

DUPLICATE





Fraunhofer TESTED® DEVICE Purepack GmbH UHP/PE CR-bag without additives

Report No. PU 2405-1524

Statement of Qualification

Single product Outgassing Behavior VOC/SVOC

Statement of Qualification • Single product

Customer	Purepack GmbH Im Gemmingstal 55 74074 Heilbronn Germany	Test result / Classification	without additives at th to VDI 2083 Part 17 ar determined for the spe	The outgassing behavior of UHP/PE cleanroom bag, transparent, unprinted without additives at the stated temperatures was investigated according to VDI 2083 Part 17 and ISO 14644-15. Based on the outgassing rates determined for the specific surfaces, the following material classification was made for the corresponding Contaminant Category:		
Component tested			Contaminant Category (x)	SER ¹⁾ 23 °C [g/m ² s]	SER ¹⁾ 90 °C [g/m ² s]	ISO-ACC _m Class (x) based on 23°C
Category:	Materials		VOC	< 2.8 x 10 ⁻¹⁰	< 1.7 x 10 ⁻⁹	<-9.6
Subcategory:	Consumables		SVOC	< 2.8 x 10 ⁻¹⁰	1.1 x 10 ⁻⁷	<-9.6
Product name:	UHP/PE cleanroom bag, transparent, unprinted without additives		Amines	< 2.8 x 10 ⁻¹⁰	< 1.7 x 10 ⁻⁹	
	(manufacturing date: 4/22/2024; color: transparent; charge number: 220424; batch number: 220424)		Organophosphates	< 2.8 x 10 ⁻¹⁰	< 1.7 x 10 ⁻⁹	
			Siloxanes	< 2.8 x 10 ⁻¹⁰	< 1.7 x 10 ⁻⁹	
			Phthalates	< 2.8 x 10 ⁻¹⁰	< 1.7 x 10 ⁻⁹	
Emission chamber measurements with with mass spectrometry (TD-GC/MS)	purge-and-trap thermodesorption method and gas chromatography combined				¹⁾ SER _a	: Area-specific emission rate
Standards/Guidelines:	ISO 14644-8, -15; ISO 16000-6, -9, -11, -25; VDI 2083 Part 17 The norms stated generally refer to the version valid at the time of the tests.					
Testing equipment:	 Measuring station: PerkinElmer Clarus 600, Clarus SQ8, ATD 650 Sampling chamber: PerkinElmer Clarus 600, Clarus SQ8, ATD 650 					
Sample storage:	 Pre-conditioning: Cleanroom Air Cleanliness Class (according to ISO 14644-1): ISO 1 Airflow velocity:					
Test procedure parameters:	 Retention range (VOC):	The measuring devices used for the qualification and international standards. In cases where				

and international standards. In cases where no national standards exist, the test procedure implemented complies with the technical regulations and norms applicable at the time of the test. The relevant documentation can be viewed on request at any time.

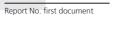
Detailed information and parameters of the test environment can be found in the Fraunhofer IPA test report.

Fraunhofer Institute for Manufacturing Engineering and Automation IPA

PU 2405-1524

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on behalf of Bury Dr.-Ing. Frank Bürger, Project Manager Fraunhofer IPA



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