

Section 1: Identification:

Identification of Substance: Potassium Methyl Siliconate
 Product Name: NYACOL® K-Sol
 Synonym: None.
 CAS Number: 31795-24-1
 Company Identification: Nyacol Nano Technologies, Incorporated
 Megunko Road, P.O. Box 349, Ashland, MA 01721 U.S.A.
 508-881-2220
 In Case of Emergency: CHEMTREC: 800-424-9300
 24 Hours/Day: 7 Days/Week
 E-mail Contact: info@nyacol.com
 Internet: www.nyacol.com
 Recommended Use: Recommended for use as a water repellent.
 Restrictions on Use: For industrial use only, not for food, drug or home use.

Section 2: Hazard(s) Identification

Health	Environmental	Physical
Corrosion/Damage/Irritation Eye (Category 1)	Complete information is not yet available.	Not determined.
Corrosion/Irritation Skin (Category 1C)		
Acute toxicity, Inhalation (Category 4) STOT, Single Exposure (Category 2)		

GHS label element including precautionary statements: P102 Keep out of reach of children.

Signal Word / Pictogram: Danger



Emergency Overview: Clear to slightly yellow, odorless liquid. Corrosive.
 Primary routes of entry: Inhalation. Absorption
 Target organs: Eyes. Skin. Lungs
 OSHA Hazard: This material is hazardous as defined in 29 CFR 1910.1200.

Hazard Statement(s): List Out	Precautionary Statement(s): List Out
H318 – Causes serious eye damage.	P280 – Wear eye protection. P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. P310 – Immediately call a POISON CENTER or doctor/physician.
H314 – Causes severe skin burns and eye damage.	P260 – Do not breathe dust/fume/gas/mist/vapors/spray. P264 – Wash face, hands and any exposed skin thoroughly after handling. P280 – Wear protective gloves/protective clothing/eye protection /face protection. P301+P330+P331 – IF SWALLOWED: rinse mouth. DO NOT induce vomiting. P303+P361+P353 – IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P304+P340 – IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. P310, P321 – Immediately call a POISON CENTER or doctor/physician. Specific treatment see Section 4. P305+P351+P338 –IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

H332 – Harmful if inhaled.	P261 – Avoid breathing dust/fume/gas/mist/vapors/spray. P271 – Use only outdoors or in a well-ventilated area. P304+P340 – IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. P312 – Call a POISON CENTER or doctor/physician if you feel unwell.
H371 – May cause damage to mouth, throat, and stomach if ingested.	P260 – Do not breathe dust/fume/gas/mist/vapors/spray. P264 – Wash face, hands and any exposed skin thoroughly after handling. P270 – Do not eat, drink or smoke when using this product. P309+P311 – If exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.

Section 3: Composition / Information on Ingredients

Component Name:	CAS Number	Exposure Limits	Percent By Weight
Potassium methyl silicate:	31795-24-1		30 – 40
Water	7732-18-5	None.	60
Component Name:	EINECS Number	RTECS Number	REACH Number
Potassium methyl silicate:	250-807-9	None.	Not Listed.
Water	231-791-2	ZC0110000	N/A

Synonyms: Potassium methylsilanetriotate
 Impurities: None.
 Stabilizing Additives: None.

Section 4: First-Aid Measures

Eye Contact: Immediately flush eyes with lukewarm water for 30 minutes while holding eyelid(s) open. If contact lenses are present, do not delay irrigation or attempt to remove the lens. Neutral saline solution may be used. Do not interrupt flushing. If necessary, continue flushing during transport to emergency care facility. Take care not to rinse contaminated water into the unaffected eye or onto the face. Seek immediate medical attention.

Skin Contact: Immediately remove contaminated clothing. Quickly and gently blot or brush away excess chemical. Immediately flush with lukewarm gently flowing water for at least 15 minutes. Decontaminate clothing. Seek immediate medical attention.

Inhalation: Remove person from exposure source, consult a medical professional. If breathing is difficult, trained personnel should administer emergency oxygen. Seek immediate medical attention.

Ingestion: If swallowed seek medical attention immediately. Never give anything by mouth to a person losing consciousness or convulsing. DO NOT INDUCE VOMITING. If medical attention is not available rinse mouth thoroughly with water. Have the victim drink 2 to 8 oz. (60 to 240 mL) of water. If vomiting occurs, lean the victim forward to reduce the risk of aspiration. Rinse mouth with water again. Obtain medical attention immediately.

