

Product Identification: COMPOSITION C-4, TYPE II
Date of MSDS: 07/15/1987 **Technical Review Date:** 05/27/1999
FSC: 1375 **NIIN:** LIIN: 00N091093
Submitter: N EN
Status Code: A
MFN: 01
Article: N
Kit Part: N

Manufacturer's Information

Manufacturer's Name: HOLSTON DEFENSE CORPORATION
Manufacturer's Address1: WEST STONE DRIVE
Manufacturer's Address2: KINGSPORT, TN 37660
Manufacturer's Country: US
General Information Telephone: 615-247-9111
Emergency Telephone: 615-247-9111
Other Number for MSDS Information: 4113.0072, HH-3810
Emergency Telephone: 615-247-9111
Proprietary: N
Reviewed: Y
Published: Y
CAGE: 1D893

Contractor Information

Contractor's Name: HOLSTON DEFENSE CORPORATION
Contractor's Address1: WEST STONE DRIVE
Contractor's Address2: KINGSPORT, TN 37660
Contractor's Telephone: 615-247-9111
Contractor's CAGE: 1D893

Section 2 - Composition/Information on Ingredients COMPOSITION C-4, TYPE II

Ingredient Name: CYCLOTRIMETHYLENE-TRINITRAMINE (RDX, CYCLONITE, HEXOGEN)
Ingredient CAS Number: **Ingredient CAS Code:** X
RTECS Number: **RTECS Code:** X
=WT: **=WT Code:**
=Volume: **=Volume Code:**
>WT: **>WT Code:**
>Volume: **>Volume Code:**
<WT: **<WT Code:**
<Volume: **<Volume Code:**
% Low WT: 89.9 **% Low WT Code:** M

% High WT: 92. % High WT Code: M
% Low Volume: % Low Volume Code:
% High Volume: % High Volume Code:
% Text:
% Environmental Weight:
Other REC Limits: N/K (FP N)
OSHA PEL: N/K (FP N) OSHA PEL Code:
OSHA STEL: N/K (FP N) OSHA STEL Code:
ACGIH TLV: 1.5 MG/M3 ACGIH TLV Code: M
ACGIH STEL: 3.0 MG/M3 ACGIH STEL Code: M
EPA Reporting Quantity:
DOT Reporting Quantity:
Ozone Depleting Chemical:

Section 3 - Hazards Identification, Including Emergency Overview
COMPOSITION C-4, TYPE II

Health Hazards Acute & Chronic: SKIN/EYES: CAN CAUSE ALLERGIC SKIN REACTION. CAN CAUSE EYE IRRITATION. AVOID PROLONGED CONTACT WITH SKIN. AVOID CONTACT WITH EYES. INHALATION/INGESTION: CHRONIC EXPOSURE TO RDX DUST HAS BEEN REPORTED TO CAUSE CONVULSIONS OR UNCONSCIOUSNESS. CHRONIC LOCAL AND SYSTEMIC EFFECTS ARE NOT FULLY KNOWN. INHALATION AND INGESTION CAN RESULT IN SYSTEMIC POISONING, USUALLY AFFECTING THE BONE MARROW (BLOOD-CELL-PRODUCING SYSTEM) AND THE LIVER. AVOID INHALATION AND INGESTION OF DUST.

Signs & Symptoms of Overexposure:
SEE HEALTH HAZARDS.

Medical Conditions Aggravated by Exposure:
N/P

LD50 LC50 Mixture: SEE TOXICOLOGICAL INFORMATION.

Route of Entry Indicators:

Inhalation: YES

Skin: YES

Ingestion: YES

Carcinogenicity Indicators

NTP: NO

IARC: NO

OSHA: NO

Carcinogenicity Explanation: N/P

Section 4 - First Aid Measures
COMPOSITION C-4, TYPE II

First Aid:

EYES: FLUSH THORO W/LARGE AMOUNTS OF LOW PRESS WATER FOR AT LEAST 15 MINUTES. REMOVE CONT LENSES. GET MEDICAL ATTN. SKIN: WASH W/SOAP & WARM RUNNING WATER. CLEAN CLOTHING THORO & DISPOSE OF SHOES CONTAM W/EXPLOSIVES I/A/W EXPLOSIVE DISPOSAL PROCEDURES. GET MEDICAL ATTN FOR RASH/IRRIT. INHAL: REMOVE TO FRESH AIR, TREAT ANY IRRITATION SYMTOMATICALLY. IF BREATHING IS DIFFICULT, GIVE OXYGEN. G ET MEDICAL ATTN. INGEST: IF CONSCIOUS, INDUCE VOMIT IMMED BY GIVING 1-2 GLASSES OF WATER & TOUCHING BACK OF THROAT W/FINGER/BLUNT OBJECT/BY GIVING SYRUP OF IPECAC. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET MEDICAL ATTN.

