

# *Chem-Impex International Inc.*

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## SAFETY DATA SHEET

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### SECTION 1. CHEMICAL IDENTIFICATION

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CATALOG #: 32128

NAME: 2,3,4,6-Tetra-*O*-benzyl- $\alpha$ -D-glucopyranosyl *N,N,N',N'*-tetramethylphosphorodiamidate (ca. 20% in Benzene)

SYNONYMS:

24 HOUR EMERGENCY TELEPHONE: (800) 535-5053(USA)  
352-323-3500 (INTERNATIONAL)

TO REQUEST AN MSDS: (800) 869-9290

CUSTOMER SERVICE: (630) 766-2112

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### 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

ACUTE TOXICITY - INHALATION (CATEGORY 4), H332

SKIN CORROSION/IRRITATION (CATEGORY 2), H315

EYE DAMAGE/IRRITATION (CATEGORY 2A), H319

GERM CELL MUTAGENICITY (CATEGORY 2), H341  
 CARCINOGENICITY (CATEGORY 1A), H350  
 TOXIC TO REPRODUCTION (CATEGORY 2), H361  
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (CATEGORY 1), H370  
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (CATEGORY 3), H336  
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (CATEGORY 1), H372  
 ASPIRATION HAZARD (CATEGORY 1), H304  
 FLAMMABLE LIQUIDS (CATEGORY 2), H225  
 AQUATIC HAZARD (ACUTE) (CATEGORY 2), H401  
 AQUATIC HAZARD (LONG-TERM) (CATEGORY 2), H411

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)

H319	CAUSES SERIOUS EYE IRRITATION
H315	CAUSES SKIN IRRITATION
H302	HARMFUL IF SWALLOWED
H312	HARMFUL IN CONTACT WITH SKIN
H332	HARMFUL IF INHALED
H225	HIGHLY FLAMMABLE LIQUID AND VAPOR
H304	MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS
H350	MAY CAUSE CANCER
H341	SUSPECTED OF CAUSING GENETIC DEFECTS
H361	SUSPECTED OF DAMAGING FERTILITY OR THE UNBORN CHILD
H401	TOXIC TO AQUATIC LIFE
H411	TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS
H370	CAUSES DAMAGE TO: RESPIRATORY SYSTEM
H336	MAY CAUSE DROWSINESS OR DIZZINESS.
H372	CAUSES DAMAGE TO ORGANS: HEMATOPOIETIC SYSTEM CENTRAL NERVOUS SYSTEM THROUGH PROLONGED OR REPEATED EXPOSURE.

PRECAUTIONARY STATEMENT(S)

P270	DO NOT EAT, DRINK OR SMOKE WHEN USING THIS PRODUCT.
P264	WASH HANDS AND FACE THOROUGHLY AFTER HANDLING.
P280	WEAR PROTECTIVE GLOVES, PROTECTIVE CLOTHING, EYE PROTECTION AND FACE PROTECTION.
P261	AVOID BREATHING FUME, MIST, VAPORS OR SPRAY.
P271	USE ONLY OUTDOORS OR IN A WELL-VENTILATED AREA.
P280	WEAR PROTECTIVE GLOVES. WEAR EYE AND FACE PROTECTION.
P201	OBTAIN SPECIAL INSTRUCTIONS BEFORE USE.

