

Safety Data Sheet per OSHA HazCom 2012

1 Identification Product identifier Product name: 2(3)-tert-Butyl-4-methoxyphenol Stock number: B23530 CAS Number: 25013-16-5 EC number: 246-563-8 Relevant identified uses of the substance or mixture and uses advised against. Identified use: SU24 Scientific research and development Details of the supplier of the safety data sheet Manufacturer/Supplier: Alfa Aesar Thermo Fisher Scientific Chemicals, Inc. Inerrito Fisher Scheman C. 30 Bond Street Ward Hill, MA 01835-8099 Tel: 800-343-0660 Fax: 800-322-4757 Email: tech @alfa.com www.alfa.com Information Department: Health, Safety and Environmental Department Emergency telephone number: During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0789. 2 Hazard(s) identification Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS) æ GHS08 Health hazard Carc. 2 H351 Suspected of causing cancer. ! GHS07 Acute Tox. 4 H302 Harmful if swallowed. Hazards not otherwise classified No information known. Label elements GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS) Hazard pictograms GHS07 GHS08 Signal word Warning Hazard statements H302 Harmful if swallowed. H351 Suspected of causing cancer. Precautionary statements P281 Use personal protective equipment as required. P264 Wash thoroughly after handling. P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor/.../if you feel unwell. P308+P313 IF exposed or concerned: Get medical advice/attention. P405 Store locked up. P501 Dispose of contents/container in accordance with local/regional/national/international regulations. WHMIS classification D2A - Very toxic material causing other toxic effects Classification system HMIS ratings (scale 0-4) (Hazardous Materials Identification System) 1

 EALTH
 Health (acute effects) = 1

 IRE
 Flammability = 1

 EACTIVITY
 Physical Hazard = 1

Other hazards Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable. 3 Composition/information on ingredients Chemical characterization: Substances CAS# Description: 25013-16-5 2(3)-tert-Butyl-4-methoxyphenol Identification number(s): EC number: 246-563-8 4 First-aid measures Description of first aid measures After inhalation Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice.

(Contd. of page 1)

Product name: 2(3)-tert-ButyI-4-methoxyphenol

After skin contact

After skin contact Immediately wash with water and soap and rinse thoroughly. Seek immediate medical advice. After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor. After swallowing Seek medical treatment. Information for doctor Mect important symptoms and effects, both acute and delayed No further relevant information ave

Most important symptoms and effects, both acute and delayed No further relevant information available. Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

Extinguishing media Suitable extinguishing agents Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Special hazards arising from the substance or mixture If this product is involved in a fire, the following can be released: Carbon monoxide and carbon dioxide Advice for firefighters Protective equipment: Wear self-contained respirator. Wear fully protective impervious suit.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation Environmental precautions: Do not allow product to reach sewage system or any water course. Methods and material for containment and cleaning up: Dispose of contaminated material as waste according to section 13. Prevention of secondary hazards: No special measures required. Reference to other sections See Section 7 for information on safe handling See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

7 Handling and storage

Handling

8

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Handling Precautions for safe handling		
Keep container tightly sealed. Store in cool, dry place in tightly closed	containers.	
Information about protection against explosions and fires: No information known.		
Conditions for safe storage, including	•	
Storage Requirements to be met by storerooms and receptacles: No special requirements.		
Information about storage in one con Store in the dark.	nmon storage facility:	
Store away from oxidizing agents. Further information about storage co	nditions:	
Keep container tightly sealed. Store in cool, dry conditions in well sealed.		
Protect from exposure to light. Specific end use(s) No further relevant		
Exposure controls/personal prote		
Additional information about design of technical systems: Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute		
Control parameters Components with limit values that red	quire monitoring at the workplace:	
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace. Additional information: No data		
Exposure controls Personal protective equipment		
General protective and hygienic measures The usual precautionary measures for handling chemicals should be followed.		
Keep away from foodstuffs, beverages a Remove all soiled and contaminated clo	and feed.	
Wash hands before breaks and at the e	nd of work.	
Maintain an ergonomically appropriate v Breathing equipment: Use suitable res	pirator when high concentrations are present.	
Protection of hands: Impervious gloves		
Check protective gloves prior to each use for their proper condition. The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.		
Penetration time of glove material (in minutes) Not determined Eve protection: Safety glasses		
Body protection: Protective work clothing.		
9 Physical and chemical properties		
Information on basic physical and ch General Information	emical properties	
Appearance: Form:	Crystelline	
Color:	Crystalline White to cream	
Odor: Odor threshold:	Not determined Not determined.	
pH-value:	Not applicable.	
Change in condition Melting point/Melting range:	55-65 °C (131-149 °F)	

