



## SAFETY DATA SHEET

### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** ISO-TEK 8100

**PRODUCT CODES:** 8100

**MANUFACTURER:** KRETETEK INDUSTRIES

**STREET ADDRESS:** 1000 N WEST ST

**CITY, STATE, ZIP:** WILMINGTON, DE 19801

**INFORMATION PHONE:** 855-573-8383

**EMERGENCY PHONE:** Chemtrec 800-424-9300

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**DATE REVISED:** 9/1/17

### SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

Classification GHS

Flammable liquid: Category 3

H-Code Hazard Statements

H226: Flammable liquid and vapour

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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

P233: Keep container tightly closed

P370+P378: In case of fire: Use extinguishing powder, alcohol-resistant foam or carbon dioxide to extinguish.

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

P501: Dispose of contents/container to waste disposal.

Other hazards: Inhalation of aerosol spray may damage health. Product hydrolyses, producing ethanol (CAS no. 64-17-5). Ethanol is highly flammable.

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### INGREDIENTS

35435-21-3      Nano Isomers of Octyl triethoxy silane

### SECTION 4: FIRST AID MEASURES

General information: Get medical attention if irritation or other symptoms occur. Before seeking medical attention remove contaminated clothing and shoes. Take a copy of the Safety Data Sheet when going for medical treatment.

After inhalation: If inhaled remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult give oxygen.

After contact with the skin: If contact with skin, immediately wipe away excess material. Use a waterless hand cleaner to remove as much of the remaining material as possible. Wash with soap and water.

After contact with the eyes: If contact with eyes, immediately hold eyelids apart and flush with plenty of water for at least 15 min.

After swallowing: For Ingestion, if conscious, give several glasses of water but do not induce vomiting. If vomiting does occur, give additional fluids. Indicated the possible formation of ethanol.

Advice for the physician: Treat symptomatically.

## SECTION 5: FIRE-FIGHTING MEASURES

Flammable properties:

Property: Flash point Value: 42 ° C (107 ° F) Method: ISO 3679

Sustained combustibility: : 105 ° C (221 ° F)

Property: Boiling point/boiling range Value > 237 ° C (> 3458 ° F) at 1013 hPa

Property: Lower explosion limit (LEL) Value: 0.4 %(V)

Property: Upper explosion limit (UEL) Value: not determined

Ignition temperature Value: 251 ° C (483 ° F)

NFPA Hazard Class (comb/flamm liquid): II

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. Consider possible formation of explosive mixtures with air, for example in uncleaned containers by moisture. Explosion limits for hydrolysis product: 3.5-15% v/v (ethanol).

Recommended extinguishing media: carbon dioxide, dry chemical or alcohol-resistant foam. Water may be used to cool tanks and structures adjacent to the fire.

Unsuitable extinguishing media: water, halones

Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases: Hazardous decomposition products: carbon dioxide , carbon monoxide , formaldehyde , silicon dioxide and incompletely burnt hydrocarbons .

Fire fighting procedures: Fire fighters should wear full protective clothing including a self-contained breathing apparatus

## SECTION 6: RELEASE MEASURES

Precautions: Wear personal protection equipment (see section 8). Keep unprotective personal away. Avoid contact with eyes and skin.

Do not inhale gases/vapours/aerosols. If material is released indicated risk of slipping. Do not walk through spilled material.

HAZWOPER PPE Level: D

Containment: Prevent material from entering sewers or surface waters. Contain any fluid that runs out using suitable material (e.g. earth). Retain contaminated water/extinguishing water. Dispose of in prescribed marked containers. Inform authorities if substance leaks into surface waters, sewerage or ground. Spills of material which could reach surface waters must be reported to the United States Coast Guard National Response Center's toll free phone number (800) 424-8802.

Methods for cleaning up: Take up mechanically and dispose of according to local/state/federal regulations. Do not flush away with water. For small amounts: absorb with a neutral (non-acidic/non-basic) liquid binding material such as diatomaceous earth and dispose of according to government regulations. For large amounts liquids may be recovered using suction devices or pumps. If flammable, only air driven or properly rated electrical equipment should be used. Clean any slippery coating that remains using a detergent/soap solutions or another biodegradable cleaner. Silicone fluids are slippery; spills are a safety hazard. Apply sand or other inert granular material to improve traction.

Further information: Exhaust vapours. Eliminate all sources of ignition. Consider explosion protection.

