



**HYDRA S**



**HS-LI NANO 3  
DENSIFIER UH | SAFETY DATA SHEET**

## 1. COMPANY & PRODUCT IDENTIFICATION

1.1	PRODUCT NAME:	HS-LI NANO 3 DENSIFIER UH
	CAS NUMBER:	7631-86-9
	SUPPLIER:	Hydra-S +1 248-572-6511 info@hydras-products.com
1.2	PRODUCT USE:	Concrete Densifier
1.3	MANUFACTURER'S NAME:	Adeo Distributors
	EMAIL:	info@adeodistributorsl.com
1.4	PREPARATION INFORMATION:	
	DATE OF CURRENT REVISION:	January 8, 2018
	DATE OF LAST REVISION:	January 8, 2015

## 2. RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

2.1	RECOMMENDED USE:	Concrete coatings.
2.2	RESTRICTIONS ON USE:	For industrial use only, not for food, drug or home use.

## 3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

3.1	COMPANY IDENTIFICATION:	Nyacol Nano Technologies, Incorporated Megunko Road, P.O. Box 349, Ashland, MA 01721 U.S.A. 508-881-2220
3.2	EMAIL CONTACT:	<a href="mailto:info@nyacol.com">info@nyacol.com</a>
3.3	INTERNET:	<a href="http://www.nyacol.com">www.nyacol.com</a>

## 4. EMERGENCY TELEPHONE NUMBER

4.1	IN CASE OF EMERGENCY:	USA/Canada CHEMTREC: +1 (703) 527-3887 International CHEMTREC: +1 (703) 741-5970 24 Hours/Day: 7 Days/Week
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## 5. CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

5.1	GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS)	Not Classified
5.2	CLASSIFICATION ACCORDING TO REGULATION (EC) NO. 1272/2008 (CLP)	Not Classified

## 6. LABEL ELEMENTS

6.1	NOT LABELLED	
6.2	SIGNAL WORD:	Not applicable
6.3	HAZARD PICTOGRAM:	Not applicable
6.4	HAZARD STATEMENT(S):	Not applicable
6.5	PRECAUTIONARY STATEMENT(S):	Not applicable

## 7. OTHER HAZARDS

7.1	PBT/VPVB ASSESSMENT	Not available as chemical safety assessment Not required Not conducted
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## 8. UNKNOWN ACUTE TOXICITY (GHS US)

8.1	NO DATA AVAILABLE
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## 9. COMPOSITION / INFORMATION ON INGREDIENTS

### 9.1 DESCRIPTION: MIXTURE CONSISTING OF THE FOLLOWING COMPONENTS

COMPONENT NAME:	PRODUCT IDENTIFIER	GHS CLASSIFICATION	PERCENT BY WEIGHT
Silicon Dioxide:	CAS: 7631-86-9 EINECS: 231-545-4 Index: Not available	Not classified	7.5
Lithium Silicate: REACH: Not Registered by NNT	CAS: 12627-14-4 EINECS: 235-730-0 Index: Not available	Corr. Eye 1, H318	<1
Water:	CAS: 7732-18-5 EINECS: 231-791-2 Index: Not available	Not classified	92.5

9.2 **IMPURITIES:** Present at a level below that to be taken into account for classification.

9.3 **STABILIZING ADDITIVES:** Present at a level below that to be taken into account for classification.

The supplier currently has no knowledge on additional ingredients that are classified and that contribute to the classification of this substance.

See Section 16 for a list of hazards if identified above

## 10. FIRST-AID MEASURES

- 10.1 **EYE CONTACT:** Immediately flush eyes with plenty of water for at least 15 minutes. Hold eyelids apart while flushing to rinse entire surface of the eye and lids with water. Get medical attention.
- 10.2 **SKIN CONTACT:** Wash skin with plenty of soap and water for several minutes. Get medical attention if skin irritation develops or persists. Remove contaminated clothing.
- 10.3 **INHALATION:** Remove person from exposure. Seek immediate medical care if respiratory irritation, dizziness, nausea or unconsciousness occurs. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Consult medical professional.
- 10.4 **INGESTION:** Seek immediate medical care. Do not induce vomiting. Never give anything by mouth to an unconscious person.
- 10.5 **FIRST AID FACILITIES:** Eye wash station.
- 10.6 **ADVICE TO PHYSICIANS:** No further relevant information available.

