

ALFA AESAR,A JOHNSON MATTHEY COMPANY -- CESIUM (STOCK # 97715, SEE SUPPL DATA) --  
6240-01-266-0930

===== Product Identification =====

Product ID:CESIUM (STOCK # 97715, SEE SUPPL DATA)

MSDS Date:01/11/2001

FSC:6240

NIIN:01-266-0930

Status Code:A

MSDS Number: CLMCZ

=== Responsible Party ===

Company Name:ALFA AESAR,A JOHNSON MATTHEY COMPANY

Address:30 BOND STREET

City:WARD HILL

State:MA

ZIP:01835-0747

Country:US

Info Phone Num:508-521-6300/978-424-9300

Emergenc

y Phone Num:978 521-6300 - 800 424-9300

Chemtre Ind/Phone:(800)424-9300

CAGE:NO660

=== Contractor Identification ===

Company Name:ALFA AESAR,A JOHNSON MATTHEY COMPANY

Address:30 BOND STREET

Box:City:WARD HILL

State:MA

ZIP:01835-0747

Country:US

Phone:508-521-6300/978-424-9300

CAGE:NO660

Company Name:LORAL ELECTRO-OPTICAL SYSTEMS A SUB OF LORAL CORP

Address:300 N HALSTEAD ST

Box:7101

City:PASADENA

State:CA

ZIP:91109

Country:US

Contract Num:SP056000CC080

CAGE:12705

Company Name:SANDERS, A LOCKHEED

MARTIN CO (BAE SYSTEMS)  
Address:600 E. BONITA AVENUE  
Box:City:POMONA  
State:CA  
ZIP:91767  
Country:US  
Phone:XXXXXXXXXXXXXX  
CAGE:UO698

===== Composition/Information on Ingredients =====

Ingred Name:CESIUM  
CAS:7440-46-2  
RTECS #:FK9225000  
= Wt:100.

===== Hazards Identification =====

Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES  
Health Hazards Acute and Chronic:PRIMARY IRRITANT EFFECT: SKIN:  
CORROSIVE TO SKIN AND MUCOUS MEMBRANES.  
EYE: STRONG CORROSIVE  
EFFECT.INHALATION MAY RESULT IN RESPIRATORY EFFECTS SUCH AS  
INFLAMMATION, EDEMA, & CHEMICAL PNEUMONITIS. SE NSITIZATION: NO  
SENSITIZING EFFECTS KNOWN. SUBACUTE TO CHRONIC TOXICITY: CESIUM  
COMPOUNDS MAY CAUSE HYPER-IRRITABILITY, INCLUDING SPASMS,  
DIZZINESS, ABDOMINAL CRAMPS, VOMITING, DIARRHEA, CONVULSIONS A ND  
COLLAPSE. CHRONIC INGESTION OF CESIUM HAS BEEN FATAL TO LABORATORY  
ANIMALS, POSSIBLY DUE TO THE REPLACEMENT OF POTASSIUM. CHRONIC  
EXPO  
SURE ALSO CAN HAVE BLOOD AND NEUROMUSCULAR EFFECTS.  
Explanation of Carcinogenicity:NO CLASSIFICATION DATA ON CARCINOGENIC  
PROPERTIES OF THIS MATERIAL IS AVAILABLE FROM THE EPA, IARC, NTP,  
OSHA OR ACGIH.  
Effects of Overexposure:CORROSIVE MATERIALS ARE ACUTELY DESTRUCTIVE TO  
THE RESPIRATORY TRACT, EYES, SKIN AND DIGESTIVE TRACT. EYE CONTACT  
MAY RESULT IN PERMANENT DAMAGE AND COMPLETE VISION LOSS. INHALATION  
MAY RESULT IN RESP IRATORY EFFECTS SUCH AS INFLAMMATION, EDEMA, AND  
CHEMICAL PNEUMONITIS. MAY CAUSE COUGHING, WHEEZING, LARYNGITIS,  
SHORTNESS OF BREATH, HEADACHE, NAUSEA AND VOMITING. INGESTION MAY  
CAUSE DAMAGE TO THE M OUTH, THROAT AND ESOPHAGUS. MAY CAUSE SKIN  
BURNS OR IRRITATION DEPENDING ON THE SEVERITY OF THE EXPOSURE.  
SWALLOWING WILL LEAD TO A STRONG CORROSIVE EFFECT ON MOUTH AND  
THROAT AND TO THE DANGER OF PER FORATION OF ESOPHAGUS AND STOMACH.

===== First Aid Measures =====

First Aid:GENERAL IN

FORMATION: IMMEDIATELY REMOVE ANY CLOTHING SOILED BY THE PRODUCT. AFTER INHALATION: SUPPLY FRESH AIR. IF REQUIRED, PROVIDE ARTIFICIAL RESPIRATION. KEEP PATIENT WARM. SEEK IMMEDIATE MEDICAL A DVICE. AFTER SKIN CONTACT: IMMEDIATELY WASH WITH WATER AND SOAP AND RINSE THOROUGHLY. SEEK IMMEDIATE MEDICAL ADVICE. AFTER EYE CONTACT: RINSE OPENED EYE FOR SEVERAL MINUTES UNDER RUNNING WATER. THEN C ONSULT A DOCTOR. AFTER SWALLOWING SEEK IMMEDIATE MEDICAL ADVICE.

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===== Fire Fighting Measures =====

Autoignition Temp:Autoignition Temp Text:N/D

Lower Limits:N/D

Upper Limits:N/D

Extinguishing Media:SPECIAL POWDER FOR METAL FIRES. DO NOT USE WATER. FOR SAFETY REASONS UNSUITABLE EXTINGUISHING AGENTS: WATER.

