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SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #:	33860
NAME:	2,6-Di- <i>tert</i> -butyl-4-methylphenol
SYNONYMS:	Butylated hydroxytoluene 2,6-Di- <i>tert</i> -butyl- <i>p</i> -cresol
24 HOUR EMERGENCY TELEPHONE:	(800) 535-5053(USA) 352-323-3500 (INTERNATIONAL)
TO REQUEST AN MSDS:	(800) 869-9290
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SECTION 2. HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS)
LONG-TERM (CHRONIC) AQUATIC HAZARD (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 WARNING

HAZARD STATEMENT(S)

H410 VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING
EFFECTS.

PRECAUTIONARY STATEMENT(S)

P273 AVOID RELEASE TO THE ENVIRONMENT.
P391 COLLECT SPILLAGE.
P501 DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED
WASTE DISPOSAL PLANT.

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

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MF: C₁₅H₂₄O
MW: 220.35
CAS-NO. 128-37-0
PURITY: ≥ 99% (GC)

HAZARDOUS COMPONENTS

COMPONENT	CLASSIFICATION	CONCENTRATION
2,6-Di- <i>tert</i> -butyl-4-methylphenol	AQUATIC CHRONIC 1; H410 M- FACTOR - AQUATIC ACUTE: 1 M-FACTOR - AQUATIC CHRONIC: 1	<= 100%

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

SECTION 4. FIRST-AID MEASURES

DESCRIPTION OF FIRST AID MEASURES

GENERAL ADVICE	CONSULT A PHYSICIAN. SHOW THIS SAFETY DATA SHEET TO THE DOCTOR IN ATTENDANCE.
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	FLUSH EYES WITH WATER AS A PRECAUTION.
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

SECTION 5. FIRE AND EXPLOSION DATA

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 COMBUSTIBLE.
ADVICE FOR FIREFIGHTERS	WEAR SELF-CONTAINED BREATHING APPARATUS FOR FIREFIGHTING IF NECESSARY.
FURTHER INFORMATION	NO DATA AVAILABLE

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS,	AVOID DUST FORMATION. AVOID BREATHING VAPOURS, MIST OR GAS. ENSURE ADEQUATE
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**PROTECTIVE
EQUIPMENT AND
EMERGENCY
PROCEDURES**

VENTILATION.
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.

SECTION 7. HANDLING AND STORAGE

**PRECAUTIONS FOR SAFE
HANDLING**

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.

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

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

KEEP IN A DRY PLACE.

Store at 0 - 8 °C

SPECIFIC END USE(S)

APART FROM THE USES MENTIONED IN SECTION 1.2 NO
OTHER SPECIFIC USES ARE STIPULATED

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTROL PARAMETERS

COMPONENTS WITH WORKPLACE CONTROL PARAMETERS

COMPONENT	CAS-NO.	VALUE	CONTROL PARAMETERS	BASIS
2,6-Di- <i>tert</i> -butyl-4-methylphenol	128-37-0	TWA	2 MG/M3	USA. ACGIH THRESHOLD LIMIT VALUES (TLV)
	REMARKS	UPPER RESPIRATORY TRACT IRRITATION NOT CLASSIFIABLE AS A HUMAN CARCINOGEN		
		TWA	10 MG/M3	USA. NIOSH RECOMMENDED EXPOSURE LIMITS
		PEL	10 MG/M3	CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS (TITLE 8, ARTICLE 107)

EXPOSURE CONTROLS

APPROPRIATE ENGINEERING CONTROLS

HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICE. WASH HANDS BEFORE BREAKS AND AT THE END OF WORKDAY.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION

USE EQUIPMENT FOR EYE PROTECTION TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR EN 166(EU).