## SECTION 7: HANDLING AND STORAGE

Precautions for safe handling: Ensure adequate ventilation. Must be syphoned off in situ. Spilled substance increases risk of slipping.

Avoid formation of aerosols. In case of aerosol formation special protective measures are required (exhausting by suction, respiratory protection). Observe information in section 8. Keep away from incompatible substances in accordance with section 10.

Precautions against fire and explosion required: Product may release ethanol. Flammable vapors may accumulate and form explosive mixtures with air in containers, process vessels, including partial, empty and uncleaned containers and vessels or other enclosed spaces. Keep away from sources of ignition and do not smoke. Take precautionary measures against electrostatic charging. Cool endangered container with water.

Storage

Conditions for storage rooms and vessels: Observe local/state/federal regulations/

Advice for storage of incompatible materials: Observe local/state/federal regulations.

Further information for storage:

Store in a dry and cool place. Protect against moisture. Store container in a well ventilated place.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls

Ventilation:

Use with adequate ventilation.

Local exhaust:

Local exhaust ventilation which meets the requirements of ANSI Z9.2 is recommended to control airborne contaminants at the point of use.

Associate substance with specific control parameters such as limit values.

Maximum airborne concentrations at the workplace: 64-17-5 Ethanol Re: Ethanol (CAS no. 64-17-5): STEL is 1000 ppm; carcinogenicity: A3 (ACGIH)

Personal protection equipment (PPE) Respiratory protection:

Respiratory protection is only necessary if long term or high level exposures are likely to occur. A NIOSH approved air purifying respiration equipped with universal multi-contaminant multi-gas/vapor cartridges is recommended if overexposure to chemical vapors could occur.

Hand protection:

Butyl rubber protective gloves

Eye protection:

Safety glasses with side shields or chemical safety goggles.

Additional protective clothing or equipment is not normally required. Provide eye bath and safety shower.

General hygiene and protection measures: Do not breath dust/vapor/mist/gas/aerosol. Avoid contact with eyes and skin. Do not eat, drink, smoke when handling. Wash thoroughly after handling.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state / form .....: liquid

Colour .....: colourless

Odour .....: faint

Safety parameters

Melting point/melting range Value: < -100 ° C (< -148 ° F) at 1013 hPa

Boiling point / boiling range Value: 237 ° C (458 ° F) at 1013 hPa

Flash point Value: 42° C (107 ° F)

Sustained combustibility: 105° C (221 ° F)

Ignition temperature: 251 ° C (483 ° F)

Lower explosion limit (LEL): 0.4 %(V)

Upper explosion limit (UEL): not determined

Vapour pressure: 0.089 hPa at 25 ° C (77 ° F)

Density: 0.88 g/cm<sup>3</sup> at 20 ° C (68 ° F), at 1013 hPa

Water solubility / miscibility: 0.00025 g/l/virtually insoluble

pH-Value: not applicable

Partition coefficient: n-octanol/water: 6.1 (Log Pow)

Viscosity(dynamic): 1.9 mPa.s 25 ° C (77 ° F)

Viscosity(kinematic): 1.98 mm<sup>2</sup>/s at 20 ° C (77 ° F)

Re: 9.2 pH Value: product displays neutral reaction. Re 9.2 solubility in water: Hydrolytic decomposition occurs. Explosion limits for released ethanol: 3.5 – 15% (V).

Odor limit: no data available

Thermal decomposition: >150 ° C (>302 ° F)

## SECTION 10: STABILITY AND REACTIVITY

General information: If stored and handled in accordance with standard industrial practices no hazardous reactions are known.

Conditions to avoid: moisture , Heat, open flames, and other sources of ignition.

Materials to avoid: Reacts with: water . Reaction causes the formation of: ethanol

Hazardous decomposition products: By hydrolysis: ethanol.

Further information: Hazardous polymerization cannot occur.

## SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity Assessment: Based on the available data acute toxic effects are not expected after single oral exposure. Based on the available data acute toxic effects are not expected after single dermal exposure. Based on the available data acute toxic effects are not expected after short-term inhalative exposure.

Skin corrosion/irritation Assessment: Based on the available data a clinically relevant skin irritation hazard is not expected.

Serious eye damage / eye irritation Assessment: Based on the available data a clinically relevant eye irritation hazard is not expected.

Respiratory or skin sensitization: Based on the available data a sensitization reaction is not expected from this point.

