

Safety Data Sheet per OSHA HazCom 2012

1 Identification Product identifier	
Product name: <u>1-n-Butyl-3-methylimidazolium di-n-butyl phosphate</u>	
Stock number: H59893 CAS Number:	
663199-28-8 <b>Relevant identified uses of the substance or mixture and uses advised against.</b> 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. 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)	
GHS07 Skin Irrit. 2 H315 Causes skin irritation.	
Eye Irrit. 2A H319 Causes skin initiation. STOT SE 3 H335 May cause respiratory irritation.	
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	
Signal word Warning         Hazard statements         H315 Causes skin irritation.         H319 Causes serious eye irritation.         H335 May cause respiratory irritation.         H335 May cause respiratory irritation.         Precautionary statements         P261       Avoid breathing dust/fume/gas/mist/vapours/spray.         P280       Wear protective gloves/protective clothing/eye protection/face protection.         P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.         P304+P340       IF INHALED: Remove person to fresh air and keep comfortable for breathing.         P405       Store locked up.         P501       Dispose of contents/container in accordance with local/regional/national/international regulations.	
WHMIS classification D2B - Toxic material causing other toxic effects	
$(\underline{T})$	
Classification system HMIS ratings (scale 0-4) (Hazardous Materials Identification System)	
HEATH I Health (acute effects) = 1 FIRE I Flammability = 1 REACTIVITI 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: 663199-28-8 1-n-Butyl-3-methylimidazolium di-n-butyl phosphate	
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.	
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. (Contd. on	page 2)
	- USA 🖆

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5 Fire-fighting measures         Extraplishing meak         Second hazards winding from the substance or multice spray. Fight larger fires with valuer spray or alcohol resistant foam.         Special hazards winding from the substance or multice spray. Fight larger fires with valuer spray or alcohol resistant foam.         Special hazards winding from the substance or multice spray.         Rescue product is motival in a fire, the following can be released.         Minogen academic spray.         Rescue product is motival in a fire, the following can be released.         Rescue product is motival in a fire, the following can be released.         Rescue product is motival in a fire, the following can be released.         Rescue product is motival in a fire, the following can be released.         Rescue product is motival in a fire, the following can be released for the environment without proper governmental permits.         Wethoods and the interful for containment and canceptory procedures.         Prevention of the sections         Rescue of the section section section section section section sections         Rescue of the section secti		(Contd. of page 1)
Evingible and eving the second of a line, the (oblewing can be released: Carter measures and the second of a line, the (oblewing can be released: Carter measures and the second of a line, the (oblewing can be released: Carter measures and the second of a line, the (oblewing can be released: Carter measures and the second of a line, the (oblewing can be released: Carter measures and the second of a line, the (oblewing can be released: Carter measures and the second of a line, the (oblewing can be released: Were set-contained respirator: Were set-contained respi	ny immediate medical attention and special treatment needed No further relevant information available.	
Personal precautions, protective equipment and emergency procedures. Was protective equipment. Cape unprotected persons away. Ensuite adequate ventilation To another of the process persons away. Ensuite adequate ventilation To another of the process persons away. Ensuite adequate ventilation To another of the process persons away. Provide adequate ventilation To another of the process persons away. Provide adequate ventilation To another of the process persons away. Provide adequate ventilation Provide Provide adequate ventilation Provide Provide adequate ventilation Provide Provide adequate ventilation Provide Prov	media guishing agents Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Is arising from the substance or mixture s involved in a fire, the following can be released: ide and carbon dioxide s (NOx) ides fighters inpment: ained respirator.	
Handling Precautions for safe handling Handle under dry productive gas. Keep containers fightly sealed containers. Ensure good verification against explosions and fires: No information known. Conditions for safe storage, including any incompatibilities Storage Requirements to be met by storerooms and receptacles: No special requirements. Market of the storage including any incompatibilities Storage Requirements to be met by storerooms and receptacles: No special requirements. Market of the storage including any incompatibilities Store away from woldizing agents. Store in cool, dry conditions in well sealed containers. Protect from hundity and user: Store in cool, dry conditions in well sealed containers. Protect from takeff. Store in cool, dry conditions in well sealed containers. Protect from the storage control storage conditions: Additional information about design of technical systems: Properly operating chemical tume 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 require monitoring at the workplace: The broakit 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 eqliptionent Remove all soled and containnating chemicals should be followed. Remove all soled and containnating themicals should be followed. Remove all soled and containnated leading immediately. Marking an ergonomically papproprise working environment. Breathing equipment: Use suitable respirator whore high concentrations are present. Immerices gloves for only depends on the material, but actis	autions, protective equipment and emergency procedures e equipment. Keep unprotected persons away. te ventilation I precautions: Do not allow material to be released to the environment without proper governmental permits. material for containment and cleaning up: wid binders material (condition and cleaning up:	
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 require 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 production of more the sum for the sum of t	tightly sealed. Ity protective gas. tightly sealed. Ity place in tightly closed containers. antilation at the workplace. <b>Sour protection against explosions and fires:</b> No information known. <b>Sour storage, including any incompatibilities</b> <b>to be met by storerooms and receptacles:</b> No special requirements. <b>Sour storage in one common storage facility:</b> In water/moisture. In oxidizing agents. Babut storage conditions:	
9 Physical and chemical properties         Information on basic physical and chemical properties         General Information         Appearance:         Form:       Liquid         Color:       Brown         Odor:       Not determined         Odor threshold:       Not determined.	by mation about design of technical systems: ting chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute. teters with limit values that require monitoring at the workplace: es not contain any relevant quantities of materials with critical values that have to be monitored at the workplace. by materials with provide the workplace of the workplace of materials with critical values that have to be monitored at the workplace. by materials with provide the workplace of the workplace of the workplace of materials with critical values that have to be monitored at the workplace. by materials with critical values that have to be monitored at the workplace. by materials of materials with critical values that have to be monitored at the workplace. by materials and the workplace of the workplace of the workplace of the workplace of the workplace. Is a strong the second of the workplace of the workplace of the workplace of the workplace of the workplace. Is a strong of the workplace of the work of the	
Information on basic physical and chemical properties General Information Appearance: Form: Liquid Color: Brown Odor: Not determined Odor threshold: Not determined.		
Odor threshold: Not determined.	n basic physical and chemical properties nation Liquid Brown	
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## Product name: 1-n-Butyl-3-methylimidazolium di-n-butyl phosphate

		(Contd. of page 2)
pH-value:	Not determined.	(Conta: of page 2)
Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting:	Not determined Not determined Not determined Not determined Not determined Not determined Not determined Not determined	
Danger of explosion: Explosion limits: Lower: Upper: Vapor pressure: Density: Relative density Vapor density Evaporation rate Solubility in / Miscibility with Water: Partition coefficient (n-octanol/water)	Not determined. Not determined Not determined Not determined Not determined. Not determined. Not determined. Not determined.	
Viscosity: dynamic: kinematic: Other information	Not determined. Not determined. No further relevant information available.	
10 Stability and reactivity Reactivity No information known. Chemical stability Stable under recoming Thermal decomposition / conditions of Possibility of hazardous reactions Re Conditions to avoid No further relevant Incompatible materials: Water/moisture Oxidizing agents Hazardous decomposition products: Carbon monoxide and carbon dioxide Nitrogen oxides Phosphorus oxides (e.g. P2O5)	to be avoided: Decomposition will not occur if used and stored according to specifications. eacts with strong oxidizing agents	
Reproductive toxicity: No effects know Specific target organ system toxicity Specific target organ system toxicity Aspiration hazard: No effects known. Subacute to chronic toxicity: No effect	kin irritation. rious eye irritation. own. on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH. vn. - <b>repeated exposure:</b> No effects known. - <b>single exposure:</b> May cause respiratory irritation.	
12 Ecological information Toxicity Aquatic toxicity: No further relevant inf Persistence and degradability No furth Bioaccumulative potential No further r Mobility in soil No further relevant infor Additional ecological information: General notes: Do not allow material to be released to t Do not allow undiluted product or large of Avoid transfer into the environment. Results of PBT and vPvB assessmen PBT: Not applicable. vPvB: Not applicable. Other adverse effects No further releval	relevant information available. rmation available. the environment without proper governmental permits. quantities to reach ground water, water course or sewage system. <b>t</b>	
13 Disposal considerations Waste treatment methods Recommendation Consult state, local of Uncleaned packagings: Recommendation: Disposal must be m	or national regulations to ensure proper disposal. nade according to official regulations.	
14 Transport information		
UN-Number DOT, ADN, IMDG, IATA	Not applicable	
UN proper shipping name DOT, ADN, IMDG, IATA	Not applicable	
		(Contd. on page 4) USA

## Product name: 1-n-Butyl-3-methylimidazolium di-n-butyl phosphate (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 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 specific for the substance or mixture GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS) Hazard pictograms GHS07 Signal word Warning Hazard statements H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation. Precautionary statements P261 Avoid bre P280 Wear pro Precautionary statements P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P280 Wear protective gloves/protective clothing/eye protection/face protection. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P304+P340 P405 P501 Store locked up. Dispose of contents/container in accordance with local/regional/national/international regulations. National regulations This product is not listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricted to research and development only. This product must be used by or directly under the supervision of a technically qualified individual as defined by TSCA. This product must not be used for commercial purposes or in formulations for commercial purposes. This product is not listed on the Canadian Domestic Substances List (DSL) or the Canadian Non-Domestic Substances List (NDSL). This product is not listed on the Canadian Domestic Substances List (DSL) or the Cana SARA Section 313 (specific toxic chemical listings) Substance is not listed. California Proposition 65 Prop 65 - Developmental toxicity Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Other regulations limitation of use: For use only by technically qualified individuals. Other regulations, limitations and prohibitive regulations Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006. Substance is not listed. The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed. Substance is not liste Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed. Chemical safety assessment: A Chemical Safety Assessment has not been carried out. 16 Other information Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user. Department issuing SDS: Global Marketing Department Date of preparation / last revision 11/24/2015 / -Date of preparation / last revision 11/24/2015'/ -Abbreviations and acronyms: ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) DOT: US Department of Transportation CAS: Chemical Abstracts Service (division of the American Chemical Society) HMIS: Hazardous Materials Identification System (USA) WHMIS: Workplace Hazardous Materials Information System (Canada) LC50: Lethal concentration, 50 percent LD50: Lethal concentration, 50 percent LD50: Lethal concentration and every Bioaccumulative VPUB: very Persistent and very Bioaccumulative ACGIH: American Conterence of Governmental Industrial Hygienists (USA) OSHA: Occupational Safety and Health Administration (USA) NTP: National Toxicology Program (USA) LR7C: International Agency for Research on Cancer EPA: Environmental Protection Agency (USA)

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