

# *Chem-Impex International Inc.*

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## SAFETY DATA SHEET

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### SECTION 1. CHEMICAL IDENTIFICATION

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CATALOG #:	27116
NAME:	2-Bromo-2-nitro-1,3-propanediol
SYNONYMS:	Bronopol
24 HOUR EMERGENCY TELEPHONE:	(800) 535-5053(USA) 352-323-3500 (INTERNATIONAL)
TO REQUEST AN MSDS:	(800) 869-9290
CUSTOMER SERVICE:	(630) 766-2112

### SECTION 2. HAZARDS IDENTIFICATION

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#### CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

**GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS)**  
ACUTE TOXICITY, ORAL (CATEGORY 4), H302  
ACUTE TOXICITY, DERMAL (CATEGORY 4), H312  
SKIN IRRITATION (CATEGORY 2), H315  
SERIOUS EYE DAMAGE (CATEGORY 1), H318

SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (CATEGORY 3),  
RESPIRATORY SYSTEM, H335  
ACUTE AQUATIC TOXICITY (CATEGORY 1), H400  
CHRONIC AQUATIC TOXICITY (CATEGORY 1), H410

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE  
SECTION 16.

**GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS  
PICTOGRAM**



SIGNAL WORD DANGER

**HAZARD STATEMENT(S)**

H302 + H312 HARMFUL IF SWALLOWED OR IN CONTACT WITH SKIN  
H315 CAUSES SKIN IRRITATION.  
H318 CAUSES SERIOUS EYE DAMAGE.  
H335 MAY CAUSE RESPIRATORY IRRITATION.  
H410 VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING  
EFFECTS.

**PRECAUTIONARY STATEMENT(S)**

P261 AVOID BREATHING DUST/ FUME/ GAS/ MIST/ VAPOURS/  
SPRAY.  
P264 WASH SKIN THOROUGHLY AFTER HANDLING.  
P270 DO NOT EAT, DRINK OR SMOKE WHEN USING THIS  
PRODUCT.  
P271 USE ONLY OUTDOORS OR IN A WELL-VENTILATED AREA.  
P273 AVOID RELEASE TO THE ENVIRONMENT.  
P280 WEAR EYE PROTECTION/ FACE PROTECTION.  
P280 WEAR PROTECTIVE GLOVES/ PROTECTIVE CLOTHING.  
P301 + P312 + P330 IF SWALLOWED: CALL A POISON CENTER OR DOCTOR/  
PHYSICIAN IF YOU FEEL UNWELL. RINSE MOUTH.  
P302 + P352 + P312 IF ON SKIN: WASH WITH PLENTY OF SOAP AND WATER.  
CALL A POISON CENTER OR DOCTOR/ PHYSICIAN IF YOU  
FEEL UNWELL.  
P304 + P340 + P312 IF INHALED: REMOVE PERSON TO FRESH AIR AND KEEP  
COMFORTABLE FOR BREATHING. CALL A POISON CENTER  
OR DOCTOR/ PHYSICIAN IF YOU FEEL UNWELL.  
P305 + P351 + P338 +  
P310 IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL  
MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND  
EASY TO DO. CONTINUE RINSING. IMMEDIATELY CALL A  
POISON CENTER OR DOCTOR/ PHYSICIAN.  
P332 + P313 IF SKIN IRRITATION OCCURS: GET MEDICAL ADVICE/  
ATTENTION.  
P362 TAKE OFF CONTAMINATED CLOTHING AND WASH BEFORE  
REUSE.  
P391 COLLECT SPILLAGE.  
P403 + P233 STORE IN A WELL-VENTILATED PLACE. KEEP CONTAINER  
TIGHTLY CLOSED.  
P405 STORE LOCKED UP.  
P501 DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED  
WASTE DISPOSAL PLANT.

**HAZARDS NOT  
OTHERWISE  
CLASSIFIED (HNOC)  
OR NOT COVERED  
BY GHS**                      NONE

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### **SECTION 3.    COMPOSITION/INFORMATION ON INGREDIENTS**

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MF:                                      C<sub>3</sub>H<sub>6</sub>BrNO<sub>4</sub>  
MW:                                      199.99  
CAS-NO.                                52-51-7  
PURITY:                                ≥ 99.5% (Assay)

#### **HAZARDOUS COMPONENTS**

<b>COMPONENT</b>	<b>CLASSIFICATION</b>	<b>CONCENTRATION</b>
<b>2-BROMO-2-NITROPROPANE-1,3-DIOL</b>		
	ACUTE TOX. 4; SKIN IRRIT. 2; EYE DAM. 1; STOT SE 3; AQUATIC ACUTE 1; AQUATIC CHRONIC 1; H302 + H312, H315, H318, H335, H410	<= 100%

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

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### **SECTION 4.    FIRST-AID MEASURES**

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#### **DESCRIPTION OF FIRST AID MEASURES**

**GENERAL ADVICE**                      CONSULT A PHYSICIAN. SHOW THIS SAFETY DATA SHEET TO THE DOCTOR IN ATTENDANCE.MOVE OUT OF DANGEROUS AREA.

