Material Safety Data Sheet
Scintiverse II Cocktail

ACC# 40207

Section 1 - Chemical Product and Company Identification

MSDS Name: Scintiverse II Cocktail
Catalog Numbers: SX12-4
Synonyms: None
Company Identification:
Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410
For information, call: 201-796-7100
Emergency Number: 201-796-7100
For CHEMTREC assistance, call: 800-424-9300
For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
95-63-6	1,2,4-Trimethylbenzene	63.1	202-436-9
9003-11-6	Polyethylene-polypropylene glycol	36.2	unlisted
92-71-7	Oxazole, 2,5-diphenyl-	0.55	202-181-3
13280-61-0	Benzene, 1,4-bis2-(2-methylphenyl)ethenyl-	0.1	236-285-5

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: light blue liquid. Flash Point: 48.88 deg C.
Warning! Flammable liquid and vapor. Causes eye, skin, and respiratory tract irritation. Harmful if inhaled. May cause allergic respiratory reaction. May be absorbed through intact skin. May cause blood abnormalities. May cause central nervous system effects. Dangerous for the environment.
Target Organs: Blood, central nervous system, respiratory system, eyes, skin.

Potential Health Effects

Eye: Causes eye irritation. Causes redness and pain. May cause irritation of the conjunctiva.
Skin: Causes skin irritation. May be absorbed through the skin. Causes redness and pain.
Ingestion: Causes gastrointestinal irritation with nausea, vomiting and diarrhea. Aspiration of material into the lungs may cause chemical pneumonitis, which may be fatal. May cause central nervous system depression.
Inhalation: May cause drowsiness, unconsciousness, and central nervous system depression. Vapors may cause dizziness or suffocation. Causes irritation of the mucous membrane and upper respiratory tract. Individuals exposed to a solvent containing a mixture of trimethylbenzenes have complained of nervousness, tension, anxiety, and asthmatic bronchitis. In addition, the peripheral blood showed a tendency to hypochromic anemia and a deviation from normal in the coagulability of the blood. Contamination of the solvent with benzene was probably responsible for the blood effects.
Chronic: Prolonged or repeated skin contact may cause dermatitis. Repeated inhalation may cause chronic bronchitis. May cause anemia and other blood cell abnormalities. Prolonged exposure may produce a narcotic effect. Prolonged or repeated exposure may cause nausea, dizziness, and headache. Laboratory experiments have resulted in mutagenic effects.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.
Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.
Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Use water spray to keep fire-exposed containers cool. Water may be ineffective. Material is lighter than water and a fire may be spread by the use of water. Containers may explode in the heat of a fire. Flammable liquid and vapor. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.
Extinguishing Media: For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. This material is lighter

than water and insoluble in water. The fire could easily be spread by the use of water in an area where the water cannot be contained. Do NOT use straight streams of water.
Flash Point: 48.88 deg C (119.98 deg F)
Autoignition Temperature: 514 deg C (957.20 deg F)
Explosion Limits, Lower:0.90 vol %
Upper: 6.4 vol %
NFPA Rating: (estimated) Health: 2; Flammability: 2; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use only in a well-ventilated area. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid breathing dust, vapor, mist, or gas. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Take precautionary measures against static discharges. Keep away from heat, sparks and flame. Avoid contact with clothing and other combustible materials. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.
Storage: Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.
Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
1,2,4-Trimethylbenzene	25 ppm TWA (listed under Trimethyl benzene).	25 ppm TWA; 125 mg/m3 TWA	none listed
Polyethylene-polypropylene glycol	none listed	none listed	none listed
Oxazole, 2,5-diphenyl-	none listed	none listed	none listed
Benzene, 1,4-bis2-(2-methylphenyl)ethenyl-	none listed	none listed	none listed

OSHA Vacated PELs: 1,2,4-Trimethylbenzene: No OSHA Vacated PELs are listed for this chemical. Polyethylene-polypropylene glycol: No OSHA Vacated PELs are listed for this chemical. Oxazole, 2,5-diphenyl-: No OSHA Vacated PELs are listed for this chemical. Benzene, 1,4-bis2-(2-methylphenyl)ethenyl-: No OSHA Vacated PELs are listed for this chemical.
Personal Protective Equipment
Eyes: Wear chemical splash goggles.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Appearance: light blue
Odor: none reported
pH: Not available.
Vapor Pressure: Not available.
Vapor Density: >1
Evaporation Rate: Not available.
Viscosity: Not available.
Boiling Point: Not available.
Freezing/Melting Point: Not available.
Decomposition Temperature: Not available.
Solubility: Soluble in water.
Specific Gravity/Density:0.9-0.93
Molecular Formula: Mixture
Molecular Weight: Not available

