



Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name: SFEXX-ISO-V
Product Description: Isoparaffinic Hydrocarbon
Intended Use: Solvent
Company Contact : TENOIT CO., LTD.
 Room 4, 5FL., No. 109, Sec. 6, Mingquan East Road, Taipei, Taiwan
EMERGENCY TELEPHONE NUMBER : TEL (886) 2 8792-2185 8792-2187
 FAX (886) 2 8792-2151

Section 2 - COMPOSITION / INFORMATION ON INGREDIENTS

Reportable Hazardous Substance(s) or Complex Substance(s)

| Name | CAS# | Concentration* |
|---|------------|----------------|
| HYDRO TREATED MIDDLE DISTILLATE (PETROLEUM) | 64742-46-7 | 100% |

* All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

Section 3 - HAZARDS IDENTIFICATION

This material is considered to be hazardous according to regulatory guidelines (see (M)SDS Section 15).

POTENTIAL PHYSICAL / CHEMICAL EFFECTS

Material can release vapors that readily form flammable mixtures. Vapor accumulation could flash and/or explode if ignited. Material can accumulate static charges which may cause an ignition.

POTENTIAL HEALTH EFFECTS

If swallowed, may be aspirated and cause lung damage. Excessive exposure may result in eye, skin, or respiratory irritation.

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|------------------------|-----------|-----------------|---------------|
| NFPA Hazard ID: | Health: 1 | Flammability: 1 | Reactivity: 0 |
| HMIS Hazard ID: | Health: 1 | Flammability: 1 | Reactivity: 0 |

NOTE: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

Section 4 - FIRST AID MEASURES

Inhalation

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

SKIN CONTACT

Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse.

EYE CONTACT

Flush thoroughly with water. If irritation occurs, get medical assistance.

Ingestion



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| <p>Seek immediate medical attention. Do not induce vomiting. NOTE TO PHYSICIAN If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.</p> |
| <p>Section 5 - FIRE FIGHTING MEASURES</p> |
| <p>EXTINGUISHING MEDIA Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames. Inappropriate Extinguishing Media: Straight Streams of Water</p> |
| <p>FIRE FIGHTING Fire Fighting Instructions: Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel. Hazardous Combustion Products: Smoke, Fume, Incomplete combustion products, Oxides of carbon.</p> |
| <p>FLAMMABILITY PROPERTIES Flash Point [Method]: 118°C (244°F) [ASTM D-93] Flammable Limits (Approximate volume % in air): LEL: 0.5 UEL: 4.4 Autoignition Temperature: 335°C (635°F)[Approximate]</p> |
| <p>Section 6 - ACCIDENTAL RELEASE MEASURES</p> |
| <p>NOTIFICATION PROCEDURES In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. US regulations require reporting releases of this material to the environment which exceed the applicable reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800)424-8802.</p> |
| <p>PROTECTIVE MEASURES Avoid contact with spilled material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for Personal Protective Equipment.</p> |
| <p>SPILL MANAGEMENT</p> |
| <p>Land Spill: Stop leak if you can do it without risk. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Recover by pumping or with suitable absorbent.</p> |
| <p>Water Spill: Stop leak if you can do it without risk. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants. Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the</p> |



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| appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken. |
| ENVIRONMENTAL PRECAUTIONS Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas. |
| Section 7 - HANDLING AND STORAGE |
| HANDLING : Avoid contact with skin. Use proper bonding and/or ground procedures. However, bonding and grounds may not eliminate the hazard from static accumulation. Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source). When the material is handled in bulk, an electrical spark could ignite any flammable vapors from liquids or residues that may be present (e.g., during switch-loading operations). Use proper bonding and/or ground procedures. However, bonding and grounds may not eliminate the hazard from static accumulation. Consult local applicable standards for guidance. Additional references include American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practice on Static Electricity) or CENELEC CLC/TR 50404 (Electrostatics-Code of practice for the avoidance of hazards due to static electricity). Loading/Unloading Temperature: [Ambient] Transport Temperature: [Ambient] Transport Pressure: [Ambient] Static Accumulator: This material is a static accumulator. A liquid is typically considered a nonconductive, static accumulator if its conductivity is below 100 pS/m (100x10E-12 Siemens per meter) and is considered a semiconductive, static accumulator if its conductivity is below 10,000 pS/m. Whether a liquid is nonconductive or semiconductive, the precautions are the same. A number of factors, for example liquid temperature, presence of contaminants, anti-static additives and filtration can greatly influence the conductivity of a liquid. |
| STORAGE The container choice, for example storage vessel, may effect static accumulation and dissipation. Do not store in open or unlabelled containers. Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area. Storage Temperature: [Ambient] Storage Pressure: [Ambient] Suitable Containers/Packing: Tank Trucks; Railcars; Barges; Drums; Tankers Suitable Materials and Coatings (Chemical Compatibility): Carbon Steel; Stainless Steel; Polyethylene; Polypropylene; Teflon; Polyester Unsuitable Materials and Coatings: Natural Rubber; Butyl Rubber; Ethylene-propylene-diene monomer (EPDM); Polystyrene |
| Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION |
| Exposure limits/standards for materials that can be formed when handling this |