P202	DO NOT HANDLE UNTIL ALL SAFETY PRECAUTIONS HAVE BEEN READ AND UNDERSTOOD.
P260	DO NOT BREATHE FUME, MIST, VAPORS OR SPRAY.
P210	KEEP AWAY FROM HEAT, SPARKS, OPEN FLAMES OR OTHER HOT SURFACES. - NO SMOKING.
P233	KEEP CONTAINER TIGHTLY CLOSED.
P240	GROUND OR BOND CONTAINER AND RECEIVING EQUIPMENT.
P241	USE EXPLOSION-PROOF ELECTRICAL, VENTILATING, LIGHTING, AND EQUIPMENT.
P242	USE ONLY NON-SPARKING TOOLS.
P243	TAKE PRECAUTIONARY MEASURES AGAINST STATIC DISCHARGE.
P301+310+330	IF SWALLOWED: IMMEDIATELY CALL A POISON CENTER OR DOCTOR. RINSE MOUTH.
P302+352+P312+P362+P364	IF ON SKIN: WASH WITH PLENTY OF WATER. CALL A POISON CENTER OR DOCTOR IF YOU FEEL UNWELL. TAKE OFF CONTAMINATED CLOTHING AND WASH IT BEFORE REUSE.
P304+340	IF INHALED: REMOVE PERSON TO FRESH AIR AND KEEP COMFORTABLE FOR BREATHING.
P333+313	IF SKIN IRRITATION OR RASH OCCURS: GET MEDICAL ADVICE/ATTENTION.
P305+351+338+P313	IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND EASY TO DO. CONTINUE RINSING. IF EYE IRRITATION PERSISTS: GET MEDICAL ADVICE OR ATTENTION.
P308+313	IF EXPOSED: CALL A POISON CENTER OR DOCTOR.
P308+P314+P331	IF EXPOSED OR CONCERNED: GET MEDICAL ADVICE OR ATTENTION IF YOU FEEL UNWELL. DO NOT INDUCE VOMITING.
P303+P361+P353	IF ON SKIN (OR HAIR): TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER OR SHOWER.
P370+378	IN CASE OF FIRE: USE DRY CHEMICAL, CO2, WATER SPRAY OR ALCOHOL-RESISTANT FOAM TO EXTINGUISH.
P405+P403+P233+P235	STORE LOCKED UP. STORE IN A WELL-VENTILATED PLACE. KEEP CONTAINER TIGHTLY CLOSED. KEEP COOL.
P501	DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED WASTE DISPOSAL PLANT.

<b>HAZARDS NOT OTHERWISE CLASSIFIED (HNOC) OR NOT COVERED BY GHS</b>	NONE
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**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

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MF:  $C_{38}H_{47}N_2O_7P$

MW: 674.77

CAS-NO. 143520-19-8

PURITY:

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**

IMMEDIATELY CALL A POISON CENTER OR DOCTOR. EFFECTS OF EXPOSURE (INHALATION) TO SUBSTANCE MAY BE DELAYED. INHALATION OF VAPORS OR CONTACT WITH SUBSTANCE WILL RESULT IN CONTAMINATION AND POTENTIAL HARMFUL EFFECTS. MOVE VICTIM TO FRESH AIR. GIVE ARTIFICIAL RESPIRATION IF VICTIM IS NOT BREATHING. ADMINISTER OXYGEN IF BREATHING IS DIFFICULT. KEEP VICTIM WARM AND QUIET. TREAT SYMPTOMATICALLY AND SUPPORTIVELY. ENSURE THAT MEDICAL PERSONNEL ARE AWARE OF THE MATERIAL(S) INVOLVED AND TAKE PRECAUTIONS TO PROTECT THEMSELVES.

#### **IN CASE OF SKIN CONTACT**

FOR SEVERE BURNS, IMMEDIATE MEDICAL ATTENTION IS REQUIRED. IMMEDIATELY CALL A POISON CENTER OR DOCTOR. EFFECTS OF EXPOSURE (SKIN CONTACT) TO SUBSTANCE MAY BE DELAYED. REMOVE AND WASH CONTAMINATED CLOTHING BEFORE RE-USE. REMOVE AND ISOLATE CONTAMINATED CLOTHING AND SHOES. IN CASE OF CONTACT WITH SUBSTANCE, IMMEDIATELY FLUSH SKIN WITH RUNNING WATER FOR AT LEAST 20 MINUTES. TREAT SYMPTOMATICALLY AND SUPPORTIVELY. ENSURE THAT MEDICAL PERSONNEL ARE AWARE OF THE MATERIAL(S) INVOLVED AND TAKE PRECAUTIONS TO PROTECT THEMSELVES.

#### **IN CASE OF EYE CONTACT**

IMMEDIATELY FLUSH EYES WITH RUNNING WATER FOR AT LEAST 15 MINUTES, KEEPING EYELIDS OPEN. CONTACT WITH MATERIAL MAY IRRITATE OR BURN

EYES. CALL EMERGENCY MEDICAL SERVICE. MOVE VICTIM TO FRESH AIR. CHECK FOR AND REMOVE ANY CONTACT LENSES. KEEP VICTIM WARM AND QUIET. TREAT SYMPTOMATICALLY AND SUPPORTIVELY. EFFECTS OF EXPOSURE TO SUBSTANCE MAY BE DELAYED. ENSURE THAT MEDICAL PERSONNEL ARE AWARE OF THE MATERIAL(S) INVOLVED AND TAKE PRECAUTIONS TO PROTECT THEMSELVES.