Section 5 - Fire Fighting Measures
COMPOSITION C-4, TYPE II

Fire Fighting Procedures:

WEAR NIOSH APPRVD SCBA & FULL PROT EQUIP (FP N). DO NOT ATTEMPT TO MANUALLY EXTING FIRES. BURNING EXPLO MAY ACCELERATE TO DETONATION AT ANY TIME WHEN SUBJECTED TO CONFINEMENT, SHOCK/OTHER SUFFICIENT INITIATION SOURCE. NO ATTEMPT TO FIGHT FIRE INVOLVING EXPLO SHOULD BE MADE EXCEPT FOR MANUAL (TRANSPORT INFO)

Unusual Fire or Explosion Hazard:

MUST NOT BE CONFINED IF BURNING. CONFINEMENT CAN CAUSE DEFLAGRATION/TRANSITION TO DETONATION W/EXTREMELY VIOLENT RSLTS. EXPLO MAY BE RETAINED IN FISSURES, CRACKS, & CREVICES OF STRUCTURES, EQUIP, & CONTRS WHICH HAVE BEEN EXPOSED TO EXPLO. PROPERTY WHICH MAY BE CONTAM BY EXPLO MUST NOT BE SUBJECTED TO (TRANSPORT INFO)

Extinguishing Media:

WATER SPRINKLER/DELUGE SYSTEM RECOMMENDED.

Flash Point: Flash Point Text: N/A

Autoignition Temperature:

Autoignition Temperature Text: N/P

Lower Limit(s): N/A

Upper Limit(s): N/A

Section 6 - Accidental Release Measures
COMPOSITION C-4, TYPE II

Spill Release Procedures:

CLEAN UP SPILLS IMMED USING SOFT BRISTLE BRUSH & CONDUCTIVE RUBBER PAN/RUBBER SHOVEL. USE CONDUCTIVE CONTRS & GROUND ALL CONTRS BEFORE TRANSFERRING EXPLO BETWEEN CONTRS. TREAT LIKE

FLAM SOLV W/REGAR D TO ELECTROSTATIC DISCHARGE. AVOID PINCHING MATL, METAL TO METAL CONT, IMPACT W/SHARP OBJECTS, FRICTION/OTHER SITUATIONS WHICH MAY INITIATE EXPLO. (SUP DAT)

Section 7 - Handling and Storage COMPOSITION C-4, TYPE II

Handling and Storage Precautions:

Other Precautions:

Section 8 - Exposure Controls & Personal Protection COMPOSITION C-4, TYPE II

Respiratory Protection:

NOT APPLICABLE. USE NIOSH APPROVED RESPIRATOR APPROPRIATE FOR EXPOSURE OF CONCERN (FP N).

Ventilation:

NOT APPLICABLE.

Protective Gloves:

IMPERVIOUS GLOVES RECOMMENDED FOR PROLONGED OR REPEATED SKIN CONTACT.

Eye Protection: ANSI APPROVED CHEMICAL WORKERS GOGGLES (FP N).

Other Protective Equipment: ANSI APPRVD EMER EYEWASH & DELUGE SHOWER (FP N). EXPLO-HNDLG: CAPS & COVERALLS FOR FULL BODY (ARMS & LEGS) PROT REC. COTTON UNDERWEAR, SOCKS, & CONDUCTIVE SHOES REC TO AVOID HUMAN STATIC DISCHARGE.

Work Hygienic Practices: AS A PRECAUTION, HANDLE ONLY IN WELL-VENTILATED AREAS, CHANGE CLOTHING DAILY, BATHE AT THE END OF THE WORK PERIOD, AND WASH HANDS THOROUGHLY AFTER HANDLING. WASH CONTAMINATED CLOTHING BEFORE REUSE.