Germ cell mutagenicity Assessment: According to our present state of knowledge not mutagenic

Carcinogenicity Assessment: Based on the available toxicological data no specific evaluation of the carcinogenic potential is scientifically implicated.

Reproductive toxicity Assessment: Animal tests have shown no indications of possibility of damage to embryo and impairment of fertility.

Specific target organ toxicity (single exposure) Assessment: For this endpoint no toxicological test data is available for the whole product.

Aspiration hazard Assessment: For this endpoint no toxicological test data is available for the whole product.

Further toxicological information: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. No component of this product present at levels greater than or equal to 0.1% is identified as probably, possible or confirmed human carcinogen by IARC. No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Hydrolysis product/impurity Ethanol (64-17-5) is readily absorbed at all exposure routes. Ethanol may cause irritation of eyes and mucosa, trigger dysfunction of the central nervous system and cause nausea as well as dizziness. Chronic exposure to high amounts of ethanol may cause damage to liver and central nervous system.

## SECTION 12: ECOLOGICAL INFORMATION

Assessment: Up to the maximal solubility in the test medium the substance and its hydrolysis products do not show any acute effects on aquatic organisms that are relevant for classification and labelling. According to current knowledge adverse effects on water purification plants are not expected.

Persistence and degradability: Contact with water liberates ethanol and silanol-and/or siloxanol-compounds. The hydrolysis product (ethanol) is readily biologically degradable.

Bioaccumulative potential Assessment: Not readily biodegradable. Rapid biological degradation of the organic hydrolysis product.

Products of hydrolysis: Bioaccumulation is not expected to occur.

## SECTION 13: WASTE DISPOSAL

RCRA Waste Classification: 001 (Ignitable): This classification applies only to the material as it was originally produced.

Product disposal recommendation: Recommendation: Material that cannot be used, reprocessed or recycled should be disposed of in accordance with Federal, State and local regulations at an approved facility. Depending on the regulations, waste treatment methods may include landfill, or incineration.

Packaging disposal: Recommendation: Completely discharge containers (no tear drops, no powder rest, scraped carefully). Containers may be recycled or re-used. Observe local/state/federal regulations. Uncleaned packaging should be treated with the same precautions as the material.

## SECTION 14: TRANSPORTATION

DOT:

Valuation .....	Not regulated for transport
Other Information .....	This material has been tested and does not sustain combustion. No DOT flammable liquid class 3 diamond label required!

Transport by sea IMDG-code: Not regulated for transport

Transport by air IMDG-code: Not regulated for transport

## **SECTION 15: REGULATORY INFORMATION**

U.S. Federal regulations

TSCA inventory status and TSCA information:

This material or its components are listed on or are in compliance with the requirements of the TSCA Chemical Substance Inventory.

TSCA 12(b) Export Notification:

This material does not contain any TSCA 12(b) regulated chemicals.

CERCLA Regulated Chemicals:

This material does not contain any CERCLA regulated chemicals.

SARA 302 EHS Chemicals:

This material does not contain any SARA extremely hazardous substances.

SARA 311/312 Hazard Class:

Fire hazard. .

SARA 313 Chemicals:

This material does not contain any SARA 313 chemicals above de minimus levels.

HAPS: This material does not contain any hazardous air pollutants.

U.S. State regulations

California Proposition 65 Carcinogens:

This material does not contain any chemicals know to the State of California to cause cancer.

California Proposition 65 Redproductive Toxins:

This material does not contain any chemicals know to the State of California to cause cancer.

Massachusetts Substance List:

64-17-5: Ethanol

New Jersey Right-to-Know Hazardous Substance List:

64-17-5: Ethanol

Pennsylvania Right-to-Know Hazardous Substance List:

64-17-5: Ethanol

Canadian regulations

This product has been classified in accordance with the Hazard criteria of the CPR and the SDS contains all the information required by the CPR.

WHMIS Hazard Classes: B3

DSL Status: This material or its components are listed on the Canadian Domestic Substances List.

## **SECTION 16: OTHER INFORMATION**

DISCLAIMER: THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE AND IS BELIEVED TO BE ACCURATE, HOWEVER, THE MANUFACTURER MAKES NO WARRANTY EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THIS DATA OR THE RESULTS OBTAINED FROM THE USE THEREOF. ACCORDINGLY, WE ASSUME NO RESPONSIBILITY FOR INJURY FROM THE USE OF THIS PRODUCT.