Students have a Right-to-Know about the hazards of any chemicals with which they are working. One excellent source of information about hazards of chemicals is the Material Safety Data Sheets (MSDS). The MSDSs are provided by the chemical manufacturer and must be kept on file and available for all chemicals used at an educational institutional. The stockroom supervisor in each of the labs (biology, chemistry, and marine science) can acquaint you with MSDSs.

Actually reading a MSDS can be a bit daunting, given the amount of information typically contained in the document. The MSDS is divided into the following sections:

Section 1 - Product and Company Identification
Section 2 - Composition/Information on Ingredients
Section 3 - Hazards Identification, Including Emergency Overview
Section 4 - First Aid Measures
Section 5 - Fire Fighting Measures
Section 6 - Accidental Release Measures
Section 7 - Handling and Storage
Section 8 - Exposure Controls & Personal Protection
Section 9 - Physical & Chemical Properties
Section 10 - Stability & Reactivity Data
Section 11 - Toxicological Information
Section 12 - Ecological Information
Section 13 - Disposal Considerations
Section 14 - MSDS Transport Information
Section 15 - Regulatory Information
Section 16 - Other Information

A sample MSDS for hexanes is provided below.
Section 1 - Product and Company Identification
01135 HEXANES

Product Identification: 01135 HEXANES
Date of MSDS: 10/28/1986 Technical Review Date: 04/17/2000
FSC: NIIN: EMPTY
Submitter: F BT
Status Code: A
MFN: 01
Article: N
Kit Part: N

Manufacturer's Information

Manufacturer's Name: EASTMAN KODAK COMPANY
Manufacturer's Address1: 343 STATE STREET
Manufacturer's Address2: ROCHESTER, NY 14650
Manufacturer's Country: US
General Information Telephone: 716-722-5151
Emergency Telephone: 800-225-5352
Emergency Telephone: 800-225-5352
Proprietary: N
Reviewed: Y
Published: Y
CAGE: 19139

Contractor Information

Contractor's Name: EASTMAN KODAK CO GOVERNMENT MARKETS CONTRACTS
Contractor's Address1: 343 STATE ST
Contractor's Address2: ROCHESTER, NY 14650-1115
Contractor's Telephone: 716-722-5151/(800) 242-2424
Contractor's CAGE: 19139

Section 2 - Composition/Information on Ingredients
01135 HEXANES

Ingredient Name: HEXANE
Ingredient CAS Number: 110-54-3 Ingredient CAS Code: T
RTECS Number: MN9275000 RTECS Code: T
=Wt: 100. =WT Code: M
=Volume: =Volume Code:
>Wt: >WT Code:
>Volume: >Volume Code:
<Wt: <WT Code:
<Volume: <Volume Code:
% Low WT: % Low WT Code:
% High WT: % High WT Code:
Section 3 - Hazards Identification, Including Emergency Overview
01135 HEXANES

Health Hazards Acute & Chronic: INHALATION: HARMFUL. MAY CAUSE NERVOUS SYSTEM INJURY. SKIN: IRRITATION. HARMFUL IF ABSORBED. EYES: CAUSES IRRITATION. INGESTION: LOW ORAL TOXICITY.

Signs & Symptoms of Overexposure:
DIZZINESS, GIDDINESS, HEADACHE, NAUSEA, BLURRED VISION, LOSS OF APPETITE & WEIGHT, NUMBNESS, WEAKNESS OF ARMS & LEGS, IRRITATION

Medical Conditions Aggravated by Exposure:
N/P

LD50 LC50 Mixture: N/P
Route of Entry Indicators:
Inhalation: YES
Skin: YES
Ingestion: YES
Carcinogenicity Indicators
NTP: N/P
IARC: N/P
OSHA: N/P
Carcinogenicity Explanation: N/P

Section 4 - First Aid Measures
01135 HEXANES

First Aid:
INHALATION: REMOVE TO FRESH AIR, TREAT SYMPTOMATICALLY.
SKIN/EYES: IMMEDIATELY FLUSH W/PLENTY OF WATER FOR 15 MINS.
INGESTION: DON'T INDUCE VOMITING. OBTAIN MEDICAL ATTENTION IN ALL CASES.
Section 5 - Fire Fighting Measures
01135 HEXANES

Fire Fighting Procedures:
WEAR SCBA & PROTECTIVE CLOTHING. USE WATER W/CAUTION.
MATERIAL IS LIGHTER THAN WATER & INSOLUBLE IN WATER, THE FIRE
COULD EASILY SPREAD BY THE USE OF WATER IN AN AREA WHERE THE
WATER COULD NOT BE CONTAINED. WATER MAY BE INEFFECTIVE IN
FIGHTING FIRE. USE WATER SPRAY TO KEEP FIRE-EXPOSED CONTAINERS
COOL.

Unusual Fire or Explosion Hazard:
VAPORS ARE HEAVIER THAN AIR & MAY TRAVEL ALONG THE GROUND/BE
MOVED BY VENTILATION TO AN IGNITION SOURCE & FLASH BACK.
VAPORS MAY IGNITE EXPLOSIVELY. PREVENT BUILDUP OF VAPORS TO
EXPLOSIVE CONCENTRATIONS.

