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KYREAD SDF-13A
MATERIAL SAFETY DATASHEET

SECTION 1. - GENERAL INFORMATION

1.1 MANUFACTURER

Kyros Technologies, LLC, 132 Tiger Lane, Benton, Ky. 42025, USA
Phone: 270-527-7777 Emergency Phone: 270-906-6051 Fax: 270-527-7777

1.2 PRODUCT INFORMATION

Name of product: Kyread SDF-130A
Product use: Magnetic tester used to visually delineate information recorded on
Magnetic media (cards, disk, tapes, etc.)

1.3 INGREDIENTS

	<u>C.A.S. No.</u>		<u>% By Weight</u>
Methyl Nonafluoroisobutyl ether	163702-08-7		
Plus		=	94.0000
Methyl Nonafluorobutyl ether	163702-07-6		
Isopropyl Alcohol	67-63-0		05.3243
Iron Powder (1-3 Micron)	7439-89-6		00.6757

CO₂ (10-15 psi) is present as the propellant in the aerosol package of Kyread SDF-130A.

1.4 PHYSICAL PROPERTIES

Physical Form: Liquid suspension of powder iron.
Auto ignition temperature: > 443°C
Flash Point: No flash point, per ASTM-D-3278
Flammable Limits – LEL: 4% [ASTM-E681]
Boiling Range: 54°C
Density: 1.48 gms/ml
Vapor Density: 7.1 [AIR=1]
Solubility in Water: < 10%
Evaporation Rate: 58 [Ref Butyl acetate = 1]
Evaporation Rate in weighing dish open to ambient air: 62-75% of the evaporation rates of
CFC 113 & HCFC 141B under the same conditions in the range 16°C - 32°C.

1.5 STABILITY AND REACTIVITY

Kyread SDF-130A is stable and non-polymerizable. However, it should not contact strong
Bases (NaOH, etc.) alkali metals (Li, K, Na) or strong oxidizing agents.

The small amounts of hydrochloric and hydrofluoric acids resulting from exposure of
Kyread SDF-130A to extreme heat, react with the iron powder in the product and are
Immobilized as the iron salts.

Hydrogen Fluoride has an ACGIH Threshold Ceiling of 3 ppm (as fluoride) and an eight
hour Time - Weighted Average and 6 ppm of fluoride as a Short Time Exposure Limit, we
above the odor threshold of 0.04 ppm for HF.

SECTION 2 – HEALTH CONSIDERATIONS

2.1 SUMMARY

Kyread SDF-130A should be used with adequate ventilation and the proper respect
Afforded all laboratory chemicals. Since the components of Kyread can be decomposed
at very high temperatures, Kyread should not be used near ovens, hot plates, electric arcs
or open flames. Cigarette smoking is to be avoided while using Kyread.

2.2 POTENTIAL HEALTH EFFECTS AND SYMPTOMS

Recommended Protective Devices and Treatment

A. Protection

Eyes: Safety glasses – side shields

Skin: Gloves – polyethylene

Inhalation: Use adequate ventilation.

Ingestion: Do not eat, drink or smoke when using Kyread.

- B. Symptoms of Irritation
 Contact with Kyread SDF-130A might cause the following:
1. Eyes, skin: mild irritation, itching
 2. Inhalation: may cause upper respiratory irritation, sneezing, hoarseness, headache.
 3. Ingestion (may be absorbed and cause): Central nervous system depression, headache, abdominal pain, diarrhea, dizziness, slowed reaction time, giddiness or unconsciousness.
Treatment: Remove person to fresh air; flush eyes with large quantities of water; wash skin contact with warm soapy water and rinse with water.
 If swallowed – do not induce vomiting. Give two glasses of water and get immediate medical attention.
- C. Spills and Leaks
 If the Kyread SDF-130A container leaks, reclaim as much as possible. If this is difficult or if SDF-130A is spilled, mop it up with paper toweling and allow toweling to dry outside. Remove leaking container to exhaust hood or outside location.

SECTION 3 – ECOLOGICAL CONSIDERATIONS

3.1 OZONE DEPLETION

Kyread SDF-130A has near-zero ozone depletion (ODP).
 The U.S. Environmental Protection Agency (EPA) has listed the major ingredients of Kyread SDF-130A as acceptable substitutes for ozone depleting substances in specific solvent and Aerosol industry applications under its Significant New Alternatives Program (SNAP), Section 612 of the Clean Air Act.
Atmospheric Lifetime: Approximately 4.7 years and 3.7 years for methyl nonafluoroisobutyl ether and methyl nonafluorobutyl ether respectively.
 Isopropyl alcohol has an atmospheric half-life < 2 days.

3.2 POTENTIAL ENVIRONMENT EFFECTS

Aquatic Toxicity:
 Test results indicate that methyl nonafluoroisobutyl ether and methyl nonafluorobutyl ether have insignificant Toxicity to aquatic organisms. Isopropyl alcohol has minimal toxicity to aquatic organisms.
BIOCOCONCENTRATIONS:
 Methyl nonafluoroisobutyl ether and methyl nonafluorobutyl ether are water insoluble and very volatile. These Components move rapidly from aquatic or terrestrial environments to the atmosphere. Bioconcentration is unlikely to occur.
 Isopropyl alcohol has an octanol/water partition coefficient value < 3 indicating it is unlikely to bioconcentrate.

3.3 OTHER INFORMATION

311/312 Hazard Categories and Classifications
 Fire Hazard – [NO] Pressure Hazard – [NO] Reactivity Hazard – [NO]

3.4 HMIS CLASSIFICATION

Health: [2] Flammability: [1] Reactivity: [0] Protection: [See Section 2.2]

Addendum to Kyread SDF-130A Material Safety Data Sheet January 15, 2006

Transportation Information for Kyread SDF-130A
 (Includes spray cans, eyedropper bottles, and bulk containers.)

DOTG: Dept. of Transportation – Ground (US)
 Not Hazardous
 DOTW: Dept. of Transportation – Vessel (US)
 Not Hazardous
 IATA: International Air Transport Association (United Nations)
 Not Hazardous
 IMO: International Maritime Organization (United Nations)
 Not Hazardous

Handling of Leaks and Disposal Information

Ventilate area with fresh air. Reclaim contents or collect in a closed container and transfer to industrial incinerator capable of handling halogenated materials.

EPA Hazardous Waste Number (RCRA): [Not Regulated]