Printing date 22.07.2010	according to 1907/2006/EC, Article 31	Revision: 22.07.2010
		Revision. 22.07.2010
1 Identification of substance		
Product details	10-Undecenoic acid	
Trade name Stock number:	A19122, L07848	
Manufacturer/Supplier:	Alfa Aesar GmbH & Co.KG	
Manufacturer/Supplier.	Benzstrasse 3	E-mail: gcat@matthey.com www.alfa-chemcat.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:		
nazaru uesignation.	Xi Irritant	
Information portaining to particular dangers		
Information pertaining to particular dangers for man and environment	R 36/37/38 Irritating to eyes, respiratory system and skin.	
GHS label elements	Warning	
	$\sim$	
	H315 - Causes skin irritation. H319 - Causes serious eve irritation.	
<b>-</b>	H335 - May cause respiratory irritation	
Prevention: Response:	P261 Avoid breathing dust/tume/gas/mist/vapours/spray. P302+P352 IF ON SKIN: Wash with plenty of soap and water	
	P361 Avoid breathing dust/fume/gas/mist/vapours/spray. P302+P352 IF ON SKIN: Wash with plenty of soap and water. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minu present and easy to do. Continue rinsing. P321 Specific treatment (see on this label).	utes. Remove contact lenses, if
	P321 present and easy to do. Continue rinsing.	
Storage: Disposal:	P405 Store locked up.	
บเจมบอลเ.	P501 Dispose of contents/container in accordance with local/regional/nation	
3 Composition/information on ingredient	's	
Chemical characterization:	10 Undesensis soid (CAS# 112 28 0): 1000/	
Designation: (CAS#) Identification number(s):	10-Undecenoic acid (CAS# 112-38-9): 100%	
EINECS Number:	203-965-8	
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.	
After eye contact	Seek immediate medical advice.	actor
After swallowing	Rinse opened eye for several minutes under running water. Then consult do Seek immediate medical advice.	
5 Eiro fighting mossures		
5 Fire fighting measures	CO2 extinguishing pourder or water jet. Fight larger fires with water jet or al	appel registent form
Suitable extinguishing agents Special hazards caused by the material, its	CO2, extinguishing powder or water jet. Fight larger fires with water jet or al	conol-resistant roam.
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 gove	romental permits
Measures for cleaning/collecting:	Absorb with liquid-binding material (sand, diatomite, acid binders, universal	binders, sawdust).
Additional information:	Ensure adequate ventilation. 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	Keen containers tightly seeled	
Information for safe handling:	Keep containers tightly sealed. Store in cool, dry place in tightly closed containers.	
Information about protoction assist	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:	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 hand designed for beardous chemicals	and having an average face velocity
technical systems:	Properly operating chemical fume hood designed for hazardous chemicals a of at least 100 feet per minute.	and naving an average face velocity
Components with critical values that require	· · ·	
monitoring at the workplace: Additional information:	Not required. No data	
Personal protective equipment		
General protective and hygienic measures	The usual precautionary measures should be adhered to in handling the ch	emicals.
-	Keep away from foodstuffs, beverages and food.	
	Wash hands during breaks and at the end of the work. Avoid contact with the eyes and skin.	
	Avoid contact with the eyes and skin.	(Contd. on page 2)

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Breathing equipment: Protection of hands: Material of gloves Eye protection:	(Contd. of page 1) Check protective gloves prior to each use for their proper condition. 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. Safety glasses Eace protection
Body protection:	Face protection Protective work clothing.
9 Physical and chemical properties:	
General Information	
Form:	Liquid
Colour:	Low melting solid Colourless
Smell:	White Not determined
Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start:	25-27°C Not determined Not determined
Flash point:	149°C
Ignition temperature: Decomposition temperature:	Not determined Not determined
Danger of explosion:	Product is not explosive.
Critical values for explosion:	
Lower: Upper:	Not determined Not determined
Steam pressure:	Not determined
Density at 20°C	0.91 g/cm <sup>3</sup>
Solubility in / Miscibility with Water:	Not miscible or difficult to mix
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 classifi         Oral       LD50       8150 mg/kg (mouse)         2500 mg/kg (rat)       2500 mg/kg (rat)	ication:
Primary irritant effect: on the skin: on the skin: 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:	Generally not hazardous for water. 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:	Xi Irritant
Risk phrases:	S6/37/38 Irritating to eyes, respiratory system and skin. (Contd. on page

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	(Contd. of page 2)	
Safety phrases:	26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. 37 Wear suitable gloves.	
National regulations		
Information about limitation of use:	Employment restrictions concerning young persons must be observed. For use only by technically qualified individuals.	
Water hazard class:	Generally not hazardous for water.	
-	as a supplement to other information gathered by them, and should make independent judgement of suitability of otect the health and safety of employees. This information is furnished without warranty, and any use of the product Data Sheet, or in combination with any other product or process, is the responsibility of the user. eet: 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: Reglement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) IMDE: International Maritime Code for Dangerous Goods	
	RID: Reglement international concernant le transport des marchandises dangereuses par chemin de ter (Regulations Concerning the International Transport of Dangerous Goods by Rail) IMDC: 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 EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent	