

MATERIAL SAFETY DATA SHEET

DATE: 1-28-92

GELMAN SCIENCES, INC.  
8780 ELY ROAD  
PENSACOLA, FL 32514

PHONE NUMBER: (904) 476-7974 (8:00 A.M. TO 4:00 P.M. EST)  
(904) 478-6160 (4:00 P.M. TO 8:00 A.M. EST)

I. PRODUCT IDENTIFICATION

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WARNING! FLAMMABLE SOLID.

NT-5000	HMIS*	RATING
+	HEALTH HAZARD:	NONE
BIOTRACE NT	FLAMMABILITY HAZARD:	3 SERIOUS
	REACTIVITY HAZARD:	1 SLIGHT

CHEMICAL AND COMMON NAME: MIXED ESTERS OF CELLULOSE

APPEARANCE: WHITE FILM. NO ODOR.

II. HAZARDOUS INGREDIENTS & EXPOSURE LIMITS

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CHEMICAL & COMMON NAMES OF HAZARDOUS INGREDIENTS	%	RECOMMENDED AIRBORNE LEVELS 1989-1990 OSHA PEL TLV-TWA
NITROCELLULOSE (9004-70-0)	90	NOT ESTABLISHED (1) (PHYSIOLOGICALLY INERT)

(1) AS GELMAN SCIENCES, INC. INTERPRETS THE U.S. OCCUPATIONAL SAFETY AND HEALTH ACT AND REGULATIONS, INCLUDING THE HAZARD COMMUNICATION STANDARD 29CFR1910.1200 DATED AUGUST 29, 1987, THIS PRODUCT SHOULD NOT BE CONSIDERED A HEALTH HAZARD.

III. TYPICAL PHYSICAL & CHEMICAL CHARACTERISTICS

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BOILING POINT: N/A  
VAPOR PRESSURE @ 20 C: N/A  
VAPOR DENSITY: N/A  
% VOLATILE (VOL.): N/A  
FREEZING POINT: N/A  
SOLUBILITY IN WATER: N/A  
SPECIFIC GRAVITY: 1.25  
PH: N/A  
EVAPORATION RATE:

\*HMIS (HAZARDOUS MATERIALS IDENTIFICATION SYSTEM): RATING FOR THE PRODUCT AS IT IS SUPPLIED.

N/A - NOT APPLICABLE

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IV. FIRE, EXPLOSION, & REACTIVITY HAZARD DATA

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WARNING! FLAMMABLE SOLID.

FLASH POINT: 12 C (53 F) CLOSED CUP FLAMMABLE LIMITS: NOT DETERMINED

AUTOIGNITION TEMPERATURE: NITROCELLULOSE DECOMPOSES AT ABOUT 160 C (320 F).

EXTINGUISHING MEDIA: WATER IS THE MOST EFFECTIVE FIRE EXTINGUISHING MEDIUM FOR NITROCELLULOSE AND SHOULD BE USED IN LARGE VOLUME.

SPECIAL FIRE-FIGHTING PROCEDURES: USE EXTREME CAUTION IN APPROACHING FIRES INVOLVING THIS MATERIAL. FIGHT FIRES FROM A SAFE DISTANCE. SELF-CONTAINED BREATHING APPARATUS SHOULD BE USED. NO ATTEMPT SHOULD BE MADE TO FIGHT

ADVANCED FIRES, EXCEPT FOR REMOTE ACTIVATION OF INSTALLED FIRE EXTINGUISHING EQUIPMENT. USE WATER TO KEEP FIRE-EXPOSED CONTAINERS COOL.

UNUSUAL FIRE & EXPLOSION HAZARDS: NITROCELLULOSE IS HIGHLY DANGEROUS IN THE DRY STATE SINCE IT CAN EASILY BE IGNITED AND BURNS RAPIDLY WITH INTENSE HEAT. ANY PERSON BREATHING THE FUMES FROM BURNING NITROCELLULOSE SHOULD BE PLACED PROMPTLY UNDER A PHYSICIAN'S CARE.

STABILITY CONSIDERATIONS: STABLE. CONDITIONS TO AVOID: RATE OF DETERIORATION INCREASES WITH INCREASING TEMPERATURE AND TIME. AVOID EXPOSURE TO HEAT. USE OLDEST MATERIAL FIRST.

INCOMPATIBILITY WITH: ALKALINE MATERIALS AND STRONG ACIDS.

HAZARDOUS POLYMERIZATION OF COMBUSTION: COMBUSTION PRODUCTS VARY DEPENDING ON FIRE CONDITIONS AND OTHER COMBUSTIBLES PRESENT IN THE FIRE. THE PREDOMINANT PRODUCTS WILL BE CARBON MONOXIDE, CARBON DIOXIDE, AND NITROGEN OXIDES. UNDER SOME CONDITIONS, METHANE, IRRITATING ALDEHYDES AND CARBOXYLIC ACIDS AND HYDROGEN CYANIDE MAY BE FORMED.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

#### V. HEALTH HAZARD DATA

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MATERIAL IS STABLE AND NO HEALTH HAZARDS ARE KNOWN AT THIS TIME.

#### VI. SPILL & LEAK PROCEDURES

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STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: SHUT OFF OR EXTINGUISH ALL SOURCES IF IGNITION. IMMEDIATELY SOAK SPILLED MATERIAL WITH WATER AND REMOVE TO COVERED METAL CONTAINERS. ADD WATER TO CONTAINERS. DO NOT ALLOW MATERIAL TO BECOME DRY.

WASTE DISPOSAL METHOD: ANY METHOD OF DISPOSAL MUST BE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL HAZARDOUS WASTE REGULATIONS.

