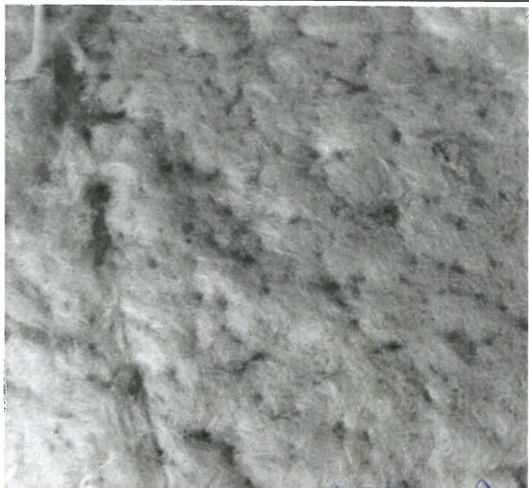


<b>Prüfbericht-Nr.:</b> <i>Test Report No.:</i>	<b>21252973 001</b>	<b>Auftrags-Nr.:</b> <i>Order No.:</i>	<b>3181995</b>	<b>Seite 1 von 5</b> <i>Page 1 of 5</i>
<b>Kunden-Referenz-Nr.:</b> <i>Client Reference No.:</i>		<b>Auftragsdatum:</b> <i>Order date:</i>	<b>25.04.2016</b>	
<b>Auftraggeber:</b> <i>Client:</i>	<b>Knauf Insulation, d.o.o., Skofja Loka, Trata 32, 4220 SKOFJA LOKA, SLOWENIEN</b>			
<b>Prüfgegenstand:</b> <i>Test item:</i>	<b>Mineral Wool</b>			
<b>Bezeichnung / Typ-Nr.:</b> <i>Identification / Type No.:</i>	<b>Knauf Insulation DAP NFS</b>			
<b>Auftrags-Inhalt:</b> <i>Order content:</i>	<b>Contamination test</b>			
<b>Prüfgrundlage:</b> <i>Test specification:</i>	<b>2 PFG S 0079_03.12 Mineral fibers in cookers and ovens</b>			
<b>Wareneingangsdatum:</b> <i>Date of receipt:</i>	<b>19.05.2016</b>			
<b>Prüfmuster-Nr.:</b> <i>Test sample No.:</i>	<b>A000128583-001</b>			
<b>Prüfzeitraum:</b> <i>Testing period:</i>	<b>19.05.2016 – 07.06.2016</b>			
<b>Ort der Prüfung:</b> <i>Place of testing:</i>	<b>Nürnberg</b>			
<b>Prüflaboratorium:</b> <i>Testing laboratory:</i>	<b>TÜV Rheinland LGA Products GmbH</b>			
<b>Prüfergebnis*:</b> <i>Test result*:</i>	<b>Pass</b>			
<b>geprüft von / tested by:</b>	<b>kontrolliert von / reviewed by:</b>			
<b>07.06.2016</b> <i>Date</i>	<b>i. A. Achim Bauer, Expert</b> <i>Name / Stellung</i>	<b>07.06.2016</b> <i>Date</i>	<b>i. A. Gerhard Frank, Sachverständiger</b> <i>Name / Stellung</i>	
<b>Datum</b> <i>Date</i>	<b>Name / Stellung</b> <i>Name / Position</i>	<b>Unterschrift</b> <i>Signature</i>	<b>Datum</b> <i>Date</i>	<b>Name / Stellung</b> <i>Name / Position</i>
				<b>Unterschrift</b> <i>Signature</i>
<b>Sonstiges / Other:</b>				
<b>Zustand des Prüfgegenstandes bei Anlieferung:</b> <i>Condition of the test item at delivery:</i>		<b>Prüfmuster vollständig und unbeschädigt</b> <i>Test item complete and undamaged</i>		
* Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested				
<b>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</b> <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

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**Liste der verwendeten Prüfmittel**  
*List of used test equipment*

