

# M A T E R I A L   S A F E T Y   D A T A   S H E E T

HTS 554 B BOOSTER UNITS

PRODUCT NAME: HTS 554B BOOSTER UNITS

PRODUCT CODE: EF-102-UT

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HMIS CODES: H F R P

1 3 1 I

## ===== SECTION I - MANUFACTURER IDENTIFICATION =====

MANUFACTURER'S NAME: HESTERMAN TECHNICAL SERVICES

ADDRESS : 190 HODSMAN ROAD

REGINA, SASK, CANADA S4N 5X4

INITIAL (FIRST CALL) 306-721-1339

EMERGENCY PHONE : CANUTEC (613) 996-6666

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NAME OF PREPARER : ENVIRONMENTAL SECT.

## ===== SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION =====

REPORTABLE COMPONENTS	CAS NUMBER	VAPOR PRESSURE mm Hg @	TEMP	WEIGHT PERCENT
HETEROCYCLIC SUBSTITUTED DIESTER	NON HAZARDOUS	10 TO 15	68F/20C	97
THIS RAW MATERIAL CONTAINS 76-84% HETEROCYCLIC SUBSTITUTED DIESTER AND HETEROCYCLIC SUBSTITUTED ALCOHOL, 14-20%, BOTH CONSIDERED NON HAZARDOUS BY THE MANUFACTURER OF THIS RAW MATERIAL. NO OCCUPATIONAL EXPOSURE GUIDELINES HAVE BEEN ESTABLISHED FOR EITHER OF THE ABOVE TWO CHEMICALS:				
*N-HEPTANE,	#142-82-5,		60F/20C	3
OSHA PEL-400PPM TWA, STEL-500PPM. ACGIH TWA-400 PPM, STEL-500PPM.				

\*Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372.

THIS MSDS MAY BE USED FOR OTHER COLORS AND CONTAINER SIZES OF THIS PRODUCT.

## ===== SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS =====

BOILING RANGE: 374F/190C

SPECIFIC GRAVITY (H2O=1): 1.06

VAPOR DENSITY: HEAVIER THAN AIR

EVAPORATION RATE: SLOWER THAN ETHER

COATING V.O.C.: 0.15 lb/gal

COATING V.O.C.: 18 g/l

MATERIAL V.O.C.: 0.15 lb/gal

MATERIAL V.O.C.: 18 g/l

SOLUBILITY IN WATER: NOT APPLICABLE - DECOMPOSES.

APPEARANCE AND ODOR: HAZY, YELLOW TO AMBER LIQUID. SOUR, BURNT ODOR.

## ===== SECTION IV - FIRE AND EXPLOSION HAZARD DATA =====

FLASH POINT: 162F/72C (SETA FLASH CLOSED CUP).

FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: N/A UPPER: N/A

EXTINGUISHING MEDIA: CARBON DIOXIDE, DRY CHEMICAL, OR WATER FOG.

### SPECIAL FIREFIGHTING PROCEDURES

DO NOT ENTER ANY ENCLOSED OR CONFINED FIRE SPACE WITHOUT FULL PROTECTIVE EQUIPMENT, INCLUDING SELF-CONTAINED BREATHING APPARATUS (PRESSURE-DEMAND MSHA/NIOSH APPROVED OR EQUIVALENT) TO PROTECT AGAINST THE HAZARDOUS EFFECTS OF COMBUSTION PRODUCTS AND OXYGEN DEFICIENCY.

### UNUSUAL FIRE AND EXPLOSION HAZARDS

MAY PRODUCE HAZARDOUS FUMES OR HAZARDOUS DECOMPOSITION PRODUCTS. THE SOLVENT(S) IN THIS PRODUCT IS (ARE) VOLATILE AND MAY GIVE OFF INVISIBLE VAPORS. THE VAPORS ARE HEAVIER THAN AIR AND MAY SETTLE IN LOW AREAS OR TRAVEL SOME DISTANCE ALONG THE GROUND OR SURFACE OR CONCENTRATE IN CONFINED SPACES WHERE THEY MAY IGNITE OR EXPLODE IF EXPOSED TO AN IGNITION SOURCE.

## ===== SECTION V - REACTIVITY DATA =====

STABILITY: STABLE

### CONDITIONS TO AVOID

HEAT, SPARKS, OPEN FLAMES, AND STATIC ELECTRICITY.

### INCOMPATIBILITY (MATERIALS TO AVOID)

AVOID CONTACT WITH STRONG OXIDIZING AGENTS. CONTACT WITH THE FOLLOWING MATERIALS MAY CAUSE A REACTION GENERATING HEAT OR DECOMPOSITION: WATER.

