

OCTEL AMERICA, INC. -- STADIS 450 CONDUCTIVITY IMPROVER

=====
MSDS Safety Information
=====

FSC: 6850
NIIN: 01-099-4015
MSDS Date: 03/11/1999
MSDS Num: CKBNJ
Product ID: STADIS 450 CONDUCTIVITY IMPROVER
MFN: 01
Responsible Party
Cage: TO504
Name: OCTEL AMERICA, INC.
Address: 200 EXECUTIVE DRIVE
City: NEWARK D
E 19702
Info Phone Number: 800-441-9547
Emergency Phone Number: 800-441-9547

=====
Item Description Information
=====

Item Manager: S9G
Item Name: ANTISTATIC ADDITIVE, AVIATION TURBINE FUEL
Specification Number: NONE
Type/Grade/Class: NONE
Unit of Issue: CN
Quantitative Expression: 00000000005GL
UI Container Qty: 0
Type of Container: CAN

=====
Ingr
edients
=====

Name: *** PROPRIETARY ***

=====

=====
Health Hazards Data
=====

LD50 LC50 Mixture: LD50 (ORAL, RAT) 5,580 MG/KG (TOLUENE)
Carcinogenicity Inds - NTP: YES
IARC: YES
OSHA: YES
Effects of Exposure: TARGET ORGANS: EYES, SKIN, RESPIRATORY SYSTEM, LIVER,
KIDNEYS, CNS (). POTENTIAL HEALTH EFFECTS SKIN CONTACT MA

Y CAUSE IRRITATION, DEFATTING, DISCOMFORT, RASH. SIGNIFICANT PERMEATION APPEARS UNLIKELY. EYE CONTACT MAY CAUSE IRRITATION, DISCOMFORT, TEARING, OR BLURRING VISION. INHALATION MAY CAUSE IRRITATION, COUGHING, DISCOMFORT, SEVERE SHORTNESS OF BREATH, NAUSEA, HEADACHE, WEAKNESS OR TEMPORARY NERVOUS SYSTEM DEPRESSION WITH ANESTHETIC EFFECTS SUCH AS DIZZINESS, CONFUSION, UNCONSCIOUSNESS. INGESTION MAY CAUSE HEART BURN, PAIN, NAUSEA, VOMITING. ASPIRATION HAZARD. HIGHER/PROLONGED EXPOSURES MAY CAUSE LIVER AND KIDNEY EFFECTS.

Explanation Of Carcinogenicity: CONTAINS BENZENE.

Signs And Symptoms Of Overexposure: SKIN CONTACT MAY CAUSE IRRITATION, DEFATTING, DISCOMFORT, RASH. EYE CONTACT MAY CAUSE IRRITATION, DISCOMFORT, TEARING, OR BLURRING VISION. INHALATION MAY CAUSE IRRITATION, COUGHING, DISCOMFORT, SEVERE SHORTNESS OF BREATH, NAUSEA, HEADACHE, WEAKNESS OR TEMPORARY NERVOUS SYSTEM DEPRESSION WITH ANESTHETIC EFFECTS SUCH AS DIZZINESS, CONFUSION, INCOORDINATION, UNCONSCIOUSNESS. INGESTION MAY CAUSE GI

TRACT IRRITATION, HEART BURN, ABDOMINAL PAIN, NAUSEA, VOMITING. ASPIRATION INTO THE LUNGS MAY CAUSE COUGHING, GASPING, CHOKING, SHORTNESS OF BREATH, BLUISH DISCOLORATION OF THE SKIN, RAPID BREATHING AND HEART RATE AND FEVER.

Medical Cond Aggravated By Exposure: INDIVIDUALS WITH PRE-EXISTING DISEASES OF THE CENTRAL NERVOUS SYSTEM, CARDIOVASCULAR SYSTEM, BONE MARROW, LIVER OR KIDNEYS MAY HAVE INCREASED SUSCEPTIBILITY TO THE TOXICITY OF EXCESSIVE EXPOSURES.

First Aid: INHALATION: IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. CALL A PHYSICIAN. EYE CONTACT: IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. CALL A PHYSICIAN. SKIN CONTACT: FLUSH SKIN WITH WATER AFTER CONTACT. WASH CONTAMINATED CLOTHING BEFORE REUSE. INGESTION: IF SWALLOWED, DO NOT INDUCE VOMITING. IMMEDIATELY GIVE 2 GLASSES OF WATER. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. CALL A PHYSICIAN.

