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1 Identification of substance		
Product details	2-Chloro-2-nitronvriding	
Trade name Stock number:	<u>3-Chloro-2-nitropyridine</u> L19863	
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	
O Hamavala idau (11) - (1- u	www.giftinfo.uni-mainz.de Telefon:+49(0)6131/19240	
2 Hazards identification		
Hazard designation:	Xn Harmful	
Information pertaining to particular dangers for man and environment	R 22 Harmful if swallowed.	
GHS label elements	R 22 Harmful if swallowed. R 36/37/38 Irritating to eyes, respiratory system and skin.	
	Warning	
	H302 - Harmful if swallowed. H315 - Causes skin irritation.	
	H319 - Causes serious eye irritation. H335 - May cause respiratory irritation.	
Prevention: Response:	H335 - May cause respiratory irritation. P280 Wear protective gloves/clothing. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if	
Response.	present and easy to do. Continue rinsing.	
3 Composition/information on ingredients		
Chemical characterization: Designation: (CAS#)	3-Chloro-2-nitropyridine (CAS# 54231-32-2)	
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. Rinse opened eye for several minutes under running water. Then consult doctor.	
After swallowing	Seek immediate medical advice.	
5 Fire fighting measures		
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	
	Nitrogen oxides (NOx) Possibly Hydrogen cyanide (HCN)	
Protective equipment:	Nitrogen oxides (NOx) Possibly Hydrogen cyanide (HCN) Hydrogen chloride (HCI) 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	
Measures for cleaning/collecting:	Do not allow material to be released to the environment without proper governmental permits. Dispose of contaminated material as waste according to item 13. Ensure adequate ventilation.	
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	Ensure good ventilation/exhaustion at the workplace.	
explosions and fires: Storage	Keep ignition sources away - Do not smoke.	
Requirements to be met by storerooms and containers:	No special requirements.	
Information about storage in one common 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 protection		
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:		
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 chemicals.	
	Keep away from foodstuffs, beverages and food. Instantly remove any soiled and impregnated garments.	
	The usual precautionary measures should be adhered to in handling the chemicals. Keep away from foodstuffs, beverages and food. Instantly remove any soiled and impregnated garments. Wash hands during breaks and at the end of the work. Avoid contact with the eyes and skin.	
Breathing equipment:	Use breathing protection with high concentrations. (Contd. on page 2)	

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	(Contd. of page 1)
Protection of hands: Material of gloves	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. Impervious gloves
Penetration time of glove material Eye protection:	Not determined Safety glasses Face protection
Body protection:	Protective work clothing.
9 Physical and chemical properties: General Information	
Form:	Powder
Colour: Smell:	Yellow Not determined
Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start:	89-92°C Not determined Not determined
Flash point:	Not applicable
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
Solubility in / Miscibility with Water:	Insoluble
10 Stability and reactivity	
Thermal decomposition / conditions to be	
avoided: Materials to be avoided:	No decomposition if used and stored according to specifications. Oxidizing agents
Dangerous reactions: Dangerous products of decomposition:	No dangerous reactions known Carbon monoxide and carbon dioxide
	Nitrogen oxides (NOX) Hydrogen chloride (HCI)
	Possibly Hydrogen cyanide (HCN)
11 Toxicological information	
Acute toxicity:	
Primary irritant effect: on the skin:	Irritant for skin and mucous membranes.
on the eye: Sensitization:	Irritant effect. No sensitizing effect known.
Additional toxicological information:	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:	Water barend along 1 (Calf approximant), alightly barandaya far water
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 (c 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
Dick phrases	22 Harmful if swallowed.
Risk phrases:	36/37/38 Irritating to eyes, respiratory system and skin. (Contd. on page 3)

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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. 36/37 Wear suitable protective clothing and gloves.	
National regulations		
Information about limitation of use:	For use only by technically qualified individuals. Employment restrictions concerning young persons must be observed.	
Water hazard class:	Water hazard class 1 (Self-assessment): slightly hazardous for water.	
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: Health, Safety and Environmental Department.		
Contact: Abbreviations and acronyms:	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) 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 CAS: Chemical Abstracts Service (division of the American Chemical Society)	