### HAZARDOUS DECOMPOSITION OR BYPRODUCTS

THERMAL DECOMPOSITION OR BURNING MAY PRODUCE CARBON MONOXIDE, CARBON DIOXIDE, SULPHUR OXIDES AND UNIDENTIFIED ORGANICS IN SMOKE.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

===== SECTION VI - HEALTH HAZARD DATA =====

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE  
HEADACHE AND/OR NAUSEA.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE  
SLIGHTLY IRRITATING TO THE SKIN. EYE CONTACT WITH VAPOR AND/OR SPRAY MIST MAY IRRITATE THE EYES. EYE CONTACT WITH LIQUID MAY RESULT IN SEVERE IRRITATION.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE  
EXPOSURE OF EXPERIMENTAL ANIMALS VIA OF SKIN ABSORPTION, INHALATION OR INGESTION PRODUCES A TOXIC EFFECT ON RED BLOOD CELLS.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE  
SWALLOWING MAY RESULT IN LOCAL IRRITATION AND CENTRAL NERVOUS EXCITATION AND DEPRESSION. VOMITING MAY ALSO RESULT. DO NOT ALLOW VOMITUS TO BE BREATHED INTO THE LUNGS, AS CHEMICAL PNEUMONITIS AND PULMONARY EDEMA/HEMORRHAGE IS POSSIBLE. PRODUCT CONTAINS A PETROLEUM DISTILLATE.

HEALTH HAZARDS (ACUTE AND CHRONIC)  
ACUTE: HEADACHE, NAUSEA, DIZZINESS, DROWSINESS AND IRRITATION OF THE NOSE, THROAT AND LUNGS. DELAYED EFFECTS: REPEATED OVEREXPOSURE TO THE SOLVENTS IN THIS PRODUCT CAN CAUSE CENTRAL NERVOUS SYSTEM EFFECTS.

CARCINOGENICITY: NTP CARCINOGEN: NO IARC MONOGRAPHS: NO OSHA REGULATED: YES  
PRODUCT INGREDIENTS ARE AT OR LESS THAN DE MINIMIS LEVELS OR ARE NOT CONSIDERED TO BE CARCINOGENS BY THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC), THE NATIONAL TOXICOLOGY PROGRAM (NTP) OR BY THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE  
NOT KNOWN.

EMERGENCY AND FIRST AID PROCEDURES  
INHALATION: REMOVE TO FRESH AIR. GIVE ARTIFICIAL RESPIRATION IF NOT BREATHING. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. TRAINED PERSONNEL ONLY SHOULD ADMINISTER OXYGEN. PREVENT ASPIRATION OF VOMIT. TURN VICTIMS HEAD TO THE SIDE. ASSURE OPEN AIRWAY. CALL A PHYSICIAN IMMEDIATELY. EYES: HOLD EYELIDS APART AND IMMEDIATELY FLUSH WITH PLenty OF WATER FOR AT LEAST 15 MINUTES. CONSULT A PHYSICIAN. SKIN: REMOVE PRODUCT AND IMMEDIATELY FLUSH AFFECTED AREA WITH WATER FOR AT LEAST 15 MINUTES. EXCEPT IN THE MOST MINOR, SUPERFICIAL AND LOCALIZED BURNS, COVER THE AFFECTED AREA WITH A STERILE DRESSING OR CLEAN SHEETING AND TRANSPORT FOR MEDICAL CARE. DO NOT APPLY GREASES OR OINTMENTS. CONTROL SHOCK IF PRESENT. DISCARD OR LAUNDER CONTAMINATED CLOTHING BEFORE REUSE. CONTAMINATED LEATHER WEAR SHOULD BE DISCARDED. INGESTION: IF SWALLOWED, DO NOT INDUCE VOMITING. ADMINISTER 3-4 GLASSES OF MILK OR WATER. OBTAIN MEDICAL CARE AND HOSPITAL TREATMENT IMMEDIATELY.

NOTE TO PHYSICIANS: THIS PRODUCT IS EXTREMELY INJURIOUS TO ALL TISSUES, SIMILAR TO THAT OF AMMONIA OR AMMONIA GAS. CHEMICAL PNEUMONITIS, PULMONARY EDEMA, LARYNGEAL EDEMA AND DELAYED SCARRING OF THE AIRWAY OR OTHER AFFECTED TISSUES MAY OCCUR FOLLOWING AN EXPOSURE. THERE IS NO SPECIFIC TREATMENT. CLINICAL MANAGEMENT IS BASED ON SUPPORTIVE TREATMENT, WHICH IS SIMILAR TO THAT FOR THERMAL BURNS.

===== SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE =====

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED  
DIKE AND ABSORB WITH INERT MATERIAL SUCH AS SAND. SCOOP UP WITH NON-SPARKING TOOLS AND PLACE IN APPROVED DOT CONTAINERS FOR DISPOSAL. KEEP OUT OF SEWERS, STORM DRAINS, SURFACE WATERS AND SOIL. TIGHTLY CLOSE DISPOSAL CONTAINER, EXCEPT IF MATERIAL HAS BECOME CONTAMINATED WITH MOISTURE OR WATER DURING CLEANING OPERATIONS. LEAVE LID OF CONTAINER LOOSE FOR 48 HOURS. ALLOW REACTION TO COME TO EQUILIBRIUM TO PREVENT PRESSURE BUILD-UP AND POSSIBLE CONTAINER RUPTURE.

WASTE DISPOSAL METHOD  
DISPOSE OF UNUSED PRODUCT OR CONTAMINATED PRODUCT AND MATERIALS USED IN CLEANING UP SPILLS OR LEAKS IN A MANNER APPROVED FOR THIS MATERIAL. CONSULT APPROPRIATE FEDERAL, STATE AND LOCAL REGULATORY AGENCIES TO ASCERTAIN PROPER DISPOSAL PROCEDURES. INCINERATION IS ACCEPTABLE AND THE PREFERRED METHOD OF DISPOSAL, HOWEVER; NITROGEN OXIDE EMISSIONS CONTROLS MAY BE REQUIRED TO MEET SPECIFICATIONS. CHEMICAL AND BIOLOGICAL DEGRADATION IS POSSIBLE. A SUITABLE INDUSTRIAL OR MUNICIPAL WASTE TREATMENT SYSTEM CAN BE USED DEPENDING ON THE QUALITY AND QUANTITY OF WASTE TO BE TREATED, THE TREATMENT PLANT CAPABILITY, AND DISCHARGE WATER QUALITY STANDARDS. DISPOSE OF IN AN APPROVED LANDFILL IF ALLOWED LOCALLY. EMPTY CONTAINERS WILL RETAIN PRODUCT RESIDUE AND VAPORS AND ARE SUBJECT TO PROPER WASTE DISPOSAL, AS ABOVE.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING  
STORE IN TIGHTLY CLOSED CONTAINERS TO PREVENT MOISTURE CONTAMINATION. UNUSED PRODUCT REMAINING IN OPENED CONTAINERS MUST BE PURGED WITH DRY NITROGEN BEFORE RESEALING TO PREVENT CO2 PRESSURE BUILD-UP DUE TO MOISTURE CONTAMINATION. IF MOISTURE OR WATER CONTAMINATION IS SUSPECTED, DO NOT RESEAL. STORE IN A COOL DRY, WELL VENTILATED AREA. OPEN SEALED DRUMS SLOWLY TO RELEASE ANY PRESSURE DUE TO POSSIBLE CO2 PRESSURE BUILD-UP. DO NOT PUNCTURE, CUT, GRIND, BRAZE, WELD OR DRILL ON OR NEAR THIS CONTAINER. CONTAINERS, EVEN THOSE THAT HAVE BEEN EMPTIED, WILL CONTAIN PRODUCT RESIDUE AND VAPORS. ALWAYS OBEY HAZARD WARNINGS AND HANDLE EMPTY CONTAINERS AS IF THEY WERE FULL. DO NOT USE PRESSURE TO EMPTY CONTAINER.

**OTHER PRECAUTIONS**

CONTAINERS, EVEN THOSE THAT HAVE BEEN EMPTIED, WILL RETAIN PRODUCT RESIDUE & VAPORS. ALWAYS OBEY HAZARD WARNINGS AND HANDLE EMPTY CONTAINERS AS IF THEY WERE FULL. DO NOT USE PRESSURE TO EMPTY CONTAINER. DO NOT PUNCTURE, CUT, GRIND, WELD, BRAZE, SOLDER OR DRILL ON OR NEAR THIS CONTAINER OR OTHERWISE EXPOSE SUCH CONTAINER TO HEAT, FLAME, SPARKS, STATIC ELECTRICAL CHARGES, ELECTRICITY OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND/OR EMIT TOXIC VAPORS RESULTING IN INJURY OR DEATH. CLOSED CONTAINERS MAY EXPLODE DUE TO PRESSURE BUILD-UP IF EXPOSED TO EXTREME HEAT. DO NOT GET IN EYES, ON SKIN OR ON CLOTHING. AVOID PROLONGED OR REPEATED BREATHING OF VAPOR OR SPRAY MIST. USE ONLY IN A WELL VENTILATED AREA. KEEP OUT OF THE REACH OF CHILDREN.