=====
Handling and Disposal
=====

Spill Release Procedures: REVIEW FIRE FIGHTING MEASURES AND HANDLING SECTIONS BEFORE CLEAN-UP. USE APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT. ELIMINATE ALL SOURCES OF IGNITION. DIKE SPILL. PREVENT MATERIAL FROM ENTERING SEWERS, WATERWAYS OR LOW AREAS. SOAK UP WITH SAWDUST, SAND, OIL DRY OR OTHER ABSORBENT.

RBENT MATERIAL (: NON-FLAMMABLE). A RELEASE OF 100 LBS MAY TRIGGER REPORTING REQUIREMENTS OF CERCLA SECTION 103.

Neutralizing Agent: NONE SPECIFIED BY MANUFACTURER.

Waste Disposal Methods: TREATMENT, STORAGE, TRANSPORTATION OR DISPOSAL MUST BE IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE/PROVINCIAL AND LOCAL REGULATIONS. DO NOT FLUSH TO SURFACE WATER OR SANITARY SEWER SYSTEM. THIS MATERIAL MAY BE A RCRA REGULATED HAZARDOUS WASTE UPON DISPOSAL DUE TO THE IGNITABILITY CHARACTERISTIC.

Ha

Handling And Storage Precautions: STORE IN A WELL VENTILATED PLACE. KEEP CONTAINER TIGHTLY CLOSED. GROUND CONTAINER WHEN POURING. KEEP AWAY FROM HEAT, SPARKS AND FLAMES. USE OF NON-SPARKING AND EXPLOSION-PROOF EQUIPMENT MAY BE NECESSARY DEPENDING ON TYPE OF OPERATION.

Other Precautions: AVOID BREATHING VAPORS OR MIST. AVOID CONTACT WITH EYES, SKIN, OR CLOTHING. WASH THOROUGHLY AFTER HANDLING.

=====
Fire and Explosion Hazard Information
==

=====
Flash Point Method: PMCC

Flash Point: =6.C, 42.8F

Autoignition Temp: =440.C, 824.F

Autoignition Temp Text: ESTIMA

Lower Limits: NOT GIVEN

Upper Limits: NOT GIVEN

Extinguishing Media: WATER SPRAY, CO2, FOAM, DRY CHEMICAL. WATER MAY BE INEFFECTIVE FOR FIGHTING FIRE, HOWEVER WATER SPRAY MAY BE USED TO ABSORB MUCH OF THE HEAT AND TO COOL FIRE EXPOSED CONTAINERS.

Fire Fighting Procedures: EVACUATE PERSONNEL TO SAFE AREA. WEAR SELF-CONTAINED

BREATHING APPARATUS. WEAR FULL PROTECTIVE EQUIPMENT. COOL TANK/CONTAINER WITH WATER SPRAY.

Unusual Fire/Explosion Hazard: FLAMMABLE LIQUID. VAPOR FORMS EXPLOSIVE MIXTURE WITH AIR.

=====
Control Measures
=====

Respiratory Protection: WHERE THERE IS POTENTIAL FOR AIRBORNE EXPOSURE, WEAR NIOSH/MSHA APPROVED RESPIRATORY PROTECTION.

Ventilation: KEEP CONTAINER TIGHTLY CLOSED. USE SUFFICIENT VENT

ILATION TO KEEP

EMPLOYEE EXPOSURE BELOW RECOMMENDED LIMITS.

Protective Gloves: IMPERVIOUS GLOVES

Eye Protection: SAFETY GLASSES OR COVERALL CHEMICAL SPLASH GOGGLES OR FACE SHIELD WHEN SPRAYING

Other Protective Equipment: WHERE THERE IS POTENTIAL FOR SKIN CONTACT HAVE AVAILABLE AND WEAR IMPERVIOUS GLOVES, APRON, PANTS AND JACKET.

Work Hygienic Practices: NOT PROVIDED.

Supplemental Safety and Health: NONE

=====

Physical/Chemical Properties

=

=====

HCC: F2

NRC/State LIC No: NOT RELEVANT.

Boiling Point: =90.C, 194.F

B.P. Text: IBP

Vapor Pres: NOT GIVEN

Vapor Density: NOT GIVEN

Spec Gravity: 0.92

Evaporation Rate & Reference: >1 (BUTYL ACETATE=1)

Solubility in Water: SLIGHT

Appearance and Odor: CLEAR DARK AMBER LIQUID, TOLUENE ODOR

=====

Reactivity Data

=====

Stability Indicator: YES

Stability Condition To Avoid: HIGH HEAT, SPARKS, FLAME, OTHER SOURCES OF IGNITION ()

Materials To Avoid: NONE REASONABLY FORESEEABLE.