1. LARGE QUANTITIES - BURN IN THIN LAYERS (NO MORE THAN 2" DEEP) IN AN OUTSIDE, OPEN, ISOLATED LOCATION. DO NOT BURN IN A BOILER FIREBOX, INCINERATOR, OR OTHER CONFINING EQUIPMENT.

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2. SMALL QUANTITIES - IN A WELL-VENTILATED AREA SUCH AS A LABORATORY HOOD, DENITRATE IN AN AQUEOUS SOLUTION OF 5% SODIUM HYDROXIDE. ALWAYS BE CERTAIN THAT SMALL QUANTITIES OF NITROCELLULOSE, THAT HAVE BEEN THOROUGHLY WETTED WITH WATER, ARE ADDED TO THE 5% SODIUM HYDROXIDE SOLUTION. THE SLURRY SHOULD BE STIRRED UNTIL THE NITROCELLULOSE HAS BEEN COMPLETELY DIGESTED, I.E., ALL OF THE NITROCELLULOSE PARTICLES HAVE BEEN DISSOLVED AND THE AQUEOUS SOLUTION PH IS BASIC. THE DIGESTED MATERIAL CAN THEN BE FLUSHED TO A WASTE DISPOSAL SETTLING POND OR CHEMICAL SEWER USING LARGE QUANTITIES OF WATER.

NOTE: REFER TO SECTION VIII FOR SPECIFIC FEDERAL ENVIRONMENTAL AND REGULATORY DATA REGARDING USE OR DISPOSAL OF THIS PRODUCT.

#### VII. APPLICABLE CONTROL MEASURES

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HANDLING AND STORAGE PRECAUTIONS: ELIMINATE SOURCES OF IGNITION.

PROTECTIVE MEASURES DURING REPAIR & MAINTENANCE: ELIMINATE SOURCES OF IGNITION.

#### VIII. ENVIRONMENTAL REGULATORY DATA

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THE FOLLOWING ENVIRONMENTAL AND REGULATORY DATA ARE PROVIDED TO ASSIST USERS OF THIS PRODUCT IN DEFINING THEIR REGULATORY ENVIRONMENTAL COMPLIANCE OBLIGATIONS.

##### A. PRODUCT COMPOSITION

PRODUCT (P) OR COMPONENT NO.	TRADE NAME OR CHEMICAL COMPONENT	CAS NUMBER	WT. PERCENT
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P	GELMAN SCIENCES NT-5000		N/A	100
B. SARA TITLE III (SEE FOOTNOTES)				
COMPONENT NO.	SEC. 304 EHS	SEC. 302 EHS	SEC. 311/312 HAZARD CATEGORY	SEC 313 TOXIC CHEMICAL (YES,NO)
P	N/A	N/A	HC-3	N/A

C. CERCLA (40 CFR 302.4 HAZARDOUS SUBSTANCE & REPORTABLE QUANTITIES)

THIS PRODUCT DOES NOT CONTAIN ANY HAZARDOUS SUBSTANCES LISTED IN 40 CFR 302.4.

D. RCRA INFORMATION

THIS PRODUCT EXHIBITS THE CHARACTERISTICS OF IGNITABILITY AND REACTIVITY AS DEFINED IN HAZARDOUS WASTE REGULATIONS 40 CFR 261 SUBPART C. THEREFORE, DISPOSAL OF UNUSED PRODUCT MUST COMPLY WITH HAZARDOUS WASTE REGULATIONS.

E. OTHER

NONE

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FOOTNOTES:

SEC. 302-THRESHOLD PLANNING QUANTITY, EXTREMELY HAZARDOUS SUBSTANCE (EHS) (40 CFR 355 EMERGENCY PLANNING AND NOTIFICATION REGULATIONS)

N/A: THIS CHEMICAL IS NOT AN EHS. THEREFORE, THERE IS NO THRESHOLD PLANNING QUANTITY (TPQ).

SEC. 304 - REPORTABLE QUANTITY FOR RELEASES OF AN EHS (40 CFR 3355, APPENDIX A)

N/A: THIS CHEMICAL IS NOT AN EHS. THEREFORE, THERE IS NO REPORTABLE QUANTITY (RQ).

SEC 311/312 - 40 CFR 370 HAZARDOUS CHEMICAL REPORTING REQUIREMENTS "HAZARD CATEGORIES"

HC-1 IMMEDIATE (ACUTE) HEALTH HAZARD  
 HC-2 DELAYED (CHRONIC) HEALTH HAZARD  
 HC-3 FIRE HAZARD  
 HC-4 SUDDEN RELEASE OF PRESSURE HAZARD  
 HC-5 REACTIVE HAZARD  
 NHH NOT A HEALTH HAZARD  
 NPH NOT A PHYSICAL HAZARD

SEC 313 - 40 CFR 372 TOXIC CHEMICAL RELEASE REPORTING REQUIREMENTS

NO: THIS COMPONENT IS NOT SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372 TOXIC CHEMICAL REPORTING REQUIREMENTS.

YES: THIS COMPONENT IS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372 TOXIC CHEMICAL REPORTING REQUIREMENTS. PERCENT COMPOSITION (OR ESTIMATED RANGE) IS LISTED ABOVE.

N/A: THIS PRODUCT IS A MIXTURE. AS SUCH, IT IS NOT LISTED AS A TOXIC CHEMICAL UNDER 40 CFR 372, SECT. 313 REPORTING REQUIREMENTS. REPORTABLE CONSTITUENTS ARE LISTED INDIVIDUALLY WHERE THEY EXCEED THRESHOLD CONCENTRATION LIMITS.

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