Advice to Physicians: Treat according to person's condition and specifics of exposure.
First Aid Facilities: Eye wash station. Safety showers.

Section 5: Fire-Fighting Measures

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.

Not Suitable: None known.
Protective Equipment: Wear standard full firefighter turn-out gear (full bunker gear) and respiratory protection (SCBA). Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.
Special Hazard Arising from the Chemical: None known.

Section 6: Accidental Release Measures

Personal Precautions and PPE: Eye protection and impervious gloves. An approved air-purifying respirator is recommended. Do not take internally. Do not get in eyes. Do not get on skin. Do not breathe mist. Keep container closed. Use responsible care.
Environmental Precautions: Water contamination should be avoided.
Method for Cleaning Up:
Spill: Determine whether to evacuate or isolate based on your local emergency plan. Observe all Personal Protection Equipment recommendations in Section 8. For large spills, provide diking or other appropriate containments to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up spill with suitable absorbent. Final cleaning may involve use of steam, solvents or detergents. Dispose of cleaning materials appropriately as spontaneous heating may occur. Determine which federal, state and local laws and regulations are applicable.

Section 7: Handling and Storage

Precautions During Handling: Avoid generating mist or dust during use. Use adequate ventilation. Do not breathe mist. Do not take internally. Do not get in eyes. Do not get on skin. Keep container closed.
Storage: Do not store with acids.

Section 8: Exposure Controls / Personal Protection

Ingredient(s): K-Sol Potassium Methyl Siliconate
Engineering Controls: Use exhaust ventilation to keep airborne concentrations below exposure limits.
Hygiene Measures: Change contaminated clothing. Wash hands after working with substance. Use recommended PPE below.
Personal Protective Equipment (PPE):
Respiratory: When respiratory protection is required or concentrations are unknown, use an approved air-purifying respirator equipped with a dust cartridge. 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.
Hands: Wear impervious gloves such as neoprene.
Eyes: Wear approved safety glasses as a minimum. Use a full face respirator for spills.
Skin: Wear clean body-covering clothing; impervious gloves such as neoprene. Wash at mealtime and end of shift. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc.). Wash skin promptly upon any skin contact.

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.

Section 9: Physical and Chemical Properties

Appearance (Physical State, Color): Clear to slightly yellow liquid. NYACOL K-Sol is a water-based material.

Odor: Not available.

Vapor Pressure @ 25°C: Not determined.

pH: 13.0

Vapor Density: Not determined.

Boiling Point: >64°C

Freezing/Melting Point: Not determined.

Flashpoint: >212°F / >100°C (Closed Cup)

Solubility(ies): Not determined.

Specific Gravity @ 25°C: 1.29

Volatile Content: 60 – 70

Viscosity: 10 cSt

Auto ignition Temperature: Not determined.

Flammability Limits in Air: Not determined.

Section 10: Stability and Reactivity

Chemical Stability: Stable.

Hazardous Reactions: None known.

Conditions to Avoid: No recommendation.

Incompatible Materials: Avoid contact with acids. Oxidizing material can cause a reaction.

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. Metal oxides. Silicon dioxide. Formaldehyde.

Hazardous Polymerization: Will not occur.

Section 11: Toxicological Information

Acute Toxicity Values: **Potassium methyl silicate:**
LD50, Rat Oral: No data available.

Water:
None reported.

Ecotoxicity Classification Criteria:

Hazard Parameters (LC50 or EC50)	High	Medium	Low
Acute Aquatic Toxicity (mg/L)	<=1	>1 and <=100	>100
Acute Terrestrial Toxicity	<=100	>100 and <=2000	>2000

This table is adapted from "Environmental Toxicology and Risk Assessment" ASTM STP 1179, p.34, 1993. The table can be used to classify the ecotoxicity of this product when ecotoxicity data is listed above. Please read all other information present in the referenced section concerning the overall ecological safety of this material.

Acute Effects:

Skin Contact: Corrosive. Burns skin upon short periods of contact.

Eye Contact: May cause irreversible damage and burns to the eyes.

Inhalation: Mist irritating to the respiratory tract.

Ingestion: Corrosive. May cause severe and permanent damage to the mouth, throat and stomach.