Hazardous Decomposition Products: SULFUR DIOXIDE (SO2)

Hazardous Polymerization Indicator: NO

Conditions To Avoid Polymerization: NONE. WILL NOT OCCUR.

=====

Toxicological Information

=====

Toxicological Information: ANIMAL DATA: TOLUENE: INHALATION 4 HR ALC: 4,000 PPM

IN RATS. SKIN ABSORPTION LD50: 12,124 MG/KG IN RABBITS. ORAL LD50: 5,580 MG/KG IN RATS. ISOPROPYL ALCOHOL: ORAL LD50: 4,700 MG/KG IN RATS. INHALATION 4 HR LC50: 16,000 PPM IN RATS. SKIN ABSORPTION LD50: 12,900 MG/KG. AROMATIC 150: INHALATION 6 HR LC50: >11.67 MG/L IN RATS. SKIN ABSORPTION LD50: >3,160 MG/KG IN RABBITS. THE EFFECTS IN ANIMALS: UNCONSCIOUSNESS AND CARDIAC SENSITIZATION. REPEATED EXPOSURES IN RANGE OF 10 - 60 X TLV RESULTED IN HEARING LOSS, ANESTHETIC EF

FECTS, HYPOTHERMIA, EXCITEMENT, DISORIENTATION
AND A REVERSIBLE INCREASED IN LIVER AND KIDNEY WEIGHTS.

=====
Ecological Information
=====

Ecological: 96 HOUR LC50, FATHEAD MINNOWS: 12 MG/L
=====

MSDS Transport Information
=====

Transport Information: DOT PROPER SHIPPING NAME: FLAMMABLE LIQUID,
N.O.S.

(CONTAINS TOLUENE & ISOPROPANOL); HAZARD CLASS: 3; UN ID#: UN1993;
PACKING GROUP II; DOT LABEL: FLAMMABLE LIQUID. IMO PROPER SHIPPING NAME:
FLAMMABLE LIQUID, N.O.S. (CONTAINS TOLUENE & ISOPROPANOL); HAZARD CLASS:
3.2; UN ID#: UN1993; PACKING GROUP II; LABEL: FLAMMABLE LIQUID. SPECIAL
INFORMATION: FLASH POINT: 6C (42F). SHIPPING CONTAINERS: UN1A1/Y /100
(PHENOLIC LINED). REPORTABLE QUANTITY: 1000 LB TOLUENE.

=====
Regulatory Information
=====

Sara Title III Information: THIS PRODUCT CONTAINS THE FOLLOWING CHEMICALS
SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE
SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA) OF 1986 AND 40 CFR PART
372: TOLUENE, NAPHTHALENE. SECTION 311/312: ACUTE - YES, CHRONIC - NO,
FIRE: YES, REACTIVITY: NO, PRESSURE: NO.

Federal Regulatory Information: TSCA INVENTORY STATUS: REPORTED/INCLUDED.

State Re

gulatory Information: THIS PRODUCT CONTAINS TRACE QUANTITIES (<600
PPM) OF BENZENE, A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

=====
Other Information
=====

Other Information: NOTE TO PHYSICIAN: ACTIVATED CHARCOAL MIXTURE MAY BE
ADMINISTERED. TO PREPARE THE MIXTURE, SUSPEND 50 GRAMS ACTIVATED CHARCOAL IN
400 ML WATER AND MIX THOROUGHLY. ADMINISTER 5 ML/KG OR 350 ML FOR A
N AVERAGE
ADULT. BECAUSE OF THE DANGER OF ASPIRATION, EMESIS OR GASTRIC LAVAGE SHOULD
BE EMPLOYED UNLESS RISK IS JUSTIFIED BY PRESENCE OF ADDITIONAL TOXIC
SUBSTANCES. ACTIVATED CHARCOAL MAY INDUCE VOMITING, BUT MAY BE GIVEN AFTER
EMESIS OR LAVAGE TO ABSORB TOXIC ADDITIVES. BECAUSE OF POSSIBLE INCREASED
RISK OF ELICITING CARDIAC DYSRHYTHMIAS, CATECHOLAMINE DRUGS SHOULD BE USED
WITH SPECIAL CAUTION IN SITUATION OF EMERGENCY LIFE SUPPORT.