Supplemental Health & Safety Information: SPILL PROC: AVOID SAND, GLASS, GRIT, & METAL FRAGMENTS WHICH MAY SENSITIZE MATL TO IMPACT &/OR FRICTION. WET W/WATER TO DESENSITIZE. WASTE DISP METH: PERS SHOULD WEAR FLAME-RESIST CLTHG. DISP OF EX PLO SHOULD COMPLY W/ALL APPLIC FED, STATE, & LOC REGS. REFER TO FIRE FIGHT PROC FOR PREC WHEN BURNING. (OTHER INFO)

Section 9 - Physical & Chemical Properties COMPOSITION C-4, TYPE II

HCC:

NRC/State License Number:

Net Property Weight for Ammo:

Boiling Point: Boiling Point Text: N/A

Melting/Freezing Point: =205.C, 401.F Melting/Freezing Text: WITH

DECOMPOSITION

Decomposition Point: Decomposition Text: N/P

Vapor Pressure: 0 MM HG **Vapor Density:** N/A

Percent Volatile Organic Content:

Specific Gravity: 1.7 (H*2O=1)

Volatile Organic Content Pounds per Gallon:

pH: N/P

Volatile Organic Content Grams per Liter:

Viscosity: N/P

Evaporation Weight and Reference: N/A

Solubility in Water: INSOLUBLE

Appearance and Odor: PUTTY-LIKE PLASTIC, WHITE TO OFF-WHITE.

Percent Volatiles by Volume: N/A

Corrosion Rate: N/P

Section 10 - Stability & Reactivity Data COMPOSITION C-4, TYPE II

Stability Indicator: NO

Materials to Avoid:

AVOID ALKALIS, PARTICULARLY AT ELEVATED TEMPERATURES, STRONG ACIDS AND PHYSICAL SENSITIZERS SUCH AS GLASS, SAND, AND METAL FRAGMENTS.

Stability Condition to Avoid:

AVOID SHOCK, HEAT, ELECTROSTATIC DISCHARGE, IMPACT, IMPINGEMENT AND FRICTION. HIGH EXPLOSIVE WILL DETONATE WHEN EXPOSED TO SUFFICIENT ENERGY LEVEL.

Hazardous Decomposition Products:

DURING DECOMPOSITION TOXIC OXIDES OF NITROGEN ARE EMITTED.

Hazardous Polymerization Indicator: NO

Conditions to Avoid Polymerization:

N/P

Section 11 - Toxicological Information COMPOSITION C-4, TYPE II

Toxicological Information:

THE TOXICOLOGICAL PROPERTIES OF RDX HAVE NOT BEEN FULLY INVESTIGATED. LD₀ (BASED ON RDX, LOWEST LETHAL DOSE) ORAL-RABBIT: 500 MG/KG; INTRAPERITONEAL-RAT: 10 MG/KG; ORAL-CAT: 100 MG/KG; INTRAVENOUS-RAT: 16 MG/KG; ORAL-MOUSE: 500 MG/KG; LD₅₀ ORAL-RAT: 100 MG/KG; ORAL-MOUSE: 500 MG/KG. OSHA PEL-NOT ESTABLISHED FOR ANY COMPONENT IN THIS FORMULATION.

Section 12 - Ecological Information COMPOSITION C-4, TYPE II

Ecological Information:

OTHER INFO: OF EXPLO OF MILITARY INTEREST, ARMY MATL COMMAND PAMPHLET 700-177. ADDNL INFO ABOUT FIRE FIGHT PROC, COLLECTION & DESTRUCTION OF WASTE, & STOR & HNDLG PREC CAN BE FOUND IN ARMY SFTY MANUA L, ARMY MATL COMMAND REGS 385-100 & DEPARTMENT OF DEFENSE CONTRACTOR'S SFTY MANUAL FOR AMMUNITION, EXPLO & RELATED DANGEROUS MATL, DOD 4145.26M. COMP C-4, TYPE II IS A MILITARY HIGH EXPLO. COMP C-4, TYPE II HAS BEEN ASSIGNED UNITED NATIONS ORGANIZATION CLASSIFICATION OF CLASS 1, DIVISION 1, (MASS DETONATING) BASED ON DEPARTMENT OF DEFENSE EXPLO HAZ CLASSIFICATION PROC, ARMY TECHNICAL BULLETIN 70 0-2.

