

Material Safety Data Sheet

1. Identification of the Substance and Company	
Product Name	: Ethyl Silicate-40
Product Application	: Binding Agent.
Manufacturing Company Name	: Dr. Khan Industrial Consultants Pvt. Ltd., INDIA.
2. Composition /information on Ingredients	
Synonyms	: Silicon Ethoxide, Silicic Acid Ester, Ethoxy Silane, and Ethyl Orthosilicate
IUPAC Name	: Ethyl Silicate
USDOT Shipping Name	: Ethyl Silicate
Symbol	: Mixture.
R-Phrases	: Mixture.
S-phrases	: Mixture.

3. Physical Data	
Appearance	: Clear Colourless Liquid.
Odor	: Fruity (sweet) Like odor.
Boling Point	: 290-310 Deg. Centigrade.
Melting Point	: N.A.
Bulk Density	: Not determined.
Specific Gravity	: 1.040 to 1.070
Solubility	: Hydrolyzes with Water.
Flash Point	: 62 Degree Centigrade.
Cas No.	: 11099-6-2

4. Hazard Identification / ingredients	
Environmental Hazards	: Not Known.
Human Health Hazard	: NFPA Health Rating- 1 ; NFPA Flammability rating- 3 ; NFPA Reactivity rating- 0. NFPA others- N.A.
Hazardous ingredients	: Tetraethylsilicate – less than 15% Ethanol – less than 2%
Hazards identification	: R phrase description - not a dangerous preparation within meaning of Directive 1999/45/EC.

5 First Aid Measures	
Ingestion	: Give two glasses of water by mouth to dilute & Induce vomiting. Never give anything by mouth to an unconscious person. Call your Local Poison control center for advice by giving Identity of chemical.
Inhalation	: Victims should be assisted to an uncontaminated area & inhale fresh air. If Breathing has stopped then administer Artificial resuscitation & Supplemental oxygen. Further treatment should be symptomatic & Supportive.
Skin Contact	: Remove contaminated clothing and wash affected areas with soap & water. Seek medical attention.
Eye contact	: Safety Goggles and glasses.

6. Fire Fighting Measures
EXTINGUISHING MEDIA: Use water fog, dry chemical powder & alcohol resistant foam.
Fire and explosion hazards: **This material will flash but does not sustain combustion.** As a result of hydrolysis flammable vapors may accumulate in the container head space.
Explosion limits for hydrolysis product ethanol: 3.5-15% v/v.

7. Accidental Release Measures
Waste Disposal- Ignition per RCRA may apply. The EPA hazardous waste no. D001 may apply. It is The responsibility of user to evaluate to determine whether waste is hazardous.

Container Disposal- Containers should be cleaned of residual before disposal as per law / regulation.

8.Handling and Storage

Handling : Electrically grounded tanks & containers should be used with non-sparking hand tools, as per National Electric Code.

Storage : Due to flammable liquid, storage should be according to 29 CFR 1910.106, flammable & combustible code. Store in cool, dry & well-ventilated area & away from heat, ignition, sunlight, oxidizer & alkalis. Containers should be stored in sealed condition & cap / seal should be Removed slowly as internal pressure may be there. **This material will flash but does not sustain combustion**

9.Stability and reactivity

Stability : Stable (hydrolyze with water).

Hazardous Decomposition Products

Reacts : Not known.

10.Toxicological Information

a. Oral (LD50) (RAT) : > 5000mg/kg .

b. Dermal (LD50)(RABBIT) : > 1000mg/kg.

Acute effects

Ingestion : Not known.

Inhalation : Prolonged inhalation causes respiratory irritation, pulmonary edema also may Damage kidney & liver.

Skin contact : Not known.

Eye Contact : Does not irritate when tested in rabbits eyes.

11.Ecological Information

Comment : Nothing in particular.

Ecotoxicity : Not known.

12.Disposal Considerations

Waste Disposal- Ignition per RCRA may apply. The EPA hazardous waste no. D001 may apply. It is The responsibility of user to evaluate to determine whether waste is hazardous.

Container Disposal- Containers should be cleaned of residual before disposal as per law / regulation.

13.Transport Information

Marine Pollutant : Not Known

Railway RID & Road ADR: **Not regulated for transport.**

US DOT & CANADA TDG SURFACE Valuation: **Not regulated for transport**

Transport by sea IMDG-Code Valuation: **Not regulated for transport**

Air transport ICAO-TI/IATA-DGR Valuation: **Not regulated for transport**

14.Regulatory Information

EC Regulations : Not known.

Inventories listings: AICS-Australia, DSL-Canada, EINECS-Europe, ENCS-Japan, ECL-Korea, TSCA-USA.

15.Transporation

The product is not regulated for Sea transport by IMDG-Code

Within meaning of directive 1999 / 45 / EC, this product is not a dangerous preparation.

16.Other Information

Hazard Rating Source HMIS : Health- 0 ; Flammability- 3 ; Reactivity- 0.

Emergency Contact details: **Dr. Vikhar A Khan, Tele: 91-22-20869000 / 24.**

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