## 11. MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

11.1 ACUTE OR DELAYED EFFECTS ARE NOT ANTICIPATED

## 12. INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED.

12.1 NO FURTHER RELEVANT INFORMATION AVAILABLE

## 13. FIRE-FIGHTING MEASURES

13.1 SUITABLE EXTINGUISHING MEDIA: All are suitable. Use water spray, dry chemical, foam or carbon dioxide to extinguish flames. Use waterspray to cool fire-exposed containers. Water or foam may cause frothing.

## 14. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

14.1 SPECIAL HAZARD ARISING FROM THE CHEMICAL: Lithium oxides, silicon oxides and carbon oxides.

14.2 FIRE HAZARD: No further relevant information available.

14.3 EXPLOSION HAZARD: Use explosion proof equipment. Keep away from sources of ignition. Do not smoke. Take measures to prevent the build up of electrostatic charge.

14.4 REACTIVITY: No further relevant information available.

## 15. ADVICE FOR FIREFIGHTERS

15.1 SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS: Wear standard full firefighter turn-out gear (full bunker gear) and respiratory protection (SCBA).

## 16. ACCIDENTAL RELEASE MEASURES

16.1	PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES	Use personal protective equipment. Avoid breathing vapor, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.
16.1.1	FOR NON-EMERGENCY PERSONNEL	Wear protective equipment. Keep unprotected persons away.
16.2	ENVIRONMENTAL PRECAUTIONS	Prevent further leakage or spillage if safe to do so. Prevent entry into sewers/surface and ground water.
16.3	METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP	Ventilate area. Avoid breathing vapor. Wear appropriate personal protective equipment, including appropriate respiratory protection. Contain spill if possible. Wipe up or absorb on suitable material and shovel up. Prevent entry into sewers and waterways. Avoid contact with skin, eyes or clothing.
16.4	REFERENCE TO OTHER SECTIONS	For more information on exposure controls and personal protection or disposal considerations, check section 8 and 13 of this SDS.

## 17. HANDLING AND STORAGE

17.1	PRECAUTIONS FOR SAFE HANDLING	Keep away from heat and flame and any other ignition source. Avoid contact with skin and eyes. Avoid generating mist or dust during use. Protect against electrostatic charges. Use explosion proof equipment. Keep away from sources of ignition. Do not smoke. Take measures to prevent the build up of electrostatic charge.
17.1.1	PROTECTIVE MEASURES	Use only in well ventilated areas. As a precautionary measure, the wearing of standard work gear is suggested. Keep ignition sources away. Do not smoke. Protect from heat. Protect against electrostatic charges.
17.1.2	ADVICE ON GENERAL OCCUPATIONAL HYGIENE	Avoid inhalation, ingestion or contact with skin. General occupational hygiene measures are required to ensure a safe handling of the substance. These measures involve good personal and housekeeping practices (i.e. regular cleaning with suitable cleaning devices), no eating, drinking and smoking at the workplace and wearing standard working clothes and shoes unless otherwise stated. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas. Shower and change clothes at end of work shift. Do not wear contaminated clothing at home.
17.2	CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES	Do not freeze. Keep container tightly closed in a dry and well ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
17.3	SPECIFIC END USE(S)	No additional information available. Refer to Section 1.2 of this SDS.