Section 13 - Disposal Considerations
COMPOSITION C-4, TYPE II

Waste Disposal Methods:

EXPLO SHOULD BE DESTROYED BU OPEN BURNING, BY BURNING IN APPRVD INCIN/BY CHEM TREATMENT W/CAUSTICS. DISP SITE SHOULD BE LOCATED TO PROVIDE ADEQ QTY DIST PROT FOR ADJACENT FACILITIES & PERS. EXPLO SH OULD NOT BE BURNED IN CONTRS. EXPLO SHOULD BE IGNITED REMOTELY. PERS SHOULD WEAR FLAME-RESIST CLTH G. (SARA REG INFO)

Section 14 - MSDS Transport Information
COMPOSITION C-4, TYPE II

Transport Information:

DOT NUMBER: 0072. FIRE FIGHT PROC: ACTIVATION OF INSTALLED FIRE EXTING EQUIP. PERS SHOULD LEAVE BLDG IMMED USING AS MUCH PROT COVER AS POSS & ACTIVATING DELUGE SYS & FIRE ALARM EQUIP WHILE ESCAPING. EXPLO HAZ: HEAT, SPKS/FLAME. DETONATION CAN OCCUR. THERMAL DECONTAM UNDER CONTROLLED CNDTNS IS REC METH FOR COMPLETE DECONTAM. THERMAL DECONTAM MUST BE PRECEDED BY WASHING/STEAMING & CHEM NEUTRAL IZATION/DISSOLUTION. CONTAM PROPERTY MUST NOT BE BURIED.

Section 15 - Regulatory Information
COMPOSITION C-4, TYPE II

SARA Title III Information:

WASTE DISPOSAL METHOD: STORE AND HANDLE WASTE EXPLOSIVES AS CLASS A EXPLOSIVES. TRANSPORT IN ACCORDANCE WITH THE DEPARTMENT OF TRANSPORTATION REGULATIONS FOR CLASS A EXPLOSIVES. OBTAIN APPROVAL FOR APPROPRIATE SAFETY AGENCY BEFORE DISPOSAL.

Federal Regulatory Information:

N/P

State Regulatory Information:

**Section 16 - Other Information
COMPOSITION C-4, TYPE II**

Other Information:

OTHER PREC: FLOOR & TABLE COVERINGS, PACKING MATLS, & OTHER SIMILAR MATLS & EQUIP. KEEP CONTR CLSD. EXTREME CARE SHOULD BE EXERCISED DURING MAINTENANCE OF EXPLO CONTAM EQUIP.

DECONTAM PROC INCL WAS HING/STEAMING, CHEM DECONTAM, & THERMAL DECONTAM. DECONTAM SHOULD BE PERFORMED PRIOR TO WELDING, CUTTING/GRINDING METAL PARTS. PENETRATING OIL SHOULD BE USED LIBERALLY ON NUTS, BOLTS, & ALL THREADED CONNECTIONS TO AID IN DESENSITIZING HIDDEN EXPLO PRIOR TO DISASSEMBLY. REFER TO AMCR 385-100, PARAGRAPH 16-18. ADDNL INFO ABOUT PROPERTIES OF EXPLO CAN BE FOUND IN ENGINEERING DESIGN HANDBOOK, EXPL O SERIES, PROPERTIES (ECOLOGICAL INFO)

HAZCOM Label Information

Product Identification: COMPOSITION C-4, TYPE II

CAGE: 1D893

Assigned Individual: N

Company Name: HOLSTON DEFENSE CORPORATION

Company PO Box:

Company Street Address1: WEST STONE DRIVE

Company Street Address2: KINGSPORT, TN 37660 US

Health Emergency Telephone: 615-247-9111

Label Required Indicator: Y

Date Label Reviewed: 05/27/1999

Status Code: A

Manufacturer's Label Number:

Date of Label:

Year Procured: N/K

Organization Code: F

Chronic Hazard Indicator: Y

Eye Protection Indicator: YES

Skin Protection Indicator: YES

Respiratory Protection Indicator: YES

Signal Word: DANGER

Health Hazard: Moderate

Contact Hazard: Moderate

Fire Hazard: Moderate

Reactivity Hazard: Severe