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Incompatible materials, ignition sources, excess heat, combustible materials, strong oxidants.
Incompatibilities with Other Materials: Strong oxidizing agents, nitric acid.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.
Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:
CAS# 95-63-6: DC3325000
CAS# 9003-11-6: MD0907950; MD0911600; OK3425000; TP6000000; TP9945600; YP8307000
CAS# 92-71-7: RP6825000
CAS# 13280-61-0 unlisted.
LD50/LC50:
CAS# 95-63-6:
Inhalation, rat: LC50 = 18000 mg/m3/4H;
Oral, mouse: LD50 = 6900 mg/kg;
Oral, rat: LD50 = 5 gm/kg;
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CAS# 9003-11-6:
Inhalation, rat: LC50 = 320 mg/m3/4H;
Oral, mouse: LD50 = 3 gm/kg;
Oral, mouse: LD50 = >15 gm/kg;
Oral, mouse: LD50 = 45 gm/kg;
Oral, rabbit: LD50 = 35 gm/kg;
Oral, rat: LD50 = 5700 mg/kg;
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CAS# 92-71-7:
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CAS# 13280-61-0:
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Carcinogenicity:
CAS# 95-63-6: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 9003-11-6: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 92-71-7: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 13280-61-0: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: Workers exposed to a mixture of trimethylbenzenes at up to 60 ppm experienced CNS changes, asthmatic bronchitis, and blood dyscrasias. Contamination of the solvent with benzene was probably responsible for the blood abnormalities.
Teratogenicity: No information found
Reproductive Effects: No information found
Mutagenicity: CAS# 95-63-6: Sister Chromatid Exchange: Intraperitoneal, mouse = 900 mg/kg.
Neurotoxicity: No information found
Other Studies:

Section 12 - Ecological Information

Ecotoxicity: Fish: Fathead Minnow: LC50 = 77.2 mg/L; 96 Hr; CAS# 95-63-6: Flow-through at 25 C (pH 7.24) CAS# 95-63-6: Estimated Koc value = 720. 1,2,4-trimethylbenzene will have low mobility in soil. Volatilization from moist and dry soil surfaces is expected to occur. 1,2,4-Trimethylbenzene is expected to aerobically biodegrade in both soil and water. Anaerobic aquifer microcosms did not show significant biodegradation in comparison to poisoned controls. In water, 1,2,4-trimethylbenzene may adsorb to sediment or particulate matter.
Environmental: CAS# 95-63-6: Bioconcentration in aquatic organisms is moderate to high based on BCF values of 31-275, measured in carp. 1,2,4-Trimethylbenzene is expected to photodegrade in natural waters. If released to the atmosphere, 1,2,4-trimethylbenzene will exist solely in the vapor phase in the ambient atmosphere. Vapor-phase 1,2,4-trimethylbenzene is degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals and nitrate radicals with half-lives of about 12 hours and 6-30 days, respectively.
Physical: No information available.
Other: No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	FLAMMABLE LIQUIDS, N.O.S.	FLAMMABLE LIQUIDS, N.O.S. (1,2,4-Trimethylbenzene)
Hazard Class:	3	3
UN Number:	UN1993	UN1993
Packing Group:	III	III

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 95-63-6 is listed on the TSCA inventory.
CAS# 9003-11-6 is listed on the TSCA inventory.
CAS# 92-71-7 is listed on the TSCA inventory.
CAS# 13280-61-0 is listed on the TSCA inventory.
Health & Safety Reporting List
CAS# 95-63-6: Effective 4/29/83, Sunset 4/29/93
Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
CERCLA Hazardous Substances and corresponding RQs
None of the chemicals in this material have an RQ.
SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.
SARA Codes
CAS # 95-63-6: immediate, delayed, fire.
CAS # 9003-11-6: immediate, delayed.
Section 313
This material contains 1,2,4-Trimethylbenzene (CAS# 95-63-6, 63.1%),which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR
Clean Air Act:
This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.
Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.
OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.
STATE
CAS# 95-63-6 can be found on the following state right to know lists: California, (listed as Trimethyl benzene), New Jersey, Pennsylvania, Minnesota, (listed as Trimethyl benzene), Massachusetts.
CAS# 9003-11-6 is not present on state lists from CA, PA, MN, MA, FL, or NJ.
CAS# 92-71-7 is not present on state lists from CA, PA, MN, MA, FL, or NJ.
CAS# 13280-61-0 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives
Hazard Symbols:
XN N
Risk Phrases:
R 10 Flammable.
R 36/37/38 Irritating to eyes, respiratory system and skin.
R 20 Harmful by inhalation.
R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:
S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 61 Avoid release to the environment. Refer to special instructions /safety data sheets.

WGK (Water Danger/Protection)
CAS# 95-63-6: 3
CAS# 9003-11-6: 1
CAS# 92-71-7: No information available.
CAS# 13280-61-0: No information available.
Canada - DSL/NDSL
CAS# 95-63-6 is listed on Canada's DSL List.
CAS# 9003-11-6 is listed on Canada's DSL List.
CAS# 92-71-7 is listed on Canada's DSL List.
CAS# 13280-61-0 is listed on Canada's DSL List.
Canada - WHMIS
This product has a WHMIS classification of B2, D2B.
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.
Canadian Ingredient Disclosure List
CAS# 95-63-6 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 5/19/1999
Revision #4 Date: 3/22/2006