===== **SECTION VIII - CONTROL MEASURES** =====**RESPIRATORY PROTECTION**

WEAR A NIOSH APPROVED RESPIRATOR APPROPRIATE FOR THE VAPOR OR MIST CONCENTRATION AT THE POINT OF USE. APPROPRIATE RESPIRATORS MAY BE FULL FACE OR A HALF MASK AIR-PURIFYING CARTRIDGE RESPIRATOR EQUIPPED FOR ORGANIC VAPORS/MISTS, A SELF-CONTAINED BREATHING APPARATUS IN THE PRESSURE DEMAND MODE, OR A SUPPLIED-AIR RESPIRATOR. REFER TO OSHA STANDARD 29 CFR 1910.134 FOR ADDITIONAL INFORMATION.

**VENTILATION**

IF CURRENT VENTILATION PRACTICES ARE NOT ADEQUATE DURING MIXING AND APPLICATION OPERATIONS TO MINIMIZE EXPOSURE, USE EXPLOSION-PROOF LOCAL EXHAUST VENTILATION CAPABLE OF MAINTAINING EMISSIONS AT THE POINT OF USE BELOW THE PEL OR TLV OR OTHER EXPOSURE GUIDELINES, AS APPROPRIATE. VENTILATION RATES SHOULD BE MATCHED TO CONDITIONS. EXPLOSION-PROOF MECHANICAL EXHAUST VENTILATION, WITH VOLUME AND PATTERN CAPABLE OF MAINTAINING A FRESH AIR SUPPLY, MAY BE NECESSARY IN CONFINED SPACES. REFER TO OSHA STANDARD 29 CFR 1910.94 FOR GUIDELINES. TURN OFF HEATING AND/OR AIR CONDITIONING EQUIPMENT TO PREVENT CONTAMINATING BUILDING.

**PROTECTIVE GLOVES**

THE USE OF GLOVES IMPERMEABLE TO THE SPECIFIC MATERIAL HANDLED IS ADVISED TO PREVENT SKIN CONTACT AND POSSIBLE IRRITATION. NOTE THAT PVA DEGRADES IN WATER.

**EYE PROTECTION**

CHEMICAL GOGGLES. IF SPLASHING MAY OCCUR OR DURING SPRAY OPERATIONS WEAR A FACE SHIELD, UNLESS A FULL FACE PIECE RESPIRATOR IS USED. DO NOT WEAR CONTACT LENSES AS THEY MAY CONTRIBUTE TO THE SEVERITY OF INJURY TO THE EYE FROM EXPOSURE TO LIQUID AND/OR VAPORS AND SPRAY MIST.

**OTHER PROTECTIVE CLOTHING OR EQUIPMENT**

LONG SLEEVED SHIRT, TROUSERS, SAFETY SHOES AND GLOVES. AN EYEWASH STATION AND SAFETY SHOWER SHOULD BE AVAILABLE & READY FOR USE. IMPERVIOUS CLOTHING SHOULD BE WORN AS NEEDED. PROTECTIVE CLOTHING SHOULD BE SELECTED AND USED IN ACCORDANCE WITH "GUIDELINES FOR THE SELECTION OF CHEMICAL PROTECTIVE CLOTHING" PUBLISHED BY ACGIH. (AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS).

**WORK/HYGIENIC PRACTICES**

WASH AT THE END OF EACH WORK SHIFT AND BEFORE EATING, SMOKING OR USING THE TOILET. PROMPTLY REMOVE CONTAMINATED CLOTHING AND LAUNDER BEFORE WEARING. DISCARD CONTAMINATED LEATHER ARTICLES. EXAMINE PROTECTIVE GLOVES AND CLOTHING BEFORE USE. DISCARD UPON FINDING EVIDENCE OF HOLES CRACKS OR LEAKS.

**ADDITIONAL REGULATORY INFORMATION.**

STATUS OF SUBSTANCE LISTS: THE CONCENTRATIONS SHOWN IN SECTION II AND/OR IN THIS SECTION, ARE MAXIMUM FOR CEILING LEVELS (WEIGHT %) TO BE USED FOR CALCULATIONS FOR REGULATIONS. (DUE TO ROUNDING OFF OF COMPUTER GENERATED INGREDIENT CONTENT WEIGHT PERCENTAGES IN SECTION II, SOME VARIATION MAY OCCUR BETWEEN SECTION II AND SECTION VIII. USE THE HIGHEST PERCENTAGE FOR CALCULATIONS).