Extinguishing Media:
WATER SPRAY, DRY CHEMICAL, CO2, FOAM

Flash Point: -28°C, -18.4°F Flash Point Text: N/P

Autoignition Temperature:
Autoignition Temperature Text: N/P
Lower Limit(s): N/P
Upper Limit(s): N/P

Section 6 - Accidental Release Measures
01135 HEXANES

Spill Release Procedures:
REMOVE ALL SOURCES OF IGNITION. ABSORB MATERIAL IN
VERMICULITE/OTHER SUITABLE ABSORBENT & PLACE IN IMPERVIOUS
CONTAINER.

Section 7 - Handling and Storage
01135 HEXANES

Handling and Storage Precautions:

Other Precautions:

Section 8 - Exposure Controls & Personal Protection
01135 HEXANES

Respiratory Protection:
USE A NIOSH APPROVED ORGANIC VAPOR RESPIRATOR IF NEEDED.

Ventilation:
GENERAL ROOM VENTILATION SHOULD BE USED. LOCAL EXHAUST MAY
BE NECESSARY TO CONTROL VAPOR CONCENTRATION TO ACCEPTABLE
LEVELS.
Protective Gloves: PROTECTIVE
Eye Protection: SAFETY GLASSES, GOGGLES, FACE SHIELD
Other Protective Equipment: PROTECTIVE CLOTHING
Work Hygenic Practices: REMOVE/LAUNDER CONTAMINATED CLOTHING & SHOES BEFORE REUSE.
Supplemental Health & Safety Information: N/P

Section 9 - Physical & Chemical Properties
01135 HEXANES

HCC:
NRC/State License Number:
Net Property Weight for Ammo:
Boiling Point: =68.1°C, 154.4°F Boiling Point Text: N/P
Melting/Freezing Point: Melting/Freezing Text: N/P
Decomposition Point: Decomposition Text: N/P
Vapor Pressure: 119 Vapor Density: N/P
Percent Volatile Organic Content:
Specific Gravity: 0.66
Volatile Organic Content Pounds per Gallon: N/P
pH: N/P
Volatile Organic Content Grams per Liter: N/P
Viscosity: N/P
Evaporation Weight and Reference: N/P
Solubility in Water: NEGLIGIBLE
Appearance and Odor: COLORLESS LIQUID
Percent Volatiles by Volume: 100/WT
Corrosion Rate: N/P

Section 10 - Stability & Reactivity Data
01135 HEXANES

Stability Indicator: YES
Materials to Avoid: OXIDIZERS
Stability Condition to Avoid:
HEAT, SPARKS, FLAME
Hazardous Decomposition Products:
CO2, CO
Hazardous Polymerization Indicator: NO
Conditions to Avoid Polymerization:
N/P
Section 11 - Toxicological Information
01135 HEXANES

Toxicological Information:
N/P

Section 12 - Ecological Information
01135 HEXANES

Ecological Information:
N/P

Section 13 - Disposal Considerations
01135 HEXANES

Waste Disposal Methods:
DISPOSE BY INCINERATION/CONTRACT W/LICENSED CHEMICAL WASTE DISPOSAL AGENCY. DISCHARGE, TREATMENT/DISPOSE OF IN ACCORDANCE W/LOCAL, STATE & FEDERAL REGULATIONS.

Section 14 - MSDS Transport Information
01135 HEXANES

Transport Information:
FOR INFORMATION REGARDING THE TRANSPORTATION OF THIS PRODUCT, PLEASE PHONE THE EASTMAN KODAK DISTRIBUTION CENTER NEAREST YOU; ROCHESTER, NY 716-254-1300; OAK BROOK IL 312-654-5300; CHAMBLEE GA 404-455-0123; DALLAS TX 214-241-1611; WHITTIER CA 213-945-1255; HONOLULU HI 808-833-1661.

Section 15 - Regulatory Information
01135 HEXANES

SARA Title III Information:
N/P

Federal Regulatory Information:
N/P

State Regulatory Information:
N/P

Section 16 - Other Information
01135 HEXANES

Other Information:
THE INFORMATION CONTAINED HEREIN IS FURNISHED W/O WARRANTY OF ANY KIND. USERS SHOULD CONSIDER THESE DATA ONLY AS A SUPPLEMENT TO OTHER INFORMATION GATHERED BY THEM & MUST MAKE INDEPENDENT DETERMINATIONS OF THE SUITABILITY & COMPLETENESS OF INFORMATION FROM ALL SOURCES TO ASSURE PROPER USE & DISPOSAL OF THESE MATERIALS & THE SAFETY & HEALTH OF EMPLOYEES & CUSTOMERS.
HAZCOM Label Information

Product Identification: 01135 HEXANES
CAGE: 19139
Assigned Individual: N
Company Name: EASTMAN KODAK CO GOVERNMENT MARKETS CONTRACTS
Company PO Box: 
Company Street Address1: 343 STATE ST
Company Street Address2: ROCHESTER, NY 14650-1115 US
Health Emergency Telephone: 800-225-5352
Label Required Indicator: Y
Date Label Reviewed: 04/17/2000
Status Code: A
Manufacturer's Label Number: 
Date of Label: 
Year Procured: N/K
Organization Code: G
Chronic Hazard Indicator: N/P
Eye Protection Indicator: N/P
Skin Protection Indicator: N/P
Respiratory Protection Indicator: N/P
Signal Word: N/P
Health Hazard: 
Contact Hazard: 
Fire Hazard: 
Reactivity Hazard: 

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