=====

Transportation Information

=====

Responsible Party Cage: TO504
Trans ID NO: 151392
Product ID: STADIS 450 CONDUCTIVITY IMPROVER
MSDS Prepared Date: 03/11/1999
Review Date: 02/08/2000
MFN: 1
Tech Entry NOS Shipping Nm: CONTAINS TOLUENE AND ISOPROPANOL.
Net Unit Weight: 38.3 LBS
Multiple KIT Number: 0
Unit Of Issue: CN
Container QTY: 0
Type Of Container: CAN
Additional Data: DOT, IMO PROPER SHIPPING NAME, UN ID NUMBER, HAZARD CLASS AND
PACKING GROUP, PER MSDS. DOT/LABEL: FL AMMABLE LIQUID. SHIPPING CONTAINERS
STEEL DRUMS: UN1A1/Y/100 (PHENOLIC LINED). REPORTABLE QUANTITY: 1000 LB
TOLUENE. CARGO AIRCRAFT ONLY.

=====

Detail DOT Information

=====

DOT PSN Code: GJJ
Symbols: G
DOT Proper Shipping Name: FLAMMABLE LIQUIDS, N.O.S.
Hazard Class: 3
UN ID Num: UN1993
DOT Packaging Group: II
Label: FLAMMABLE LIQUID
Special Provision:
T8,T31
Non Bulk Pack: 202
Bulk Pack: 242
Max Qty Pass: 5L
Max Qty Cargo: 60 L
Vessel Stow Req: B

=====

Detail IMO Information

=====

IMO PSN Code: HIN
IMO Proper Shipping Name: FLAMMABLE LIQUID, N.O.S. o
IMDG Page Number: 3230
UN Number: 1993
UN Hazard Class: 3.2
IMO Packaging Group: I/II
Subsidiary Risk Label: -
EMS Number: 3-07
MED First Aid Guide NUM: T

=====

=====
Detail IATA Information
=====

IATA PSN BV
IATA UN ID Num: 1993
IATA Proper Shipping Name: FLAMMABLE LIQUID, N.O.S. *
IATA UN Class: 3
IATA Label: FLAMMABLE LIQUID
UN Packing Group: II
Packing Note Passenger: 305
Max Quant Pass: 5L
Max Quant Cargo: 60L
Packaging Note Cargo: 307
=====

=====
Detail AFI Information
=====

AFI PSN BV
AFI Symb
ols: *
AFI Proper Shipping Name: FLAMMABLE LIQUIDS, N.O.S.
AFI Hazard Class: 3
AFI UN ID NUM: UN1993
AFI Packing Group: II
Special Provisions: P5
Back Pack Reference: A7.3
=====

=====
HAZCOM Label
=====

Product ID: STADIS 450 CONDUCTIVITY IMPROVER
Cage: TO504
Assigned IND: Y
Company Name: OCTEL AMERICA, INC.
Street: 200 EXECUTIVE DRIVE
City: NEWARK DE
Zipcode: 19702
Health Emergency Phone: 800-441-9547

Label Required IND: Y
Date Of Label Review: 02/08/2000
Status Code: A
MFG Label NO: UNKNOWN.
Year Procured: 2000
Origination Code: F
Eye Protection IND: YES
Skin Protection IND: YES
Signal Word: DANGER
Respiratory Protection IND: NO
Health Hazard: Moderate
Contact Hazard: Slight
Fire Hazard: Severe
Reactivity Hazard: None
Hazard And Precautions: TARGET ORGANS: EYES, SKIN, RESPIRATORY SYSTEM, LIVER,
KIDNEYS, CNS (). WARNING: FLAMMABLE LIQUID AND VAPOR. CAUSES EYE, SKIN AND
RESPIRATORY TRACT

IRRITATION. MAY CAUSE NERVOUS SYSTEM EFFECTS SUCH AS
DIZZINESS, NAUSEA, HEADACHE. MAY CAUSE LIVER AND KIDNEY EFFECTS. KEEP AWAY
FROM HEAT, SPARKS AND FLAME. FIRST AID: IF INHALED, REMOVE TO FRESH AIR. IF
NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE
OXYGEN. CALL A PHYSICIAN. EYE CONTACT: IMMEDIATELY FLUSH WITH WATER FOR AT
LEAST 15 MINUTES. CALL A PHYSICIAN. IF SWALLOWED, DO NOT INDUCE VOMITING.
IMMEDIATELY GIVE 2 GLASSES OF WATER. CALL A PHYSICIAN.

=

=====

Disclaimer (provided with this information by the compiling agencies): This
information is formulated for use by elements of the Department of Defense.
The United States of America in no manner whatsoever expressly or implied
warrants, states, or intends said information to have any application, use or
viability by or to any person or persons outside the Department of Defense
nor any person or persons contracting with any instrumen

tality of the United

States of America and disclaims all liability for such use. Any person
utilizing this instruction who is not a military or civilian employee of the
United States of America should seek competent professional advice to verify
and assume responsibility for the suitability of this information to their
particular situation regardless of similarity to a corresponding Department
of Defense or other government situation.