**IF SWALLOWED**

HARMFUL IF SWALLOWED. DO NOT INDUCE VOMITING WITH OUT MEDICAL ADVICE. EFFECTS OF EXPOSURE (INGESTION) TO SUBSTANCE MAY BE DELAYED. CALL A PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY. DO NOT USE MOUTH-TO-MOUTH METHOD IF VICTIM INGESTED THE SUBSTANCE; GIVE ARTIFICIAL RESPIRATION WITH THE AID OF A POCKET MASK EQUIPPED WITH A ONE-WAY VALVE OR OTHER PROPER RESPIRATORY MEDICAL DEVICE. LOOSEN TIGHT CLOTHING SUCH AS A COLLAR, TIE, BELT OR WAISTBAND. IF A PERSON VOMITS PLACE THEM IN THE RECOVERY POSITION SO THAT VOMIT WILL NOT REENTER THE MOUTH AND THROAT. RINSE MOUTH. KEEP VICTIM WARM AND QUIET. TREAT SYMPTOMATICALLY AND SUPPORTIVELY. ENSURE THAT MEDICAL PERSONNEL ARE AWARE OF THE MATERIAL(S) INVOLVED AND TAKE PRECAUTIONS TO PROTECT THEMSELVES.

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

ACUTE: COUGH. DIZZINESS. REDNESS. DROWSINESS.

DELAYED: MAY CAUSE HERITABLE GENETIC DAMAGE IN HUMANS. POSSIBLY CARCINOGENIC TO HUMANS.

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

WARNING: IT MIGHT BE HAZARDOUS TO THE PERSON PROVIDING AID TO GIVE MOUTH-TO-MOUTH RESPIRATION, BECAUSE THE INHALED MATERIAL IS HARMFUL. CAUTION: VICTIM MAY BE A SOURCE OF CONTAMINATION. IF BREATHING HAS STOPPED, PERFORM ARTIFICIAL RESPIRATION. USE FIRST AID TREATMENT ACCORDING TO THE NATURE OF THE INJURY. ENSURE THAT MEDICAL PERSONNEL ARE AWARE OF THE MATERIAL(S) INVOLVED AND TAKE PRECAUTIONS TO PROTECT THEMSELVES.

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**SECTION 5. FIRE AND EXPLOSION DATA**

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**EXTINGUISHING MEDIA**

<b>SUITABLE EXTINGUISHING MEDIA</b>	DRY CHEMICAL, CO <sub>2</sub> , WATER SPRAY, OR ALCOHOL-RESISTANT FOAM. CONSULT WITH LOCAL FIRE AUTHORITIES BEFORE ATTEMPTING LARGE SCALE FIRE FIGHTING OPERATIONS.
<b>SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE</b>	HAZARDOUS COMBUSTION PRODUCTS: CARBON OXIDES NITROGEN OXIDES PHOSPHATES  OTHER SPECIFIC HAZARDS: CLOSED CONTAINERS MAY EXPLODE FROM HEAT OF A FIRE.
<b>ADVICE FOR FIREFIGHTERS</b>	USE WATER SPRAY OR FOG; DO NOT USE STRAIGHT STREAMS. DIKE FIRE-CONTROL WATER FOR LATER DISPOSAL; DO NOT SCATTER THE MATERIAL. CAUTION: ALL THESE PRODUCTS HAVE A VERY LOW FLASH POINT: USE OF WATER SPRAY WHEN FIGHTING FIRE MAY BE INEFFICIENT. DO NOT USE STRAIGHT STREAMS. RUNOFF TO SEWER MAY CREATE FIRE OR EXPLOSION HAZARD. CONTAINERS MAY EXPLODE WHEN HEATED. MOVE CONTAINERS FROM FIRE AREA IF YOU CAN DO IT WITHOUT RISK. WEAR SELF CONTAINED BREATHING APPARATUS FOR FIRE FIGHTING IF NECESSARY.
<b>FURTHER INFORMATION</b>	NO DATA AVAILABLE