product: When mists/aerosols can occur, the following are recommended: 5mg/m³-ACGIH TLV, 10mg/m³-ACGIH STEL, 5mg/m³-OSHA PEL.

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:

Adequate ventilation should be provided so that exposure limits are not exceeded.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation.

Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

Half-face filter respirator

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

If prolonged or repeated contact is likely, chemical resistant gloves are recommended. If contact with forearms is likely, wear gauntlet style gloves.

Eye Protection: If contact is likely, safety glasses with side shields are recommended.

Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

If prolonged or repeated contact is likely, chemical, and oil resistant clothing is recommended.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

ENVIRONMENTAL CONTROLS See Sections 6, 7, 12, 13.



| Section 9 - PHYSICAL AND CHEMICAL PROPERTIES | |
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| Typical physical and chemical properties are given below. Consult the Supplier in Section 1 for additional data. | |
| GENERAL INFORMATION | |
| Physical State: Liquid | Form: Clear Color: Colorless |
| Odor: Mild Petroleum/solvent | Odor Threshold: N/D |
| IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION | |
| Relative Density (at 15.6°C): 0.821 | pH: N/A |
| Density(at 15°C): 819 Kg/m ³ (6.83 lbs/gal, 0.82 Kg/dm ³) | |
| Flash Point [Method]: 118°C (244°F) [ASTM D-93] | |
| Flammable Limits (Approximate volume % in air): LEL: 0.5 UEL: 4.4 | |
| Autoignition Temperature: 335°C(635°F)[Approximate] | |
| Boiling Point / Range: 263°C (505°F) - 329°C (624°F) | |
| Vapor Density (Air = 1): > 1 at 101 kPa | |
| Vapor Pressure: 0 kPa (0 mm Hg) at 20°C < 0.001 kPa (0.01 mm Hg) at 38°C < 0.001 kPa (0.01 mm Hg) at 50°C | |
| Evaporation Rate (n-butyl acetate = 1): <0.01 | |
| Log Pow (n-Octanol/Water Partition Coefficient): N/D | |
| Solubility in Water: Negligible | |
| Viscosity: 7.48 cSt (7.48 mm ² /sec) at 40°C 14.8 cSt (14.8 mm ² /sec) at 25°C | |
| Oxidizing Properties: See Hazards Identification Section. | |
| OTHER INFORMATION | |
| Freezing Point: N/D | Melting Point: N/D |
| Pour Point: -63°C(-81°F) | Molecular Weight: 230[Approximate] |
| Hygroscopic: No | Coefficient of Thermal Expansion: 0.0007 V/V°C |
| Section 10 - STABILITY AND REACTIVITY | |
| STABILITY: Material is stable under normal conditions. | |
| CONDITIONS TO AVOID: Open flames and high energy ignition sources. | |
| MATERIALS TO AVOID: Strong oxidizers | |
| HAZARDOUS DECOMPOSITION PRODUCTS:Material does not decompose at ambient temperatures | |
| HAZARDOUS POLYMERIZATION: Will not occur. | |
| Section 11 - TOXICOLOGICAL INFORMATION | |
| ACUTE TOXICITY | |
| Route of Exposure | Conclusion / Remarks |
| Inhalation | |
| Toxicity: Data available. | Minimally Toxic. Based on test data for structurally similar material. |
| Irritation: Data available. | Negligible hazard at ambient/normal handling temperatures. Based on test data for structurally similar materials. |
| Ingestion | |
| Toxicity: LD50 > 10000 ml/kg | Minimally Toxic. Based on test data for the material. |