SKIN PROTECTION	<p>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.</p> <p>FULL CONTACT MATERIAL: NITRILE RUBBER MINIMUM LAYER THICKNESS: 0.11 MM BREAK THROUGH TIME: 480 MIN MATERIAL TESTED:DERMATRIL (KCL 740 , SIZE M)</p> <p>SPLASH CONTACT MATERIAL: NITRILE RUBBER MINIMUM LAYER THICKNESS: 0.11 MM BREAK THROUGH TIME: 480 MIN MATERIAL TESTED:DERMATRIL (KCL 740 , SIZE M)</p> <p>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.</p>
BODY PROTECTION	<p>CHOOSE BODY PROTECTION IN RELATION TO ITS TYPE, TO THE CONCENTRATION AND AMOUNT OF DANGEROUS SUBSTANCES, AND TO THE SPECIFIC WORK-PLACE. THE TYPE OF PROTECTIVE EQUIPMENT MUST BE SELECTED ACCORDING TO THE CONCENTRATION AND AMOUNT OF THE DANGEROUS SUBSTANCE AT THE SPECIFIC WORKPLACE.</p>
RESPIRATORY PROTECTION	<p>RESPIRATORY PROTECTION IS NOT REQUIRED. WHERE PROTECTION FROM NUISANCE LEVELS OF DUSTS ARE DESIRED, USE TYPE N95 (US) OR TYPE P1 (EN 143) DUST MASKS. USE RESPIRATORS AND COMPONENTS TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR CEN (EU).</p>
CONTROL OF ENVIRONMENTAL EXPOSURE	<p>PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. DO NOT LET PRODUCT ENTER DRAINS. DISCHARGE INTO THE ENVIRONMENT MUST BE AVOIDED.</p>

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	White to off-white crystalline or granular powder
ODOUR	ODOURLESS
ODOUR THRESHOLD	NO DATA AVAILABLE
PH	NO DATA AVAILABLE
MELTING POINT/FREEZING POINT	69 - 73 °C
INITIAL BOILING POINT AND BOILING RANGE	264 - 266 °C
FLASH POINT	> 93 °C
EVAPORATION RATE	NO DATA AVAILABLE
FLAMMABILITY (SOLID, GAS)	NO DATA AVAILABLE
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS	NO DATA AVAILABLE
VAPOUR PRESSURE	0.00 HPA AT 25 °C
VAPOUR DENSITY	NO DATA AVAILABLE
RELATIVE DENSITY	
WATER SOLUBILITY	0.76 G/L AT 20 °C - SLIGHTLY SOLUBLE
PARTITION COEFFICIENT: N- OCTANOL/WATER	LOG POW: 5.1 - POTENTIAL BIOACCUMULATION
AUTO-IGNITION TEMPERATURE	> 400 °C - REGULATION (EC) NO. 440/2008, ANNEX, A.16
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

SECTION 10. STABILITY AND REACTIVITY

REACTIVITY	NO DATA AVAILABLE
CHEMICAL STABILITY	STABLE UNDER RECOMMENDED STORAGE CONDITIONS.
POSSIBILITY OF HAZARDOUS REACTIONS	NO DATA AVAILABLE
CONDITIONS TO AVOID	STRONG HEATING.
INCOMPATIBLE MATERIALS	ACID CHLORIDES, ACID ANHYDRIDES, OXIDIZING AGENTS, BASES, BRASS, COPPER, MILD STEEL, COPPER COMPOUNDS

**HAZARDOUS
DECOMPOSITION
PRODUCTS**

OTHER DECOMPOSITION PRODUCTS - NO DATA
AVAILABLE
HAZARDOUS DECOMPOSITION PRODUCTS FORMED
UNDER FIRE CONDITIONS. - CARBON OXIDES
IN THE EVENT OF FIRE: SEE SECTION 5

SECTION 11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

ACUTE TOXICITY

NO DATA AVAILABLE

INHALATION: NO DATA AVAILABLE

DERMAL: NO DATA AVAILABLE

NO DATA AVAILABLE

**SKIN
CORROSION/IRRITATION**

SKIN - RABBIT
RESULT: NO SKIN IRRITATION - 4 H

**SERIOUS EYE
DAMAGE/EYE IRRITATION**

EYES - RABBIT
RESULT: NO EYE IRRITATION

**RESPIRATORY OR SKIN
SENSITISATION**

PATCH TEST: - HUMAN
RESULT: NEGATIVE
REMARKS: (ECHA)

**GERM CELL
MUTAGENICITY**

AMES TEST
SALMONELLA TYPHIMURIUM
RESULT: NEGATIVE
(ECHA)
HGPRT (CELL FORWARD MUTATION ASSAY)
RAT HEPATOCYTES
RESULT: NEGATIVE
(ECHA)
MUTAGENICITY (MAMMAL CELL TEST):
CHROMOSOME ABERRATION.
CHINESE HAMSTER OVARY CELLS
RESULT: NEGATIVE
(ECHA)

MOUSE - MALE AND FEMALE - BONE MARROW
RESULT: NEGATIVE
(ECHA)

RAT - MALE - BONE MARROW
RESULT: NEGATIVE
(ECHA)

CARCINOGENICITY

THIS PRODUCT IS OR CONTAINS A COMPONENT THAT IS NOT CLASSIFIABLE AS TO ITS CARCINOGENICITY BASED ON ITS IARC, ACGIH, NTP, OR EPA CLASSIFICATION.