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

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<b>PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES</b>	USE PERSONAL PROTECTIVE EQUIPMENT. AVOID CONTACT WITH SKIN, EYES, AND CLOTHING. KEEP PEOPLE AWAY FROM AND UPWIND OF SPILL/LEAK. USE SPARK-PROOF TOOLS AND EXPLOSION-PROOF EQUIPMENT. REMOVE ALL SOURCES OF IGNITION. DO NOT TOUCH DAMAGED CONTAINERS OR SPILLED MATERIAL UNLESS WEARING APPROPRIATE PROTECTIVE CLOTHING (SECTION 8). WARN UNNECESSARY PERSONNEL TO MOVE AWAY. STOP LEAK IF YOU CAN DO IT WITHOUT RISK. ENSURE ADEQUATE VENTILATION. ISOLATE THE HAZARD AREA AND DENY ENTRY TO UNNECESSARY AND UNPROTECTED PERSONNEL.  ISOLATE AREA UNTIL GAS HAS DISPERSED. DO NOT CLEAN-UP OR DISPOSE EXCEPT UNDER SUPERVISION OF A SPECIALIST. IN CASE OF A SPILL AND/OR A LEAK, ALWAYS SHUT OFF ANY SOURCES OF IGNITION, VENTILATE THE AREA, AND EXERCISE CAUTION. DO NOT TOUCH DAMAGED CONTAINERS OR SPILLED MATERIAL UNLESS WEARING APPROPRIATE PROTECTIVE CLOTHING. WARN PERSONNEL TO MOVE AWAY. PREVENT ENTRY INTO SEWERS, BASEMENTS OR CONFINED AREAS; DIKE IF NEEDED.
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**ENVIRONMENTAL  
PRECAUTIONS**

FOR PERSONAL PROTECTION SEE SECTION 8.  
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**

ELIMINATE ALL IGNITION SOURCES (NO SMOKING,  
FLARES, SPARKS, OR FLAMES IN IMMEDIATE AREA).  
ALL EQUIPMENT USED WHEN HANDLING THE  
PRODUCT MUST BE GROUNDED. STOP LEAK IF  
WITHOUT RISK. VENTILATE THE AREA. ABSORB WITH  
AN INERT MATERIAL AND PUT THE SPILLED  
MATERIAL IN AN APPROPRIATE WASTE DISPOSAL  
CONTAINER. USE CLEAN NON-SPARKING TOOLS TO  
COLLECT ABSORBED MATERIAL. DIKE FAR AHEAD OF  
SPILL; USE DRY SAND TO CONTAIN THE FLOW OF  
MATERIAL.

**REFERENCE TO OTHER  
SECTIONS**

FOR DISPOSAL SEE SECTION 13.

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**SECTION 7. HANDLING AND STORAGE**

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**PRECAUTIONS FOR SAFE  
HANDLING**

DO NOT BREATHE GAS, FUMES, VAPOR, OR SPRAY.  
MANIPULATE UNDER AN ADEQUATE FUME HOOD. DO  
NOT INGEST. AVOID CONTACT WITH SKIN AND EYES.  
AVOID CONTACT WITH SKIN. AVOID CONTACT -  
OBTAIN SPECIAL INSTRUCTIONS BEFORE USE. AVOID  
PROLONGED OR REPEATED EXPOSURE. NORMAL  
MEASURES FOR PREVENTIVE FIRE PROTECTION.  
AVOID  
EXPOSURE - OBTAIN SPECIAL INSTRUCTIONS BEFORE  
USE. KEEP AWAY FROM HEAT AND SOURCES OF  
IGNITION. USE EXPLOSION-PROOF EQUIPMENT. USE  
ONLY NON-SPARKING HAND TOOL WHEN HANDLING  
THIS PRODUCT. GROUND ALL EQUIPMENT  
CONTAINING MATERIAL. TAKE MEASURES TO  
PREVENT BUILD UP OF ELECTROSTATIC CHARGE.  
GOOD GENERAL  
VENTILATION SHOULD BE SUFFICIENT TO CONTROL  
AIRBORNE LEVELS. KEEP CONTAINER DRY. HANDLE  
AND OPEN CONTAINER WITH CARE. WEAR SUITABLE  
PROTECTIVE CLOTHING, GLOVES AND EYE/FACE  
PROTECTION. WHEN USING DO NOT EAT, DRINK,  
OR SMOKE. KEEP AWAY FROM SOURCES OF IGNITION.  
FOR PRECAUTIONS SEE SECTION 2.2.

**CONDITIONS FOR SAFE  
STORAGE, INCLUDING  
ANY INCOMPATIBILITIES**

KEEP CONTAINER TIGHTLY CLOSED IN A DRY AND  
WELL-VENTILATED PLACE.