**IF INHALED**                                IF BREATHED IN, MOVE PERSON INTO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. CONSULT A PHYSICIAN.

**IN CASE OF SKIN CONTACT**              WASH OFF WITH SOAP AND PLENTY OF WATER. CONSULT A PHYSICIAN.

**IN CASE OF EYE CONTACT**              RINSE THOROUGHLY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES AND CONSULT A PHYSICIAN.

**IF SWALLOWED**                            NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. RINSE MOUTH WITH WATER.

CONSULT A PHYSICIAN.

**MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED**

THE MOST IMPORTANT KNOWN SYMPTOMS AND EFFECTS ARE DESCRIBED IN THE LABELLING (SEE SECTION 2.2) AND/OR IN SECTION 11

**INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED**

NO DATA AVAILABLE

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**SECTION 5. FIRE AND EXPLOSION DATA**

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**EXTINGUISHING MEDIA**

**SUITABLE EXTINGUISHING MEDIA**

USE WATER SPRAY, ALCOHOL-RESISTANT FOAM, DRY CHEMICAL OR CARBON DIOXIDE.

**SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE**

CARBON OXIDES, NITROGEN OXIDES (NOX), HYDROGEN BROMIDE GAS

**ADVICE FOR FIREFIGHTERS**

WEAR SELF-CONTAINED BREATHING APPARATUS FOR FIREFIGHTING IF NECESSARY.

**FURTHER INFORMATION**

NO DATA AVAILABLE

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**SECTION 6. ACCIDENTAL RELEASE MEASURES**

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**PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES**

USE PERSONAL PROTECTIVE EQUIPMENT. AVOID DUST FORMATION. AVOID BREATHING VAPOURS, MIST OR GAS. ENSURE ADEQUATE VENTILATION. EVACUATE PERSONNEL TO SAFE AREAS. AVOID BREATHING DUST. FOR PERSONAL PROTECTION SEE SECTION 8.

**ENVIRONMENTAL PRECAUTIONS**

PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. DO NOT LET PRODUCT ENTER DRAINS. DISCHARGE INTO THE ENVIRONMENT MUST BE AVOIDED.

**METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP**

PICK UP AND ARRANGE DISPOSAL WITHOUT CREATING DUST. SWEEP UP AND SHOVEL. KEEP IN SUITABLE, CLOSED CONTAINERS FOR DISPOSAL.

**REFERENCE TO OTHER SECTIONS** FOR DISPOSAL SEE SECTION 13.

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## **SECTION 7. HANDLING AND STORAGE**

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<b>PRECAUTIONS FOR SAFE HANDLING</b>	AVOID CONTACT WITH SKIN AND EYES. AVOID FORMATION OF DUST AND AEROSOLS. FURTHER PROCESSING OF SOLID MATERIALS MAY RESULT IN THE FORMATION OF COMBUSTIBLE DUSTS. THE POTENTIAL FOR COMBUSTIBLE DUST FORMATION SHOULD BE TAKEN INTO CONSIDERATION BEFORE ADDITIONAL PROCESSING OCCURS. PROVIDE APPROPRIATE EXHAUST VENTILATION AT PLACES WHERE DUST IS FORMED. FOR PRECAUTIONS SEE SECTION 2.2.
<b>CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES</b>	KEEP CONTAINER TIGHTLY CLOSED IN A DRY AND WELL-VENTILATED PLACE. STORAGE CLASS (TRGS 510): FLAMMABLE SOLID HAZARDOUS MATERIALS
<b>SPECIFIC END USE(S)</b>	APART FROM THE USES MENTIONED IN SECTION 1.2 NO OTHER SPECIFIC USES ARE STIPULATED

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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### **CONTROL PARAMETERS**

<b>COMPONENTS WITH WORKPLACE CONTROL PARAMETERS</b>	CONTAINS NO SUBSTANCES WITH OCCUPATIONAL EXPOSURE LIMIT VALUES.
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### **EXPOSURE CONTROLS**