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 ON OSHA S LIST OF REGULATED CARCINOGENS.

REPRODUCTIVE TOXICITY NO DATA AVAILABLE

SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE NO DATA AVAILABLE

SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE NO DATA AVAILABLE

ASPIRATION HAZARD NO DATA AVAILABLE

ADDITIONAL INFORMATION

REPEATED DOSE TOXICITY - PIG - MALE AND FEMALE - ORAL - 42 DAYS - NO OBSERVED ADVERSE EFFECT LEVEL - \geq 61 MG/KG (ECHA)

REPEATED DOSE TOXICITY - RAT - MALE AND FEMALE - ORAL - 22 MONTHS - NO OBSERVED ADVERSE EFFECT LEVEL - 25 MG/KG (ECHA)

RTECS: GO7875000

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

SECTION 12. ECOLOGICAL INFORMATION

TOXICITY

TOXICITY TO FISH SEMI-STATIC TEST LC50 - DANIO RERIO (ZEBRA FISH) - $>$ 0.57 MG/L - 96 H (DIRECTIVE 67/548/EEC, ANNEX V, C.1.)

TOXICITY TO DAPHNIA AND OTHER AQUATIC INVERTEBRATES STATIC TEST EC50 - DAPHNIA MAGNA (WATER FLEA) - 0.48 MG/L - 48 H)

TOXICITY TO ALGAE	STATIC TEST EC50 - DESMODESMUS SUBSPICATUS (GREEN ALGAE) - > 0.4 MG/L - 72 H (DIRECTIVE 67/548/EEC, ANNEX V, C.3.)
TOXICITY TO BACTERIA	STATIC TEST EC10 - DESMODESMUS SUBSPICATUS (GREEN ALGAE) - CA. 0.4 MG/L - 72 H (DIRECTIVE 67/548/EEC, ANNEX V, C.3.) STATIC TEST EC50 - ACTIVATED SLUDGE - > 10,000 MG/L - 3 H
PERSISTENCE AND DEGRADABILITY	NO DATA AVAILABLE
BIOACCUMULATIVE POTENTIAL	NO DATA AVAILABLE
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.

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

PRODUCT	OFFER SURPLUS AND NON-RECYCLABLE SOLUTIONS TO A LICENSED DISPOSAL COMPANY.
CONTAMINATED PACKAGING	DISPOSE OF AS UNUSED PRODUCT.

SECTION 14. TRANSPORT INFORMATION

DOT (US)	NOT DANGEROUS GOODS
IMDG	
PROPER SHIPPING NAME:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(2,6-Di- <i>tert</i> -butyl-4-methylphenol)
UN NUMBER:	3077

CLASS: 9
PACKING GROUP: III
EMS-NO: F-A, S-F
MARINE POLLUTANT: YES

IATA

PROPER SHIPPING NAME: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,
N.O.S.(2,6-Di-*tert*-butyl-4-methylphenol)
UN NUMBER: 3077
CLASS: 9
PACKING GROUP: III

FURTHER INFORMATION EHS-MARK REQUIRED (IMDG CODE 2.10.3) FOR SINGLE
PACKAGINGS AND COMBINATION PACKAGINGS
CONTAINING INNER PACKAGINGS WITH DANGEROUS
GOODS > 5L FOR LIQUIDS OR > 5KG FOR SOLIDS.

SECTION 15. REGULATORY INFORMATION

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 (DE MINIMIS) REPORTING
LEVELS ESTABLISHED BY SARA TITLE III, SECTION 313.

SARA 311/312 HAZARDS NO SARA HAZARDS

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
2,6-Di- <i>tert</i> -butyl-4- methylphenol	128-37-0	

SECTION 16. OTHER INFORMATION

FULL TEXT OF H-STATEMENTS REFERRED TO UNDER SECTIONS 2 AND 3.
H410 VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING
EFFECTS.

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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