KEEP AWAY FROM SOURCES OF IGNITION. STORE AND USE AWAY FROM HEAT, SPARKS, OPEN FLAME, OR ANY OTHER IGNITION SOURCE. KEEP AWAY FROM INCOMPATIBLES. CONTAINERS WHICH ARE OPENED MUST BE CAREFULLY RESEALED AND KEPT UPRIGHT TO PREVENT LEAKAGE. AVOID PROLONGED STORAGE PERIODS. STORE IN REFRIGERATOR. COMBUSTIBLE SUBSTANCES, STORE AWAY FROM OXIDIZING AGENTS

**SPECIFIC END USE(S)** 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**

#### **COMPONENTS WITH WORKPLACE CONTROL PARAMETERS**

CONTAINS NO SUBSTANCES WITH OCCUPATIONAL EXPOSURE LIMIT VALUES.

### **EXPOSURE CONTROLS**

#### **APPROPRIATE ENGINEERING CONTROLS**

HANDLE ONLY IN A FULLY ENCLOSED SYSTEM AND EQUIPMENT. GOOD GENERAL VENTILATION SHOULD BE SUFFICIENT TO CONTROL AIRBORNE LEVELS. VENTILATION IS NORMALLY REQUIRED WHEN HANDLING OR USING THIS PRODUCT. EYEWASH FOUNTAINS SHOULD BE PROVIDED IN AREAS WHERE THERE IS ANY POSSIBILITY THAT WORKERS COULD BE EXPOSED TO THE SUBSTANCE. FOLLOW SAFE INDUSTRIAL ENGINEERING/LABORATORY PRACTICES WHEN HANDLING ANY CHEMICAL.

### **PERSONAL PROTECTIVE EQUIPMENT**

#### **EYE/FACE PROTECTION**

SAFETY GLASSES WITH SIDE-SHIELDS CONFORMING TO EN166 USE EQUIPMENT FOR EYE PROTECTION TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR EN 166(EU)

#### **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.



<b>BODY PROTECTION</b>	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.
<b>RESPIRATORY PROTECTION</b>	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).
<b>CONTROL OF ENVIRONMENTAL EXPOSURE</b>	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	Colorless clear liquid
ODOUR	NO DATA AVAILABLE
ODOUR THRESHOLD	NO DATA AVAILABLE
PH	NO DATA AVAILABLE
MELTING POINT/FREEZING POINT	
INITIAL BOILING POINT AND BOILING RANGE	
FLASH POINT	
EVAPORATION RATE	NO DATA AVAILABLE
FLAMMABILITY (SOLID, GAS)	NO DATA AVAILABLE
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS	NO DATA AVAILABLE
VAPOUR PRESSURE	NO DATA AVAILABLE
VAPOUR DENSITY	NO DATA AVAILABLE
RELATIVE DENSITY	
WATER SOLUBILITY	NO DATA AVAILABLE
PARTITION COEFFICIENT: N- OCTANOL/WATER	NO DATA AVAILABLE
AUTO-IGNITION TEMPERATURE	NO DATA AVAILABLE
DECOMPOSITION TEMPERATURE	NO DATA AVAILABLE
VISCOSITY	NO DATA AVAILABLE
EXPLOSIVE PROPERTIES	NO DATA AVAILABLE
OXIDIZING PROPERTIES	NO DATA AVAILABLE

**OTHER SAFETY  
INFORMATION**

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>	HEAT SENSITIVE.
<b>POSSIBILITY OF HAZARDOUS REACTIONS</b>	IN USE, MAY FORM FLAMMABLE/EXPLOSIVE VAPOR- AIR MIXTURE.
<b>CONDITIONS TO AVOID</b>	HEAT SENSITIVE.
<b>INCOMPATIBLE MATERIALS</b>	OXIDIZING 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>	NO DATA AVAILABLE  INHALATION: NO DATA AVAILABLE  DERMAL: NO DATA AVAILABLE  NO DATA AVAILABLE
<b>SKIN CORROSION/IRRITATION</b>	NO DATA AVAILABLE
<b>SERIOUS EYE DAMAGE/EYE IRRITATION</b>	NO DATA AVAILABLE
<b>RESPIRATORY OR SKIN SENSITISATION</b>	NO DATA AVAILABLE
<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.

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.

**REPRODUCTIVE TOXICITY** NO DATA AVAILABLE

**SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE** CAUSES DAMAGE TO: RESPIRATORY SYSTEM MAY CAUSE DROWSINESS OR DIZZINESS. CAUSES DAMAGE TO ORGANS: HEMATOPOIETIC SYSTEM CENTRAL NERVOUS SYSTEM THROUGH PROLONGED OR REPEATED EXPOSURE.

**SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE** OVEREXPOSURE MAY RESULT IN SERIOUS ILLNESS OR DEATH. SKIN CONTACT MAY RESULT IN INFLAMMATION; CHARACTERIZED BY ITCHING, SCALING, REDDENING, OR OCCASIONALLY BLISTERING. SKIN CONTACT MAY RESULT IN REDNESS, PAIN OR DRY SKIN. EYE CONTACT MAY RESULT IN REDNESS OR PAIN. INHALATION CAUSES IRRITATION OF THE LUNGS AND RESPIRATORY SYSTEM.

**ASPIRATION HAZARD** MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS.

**ADDITIONAL INFORMATION** RTECS: NOT AVAILABLE

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** NO DATA AVAILABLE

**PERSISTENCE AND DEGRADABILITY** NO DATA AVAILABLE

<b>BIOACCUMULATIVE POTENTIAL</b>	NO DATA AVAILABLE
<b>MOBILITY IN SOIL</b>	NO DATA AVAILABLE
<b>RESULTS OF PBT AND VPVB ASSESSMENT</b>	PBT/VPVB ASSESSMENT NOT AVAILABLE AS CHEMICAL SAFETY ASSESSMENT NOT REQUIRED/NOT CONDUCTED
<b>OTHER ADVERSE EFFECTS</b>	NO DATA AVAILABLE

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

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### **WASTE TREATMENT METHODS**

<b>PRODUCT</b>	RECYCLE TO PROCESS IF POSSIBLE. IT IS THE GENERATOR'S RESPONSIBILITY TO COMPLY WITH FEDERAL, STATE AND LOCAL RULES AND REGULATIONS. YOU MAY BE ABLE TO DISSOLVE OR MIX MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER SYSTEM. THIS SECTION IS INTENDED TO PROVIDE ASSISTANCE BUT DOES NOT REPLACE THESE LAWS, NOR DOES COMPLIANCE IN ACCORDANCE WITH THIS SECTION ENSURE REGULATORY COMPLIANCE ACCORDING TO THE LAW. US EPA GUIDELINES FOR IDENTIFICATION AND LISTING OF HAZARDOUS WASTE ARE LISTED IN 40 CFR PARTS 261. THE PRODUCT SHOULD NOT BE ALLOWED TO ENTER THE ENVIRONMENT, DRAINS, WATER WAYS, OR THE SOIL.
<b>CONTAMINATED PACKAGING</b>	DISPOSE OF AS UNUSED PRODUCT. DO NOT RE-USE EMPTY CONTAINERS.

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## **SECTION 14. TRANSPORT INFORMATION**

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<b>DOT (US)</b>	
PROPER SHIPPING NAME:	BENZENE
UN NUMBER:	1114
CLASS:	3
PACKING GROUP:	II
REPORTABLE QUANTITY:	10 POUNDS (4.54 KILOGRAMS)

<b>IMDG</b>	
PROPER SHIPPING NAME:	BENZENE

UN NUMBER: 1114  
CLASS: 3  
PACKING GROUP: II  
EMS-NO: F-E, S-D  
MARINE POLLUTANT: YES

**IATA**  
PROPER SHIPPING NAME: BENZENE  
UN NUMBER: 1114  
CLASS: 3  
PACKING GROUP: II

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## SECTION 15. REGULATORY INFORMATION

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

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

**SARA 311/312 HAZARDS**  
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
2,3,4,6-Tetra- <i>O</i> -benzyl- $\alpha$ -D-glucopyranosyl <i>N,N,N',N'</i> -tetramethylphosphorodiamidate (ca. 20% in Benzene)	143520-19-8	

**NEW JERSEY RIGHT TO KNOW COMPONENTS**

	CAS-NO.	REVISION DATE
2,3,4,6-Tetra- <i>O</i> -benzyl- $\alpha$ -D-glucopyranosyl <i>N,N,N',N'</i> -tetramethylphosphorodiamidate (ca. 20% in Benzene)	143520-19-8	

**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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### HMIS RATING

HEALTH HAZARD:	1
CHRONIC HEALTH HAZARD:	
FLAMMABILITY:	3
PHYSICAL HAZARD	0

### NFPA RATING

HEALTH HAZARD:	1
FIRE HAZARD:	3
REACTIVITY HAZARD:	0

### 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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