<b>APPROPRIATE ENGINEERING CONTROLS</b>	HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICE. WASH HANDS BEFORE BREAKS AND AT THE END OF WORKDAY.
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### **PERSONAL PROTECTIVE EQUIPMENT**

<b>EYE/FACE PROTECTION</b>	FACE SHIELD AND SAFETY GLASSES USE EQUIPMENT FOR EYE PROTECTION TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR EN 166(EU).
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**SKIN PROTECTION**

HANDLE WITH GLOVES. GLOVES MUST BE INSPECTED PRIOR TO USE. USE PROPER GLOVE REMOVAL TECHNIQUE (WITHOUT TOUCHING GLOVE'S OUTER SURFACE) TO AVOID SKIN CONTACT WITH THIS PRODUCT. DISPOSE OF CONTAMINATED GLOVES AFTER USE IN ACCORDANCE WITH APPLICABLE LAWS AND GOOD LABORATORY PRACTICES. WASH AND DRY HANDS.

## FULL CONTACT

MATERIAL: NITRILE RUBBER

MINIMUM LAYER THICKNESS: 0.11 MM

BREAK THROUGH TIME: 480 MIN

MATERIAL TESTED:DERMATRIL (KCL 740, SIZE M)

## SPLASH CONTACT

MATERIAL: NITRILE RUBBER

MINIMUM LAYER THICKNESS: 0.11 MM

BREAK THROUGH TIME: 480 MIN

MATERIAL TESTED:DERMATRIL (KCL 740, SIZE M)

IF USED IN SOLUTION, OR MIXED WITH OTHER SUBSTANCES, AND UNDER CONDITIONS WHICH DIFFER FROM EN 374, CONTACT THE SUPPLIER OF THE CE APPROVED GLOVES. THIS RECOMMENDATION IS ADVISORY ONLY AND MUST BE EVALUATED BY AN INDUSTRIAL HYGIENIST AND SAFETY OFFICER FAMILIAR WITH THE SPECIFIC SITUATION OF ANTICIPATED USE BY OUR CUSTOMERS. IT SHOULD NOT BE CONSTRUED AS OFFERING AN APPROVAL FOR ANY SPECIFIC USE SCENARIO.

**BODY PROTECTION**

COMPLETE SUIT PROTECTING AGAINST CHEMICALS, THE TYPE OF PROTECTIVE EQUIPMENT MUST BE SELECTED ACCORDING TO THE CONCENTRATION AND AMOUNT OF THE DANGEROUS SUBSTANCE AT THE SPECIFIC WORKPLACE.

**RESPIRATORY PROTECTION**

WHERE RISK ASSESSMENT SHOWS AIR-PURIFYING RESPIRATORS ARE APPROPRIATE USE A FULL-FACE PARTICLE RESPIRATOR TYPE N100 (US) OR TYPE P3 (EN 143) RESPIRATOR CARTRIDGES AS A BACKUP TO ENGINEERING CONTROLS. IF THE RESPIRATOR IS THE SOLE MEANS OF PROTECTION, USE A FULL-FACE SUPPLIED AIR RESPIRATOR. USE RESPIRATORS AND COMPONENTS TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR CEN (EU).

**CONTROL OF ENVIRONMENTAL EXPOSURE**

PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. DO NOT LET PRODUCT ENTER DRAINS. DISCHARGE INTO THE ENVIRONMENT MUST BE AVOIDED.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

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**INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES**

APPEARANCE	White crystalline powder
ODOUR	NO DATA AVAILABLE
ODOUR THRESHOLD	NO DATA AVAILABLE
PH	5 -7
MELTING POINT/FREEZING POINT	126.0-131.0 °C
INITIAL BOILING POINT AND BOILING RANGE	
FLASH POINT	167 °C
EVAPORATION RATE	NO DATA AVAILABLE
FLAMMABILITY (SOLID, GAS)	NO DATA AVAILABLE
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS	NO DATA AVAILABLE
VAPOUR PRESSURE	0.00005 HPA (0.00004 MMHG) AT 20 °C
VAPOUR DENSITY	NO DATA AVAILABLE
RELATIVE DENSITY	
WATER SOLUBILITY	280 G/L AT 23 °C
PARTITION COEFFICIENT: N- OCTANOL/WATER	LOG POW: 0.18
AUTO-IGNITION TEMPERATURE	NO DATA AVAILABLE
DECOMPOSITION TEMPERATURE	TYPE E
VISCOSITY	NO DATA AVAILABLE
EXPLOSIVE PROPERTIES	NO DATA AVAILABLE
OXIDIZING PROPERTIES	NO DATA AVAILABLE
<b>OTHER SAFETY INFORMATION</b>	NO DATA AVAILABLE