## 18. EXPOSURE CONTROLS / PERSONAL PROTECTION

### 18.1 CONTROL PARAMETERS

#### 18.1.1 NATIONAL LIMIT VALUES

##### SILICON DIOXIDE, CAS 7631-86-9

COUNTRY	OCCUPATIONAL EXPOSURE LIMIT	REFERENCE PERIOD	REFERENCE
USA	80mg/m <sup>3</sup> /%SiO <sub>2</sub>	8 hours	OSHA PEL - <a href="http://www.cdc.gov/niosh/idlh/7631869.html">http://www.cdc.gov/niosh/idlh/7631869.html</a>
UK	6 mg/m <sup>3</sup> (inhalable)	8 hours	Health and Safety Executive <a href="http://www.hse.gov.uk/pubns/priced/eh40.pdf">http://www.hse.gov.uk/pubns/priced/eh40.pdf</a>
Germany	4 mg/m <sup>3</sup> (inhalable)	8 hours	Senate Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (MAK Commission): <a href="http://www.dfg.de/en/dfg_profile/statutory_bodies/senate/health_hazards/index.html">http://www.dfg.de/en/dfg_profile/statutory_bodies/senate/health_hazards/index.html</a>
Belgium	10 mg/m <sup>3</sup>	8 hours	Service public fédéral Emploi, Travail et Concentration sociale: <a href="http://www.emploi.belgique.be/WorkArea/showcontent.aspx?id=23914">http://www.emploi.belgique.be/WorkArea/showcontent.aspx?id=23914</a>
Austria	2 mg/m <sup>3</sup> (inhalable)	8 hours	<a href="https://www.arbeitsinspektion.gv.at/NR/rdonlyres/F173280B-D4FB-44D2-8269-8DB2CB1D2078/0/GKV2011.pdf">https://www.arbeitsinspektion.gv.at/NR/rdonlyres/F173280B-D4FB-44D2-8269-8DB2CB1D2078/0/GKV2011.pdf</a>

##### SILICIC ACID, LITHIUM SALT, CAS 12627-14-4

USA	OSHA PEL Ceiling (mg/M3)	Not available.
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#### 18.1.2 DNELS AND PNECS

##### SILICON DIOXIDE, CAS 7631-86-9

DNEL (DERIVED NO EFFECT LEVEL)	
ROUTE OF EXPOSURE/ENVIRONMENTAL PROTECTION TARGET	DNEL
Inhalation - Long term/systemic effects	4 mg/m <sup>3</sup>
PNEC (PREDICTED NO EFFECT CONCENTRATION)	

No information available

18.2	EXPOSURE CONTROLS	
18.2.1	ENGINEERING CONTROLS:	Exhaust ventilation to keep airborne concentrations below exposure limits.
18.2.2	HYGIENE MEASURES:	Workers should wash exposed skin several times daily with soap and water. Soiled work clothing should be laundered or dry cleaned.
18.2.3	RESPIRATORY:	Airborne concentrations should be kept to lowest levels possible. When respiratory protection is required or concentrations are unknown, use an approved air-purifying respirator with organic vapor cartridge.
18.2.4	HANDS:	Wear impervious gloves such as neoprene.
18.2.5	EYES:	Safety glasses, chemical type goggles, or face shield recommended to prevent eye contact.
18.2.6	SKIN:	Wear clean body-covering clothing; impervious gloves such as neoprene. Workers should wash exposed skin several times daily with soap and water. Soiled work clothing should be laundered or dry-cleaned.
18.2.7	ENVIRONMENTAL EXPOSURE CONTROLS:	Adverse effects of this material on the environment have not been evaluated. Proper disposal techniques to isolate and recover material should be implemented.

## 19. PHYSICAL AND CHEMICAL PROPERTIES

19.1	INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES	
19.1.1	APPEARANCE (PHYSICAL STATE, COLOR):	Translucent liquid.
19.1.2	UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS:	Not determined.
19.1.3	VOLATILE BY WEIGHT:	93%
19.1.4	ODOR:	Odorless
19.1.5	VAPOR PRESSURE:	2260 kPs (17 mm Hg) at 20°C water.
19.1.6	ODOR THRESHOLD:	Not determined.
19.1.7	VAPOR DENSITY:	Not determined.
19.1.8	pH:	9 - 10
19.1.9	RELATIVE DENSITY:	1050 kg/M <sup>3</sup>
19.1.10	MELTING POINT/FREEZING POINT:	Not determined.
19.1.11	SOLUBILITY IN WATER:	Soluble in water
19.1.12	INITIAL BOILING POINT AND BOILING RANGE:	100°C (212°F) water.
19.1.13	FLASHPOINT:	Not applicable.