Target Organ Effects:	Acute.
Chronic Effects:	No known applicable information.
Medication Conditions Aggravated by Over-exposure:	No data available.
Carcinogenicity:	No data available.

Section 12: Ecological Information

Ecotoxicity (aquatic and terrestrial):	Environmental fate and distribution information is not available. See Section 11.
Persistence and degradability:	Not available.
Bioaccumulative potential:	Not available.
Mobility in Soil:	Not available.
Acute Aquatic Toxicity:	See Section 11.
Chronic Aquatic Toxicity:	Not available.
Environmental Effects:	Not available.
Other Adverse Effects:	Not available.

Section 13: 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 property waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

Disposal Considerations: K-SoI is corrosive, D002. State or local laws may impose additional regulatory requirements regarding disposal.

United States: RCRA Hazard Class (40 CFR 261): Classified as a hazardous waste.

Section 14: Transport Information

U.S. Department of Transportation (DOT): Proper Shipping Name: Caustic alkali liquids, N.O.S.
Technical Name: Potassium methyl silicate
Hazard Class: 8
UN/NA Number: UN 1719
Packing Group: II
Hazard label(s): Corrosive

IATA Shipping Name: Proper Shipping Name: Caustic alkali liquids, N.O.S.
Technical Name: Potassium methyl silicate
Hazard Class 8
UN/NA Number: UN 1719
Packing Group: II
Hazard label(s): Corrosive

International Maritime Organization (IMDG): Proper Shipping Name: Caustic alkali liquids, N.O.S.
Technical Name: Potassium methyl silicate
Hazard Class 8
UN/NA Number: UN 1719
Packing Group: II
Hazard label(s): Corrosive

Section 15: Regulatory Information

U.S. Federal Regulations:
Comprehensive Environmental Response and
EPA TSCA Act: All ingredients listed.

Section 302 Extremely Hazardous Substance: None.
Section 304 CERCLA Hazardous Substance: None.

Superfund Amendments and Reauthorization Act (SARA) Title III Information:
SARA Section 311/312 (40 CFR 370):
Immediate Hazard: Acute.
Chronic: No.
Delayed Hazard: None known.
Fire Hazard: No.
Pressure Hazard: No.
Reactivity Hazard: No.
SARA 313 Components: None present or none present in regulated quantities. Chemicals are listed under 313 Toxic Chemical section only if they meet or exceed reporting threshold.

U.S. State Regulations:

California Proposition 65: Warning: This product contains the following chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm.
CAS #: 67-56-1 Wt%: <=0.5000
Component Name: Methyl Alcohol - Developmental toxin.

State Right-to-Know Laws:

New Jersey: Section 3 of this SDS lists all components of K-Sol.
CAS Number: Wt% Component Name
7732-18-5 60 - 70 Water
31795-24-1 30 - 40 Potassium methyl silicate

Pennsylvania: CAS Number: Wt% Component Name
7732-18-5 60 - 70 Water
31795-24-1 30 - 40 Potassium methyl silicate

International Regulations:

Canadian Regulations: Check with governmental or regional regulations.

Domestic Substance List:

WHMIS: All ingredients listed.
Class E, Corrosive material.

Transportation of Dangerous Goods: See Section 14.

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.

International Lists:

EU Regulations: Check with governmental or regional regulations.

Classification:

Danger:

Symbol:



Risk Phrases:

C - Corrosive.
R35 - Causes severe burns.

Safety Phrases:

S2 - Keep out of reach of children.
S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.
S38 - In case of insufficient ventilation, wear suitable respiratory equipment.

Section 16: Other Information

National Fire Protection Association (U.S.A.) Health-3, Flammability-1, Reactivity-0, Special-None
HMIS® Hazard Rating: Health-3, Flammability-1, Reactivity-0, Protective Equipment - D; Face Shield/Eye Protection, Safety Gloves, Synthetic Apron.



SAFETY DATA SHEET

NYACOL® K-Sol

REVISION: 6/13/2013
SUPERSEDES: NONE

Recommended Use: K-Sol is recommended for use as a water repellent. Other uses have not been investigated and may have other hazards. For industrial use only, not for food, drug or home use.

Work Alert: Workers using K-Sol should read and understand this SDS and be trained in the proper use of this material.

Other Special Considerations: None known.

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Supersedes: None.

This MSDS 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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