MATERIAL SAFETY DATA SHEET

EM SCIENCE

	!1.	CHEMICAL	PRODUCT	AND	COMPANY	IDENTIFICATION
--	-----	----------	---------	-----	---------	----------------

MANUFACTURER....: PREPARATION DATE.: 12/09/96 DATE MSDS PRINTED.: MAY 15, 1997 EM SCIENCE INFORMATION PHONE NUMBER.: 609-423-6300 A DIVISION OF EM INDUSTRIES P.O. BOX 70 HOURS: MON. TO FRI. 8:30-5 480 DEMOCRAT RD. CHEMTREC EMERGENCY NUMBER: 800-424-9300 HOURS: 24 HRS A DAY GIBBSTOWN, N.J. 08027 CATALOG NUMBER(S): XX0010 9630 9660 PRODUCT NAME...: 5-BROMO-4-CHLORO-3-INDOLYL-BETA-D-GALACTOPYRANOSIDE CHEMICAL FAMILY..: ORGANIC

FORMULA....: C14H15BRCLNO6

MOLECULAR WEIGHT.:

408.63

2. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS #	APPR %
X-GAL	7240-90-6	100%

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HANDLING CARE GENERALLY IN KEEPING WITH SAFE LABORATORY PRACTICES IS RECOMMENDED.

APPEARANCE....:
WHITE POWDER

POTENTIAL HEALTH EFFECTS (ACUTE AND CHRONIC)

MSDS (CONTINUED) - XX0010 PAGE # 1

SYMPTOMS OF EXPOSURE:

DATA ON THE TOXICITY OF THE SUBSTANCE IS NOT AVAILABLE. MAY BE HARMFUL IF INHALED, SWALLOWED, OR ABSORBED THROUGH THE SKIN.

MAY BE IRRITATING ON CONTACT WITH SKIN, EYES OR MUCOUS MEMBRANES. HANDLING CARE GENERALLY IN KEEPING WITH SAFE LABORATORY PRACTICES IS RECOMMENDED.

MEDICAL COND. AGGRAVATED BY EXPOSURE: NONE INDICATED

ROUTES OF ENTRY....:
INHALATION, INGESTION OR SKIN CONTACT

CARCINOGENICITY......
THE MATERIAL IS NOT LISTED (IARC, NTP, OSHA) AS CANCER CAUSING

4. FIRST AID MEASURES

EMERGENCY FIRST AID:

GET MEDICAL ASSISTANCE FOR ALL CASES OF OVEREXPOSURE.

SKIN: WASH THOROUGHLY WITH SOAP AND WATER.

EYES: IMMEDIATELY FLUSH THOROUGHLY WITH WATER FOR AT LEAST 15 MINUTES.

INHALATION: REMOVE TO FRESH AIR; GIVE ARTIFICIAL RESPIRATION IF BREATHING HAS STOPPED.

INGESTION: IF CONSCIOUS, DRINK WATER AND INDUCE VOMITING IMMEDIATELY AS DIRECTED BY MEDICAL PERSONNEL. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

5. FIRE FIGHTING MEASURES

FLASH POINT (F).....: N/A
FLAMMABLE LIMITS LEL (%).: N/A
FLAMMABLE LIMITS UEL (%).: N/A
EXTINGUISHING MEDIA....:

USE WATER SPRAY, FOAM, DRY CHEMICAL, OR CO2.

FIRE FIGHTING PROCEDURES.:

WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING.

FIRE & EXPLOSION HAZARDS.:

THERMAL DECOMPOSITION PRODUCES TOXIC FUMES.

6. ACCIDENTAL RELEASE MEASURES

SPILL RESPONSE:

EVACUATE THE AREA OF ALL UNNECESSARY PERSONNEL.

MSDS (CONTINUED) - XX0010 PAGE # 2

WEAR SUITABLE PROTECTIVE EQUIPMENT LISTED UNDER EXPOSURE / PERSONAL PROTECTION.

ELIMINATE ANY IGNITION SOURCES UNTIL THE AREA IS DETERMINED TO BE FREE FROM EXPLOSION OR FIRE HAZARDS.

CONTAIN THE RELEASE AND ELIMINATE ITS SOURCE, IF THIS CAN BE DONE WITHOUT RISK.

TAKE UP AND CONTAINERIZE FOR PROPER DISPOSAL AS DESCRIBED UNDER DISPOSAL.

COMPLY WITH FEDERAL, STATE, AND LOCAL REGULATIONS ON REPORTING RELEASES. REFER TO REGULATORY INFORMATION FOR REPORTABLE QUANTITY AND OTHER REGULATORY DATA.

7. HANDLING AND STORAGE

HANDLING & STORAGE:

KEEP CONTAINER TIGHTLY CLOSED.

STORE FROZEN (-20C).

WARM TO ROOM TEMPERATURE BEFORE OPENING.