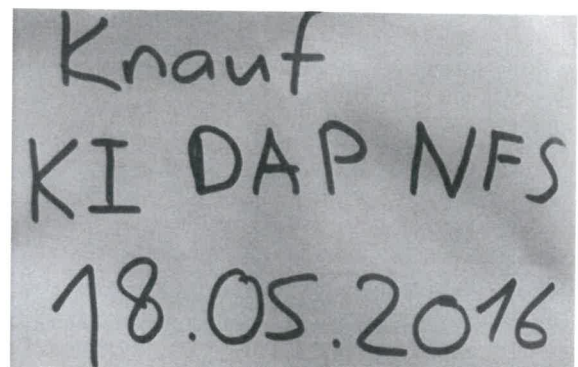
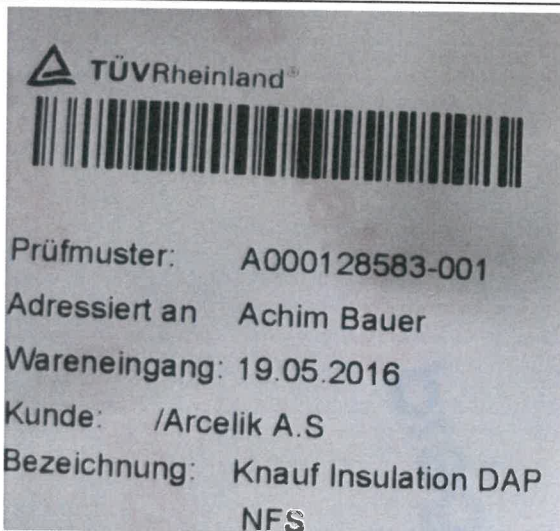
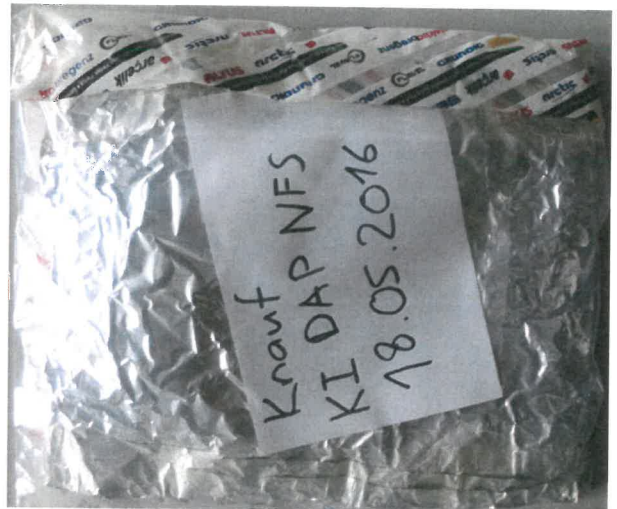
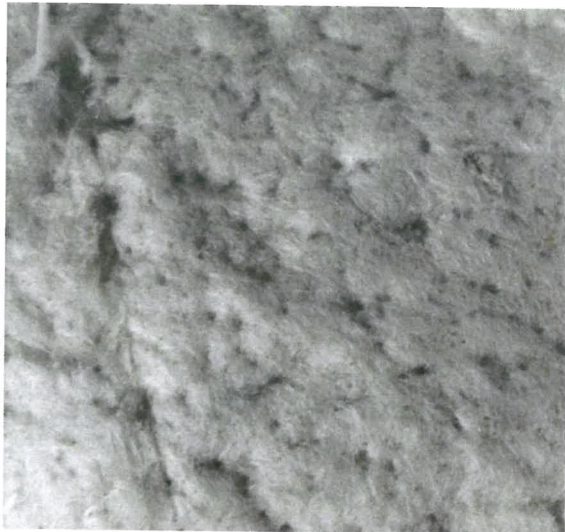
<b>Prüfmittel</b> <i>Test equipment</i>	<b>Prüfmittel-Nr. / ID-Nr.</b> <i>Equipment No. / ID-No.</i>	<b>Nächste Kalibrierung</b> <i>Next calibration</i>
<b>Röhrenofen</b> <i>tube furnace</i>	06751	12/2016
<b>Flußregler elektronisch</b> <i>flow regulator, electronic</i>	06758	12/2016

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**Produktbeschreibung**  
**Product description**

<b>1</b> Produktdetails Product details	Felt rock mineral wool "Knauf Insulation DAP NFS"
<b>2</b> Hersteller Manufacturer	--



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<b>Absatz</b>	<b>2 PFG S 0079_03.12</b>	<b>Messergebnisse - Bemerkungen</b>	<b>Bewertung</b>
<i>Clause</i>	<i>Anforderungen - Prüfungen / Requirements - Tests</i>	<i>Measuring results - Remarks</i>	<i>Evaluation</i>

## Test methods

### Formaldehyde and higher aldehydes

An amount of 20 g of the insulating material was heated in a furnace with quartz ceramic tube up to 350 °C. At a rate of 60 l/h dry synthetic air was purged over the sample for one hour in the pre-heated tube furnace. The outgoing air was conducted into two impingers containing 25 ml of DNPH solution each. After finishing sampling the aldehyde content absorbed in the solution was determined by means of HPLC-DAD.

### Methylisocyanate (MIC)

An amount of 5 g of the insulating material was heated in a furnace with quartz ceramic tube up to 350 °C. The pyrolysis gas containing MIC was adsorbed and analyzed according to ISO 17734-1, Determination of organonitrogen compounds in air using LC-MS Part 1: Isocyanates using dibutylamine derivatives.

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Absatz	<b>2 PFG S 0079_03.12</b>	Messergebnisse - Bemerkungen	Bewertung
Clause	Anforderungen - Prüfungen / Requirements - Tests	Measuring results - Remarks	Evaluation

## Test results

Substances	Sample [mg/kg]	Limit value "LGA tested for contaminants" for mineral wool [mg/kg]	Evaluation
<b>Aldehydes and ketones</b>			
Formaldehyde	2.4	≤ 5	pass
Acetaldehyde (Ethanal)	1.3	≤ 5	pass
Propanal	0.2	Total: ≤ 5	pass
Butanal	< 0.2		
Pentanal	< 0.2		
Methylisocyanate (MIC)	< 0.01	≤ 0.02	pass
Acetone	0.9	-	*)

\*) results without evaluation