19.1.14	EVAPORATION RATE:	Slow (Butyl Acetate = 1)
19.1.15	PARTITION COEFFICIENT:	Not determined.
19.1.16	AUTO-IGNITION TEMPERATURE:	Not determined.
19.1.17	DECOMPOSITION TEMPERATURE:	Not determined.
19.1.18	VISCOSITY:	Less than 10 cP.
19.1.19	SPECIFIC GRAVITY:	1.1
19.1.20	FREEZING POINT:	0°C (32°F)
19.1.21	EXPLOSION LIMITS:	Not determined.
19.1.22	OXIDIZING PROPERTIES:	Not an oxidizer.
19.2	OTHER INFORMATION	Not an oxidizer.

## 20. STABILITY AND REACTIVITY

20.1	REACTIVITY	Not determined.
20.2	CHEMICAL STABILITY	Stable under normal ambient and anticipated storage and handling conditions.
20.3	POSSIBILITY OF HAZARDOUS REACTIONS	Hazardous polymerization will not occur.
20.4	CONDITIONS TO AVOID	No recommendation.
20.5	INCOMPATIBLE MATERIALS	Gels when mixed with acid.
20.6	HAZARDOUS DECOMPOSITION PRODUCTS	No further relevant information available.

## 21. TOXICOLOGICAL INFORMATION

21.1.1	ACUTE TOXICITY:	
21.1.2	LD50, RAT, ORAL VALUES FOR CLASSIFICATION:	
21.1.3	SILICON DIOXIDE, CAS 7631-86-9	>5000 mg/kg
21.1.4	SILICIC ACID, LITHIUM SALT, CAS 12627-14-4	Not available.
21.1.5	SKIN CORROSION/IRRITATION:	Avoid contact with skin, may cause skin irritation or dryness.
21.1.6	EYE DAMAGE/IRRITATION:	Avoid contact with eyes, may cause irritation.
21.1.7	INHALATION:	Use breathing protection when aerosol or mist is formed. Breathing dried dust or spray mist causes irritation. OSHA exposure limit: Amorphous Silica = 20 mppcf (5 mg/M3) SiO2 respirable dust or mist. 8- hour time weighted average. Exposure analysis method: NIOSH Manual of Analytical Methods, 3rd edition, Method 7501.

21.1.8	ASPIRATION:	No data available
21.1.9	SENSITIZATION:	No data available
21.1.10	CHRONIC EFFECTS:	No data available
21.1.11	CARCINOGENICITY	No component of this product present levels greater than 0.1% is identified as probable, possible or confirmed human carcinogen by IARS, ACGIH, NTP and OSHA.

## 22. ECOLOGICAL INFORMATION

22.1	AQUATIC TOXICITY	Aquatic Toxicity, Silicon Dioxide CAS #7631-86-9: Not harmful to aquatic organisms. Silicic acid, lithium salt, CAS 12627-14-4: No data available.
22.2	PERSISTENCE AND DEGRADABILITY	No further relevant information available.
22.3	BIOACCUMULATIVE POTENTIAL	No further relevant information available.
22.4	MOBILITY IN SOIL	No further relevant information available.
22.5	RESULTS OF PBT AND VPVB ASSESSMENT	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.
22.6	OTHER ADVERSE EFFECTS	No further relevant information available.

## 23. DISPOSAL CONSIDERATIONS

This information presented only applies to the materials as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Recover if possible. Disposal should be in accordance with applicable regional, national and local laws and regulations.

UNITED STATES: The product is not a RCRA hazardous waste.