DO NOT BREATHE DUST OR VAPOR.

DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT:

VENTILATION, RESPIRATORY PROTECTION, PROTECTIVE CLOTHING, EYE PROTECTION MATERIAL SHOULD BE HANDLED OR TRANSFERRED IN AN APPROVED FUME HOOD OR WITH ADEQUATE VENTILATION. PROTECTIVE GLOVES SHOULD BE WORN TO PREVENT SKIN CONTACT (NEOPRENE OR EQUIVALENT) SAFETY GLASSES WITH SIDE SHIELDS SHOULD BE WORN AT ALL TIMES.								
SAFETY GLASSES WITH SIDE SHIELDS SHOULD BE WORN AT ALL TIMES. WORK / HYGENIC PRACTICES: WASH THOROUGHLY AFTER HANDLING. DO NOT TAKE INTERNALLY. EYE WASH AND SAFETY EQUIPMENT SHOULD BE READILY AVAILABLE.								
EXPOSURE GUIDELII	NES							
OSHA - PEL:								
COMPONENT	TWI PPM	A MG/M3	PPM	STEL MG/M3	PPM	CL M	G/M3	SKIN
X-GAL								
				0010				
ACGIH - TLV:	TW	A		STEL		CL		
COMPONENT	PPM	MG/M3	PPM	MG/M3	PPM	M	G/M3	SKIN
X-GAL								
9. PHYSICAL AND	CHEMICAL 1	PROPERTIES	S					
BOILING POINT (C MELTING POINT (C SPECIFIC GRAVITY VAPOR PRESSURE (I PERCENT VOLATILE VAPOR DENSITY (A EVAPORATION RATE SOLUBILITY IN WA APPEARANCE WHITE POWDER)	: 232-23).: N/A : N/A &): N/A : N/A 1): N/A	34C					
10. STABILITY AND	D REACTIV	ITY						
STABILITY	:	YES						
HAZARDOUS POLYMERIZATION: DOES NOT OCCUR								
HAZARDOUS DECOMPO								
CONDITIONS TO AVO	OID:							
MATERIALS TO AVO: () WATER () ACIDS () BASES () CORROSIVES (X) OXIDIZERS () OTHER :	ID:							

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA: NONE ESTABLISHED

TOXICOLOGICAL FINDINGS:

NONE

MSDS (CONTINUED) - XX0010

PAGE # 4

CITED IN REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES (RTECS)

12. DISPOSAL CONSIDERATIONS

EPA WASTE NUMBERS:

TREATMENT:

MATERIAL DOES NOT HAVE AN EPA WASTE NUMBER AND IS NOT A LISTED WASTE, HOWEVER CONSULTATION WITH A PERMITTED WASTE DISPOSAL SITE (TSD) SHOULD BE ACCOMPLISHED.

ALWAYS CONTACT A PERMITTED WASTE DISPOSER (TSD) TO ASSURE COMPLIANCE WITH ALL CURRENT LOCAL, STATE AND FEDERAL REGULATIONS.

1 2	THE AMERICAN	INFORMATION
T3.	IKANSPUKI	INFORMATION

DOT PROPER SHIPPING NAME...: NON-REGULATED

DOT ID NUMBER....: NONE

14. REGULATORY INFORMATION

TSCA STATEMENT:
THE CAS NUMBER OF THIS PRODUCT IS NOT LISTED ON THE TSCA INVENTORY. FOR RESEARCH AND DEVELOPMENT USE ONLY; NOT FOR MANUFACTURING OR COMMERCIAL PURPOSES.

COMPONENT	SARA EHS (302)	SARA EHS TPQ (LBS)	CERCLA RQ (LBS)
X-GAL			
	OSHA	SARA	DEMINIMIS
COMPONENT	FLOOR LIST	313	FOR SARA 313
			(%)
X-GAL			

15. OTHER INFORMATION

COMMENTS:

MSDS (CONTINUED) - XX0010 PAGE # 5

NONE

NFPA HAZARD RATINGS:

HEALTH : 2 FLAMMABILITY : 0 REACTIVITY : 0 SPECIAL HAZARDS :

REVISION HISTORY: 10/19/94 01/15/96

! = REVISED SECTION N/A = NOT AVAILABLE N/E = NONE ESTABLISHED

THE STATEMENTS CONTAINED HEREIN ARE OFFERED FOR INFORMATIONAL PURPOSES ONLY AND ARE BASED UPON TECHNICAL DATA THAT EM SCIENCE BELIEVES TO BE ACCURATE. IT IS INTENDED FOR USE ONLY BY PERSONS HAVING THE NECESSARY TECHNICAL SKILL AND AT THEIR OWN DESCRETION AND RISK. SINCE CONDITIONS AND MANNER OF USE ARE OUTSIDE OUR CONTROL, WE MAKE NO WARRANTY, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS OR OTHERWISE.

MSDS - XX0010 PAGE # 6