Revision: 27.03.2013

PIII	nting date 02.07.2013		Revision: 27	.03.2013
	SECTION 1: Identification of the substance/mixture and of the company/undertaking 1.1 Product identifier			
	Trade name Stock number: 1.2 Relevant identified uses of the substance	2-Methoxybenzylmagnesium chloride, 0.25M in 2-l H54177	MeTHF	
	or mixture and uses advised against. Identified use:	No further relevant information available. SU24 Scientific research and development		
	1.3 Details of the supplier of the safety data s Manufacturer/Supplier:	Alfa Aesar GmbH & Co.KG A Johnson Matthey Company		
		Zeppelinstr. 7b 76185 Karlsruhe / Germany Tel: +49 (0) 721 84007 280 Fax: +49 (0) 721 84007 300		
		Email: tech@alfa.com www.alfa.com		
	Informing department: 1.4 Emergency telephone number:	Product safety Tel + +049 (0) 7275 988687-0 Carechem 24: +44 (o) 1235 239 670 (Multi-language emergency nu Poison Information Center Mainz www.giftinfo.uni-mainz.de Telephone: +49(0)6131/19240	imber)	
	SECTION 2: Hazards identification 2.1 Classification of the substance or mixture Classification according to Regulation (EC) No 1272/2008			
	GHS02 flame			
	Flam. Liq. 2 H225 Highly flammable liquid and	vapour.		
	GHS05 corrosion Eye Dam. 1 H318 Causes serious eye damage			
	GHS07	3		
	Skin Irrit. 2 H315 Causes skin irritation.			
	Classification according to Directive 67/548/			
	R34: Causes burns.			
	R11: Highly flammable. R14-19: Reacts violently with water. May form	n explosive peroxides.		
	Information concerning particular hazards for human and environment:	The product has to be labelled due to the calculation procedure of the preparations of the EU" in the latest valid version.	he "General Classification guideline	e for
	Other hazards that do not result in classification	No information known.		
	2.2 Label elements Labelling according to Regulation (EC) No			
	1272/2008 Hazard pictograms Signal word	The product is classified and labelled according to the CLP regulation GHS02, GHS05 Danger	on.	
	Hazard-determining components of labelling: Hazard statements	2-Methoxybenzylmagnesium chloride H225 Highly flammable liquid and vapour.		
		H315 Causes skin irritation. H318 Causes serious eye damage.	afaaaa Nia aasaliina	
	Precautionary statements	P210 Keep away from heat/sparks/open flames/hot su P241 Use explosion-proof electrical/ventilating/lighting P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immedia	tely all contaminated clothing. Rins	e skin
		with water/shower. P305+P351+P338 IF IN EYES: Rinse cautiously with water for seve present and easy to do. Continue rinsing.	eral minutes. Remove contact lense	es, if
		P403+P235 P501 Store in a well-véntilated place. Keep cool. Dispose of contents/container in accordance with regulations.	h local/regional/national/internation	al
	Additional information: 2.3 Other hazards	EUH014 Reacts violently with water. EUH019 May form explosive peroxides.		
	PBT: vPvB:	Not applicable. Not applicable.		
	SECTION 3: Composition/information o 3.2 Mixtures	n ingredients		
	Dangerous components: CAS: 96-47-9 2-Methyltetrahydrofuran EINECS: 202-507-4 2-Methyltetrahydrofuran		F R11 R19	95,5%
	CAS: 480438-46-8 2-Methoxybenzylmagnesiu	m chloride	 Flam. Liq. 2, H225 C R34 R14 	4,5%
	Additional information	None known.	Skin Corr. 1B, H314	
	SECTION 4: First aid measures			
	4.1 Description of first aid measures General information After inhalation	Instantly remove any clothing soiled by the product. Supply fresh air. If required, provide artificial respiration. Keep patie persist.	nt warm. Consult doctor if symptom	าร
	After skin contact	Seek immediate medical advice. Instantly 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 co	onsult doctor. (Contd. o	on page 2) DE/E