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**SECTION 10. STABILITY AND REACTIVITY**

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<b>REACTIVITY</b>	NO DATA AVAILABLE
<b>CHEMICAL STABILITY</b>	STABLE UNDER RECOMMENDED STORAGE CONDITIONS.
<b>POSSIBILITY OF HAZARDOUS REACTIONS</b>	NO DATA AVAILABLE
<b>CONDITIONS TO AVOID</b>	NO DATA AVAILABLE

<b>INCOMPATIBLE MATERIALS</b>	STRONG OXIDIZING AGENTS, STRONG BASES, STRONG REDUCING AGENTS
<b>HAZARDOUS DECOMPOSITION PRODUCTS</b>	OTHER DECOMPOSITION PRODUCTS - NO DATA AVAILABLE IN THE EVENT OF FIRE: SEE SECTION 5

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

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### **INFORMATION ON TOXICOLOGICAL EFFECTS**

<b>ACUTE TOXICITY</b>	LD50 ORAL - RAT - 305 MG/KG LC50 INHALATION - RAT - 4 H - 0.588 MG/L LD50 DERMAL - RAT - 1,600 MG/KG
<b>SKIN CORROSION/IRRITATION</b>	SKIN - RABBIT RESULT: SKIN IRRITATION (OECD TEST GUIDELINE 404)
<b>SERIOUS EYE DAMAGE/EYE IRRITATION</b>	EYES - RABBIT RESULT: SEVERE EYE IRRITATION (DRAIZE TEST)
<b>RESPIRATORY OR SKIN SENSITISATION</b>	MAXIMISATION TEST (GPMT) - GUINEA PIG RESULT: DOES NOT CAUSE SKIN SENSITISATION.
<b>GERM CELL MUTAGENICITY</b>	NO DATA AVAILABLE
<b>CARCINOGENICITY</b>	
IARC:	NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS PROBABLE, POSSIBLE OR CONFIRMED HUMAN CARCINOGEN BY IARC.
ACGIH:	NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A CARCINOGEN OR POTENTIAL CARCINOGEN BY ACGIH.
NTP:	NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A KNOWN OR ANTICIPATED CARCINOGEN BY NTP.
OSHA:	NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A CARCINOGEN OR POTENTIAL CARCINOGEN BY OSHA.
<b>REPRODUCTIVE TOXICITY</b>	NO DATA AVAILABLE



<b>SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE</b>	MAY CAUSE RESPIRATORY IRRITATION.
<b>SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE</b>	NO DATA AVAILABLE
<b>ASPIRATION HAZARD</b>	NO DATA AVAILABLE
<b>ADDITIONAL INFORMATION</b>	RTECS: TY3385000 TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

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## SECTION 12. ECOLOGICAL INFORMATION

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### TOXICITY

TOXICITY TO FISH	LC50 - ONCORHYNCHUS MYKISS (RAINBOW TROUT) - 41.2 MG/L - 96 H LC50 - LEPOMIS MACROCHIRUS (BLUEGILL) - 35.7 MG/L - 96 H
TOXICITY TO DAPHNIA AND OTHER AQUATIC INVERTEBRATES	EC50 - DAPHNIA MAGNA (WATER FLEA) - 1.6 MG/L - 48 H STATIC TEST EC50 - DAPHNIA MAGNA (WATER FLEA) - 1.4 MG/L - 48 H (OECD TEST GUIDELINE 202)
TOXICITY TO ALGAE	EC50 - SELENASTRUM CAPRICORNUTUM (GREEN ALGAE) - 0.37 MG/L - 72 H

### PERSISTENCE AND DEGRADABILITY

BIODEGRADABILITY	RESULT: 50 % - PARTIALLY BIODEGRADABLE. (OECD TEST GUIDELINE 302B)
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### BIOACCUMULATIVE POTENTIAL

DUE TO THE DISTRIBUTION COEFFICIENT N-OCTANOL/WATER, ACCUMULATION IN ORGANISMS IS NOT EXPECTED.

### MOBILITY IN SOIL

NO DATA AVAILABLE

### RESULTS OF PBT AND VPVB ASSESSMENT

PBT/VPVB ASSESSMENT NOT AVAILABLE AS CHEMICAL SAFETY ASSESSMENT NOT REQUIRED/NOT CONDUCTED

### OTHER ADVERSE EFFECTS

AN ENVIRONMENTAL HAZARD CANNOT BE EXCLUDED IN THE EVENT OF UNPROFESSIONAL HANDLING OR DISPOSAL. VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS.

