	according to 1907/2006/EC, Article 31	
Printing date 22.07.2010		Revision: 22.07.2010
1 Identification of substance		
Product details		
Trade name	delta-Hexanolactone	
Stock number:	A19274, L14492	
Manufacturer/Supplier:	Alfa Aesar GmbH & Co.KG Benzstrasse 3	E-mail: gcat@matthey.com
	D-76185 Karlsruhe / Germany	www.alfa-chemcat.com
Informing department: Emergency information:	Product safety department. Giftnotruf Universität Mainz / Poison Information Center Mainz	
Emergency mormation.	www.giftinfo.uni-mainz.de Telefon:+49(0)6131/19240	
2 Hazards identification		
Hazard designation:	void	
Information pertaining to particular dangers for man and environment	Not applicable	
GHS label elements	Void	
3 Composition/information on ingredients	s	
Chemical characterization:		
Designation: (CAS#)	delta-Hexanolactone (CAS# 823-22-3): 100%	
Identification number(s): EINECS Number:	212-511-8	
4 First aid measures	Supply fresh sin If required provide artificial respiration Keep patient warm (	enoult doctor if ourontomo
After inhalation	Supply fresh air. If required, provide artificial respiration. Keep patient warm. C persist.	onsult doctor il symptoms
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 doct Seek medical treatment.	51.
5 Fire fighting measures		
Suitable extinguishing agents	CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcol	hol-resistant foam
Special hazards caused by the material, its		
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. Ensure adequate ventilation	
Measures for environmental protection: Measures for cleaning/collecting:	Do not allow material to be released to the environment without proper govern Collect mechanically.	mental permits.
Additional information:	See Section 7 for information on safe handling	
	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. No special precautions necessary if used correctly.	
Information about protection against explosions and fires:	Keep ignition sources away - Do not smoke.	
Storage		
Requirements to be met by storerooms and containers:	No special requirements.	
Information about storage in one common		
storage facility: Further information about storage	Store away from oxidizing agents.	
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:	No data	
Personal protective equipment General protective and hygienic measures	The usual propositionary managing should be adhered to in handling the shore	iaala
General protective and hygienic measures	The usual precautionary measures should be adhered to in handling the chem Keep away from foodstuffs, beverages and food.	icais.
	Instantly rémove any soiled and impregnated garments. 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
Eye protection:	and varies from manufacturer to manufacturer.	
Body protection:	Protective work clothing.	
9 Physical and chemical properties:		
General Information		
Form:	Low melting solid	
Smell:	Not determined	(Cantel on page 2)
		(Contd. on page 2) GB

## Safety Data Sheet according to 1907/2006/EC, Article 31

Printing date 22.07.2010

	Nevision: 22.01.2010
Trade name <i>delta-Hexanolactone</i>	
	(Contd. of page 1)
Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start:	Not determined Not determined Not determined
Flash point:	Not applicable
Ignition temperature:	Not determined
Decomposition temperature:	Not determined
Danger of explosion:	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: Primary irritant effect: on the skin: on the eye: Sensitization: Additional toxicological information:	May cause irritation May cause irritation 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:	Observe the normal safety regulations when handling chemicals The product is not subject to identification regulations under EC Directives and the Ordinance on Hazardous Materials (GefStoffV).
National regulations	
Information about limitation of use:	For use only by technically qualified individuals.
Water hazard class:	Water hazard class 1 (Self-assessment): slightly hazardous for water.
this information to ensure proper use and prote not in conformance with this Material Safety Da	a supplement to other information gathered by them, and should make independent judgement of suitability of etc the health and safety of employees. This information is furnished without warranty, and any use of the product ata Sheet, or in combination with any other product or process, is the responsibility of the user. <b>t:</b> 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: Réglement 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 Aviation Organization IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA) ICAO: International Invitation Organization ICAO: International Invitation organization and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Society)
	CAS: Chemical Abstracts Service (division of the American Chemical Society) GB