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SECTION 8: Exposure controls/personal protection Additional information about design of technical systems: Properly operating chemical fume hood designed for hazardous chemicals and having an average face veloci of at least 100 feet per minute. 8.1 Control parameters Components with critical 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 8.2 Exposure controls 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. Wash hands during breaks and at the end of the work. Do not inhale dust / smoke / mist. Avoid contact with the eyes and skin. Maintain an ergonomically appropriate working environment. Use breathing protective gloves prior to each use for their proper condition. The selection of hands: Material of gloves Penetration time of glove material Check protective dives gloves Not determined	7.3 Specific end use(s)	Check container pressure periodically to prevent explosive peroxides. No further relevant information available.			
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(Contd. on page DE/E	Material of gloves Penetration time of glove material	Impervious gloves			
			(Contd. on page 3 DE/E		

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Trade name 2-Methoxybonzy/magnesium chloride 0.25M in 2-MeTHE			
Trade name 2-MethoxybenzyImagnesium chloride, 0.25M in 2-MeTHF			
Eye protection:	Tightly sealed safety glasses.	(Contd. of page 2)	
Body protection:	Full face protection 2 Protective work clothing.		
SECTION 9: Physical and chemical pro	SECTION 9: Physical and chemical properties		
	9.1 Information on basic physical and chemical properties		
Appearance: Form:	General Information Appearance:		
Colour:	Liquid Yellow to gold to grey		
Smell: Odour threshold:	Not determined.		
pH-value:	Not determined.		
Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: Inflammability (solid, gaseous) Ignition temperature: Decomposition temperature: Self-inflammability:	-136 °C Not determined Not determined Not determined Not determined Product is not selfigniting.		
Danger of explosion:	May form explosive peroxides. Do not distill to dryness.		
Critical values for explosion: Lower: Upper: Steam pressure: Density at 20 °C Relative density Vapour density Evaporation rate Solubility in / Miscibility with Water at 20 °C:	Not determined Not determined Not determined 0,856 g/cm ³ Not determined. Not determined. Not determined.		
Partition coefficient (n-octanol/water): Viscosity: dynamic: kinematic:	Reačts violently Not determined. Not determined. Not determined.		
Solvent content:			
Organic solvents: Solids content:	0,0 % 4,5 %		
9.2 Other information	No further relevant information available.		
SECTION 10: Stability and reactivity			
10.1 Reactivity	Reacts violently with water. May form explosive peroxides.		
10.2 Chemical stability Thermal decomposition / conditions to be	Stable under recommended storage conditions.		
avoided: 10.3 Possibility of hazardous reactions	No decomposition if used and stored according to specifications. Reacts with strong oxidizing agents Reacts violently with water		
10.5 Incompatible materials: 10.6 Hazardous decomposition products:	Forms peroxides Air Bases Oxidizing agents Water/moisture Carbon monoxide and carbon dioxide Hydrogen chloride (HCl)		
	Metal õxide		
SECTION 11: Toxicological information 11.1 Information on toxicological effects Acute toxicity:	Swallowing will lead to a strong caustic effect on mouth and throat and to the dange esophagus and stomach. The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxic this product.	•	
LD/LC50 values that are relevant for classified 96-47-9 2-Methyltetrahydrofuran	cation:		
Dermal LD50 4500 mg/kg (rabbit) Inhalative LC50/4H 6000 ppm/4H (rat)			
Skin irritation or corrosion: Eye irritation or corrosion: Sensitization: Germ cell mutagenicity: Carcinogenicity:	Causes severe skin burns. Causes serious eye damage. No sensitizing effect known. No effects known. No classification data on carcinogenic properties of this material is available from the or ACGIH.	e EPA, IARC, NTP, OSHA	
Reproductive toxicity: Specific target organ system toxicity - repeated exposure: Specific target organ system toxicity - single	No effects known. No effects known.		
exposure: Aspiration hazard: Additional toxicological information:	No effects known. No effects known. To the best of our knowledge the acute and chronic toxicity of this substance is not f The product shows the following dangers according to the calculation method of the Guidelines for Preparations as issued in the latest version: Corrosive	ully known. General EC Classification	
SECTION 12: Ecological information			
12.1 Toxicity Aquatic toxicity: 12.2 Persistence and degradability 12.3 Bioaccumulative potential	No further relevant information available. No further relevant information available. No further relevant information available.	(Contd. on page 4)	
L		DE/E	

Printing date 02.07.2013	Revision: 27.03.2013				
Trade name 2-Methoxybenzylmagnesium chloride, 0.25M in 2-MeTHF					
12.4 Mobility in soil No further relevant information available.					
Additional ecological information: General notes:	Do not allow material to be released to the environment without proper governmental permits. 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. Avoid transfer into the environment.				
12.5 Results of PBT and vPvB assessment PBT: vPvB: 12.6 Other adverse effects	Not applicable. Not applicable. No further relevant information available.				
SECTION 13: Disposal considerations					
13.1 Waste treatment methods Recommendation	Hand over to disposers of hazardous waste. Must be specially treated under adherence to official regulations. Consult state, local or national regulations for proper disposal.				
Uncleaned packagings: Recommendation:	d packagings:				
SECTION 14: Transport information	SECTION 14: Transport information				
UN-Number ADR, IMDG, IATA	UN2924				
14.2 UN proper shipping name ADR					
IMDG, IATA	2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S. (2- Methoxybenzylmagnesium chloride, METHYLTETRAHYDROFURAN) FLAMMABLE LIQUID, CORROSIVE, N.O.S. (2-Methoxybenzylmagnesium chloride, METHYLTETRAHYDROFURAN)				
14.3 Transport hazard class(es)					
ADR					
Class Label IMDG, IATA	3 (FC) Flammable liquids. 3+8				
Class Label	3 Flammable liquids. 3+8				
Packing group ADR, IMDG, IATA	11				
14.5 Environmental hazards: Marine pollutant:	No				
14.6 Special precautions for user Kemler Number:	Warning: Flammable liquids. 338				
14.7 Transport in bulk according to Annex II Code	of MARPOL73/78 and the IBC Not applicable.				
Transport/Additional information:					
ADR Excepted quantities (EQ): Limited quantities (LQ) Transport category	E2 1L 2				
Tunnel restriction code	D/E				
UN "Model Regulation":	UN2924, FLAMMABLE LIQUID, CORROSIVE, N.O.S. (2- Methoxybenzylmagnesium chloride, METHYLTETRAHYDROFURAN), 3 (8), II				
SECTION 15: Regulatory information					
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Australian Inventory of Chemical Substances 96-47-9 2-Methyltetrahydrofuran					
Standard for the Uniform Scheduling of Drug None of the ingredients is listed.	gs and Poisons				
National regulations Information about limitation of use: Classification according to VbF:	For use only by technically qualified individuals. Employment restrictions concerning young persons must be observed. Not applicable				
Water hazard class: Water hazard class 1 Other regulations, limitations and prohibitive regulations ELINCS (European List of Notified Chemical Substances)					
None of the ingredients is listed.					
Substances of very high concern (SVHC) action None of the ingredients are listed.	Substances of very high concern (SVHC) according to REACH, Article 57 None of the ingredients are listed.				
REACH - Pre-registered substances 96-47-9 2-Methyltetrahydrofuran					
15.2 Chemical safety assessment:	A Chemical Safety Assessment has not been carried out.				
SECTION 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.					
Relevant phrases	H225 Highly flammable liquid and vapour.				

H314 Causes severe skin burns and eye damage.

Revision: 27.03.2013

Trade name 2-Methoxybenzylmagnesium chloride, 0.25M in 2-MeTHF (Contd. of page 4) R11 Highly flammable. R14 Reacts violently with water. R19 May form explosive peroxides. R34 Causes burns. Department issuing data specification Abbreviations and acronyms: Safety and Environmental Department. ADBR: Accord europeen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Rad) MDG: International Maritime Code for Dangerous Goods MTA: International All Transport Association GHS: Globally Harmonized System of Classification and Labelling of Chemicals VbF: Verordrung Uber brennbare Flüssigkeiten, Osterreich (Ordinance on the storage of combustible liquids, Austria) LSS0: Lethal dose, 50 percent DE/E