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**SECTION 13. DISPOSAL CONSIDERATIONS**

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**WASTE TREATMENT METHODS**

**PRODUCT** OFFER SURPLUS AND NON-RECYCLABLE SOLUTIONS TO A LICENSED DISPOSAL COMPANY. CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE OF THIS MATERIAL.

**CONTAMINATED PACKAGING** DISPOSE OF AS UNUSED PRODUCT.

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**SECTION 14. TRANSPORT INFORMATION**

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**DOT (US)**

PROPER SHIPPING NAME: 2-BROMO-2-NITROPROPANE-1,3-DIOL  
UN NUMBER: 3241  
CLASS: 4.1  
PACKING GROUP: III  
REPORTABLE QUANTITY (RQ):  
POISON INHALATION HAZARD: NO

**IMDG**

PROPER SHIPPING NAME: 2-BROMO-2-NITROPROPANE-1,3-DIOL  
UN NUMBER: 3241  
CLASS: 4.1  
PACKING GROUP: III  
EMS-NO: F-J, S-G  
MARINE POLLUTANT: YES

**IATA**

PROPER SHIPPING NAME: 2-BROMO-2-NITROPROPANE-1,3-DIOL  
UN NUMBER: 3241  
CLASS: 4.1 (HEAT)  
PACKING GROUP: III

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**SECTION 15. REGULATORY INFORMATION**

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**SARA 302 COMPONENTS** NO CHEMICALS IN THIS MATERIAL ARE SUBJECT TO THE REPORTING REQUIREMENTS OF SARA TITLE III, SECTION 302.

**SARA 313 COMPONENTS** THIS MATERIAL DOES NOT CONTAIN ANY CHEMICAL COMPONENTS WITH KNOWN CAS NUMBERS THAT EXCEED THE THRESHOLD (DEMINIMIS) REPORTING LEVELS ESTABLISHED BY SARA TITLE III, SECTION 313.

**SARA 311/312 HAZARDS** FIRE HAZARD, ACUTE HEALTH HAZARD

**MASSACHUSETTS RIGHT TO KNOW COMPONENTS** NO COMPONENTS ARE SUBJECT TO THE MASSACHUSETTS RIGHT TO KNOW ACT.

**PENNSYLVANIA RIGHT TO KNOW COMPONENTS**

	CAS-NO.	REVISION DATE
2-Bromo-2-nitro-1,3-propanediol	52-51-7	

**NEW JERSEY RIGHT TO KNOW COMPONENTS**

	CAS-NO.	REVISION DATE
2-Bromo-2-nitro-1,3-propanediol	52-51-7	

**CALIFORNIA PROP. 65 COMPONENTS** THIS PRODUCT DOES NOT CONTAIN ANY CHEMICALS KNOWN TO STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS, OR ANY OTHER REPRODUCTIVE HARM.

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**SECTION 16. OTHER INFORMATION**

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**FULL TEXT OF H-STATEMENTS REFERRED TO UNDER SECTIONS 2 AND 3.**

ACUTE TOX.	ACUTE TOXICITY
AQUATIC ACUTE	ACUTE AQUATIC TOXICITY
AQUATIC CHRONIC	CHRONIC AQUATIC TOXICITY
EYE DAM.	SERIOUS EYE DAMAGE
H302	HARMFUL IF SWALLOWED.
H302 + H312	HARMFUL IF SWALLOWED OR IN CONTACT WITH SKIN
H312	HARMFUL IN CONTACT WITH SKIN.
H315	CAUSES SKIN IRRITATION.
H318	CAUSES SERIOUS EYE DAMAGE.
H335	MAY CAUSE RESPIRATORY IRRITATION.

**HMIS RATING**

HEALTH HAZARD:	4
CHRONIC HEALTH HAZARD:	
FLAMMABILITY:	2
PHYSICAL HAZARD	2

**NFPA RATING**

HEALTH HAZARD:	2
FIRE HAZARD:	1
REACTIVITY HAZARD:	2

MSDS LEGEND

MW:	MOLECULAR WEIGHT
MF:	MOLECULAR FORMULA
VOC:	VOLATILE ORGANIC COMPOUNDS
ACGIH:	AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGINISTS
CAS:	CHEMICAL ABSTRACTS SERIVE REGISTRY NUMBER
OSHA:	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PEL:	PERMISSIBLE EXPOSURE LIMIT (OSHA)
TLV:	THRESHOLD LIMIT VALUE (ACGIH)

IMPORTANT:

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