Printing date 14.07.2010	Revision: 14.07.2010		
1 Identification of substance			
Product details			
Trade name	n-Butylidenephthalide		
Stock number:	A10353, L07555		
Manufacturer/Supplier:	Alfa Aesar GmbH & Co.KG		
	Benzstrasse 3 E-mail: gcat@matthey.com D-76185 Karlsruhe / Germany www.alfa-chemcat.com		
Informing department:	Product safety department. Giftnotruf Universität Mainz / Poison Information Center Mainz		
Emergency information:	Giftnotruf Universität Mainz / Poison Information Center Mainz www.giftinfo.uni-mainz.de Telefon:+49(0)6131/19240		
2 Hazards identification			
Hazard designation:	Xn Harmful		
Information nortaining to particular dangers			
Information pertaining to particular dangers for man and environment	R 22 Harmful if swallowed.		
GHS label elements	Varning		
	$\checkmark$		
Prevention:	H302 - Harmful if swallowed. P264 W ash thoroughly after handling.		
Response:	P270 Do no eat, drink or smoke when using this product. P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.		
•	P330 Rinse mouth.		
Disposal:	P501 Dispose of contents/container in accordance with local/regional/national/international regulations.		
3 Composition/information on ingredients	s		
Chemical characterization:			
Designation: (CAS#) Identification number(s):	n-Butylidenephthalide (CAS# 551-08-6): 100%		
EINECS Number:	208-991-3		
4 First aid measures			
After inhalation	Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.		
After skin contact	Seek immediate medical advice. Instantly wash with water and soap and rinse thoroughly.		
	Seek immediate medical advice		
After eye contact After swallowing	Rinse opened eye for several minutes under running water. Then consult doctor. Seek immediate medical advice.		
5 Fire fighting measures	000 - the faile second second second second second free with writes let as sleaked second to be		
Suitable extinguishing agents Special hazards caused by the material, its	CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.		
products of combustion or flue gases:	Can be released in case of fire: Carbon monoxide and carbon dioxide		
Protective equipment:	Wear self-contained breathing apparatus.		
Wear full protective suit.			
6 Accidental release measures			
Person-related safety precautions:	Wear protective equipment. Keep unprotected persons away.		
Measures for environmental protection:	Ensure adequate ventilation Do not allow material to be released to the environment without proper governmental permits.		
Measures for cleaning/collecting:	Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose of contaminated material as waste according to item 13.		
Additional information:	See Section 7 for information on safe handling		
	See section 8 for information on personal protection equipment. See Section 13 for information on disposal.		
7 Handling and storage			
Handling Information for safe handling:	Keep containers tightly sealed.		
	Store in cool, dry place in tightly closed containers. Ensure good ventilation/exhaustion at the workplace.		
Information about protection against			
explosions and fires:	Keep ignition sources away - Do not smoke.		
Storage Requirements to be met by storerooms and			
containers: Information about storage in one common	No special requirements.		
storage facility:	Store away from oxidizing agents.		
Further information about storage conditions:	Keep container tightly sealed.		
	Store in cool, dry conditions in well sealed containers.		
8 Exposure controls and personal protect	tion		
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.		
Components with critical values that require			
monitoring at the workplace:	Not required.		
Additional information: Personal protective equipment	No datá		
General protective and hygienic measures	The usual precautionary measures should be adhered to in handling the chemicals.		
	Keep away from foodstúffs, beverages and food. Instantly remove any soiled and impregnated garments.		
Pre-sthing - and mante	Wash hands during breaks and at the end of the work.		
Breathing equipment: Protection of hands:	Use breathing protection with high concentrations. Check protective gloves prior to each use for their proper condition.		
Material of gloves	The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.		
	Impervious gloves		
Penetration time of glove material Eye protection:	Not determined Safety glasses		
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Revision: 14.07.2010

Frade name <i>n-Butylidenephthalide</i>	Revision. 14.07.20
	(Contd. of page
Body protection:	Protective work clothing.
9 Physical and chemical properties: General Information	
Form: Smell:	Liquid Not determined
Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start:	Not determined 108-110°C (0.1 mmHg) Not determined
Flash point:	Not determined
Ignition temperature:	Not determined
Decomposition temperature: Danger of explosion:	Not determined Product is not explosive.
Critical values for explosion: Lower: Upper:	Not determined Not determined
Steam pressure:	Not determined
Density	Not determined
10 Stability and reactivity Thermal decomposition / conditions to be avoided: Materials to be avoided: Dangerous reactions: Dangerous products of decomposition:	No decomposition if used and stored according to specifications. Oxidizing agents No dangerous reactions known Carbon monoxide and carbon dioxide
11 Toxicological information	
Acute toxicity: LD/LC50 values that are relevant for classif	ication:
OralLD501850 mg/kg (rat)DermalLD50>5000 mg/kg (rabbit)Irritation of skinmild500 mg/24H (rabbit)	
Primary irritant effect: on the skin: on the eye: Sensitization: Additional toxicological information:	Irritant for skin and mucous membranes. Irritant effect. No sensitizing effect known. To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.
12 Ecological information: Additional ecological information: General notes:	Water hazard class 1 (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system. Do not allow material to be released to the environment without proper governmental permits.
13 Disposal considerations	
Product: Recommendation	Consult state, local or national regulations for proper disposal. Hand over to disposers of hazardous waste. Must be specially treated under adherence to official regulations.
Uncleaned packagings: Recommendation:	Disposal must be made according to official regulations.
14 Transport information	
Land transport ADR/RID and GGVS/GGVE ( ADR/RID-GGVS/E Class:	cross-border/domestic) None
Maritime transport IMDG/GGVSea: IMDG/GGVSea Class: Marine pollutant:	None No
Air transport ICAO-TI and IATA-DGR: ICAO/IATA Class:	None
Transport/Additional information:	Not dangerous according to the above specifications.
15 Regulatory information Designation according to EC guidelines:	
Code letter and hazard designation of	
product:	Xn Harmful
Risk phrases:	22 Harmful if swallowed.
Risk phrases: Safety phrases:	
Risk phrases:	22 Harmful if swallowed.

Revision: 14.07.2010

## Trade name *n-Butylidenephthalide*

(Contd. of page 2)

Page 3/3

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 data specification sheet: Contact: Abbreviations and acronyms:	Health, Safety and Environmental Department. Zachariah Holt ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) IMDG: International Maritime Code for Dangerous Goods IATA: International Maritime Code for Dangerous Goods IATA: International Air Transport Association IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA) ICAO: International Civil Aviation Organization ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO) GHS: Globally Harmonized System of Classification and Labelling of Chemicals EINECGS: European Inventory of Existing Commercial Chemical Society) LCSO: Lethal concernation, 50 percent	