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| Skin | | | | | | | |
| Toxicity: LD50 > 3160 mg/kg | Minimally Toxic. Based on test data for the material. | | | | | | |
| Irritation: Data available. | May dry the skin leading to discomfort and dermatitis. Based on test data for structurally similar materials. | | | | | | |
| Eye | | | | | | | |
| Irritation: Data available. | May cause mild, short-lasting discomfort to eyes. Based on test data for structurally similar material. | | | | | | |
| CHRONIC/OTHER EFFECTS | | | | | | | |
| <p>For the product itself: Vapor concentrations above recommended exposure levels are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anesthetic and may have other central nervous system effects. Prolonged and/or repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema. Additional information is available by request. The following ingredients are cited on the lists below: None. --REGULATORY LISTS SEARCHED--</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">1 = NTP CARC</td> <td style="width: 33%;">3 = IARC 1</td> <td style="width: 33%;">5 = IARC 2B</td> </tr> <tr> <td>2 = NTP SUS</td> <td>4 = IARC 2A</td> <td>6 = OSHA CARC</td> </tr> </table> | | 1 = NTP CARC | 3 = IARC 1 | 5 = IARC 2B | 2 = NTP SUS | 4 = IARC 2A | 6 = OSHA CARC |
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| Section 12 - ECOLOGICAL INFORMATION | | | | | | | |
| <p>The information given is based on data available for the material, the components of the material, and similar materials.</p> <p>ECOTOXICITY Material—Not expected to be harmful to aquatic organisms. Material—Not expected to demonstrate chronic toxicity to aquatic organisms.</p> <p>MOBILITY Material-- Low solubility and floats and is expected to migrate from water to the land. Expected to partition to sediment and wastewater solids.</p> <p>PERSISTENCE AND DEGRADABILITY Biodegradation:Material-Expected to biodegrade slowly. Hydrolysis:Material-Transformation due to hydrolysis not expected to be significant. Photolysis:Material-Transformation due to photolysis not expected to be significant. Atmospheric Oxidation: Material-Expected to degrade rapidly in air</p> <p>OTHER ECOLOGICAL INFORMATION VOC (EPA Method 24): 6.835 lbs/gal</p> | | | | | | | |
| Section 13 - DISPOSAL CONSIDERATIONS | | | | | | | |
| <p>Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.</p> <p>DISPOSAL RECOMMENDATIONS : Product is suitable for burning in an enclosed controlled</p> | | | | | | | |



burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

REGULATORY DISPOSAL INFORMATION

RCRA Information: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed as hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosivity or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

Empty Container Warning Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

Section 14 - TRANSPORT INFORMATION

LAND (DOT): Not Regulated for Land Transport
LAND (TDG): Not Regulated for Land Transport
SEA (IMDG): Not Regulated for Sea Transport according to IMDG-Code
AIR (IATA): Not Regulated for Air Transport

Section 15 - REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION STANDARD: When used for its intended purposes, this material is not classified as hazardous in accordance with OSHA 29 CFR 1910.1200.
NATIONAL CHEMICAL INVENTORY LISTING: AICS, IECSC, DSL, EINECS, ENCS, KECI, PICCS, TSCA
EPCRA: This material contains no extremely hazardous substances.
CERCLA: This material is not subject to any special reporting under the requirements of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Contact local authorities to determine if other reporting requirements apply.
CWA / OPA: This product is classified as an oil under Section 311 of the Clean Water Act (40 CFR 110) and the Oil Pollution Act of 1990. Discharge or spills which produce a visible sheen on either surface water, or in waterways/sewers which lead to surface water, must be reported to the National Response Center at 800-424-8802.
SARA (311/312) REPORTABLE HAZARD CATEGORIES: None.
SARA (313) TOXIC RELEASE INVENTORY: This material contains no chemicals subject to the supplier notification requirements of the SARA 313 Toxic Release Program.
The following ingredients are cited on the lists below: None.

--REGULATORY LISTS SEARCHED--

| | | | |
|---------------|--------------|-------------------|-------------|
| 1 = ACGIH ALL | 6 = TSCA 5a2 | 11 = CA P65 REPRO | 16 = MN RTK |
| 2 = ACGIH A1 | 7 = TSCA 5e | 12 = CA RTK | 17 = NJ RTK |
| 3 = ACGIH A2 | 8 = TSCA 6 | 13 = IL RTK | 18 = PA RTK |



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|---|------------------|-------------|-------------|
| 4 = OSHA Z | 9 = TSCA 12b | 14 = LA RTK | 19 = RI RTK |
| 5 = TSCA 4 | 10 = CA P65 CARC | 15 = MI 293 | |
| Code key: CARC=Carcinogen; REPRO=Reproductive | | | |
| Section 16- OTHER INFORMATION | | | |
| N/D = Not determined, N/A = Not applicable | | | |

Disclaimer :The information contained herein is based upon data believed to be reliable and reflects our best professional judgment. It is the responsibility of the user to determine the suitability of the material for their purpose. No warranty is expressed or implied, is given.