed during hydrolysis lowers the flash point of the product.

SECTION 11: Toxicological information

11.1 Information on hazard classes within the meaning of Regulation (EC) No.

1272/2008 Information on likely routes of exposure

Inhalation: No data available.

Skin contact: No data available.

Eye contact: No data available.

Ingestion: No data available.

Acute toxicity (list of all possible exposure routes) Ingestion

Product: LD 50 (rat, female, male): > 5,000 mg/kg (OECD 401)
Not classified.

Skin contact

Product: LD 50 (rat, female, male): > 2,000 mg/kg (OECD 402)
Not classified.

Inhalation

Product LC 50 (rat, female, male, 4 h): 5.88 mg/l (OECD 403) Dust, mist and smoke,
Not classified.

Toxicity upon repeated administration

Product: NOAEL (no observed adverse effect level) (rat, female, male), oral, 28 d): > 1,000 mg/kg

Skin corrosion/irritation

Product: OECD 404 (rabbit): Irritant;

Serious eye damage/irritation

Product: OECD 405 (rabbit): Non-irritating;

Respiratory or skin sensitisation

Product: Maximisation test, OECD 406 (guinea pigs):
Not a skin sensitiser.

Carcinogenicity

Product: No evidence of carcinogenic effects.

Germ cell mutagenicity: No evidence of mutagenic effects

In vitro

Product: Ames-test (OECD 471): negative.
Chromosome aberration (OECD 473): negative; Gene mutation test (OECD 476): negative.

In vivo
Product: Chromosome aberration (OECD 474) Oral (mouse, female, male): negative;

Reproductive toxicity
Product: Showed no effect on fertility in animal studies.

Specific target organ toxicity – single exposure
Product: No data available.
Specific target organ toxicity - repeated exposure
Product: No data available.

Aspiration hazard
Product: No evidence of aspiration toxicity

11.2 Information on other hazards

Endocrine-disrupting properties
Product The substance/mixture does not contain any components that, according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605, have endocrine-disrupting properties in quantities of 0.1% or more
Other hazards: .

No data available.

SECTION 12: Environmental information

12.1 Toxicity: all information refers to the product.

Acute aquatic toxicity:
Fish LC 50 (Oncorhynchus mykiss, 96 h): 85 mg/l (Lit.)

Invertebrate aquatic animals: EC50 (Daphnia magna, 48 h): > 49.1 mg/l

Toxicity to aquatic plants: No data available.

Toxicity to microorganisms: NOEC (municipal activated sludge, 3 h): > 1,000 mg/l (OECD 209)

Chronic aquatic toxicity:
Fish: **No data available.**

12.2 Persistence and degradability of the product

Biological degradation 75% (28 d, OECD 301 D), The product is biodegradable.

BOD/COD ratio No data available.

Bioaccumulation potential

Bioconcentration factor (BCF): not bioaccumulative

12.3 Mobility in soil: Adsorption to soil: low.

12.4 Results of PBT and vPvB assessment:

Not a PBT or vPvB substance according to the criteria of the REACH Regulation.

12.5 Endocrine-disrupting properties:

Product: The substance/mixture does not contain any components that, according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605, have endocrine-disrupting properties in quantities of 0.1% or more. properties in quantities of 0.1% or more.

12.6 Other harmful effects: Other hazards

Product: The data available to us does not lead to any environmental labelling.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

General information: No data available.

Disposal methods: In compliance with local regulations, e.g. to a suitable incineration plant. No waste code number can be assigned to this product in accordance with the European Waste Catalogue, as only the intended use by the consumer allows for classification. The waste code number must be determined in accordance with the European Waste Catalogue (EU Decision on Waste Catalogue 2000/532/EC) in consultation with the disposal company / manufacturer / the authorities.

Contaminated packaging material: Do not reuse empty containers and dispose of them in accordance with local regulations. If product remains in the empty container, the handling instructions on the container must also be followed. Improper disposal or reuse of this container is illegal and can be dangerous. Other countries: Observe national regulations
.

SECTION 14: Transport information

14.1 UN/ID No.: Not classified as dangerous goods.

14.2 Proper UN shipping name: Not classified as dangerous goods.

14.3 Transport hazard classes: Not classified as dangerous goods.

14.4 Packaging group

ADN : Not classified as dangerous goods
Remarks : Not classified as dangerous goods in inland waterway transport (ADN).

ADR : Not classified as dangerous goods
Notes : Not classified as dangerous goods in road and rail transport (ADR / RID)

RID	:	Not classified as dangerous goods
Notes	:	Not classified as dangerous goods in road and rail transport (ADR / RID).
IMDG	:	Not classified as dangerous goods
Notes	:	Not classified as dangerous goods for maritime transport (IMDG Code), WITHIN THE USA ONLY: In containers with a capacity of more than 450 litres, the product must be classified as a flammable liquid and clearly labelled before shipment to the USA.
IATA (air transport only air transport)	:	Not classified as dangerous goods
Notes	:	Not classified as dangerous goods in air transport (ICAO-TI / IATA-DGR).
IATA (passenger and cargo aircraft)	:	Not classified as dangerous goods
Notes	:	Not classified as dangerous goods in air transport (ICAO-TI / IATA-DGR).