**CANADIAN WHIMIS HAZARD CLASSIFICATION**

ACCORDING TO THE CONTROLLED PRODUCTS REGULATIONS THIS PRODUCT IS CLASSIFIED AS;  
FLAMMABLE LIQUID (CLASS B, DIVISION 2) AND A VERY TOXIC MATERIAL (CLASS D, DIVISION 2, SUBDIVISION A).

FEDERAL EPA: COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT OF 1980 (CERCLA) REQUIRES NOTIFICATION OF THE NATIONAL RESPONSE CENTER OF RELEASE OF QUANTITIES OF HAZARDOUS SUBSTANCES EQUAL TO OR GREATER THAN THE REPORTABLE QUANTITIES (RQs) IN 40 CFR 302.4.

COMPONENTS PRESENT IN THIS PRODUCT AT A LEVEL THAT COULD REQUIRE REPORTING UNDER THE STATUTE ARE: NONE KNOWN.

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III REQUIRES EMERGENCY PLANNING BASED ON THRESHOLD PLANNING QUANTITIES (TPQs) AND RELEASE REPORTING BASED ON REPORTABLE QUANTITIES (RQs) IN 40 CFR 355 (USED FOR SARA 302, 304, 311 AND 312).

COMPONENTS PRESENT IN THIS PRODUCT AT A LEVEL THAT COULD REQUIRE REPORTING UNDER THE STATUTE ARE: NONE KNOWN

UNDER SECTION 311 & 312 CATEGORIZATION (40CFR370) THIS PRODUCT IS A HAZARDOUS CHEMICAL UNDER 29CFR1910.1200, AND IS CATEGORIZED AS AN IMMEDIATE AND DELAYED HEALTH, AND FLAMMABILITY HAZARD.

REQUIRES SUBMISSION OF ANNUAL REPORTS OF RELEASE OF TOXIC CHEMICALS THAT APPEAR IN 40 CFR 372 (FOR SARA 313). THIS INFORMATION MUST BE INCLUDED IN ALL MSDS's THAT ARE COPIED AND DISTRIBUTED FOR THIS MATERIAL.

COMPONENTS PRESENT IN THIS PRODUCT AT A LEVEL THAT COULD REQUIRE REPORTING UNDER THE STATUTE ARE:  
SEE SECT II

STATE RIGHT TO KNOW:

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CALIFORNIA PROPOSITION 65:

NONE KNOWN.

IN ADDITION TO THE ABOVE NAMED CHEMICALS, IF ANY, THIS PRODUCT MAY CONTAIN TRACE AMOUNTS OF SOME CHEMICALS CONSIDERED BY THE STATE OF CALIFORNIA TO BE CARCINOGENS OR REPRODUCTIVE TOXICANTS.

TOXIC SUBSTANCES CONTROL ACT (TSCA) STATUS:

THE COMPONENTS OF THIS PRODUCT ARE LISTED OR ARE EXCLUDED FROM LISTING ON THE U.S. TOXIC SUBSTANCES CONTROL ACT (TSCA) CHEMICAL SUBSTANCE INVENTORY.

THE REMAINING PERCENTAGE OF UNSPECIFIED INGREDIENTS ARE NOT CONTAINED IN ABOVE de minimis CONCENTRATIONS AND/OR ARE BELIEVED TO BE NON-HAZARDOUS UNDER THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200), AND MAY CONSIST OF PIGMENTS, FILLERS, DEFOAMERS, WETTING AGENTS, ANTI-BACTERIAL AGENTS, RESINS, DRYERS, WATER AND/OR SOLVENTS IN VARYING CONCENTRATIONS.

===== SECTION IX - DISCLAIMER =====

Prepared by Leon Scott, Hesterman Technical Services

THE INFORMATION CONTAINED HEREIN IS FURNISHED WITHOUT WARRANTY OF ANY KIND. USERS SHOULD CONSIDER THIS DATA ONLY AS A SUPPLEMENT TO OTHER INFORMATION GATHERED BY THEM & DETERMINE THE SUITABILITY & COMPLETENESS OF INFORMATION FROM ALL SOURCES TO ASSURE PROPER USE & DISPOSAL OF THESE MATERIALS & THE SAFETY & HEALTH OF EMPLOYEES & CUSTOMERS.