Product name: 2(3)-tert-ButvI-4-methoxyphenol

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Product name: 2(3)-tert-Butyl-4-meth	hoxyphenol	
Boiling point/Boiling range:	(Contd. of page 2)	
Sublimation temperature / start:	Not determined Not determined	
Flammability (solid, gaseous)	Not determined.	
Ignition temperature:	Not determined	
Decomposition temperature: Auto igniting:	Not determined Not determined.	
V		
Danger of explosion: Explosion limits:	Not determined.	
Lower:	Not determined	
Upper: Vapor prossuro:	Not determined	
Vapor pressure: Density:	Not applicable. Not determined	
Relative density	Not determined.	
Vapor density	Not applicable.	
Evaporation rate Solubility in / Miscibility with	Not applicable.	
Water:	Not determined	
Partition coefficient (n-octanol/water):		
Viscosity:		
dynamic: kinematic:	Not applicable. Not applicable.	
Other information	No further relevant information available.	
10 Stability and reactivity		
Reactivity No information known. Chemical stability Stable under recomm	mended storage conditions	
Thermal decomposition / conditions t	nended storage conditions. To be avoided: Decomposition will not occur if used and stored according to specifications.	
Possibility of hazardous reactions Rea	acts with strong oxidizing agents	
Conditions to avoid No further relevant Incompatible materials:	information available.	
Oxidizing agents		
Liaht		
Hăzardous decomposition products: (Carbon monoxide and carbon dioxide	
11 Texicological information		
11 Toxicological information		
Information on toxicological effects		
Acute toxicity: Harmful if swallowed.		
	al Substances (RTECS) contains acute toxicity data for this substance.	
LD/LC50 values that are relevant for c		
Oral LD50 2000 mg/kg (rat)		
Skin irritation or corrosion: May cause	e irritation	
Eve irritation or corrosion: Mav cause	irritation	
Sensitization: No sensitizing effects knc Germ cell mutagenicity: The Registry c	own. of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance.	
Carcinogenicity:		
Carcinogenicity: Suspected of causing cancer.		
IARC-28: Possibly carcinogenic to numa The Registry of Toxic Effects of Chemic	ans: limited evidence in humans in the absence of sufficient evidence in experimental animals. al Substances (RTECS) contains tumorigenic and/or carcinogenic and/or peoplastic data for this substance	
Reproductive toxicity: The Registry of	al Substances (RTECS) contains the discriber and/or carcinogenic and/or neoplastic data for this substance. Toxic Effects of Chemical Substances (RTECS) contains reproductive data for this substance.	
Specific target organ system toxicity -	- repeated exposure: No effects known.	
Specific target organ system toxicity -	- single exposure: No effects known.	
Aspiration hazard: No effects known. Subacute to chronic toxicity: The Reg	istry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.	
Additional toxicological information:	To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.	
v		
12 Ecological information		
Toxicity		
Aquatic toxicity: No further relevant info	ormation available.	
Persistence and degradability No furth Bioaccumulative potential No further re	ier relevant information available.	
Mobility in soil No further relevant infor	Hevani Information available. mation available	
Additional ecological information:		
General notes:		
Do not allow undiluted product or large q Avoid transfer into the environment.	quantities to reach ground water, water course or sewage system.	
Results of PBT and vPvB assessment	t	
PBT: Not applicable.		
vPvB: Not applicable. Other adverse effects No further releva	and information available	
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13 Disposal considerations		
Waste treatment methods		
Recommendation Consult state, local or national regulations to ensure proper disposal.		
Uncleaned packagings:		
Recommendation: Disposal must be made according to official regulations.		
44 Transport information		
14 Transport information		
UN-Number	Netennlieghle	
DOT, ADN, IMDG, IATA	Not applicable	
UN proper shipping name DOT, ADN, IMDG, IATA	Not applicable	
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Product name: 2(3)-tert-Butyl-4-methoxyphenol	
	(Control of power 2)
Transport bozard alass(as)	(Contd. of page 3)
Transport hazard class(es)	
DOT, ADR, ADN, IMDG, IATA Class	Not applicable
Packing group DOT, IMDG, IATA	Not applicable
Environmental hazards:	Not applicable.
Special precautions for user	Not applicable.
Transport in bulk according to Annex II of MARPOL73/78	'8 and the IBC Code Not applicable.
Transport/Additional information:	
DOT Marine Pollutant (DOT):	No
UN "Model Regulation":	-
15 Regulatory information Safety, health and environmental regulations/legislation GHS label elements The product is classified and labeled in Hazard pictograms GHS07 GHS08	n specific for the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)
National regulations All components of this product are listed in the U.S. Environ All components of this product are listed on the Canadian Do SARA Section 313 (specific toxic chemical listings) Subs California Proposition 65	aueniion. ith local/regional/national/international regulations. imental Protection Agency Toxic Substances Control Act Chemical substance Inventory. iomestic Substances List (DSL).
Prop 65 - Chemicals known to cause cancer	
25013-16-5 2(3)-tert-Butyl-4-methoxyphenol Prop 65 - Developmental toxicity Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not Information about limitation of use: For use only by techn Other regulations, limitations and prohibitive regulations Substance of Very High Concern (SVHC) according to th The conditions of restrictions according to Article 67 an market and use must be observed. Substance is not listed. Annex XIV of the REACH Regulations (requiring Authori Chemical safety assessment: A Chemical Safety Assessm	listed. nically qualified individuals. Is he REACH Regulations (EC) No. 1907/2006. Substance is not listed. nd Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the isation for use). Substance is not listed.
conformance with this Material Safety Data Sheet, or in com Department issuing SDS: Global Marketing Department	nt to other information gathered by them, and should make independent judgement of suitability of this I safety of employees. This information is furnished without warranty, and any use of the product not in nbination with any other product or process, is the responsibility of the user. bute (European Agreement concerning the International Carriage of Dangerous Goods by Road) USA