14.5 Environmental hazards

Not classified as dangerous goods

14.6 Special precautions for the user

Not applicable

14.7 Bulk transport by sea in accordance with IMO instruments

Not applicable to product in delivery condition.

SECTION 15: Regulatory information

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

EU Regulations

Regulation 1005/2009/EC on substances that deplete the ozone layer, Annex I, Controlled substances: None present or none present in controlled quantities.

REGULATION (EC) No. 1907/2006 (REACH), ANNEX XIV LIST OF SUBSTANCES SUBJECT TO AUTHORISATION: None present or none present in regulated quantities.

Regulation (EU) 2019/1021 on persistent organic pollutants (recast), as amended: None present or none present in regulated quantities.

DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions (integrated pollution prevention and control), ANNEX II List of pollutants: None present or none present in regulated quantities

.

Regulation (EC) No 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1, as amended: None present or none present in regulated quantities.

Regulation (EC) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I,

Part 2, as amended: None present or none present in regulated quantities.

Regulation (EC) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3, as amended: None present or none present in regulated quantities.

as amended: None present or none present in regulated quantities.

Regulation (EC) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V, as amended: None present or none present in regulated quantities.

EU. REACH Candidate List of Substances of Very High Concern (SVHC) that may be subject to authorisation: None present or none present in regulated quantities.

Regulation (EC) No. 1907/2006 Annex XVII Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles: None present or none present in regulated quantities.

Directive 92/85/EEC on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding: None present or none present in regulated quantities.

EU Directive 2012/18/EU (SEVESO III) on the control of major-accident hazards involving dangerous substances, as amended: Not applicable

REGULATION (EC) No 166/2006 concerning the establishment of a European Pollutant Release and Transfer Register, ANNEX II: Pollutants: None present or none present in regulated quantities.

Directive 98/24/EU on the protection of workers from the risks related to chemical agents at work: None present or none present in regulated quantities.

National regulations

When working, observe BG information sheet BGI 595: Irritant substances / Corrosive substances.

Water hazard class (WGK): WGK 1: slightly hazardous to water.

Technical Instructions on Clean Air (TA-Luft): none

15.2 Material safety assessment: A substance safety assessment has been carried out.

International regulations

Montreal Protocol:	Not applicable
Stockholm Convention:	Not applicable
Rotterdam Convention:	Not applicable
Kyoto Protocol:	Not applicable

SECTION 16: Other information

Abbreviations and acronyms:

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; **ADN -** European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; **AGW -** Occupational exposure limit; **ASTM -** American Society for material testing; **AwSV -** Ordinance on Installations for Handling Substances Hazardous to Water; **BOD -** Biochemical Oxygen Demand; **c.c. -** closed container; **CAS -** Society for the Assignment of CAS Numbers; **CESIO -** European Committee for Organic Surfactants and their Intermediates; **COD -** Chemical Oxygen Demand; **DMEL -** Derived Minimal Effect Level; **DNEL -** Derived No Effect Level; **EbC50 -** median growth inhibition concentration; **EC -** effective concentration; **EINECS -** European Inventory of Existing Commercial Chemical Substances; **EN -** European Standard; **ErC50 -** median growth rate inhibition concentration; **GGVSEB -** German Hazardous Goods Ordinance for Road, Rail and Inland Waterways; **GGVSee -** German Hazardous Goods Ordinance for Sea Transport; **GLP -** Good Laboratory Practice; **GMO -** Genetically Modified Organism; **IATA -** International Air Transport Association; **ICAO -** International Civil Aviation Organisation; **IMDG -** International Maritime Dangerous Goods Code; **ISO -** International Organisation for Standardisation; **LD/LC -** lethal dose/concentration; **LOAEL -** lowest dose of an administered chemical substance at which damage was still observed in animal experiments; **LOEL -** lowest dose of an administered chemical substance at which effects were still observed in animal experiments; **M-factor –** multiplication factor; **NOAEL –** highest dose of a substance that does not cause any detectable and measurable damage, even with continuous exposure; **NOEC –** concentration without observable effect; **NOEL –** dose without observable effect; **o.c. –** open container; **OECD -** Organisation for Economic Co-operation and Development; **OEL -** Occupational exposure limits; **PBT -** Persistent, bioaccumulative, toxic; **PNEC -** Predicted concentration in the respective environmental medium at which no harmful environmental effects occur; **REACH -** REACH registration; **RID -** Regulations concerning the international carriage of dangerous goods by rail; **SVHC -** Substances of very high concern; **TA -** Technical instructions; **TRGS -** Technical rules for hazardous substances; **vPvB -** Very persistent, very bioaccumulative; **WGK -** Water hazard class

Important references and data sources:	No data available.
Training information:	No data available.
Information on revision	Changes from the previous edition are highlighted in the margins . This version replaces all previous editions.

Disclaimer:

Our information is based on our current knowledge and experience to the best of our knowledge. However, we provide it without obligation. We reserve the right to make changes in the course of technical progress and operational development. Our information merely describes the nature of our products and services and does not constitute any guarantees. The customer is not exempt from carefully checking the functions or possible applications of the products by qualified personnel. This also applies to the protection of third-party property rights. The mention of trade names of other companies is not a recommendation and does not exclude the use of other similar products.