## 24. TRANSPORT INFORMATION

THE PRODUCT IS NOT RESTRICTED FOR TRANSPORTATION.

## REGULATIONS

24.1	U.S. D.O.T.:	Not regulated.
24.2	ICAO/IATA: N	Not regulated.
24.3	IMO/IMDG:	Not regulated.
24.4	ADR:	Not regulated.
24.5	ENVIRONMENTAL HAZARDS	No further relevant information available.
24.6	SPECIAL PRECAUTIONS FOR USERS:	No further relevant information available.
24.7	TRANSPORT BULK ACCORDING TO ANNEX II OF MARPOL73/78 AND THE IBC CODE	Not applicable.

## 25. REGULATORY INFORMATION

25.1	SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS / LEGISLATION SPECIFIC FOR SUBSTANCE OR MIXTURE:	
25.1.1	EPA TSCA INVENTORY:	All ingredients listed.
25.1.2	STATE RIGHT-TO-KNOW LAWS:	Section 3 of this SDS lists all components of the product.
25.1.3	SARA SECTION 311/312 (29 CFR 1910.1200) HAZARDS:	Not classified according to GHS.
25.1.4	SARA 313, 304 AND CERCLA 102 (A):	No ingredients listed.
25.1.5	CALIFORNIA PROP. 65 COMPONENTS:	No ingredients listed.
25.2	CHEMICAL SAFETY ASSESSMENT: A Chemical Safety Assessment has not been carried out.	
25.3	INTERNATIONAL REGULATIONS	
	CANADIAN REGULATIONS:	
25.3.1	DOMESTIC SUBSTANCE LIST:	All ingredients listed.
25.3.2	CONTROLLED PRODUCTS REGULATIONS:	This SDS contains all the information items specified in Schedule 1, Column 3 of the Controlled Products Regulations in a 16-heading format.
	WORLDWIDE CHEMICAL INVENTORIES	
25.3.3	EINECS (EU):	All ingredients listed.
25.3.4	TSCA (USA):	All ingredients listed.
25.3.5	DSL (CANADA):	All ingredients listed.
25.3.6	AICS (AUSTRALIA):	All ingredients listed.
25.3.7	ENCS (JAPAN):	All ingredients listed.
25.3.8	ECL (KOREA):	All ingredients listed.
25.3.9	PICCS (PHILIPPINES):	All ingredients listed.
25.3.10	IECSC (CHINA):	All ingredients listed.

## 26. OTHER INFORMATION

26.1	FULL TEXT OF H STATEMENTS REFERRED TO UNDER SECTIONS 2 AND 3: H318 - CAUSES SERIOUS EYE DAMAGE.	
26.2	NATIONAL FIRE PROTECTION ASSOCIATION (U.S.A.) 704 HAZARD RATING:	Health-1, Flammability-0, Reactivity-0, Special-None
26.3	HMIS® HAZARD RATING:	Health-1, Flammability-0, Reactivity-0, Protective Equipment - B; safety glasses, gloves.
26.3	RECOMMENDED USE:	The product is recommended for use in coatings for concrete. Other uses have not been investigated and may have other hazards. For industrial use only, not for food, drug or home use.
26.3	WORK ALERT:	Workers using the product should read and understand this SDS and be trained in the proper use of this material.
26.3	OTHER SPECIAL CONSIDERATIONS:	None known.
26.3	SDS PREPARED BY:	Andrew A. Guzelian Nyacol Nano Technologies, Incorporated Telephone: 508-881-2220 U.S.A.
26.3	REVISION DATE:	June 3, 2020
26.3	SUPERSEDES:	December 10, 2018

This SDS has been prepared with data from Nyacol Nano Technologies, Inc.'s laboratories, raw material suppliers, and government publications. Information herein is accurate to the best of our knowledge. Suggestions are made without warranty or guarantee of results. Before using, the user should determine the suitability of the products for the intended use, and the user assumes the risk and liability in connection therewith. We do not suggest violation of any existing patents or give permission to practice any patented invention without license.

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