Fire Fighting Procedures:WEAR SELF-CONTAINED RESPIRATOR. WEAR FULLY PROTECTIVE IMPERVIOUS SUIT.

Unusual Fire/Explosion Hazard:CONTACT WITH WATER RELEASES HYDROGEN (EXPLOSIVE).

===== Accidental Release Measures  
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Spill Release Procedures:WEAR PROTECTIVE EQUIPMENT. KEEP UNPROTECTED PERSONS AWAY. ENSURE ADEQUATE VENTILATION. KEEP AWAY FROM IGNITION SOURCES. DO NOT ALLOW MATERIAL TO BE RELEASED TO THE ENVIRONMENT WITHOUT PROPER GOVERNMENTAL PERMITS. PICK UP MECHANICALLY. DISPOSE CONTAMINATED MATERIAL AS WASTE. ENSURE ADEQUATE VENTILATION. DO NOT FLUSH WITH WATER OR AQUEOUS CLEANSING AGENTS. KEEP AWAY FROM IGNITION SOURCES.

===== Handling and S  
torage =====

Handling and Storage Precautions:HANDLE UNDER DRY PROTECTIVE GAS. KEEP CONTAINER TIGHTLY SEALED. STORE IN COOL, DRY PLACE IN TIGHTLY CLOSED CONTAINERS. ENSURE GOOD VENTILATION AT WORKPLACE. PROTECT FROM HUMIDITY AND WATER. KEEP IGNITION SOURCES AWAY.

Other Precautions:STORE AWAY FROM WATER/MOISTURE. STORE AWAY FROM OXIDIZING AGENTS. STORE UNDER DRY INERT GAS. AVOID CONTACT WITH AIR/OXYGEN. KEEP CONTAINER TIGHTLY SEALED. STORE IN COOL, DRY

CONDITIONS IN WELL SEALED CONTAINERS. STORE UNDER LOCK AND KEY AND WITH ACCESS RESTRICTED TO TECHNICAL EXPERTS OR THEIR ASSISTANTS ONLY.

===== Exposure Controls/Personal Protection =====

Respiratory Protection: PROPERLY OPERATING CHEMICAL FUME HOOD DESIGNED FOR HAZARDOUS CHEMICALS AND HAVING AN AVERAGE FACE VELOCITY OF AT LEAST 100 FEET PER MINUTE. USE SUITABLE RESPIRATOR WHEN HIGH CONCENTRATIONS ARE PRESENT.

Ventilation: NOT REQUIRED.

Protective Gloves: IMPERVIOUS GLOVES.

Eye Protection: SAFETY GLASSES. TIGHTLY SEALED GOGGLES. FULL FACE PROTECTION.

Other Protective Equipment: PROTECTIVE WORK CLOTHING.

Work Hygienic Practices: KEEP AWAY FROM FOODSTUFFS, BEVERAGES AND FEED. REMOVE ALL SOILED AND CONTAMINATED CLOTHING IMMEDIATELY. WASH HANDS BEFORE BREAKS AND AT THE END OF WORK. AVOID CONTACT WITH THE EYES AND SKIN.

Supplemental Safety and Health

CONT'D PRODUCT ID: MFR CODE: 12705, DESIGN CONTROL # 1161666. NSN IS FOR CESIUM LAMP BU

T MFR HAS PROVIDED A MSDS FOR CESIUM METAL.

SEALED LAMP WILL BE NON-HAZARDOUS AS SUCH, BUT CESIUM METAL IS HAZARDOUS.

===== Physical/Chemical Properties =====

HCC: R2

Boiling Pt: =690.C, 1274.F

Melt/Freeze Pt: =28.9C, 84.F

Decomp Temp: Decomp Text: NOT DETERMINED

Vapor Pres: 279C(534F): 1.33 HPA

Vapor Density: 1.892 G/CM

Solubility in Water: REACTS VIOLENTLY

Appearance and Odor: SILVER-COLORED ODORLESS, SOLID.

===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid: YES

WATER/MOISTURE, OXIDIZING AGENTS, ACIDS, HALOGENS.

Stability Condition to Avoid: DECOMPOSITION WILL NOT OCCUR IF USED AND STORED ACCORDING TO SPECIFICATIONS.

Hazardous Decomposition Products: EXPLOSIVE REACTION WITH WATER. CONTACT WITH WATER RELEASES FLAMMABLE GASES. REACTS WITH OXIDIZING AGENTS, ALCOHOLS, OXYGEN, CARBON DIOXIDE. SELF-IGNITING ON CONTACT WITH AIR AND DRY SURFACES. HYDROGEN.

===== Toxicological

Information =====

Toxicological Information:SEE HEALTH HAZARDS. MATERIAL IS CORROSIVE AND  
HIGHLY FLAMMABLE, REACTS WITH WATER LIBERATING EXTREMELY FLAMMABLE  
GASES.

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

Ecological:DO NOT ALLOW THE MATERIAL TO BE RELEASED TO THE ENVIRONMENT  
WITHOUT PROPER GOVERNMENTAL PERMITS.

===== Disposal Considerations =====

Waste Disposal Methods:RECOMMENDATION: CONSULT STATE, LOCAL  
OR NATIONAL  
REGULATIONS FOR PROPER DISPOSAL. UNCLEANNED PACKAGINGS:  
RECOMMENDATION: DISPOSAL MUST BE MADE ACCORDING TO OFFICIAL  
REGULATIONS.

===== MSDS Transport Information =====

Transport Information:PSN: CESIUM, 4.3, UN1407, I.

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

Federal Regulatory Information:TSCA INVENTORY STATUS: THECOMPONENTS OF  
THIS PRODUCT ARE LISTED ON THE TSCA INVENTORY.

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

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particular situation.