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## TEST REPORT

### TEST REPORT N°24.0189.001 V1

### TESTS ACCORDING TO EN 14387 :2004 + A1 :2008

Report sent for the attention of Shachar Simmonds to the email address :shachars@duram.co.il

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Name and function of the signatory :  
Julien REMY (Test technician)

Signature :

REMY  
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OBSERVATIONS

This report includes 6 pages and 0 annex - M.MEPI.554.En.V1

Monitoring of the report versions		
Version	Summary of changes	Chapter(s), Table(s) modified
1	Document creation	/

## SUMMARY

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## 1 OBJECTIVE AND PURPOSE OF THE MISSION

### 1.1 OBJECTIVE

- Type of equipment : Combined filter(s) for cogo plus
- Samples received on : 10/06/2024
- Class : ABEK 1 P3
- Identification sample : Cogo Plus –filters from Industrial Smoke Escape Mask (CO-ABEK P3)

### 1.2 PURPOSE

Performing of tests according to EN 14387 : 2004 + A1 :2008, in accordance with :

- Our quotation 2272263.1 signed on 08/02/2024 and your order 3420082 of 12/02/2024.
- Our quotation 2344924.1 signed on 11/04/2024 and your order 3420084 of 11/04/2024.
- Our quotation 2380125.1 signed on 26/05/2024 and your order 3420085 of 28/05/2024.

## 2 REFERENCE DOCUMENT(S)

The tests described in paragraph 5 on the equipment described in paragraph 1 were performed in accordance with EN 14387 : 2004 + A1 :2008.

This test report is not a EU type examination report established by a Notified Body and does not allow the affixing of the CE marking.

## 3 USE OF REPORT

Reproduction of this report is only permitted in its entirety.

The results of the present report relate only to tested equipments.

The results are not communicated under accreditation, so they are not presumed to comply with the accreditation standard or covered by international recognition agreements.

The report recipient undertakes not to use it for equipment or material that is not strictly identical to the one subject of this report.

According to the agreement of proof accepted by the customer, this report is exclusively distributed in dematerialised form.

## 4 INTERVENTION PROTOCOL

The tests were performed according to the protocols defined in the referenced standard.

Test location: APAVE's laboratory – Fontaine – France **except 6.12 Gas capacity is provided by our subcontractor.**

Laboratory temperature: 24°C ± 8°C

Laboratory relative humidity: 50%RH ± 30%RH

The measurement uncertainties are not taken into account for the assessment of conformity.

## 5 RESULTS

### 5.1 TESTS CARRIED OUT BY APAVE LABORATORY

All exposure tests were carried out on samples V2 “B” (Apave file 24.0189 V2 B) after mechanical strength according to 6.9 and temperature conditioning according to 6.10 of EN 14387:2004 + A1:2008 on 02/04/2024.

Type of test	Number of samples	Date of test	Requirement	Result
Paraffin oil test 47,5 l/min (exposure test 60mg)	1	15/04/2024	P3 < 0,05%	0,02 %
	2			<0,01 %
	3			0,02 %
Sodium chloride test 47,5 l/min (exposure test 60mg)	4			0,02 %
	5			<0,01 %
	6			0,01 %

### 5.2 TESTS CARRIED OUT BY OUR SUB CONTRACTOR

Table 1 : Gas capacity test conditions of gas filters of types A,B,E and K

Type and class	Test gas	Minimum breakthrough time at test condition	Test gas concentration in air		Breakthrough concentration
		min	% by volume	mg/L	
A1	Cyclohexane (C6H12)	70	0,1	3,5	10
B1	Chlorine (Cl2)	20	0,1	3,0	0,5
	Hydrogen sulphide (H2S)	40		1,4	10
	Hydrogen cyanide (HCN)	25		1,1	10 <sup>a</sup>
E1	Sulphur dioxide (SO2)	20	0,1	2,7	5
K1	Ammonia (NH3)	50	0,1	0,7	25

<sup>a</sup> C2N2 may sometimes be present in the effluent air. The total concentration of (C2N2 + HCN) shall not exceed 10 mL/m<sup>3</sup> at breakthrough.

The tests were carried out between 05/04/2024 and 02/05/2024 on samples received by our subcontractor on 24/04/2024. (Apave file 24.0189 V1)

Table 2 : Result mechanical strength

Sample code	Pre-treatment	Observed physical changes
24PQA0739 – 1 / 6	Mechanical strength (MS)	No deformation, loose carbon in filter

Table 3 : Capacity Hydrogen cyanide, influent concentration 1000 ppm (20°C, 70% RH, 15 l/min)

Sample code	State	Breakthrough time (min)*
24PQA0739 – 1	MS	>120
24PQA0739 – 2	MS	>120
24PQA0739 – 3	MS	>120

\* Time point at which the effluent concentration (cumulative HCN + C<sub>2</sub>N<sub>2</sub>) reaches the criterion of 10 ppm.

Table 4 : Capacity Hydrogen sulphide, influent concentration 5000 ppm (20°C, 70% RH, 15 l/min)

Sample code	State	Breakthrough time (min)*
24PQA0739 – 4	MS	>120
24PQA0739 – 5	MS	>120
24PQA0739 – 6	MS	>120

\* Time point at which the effluent concentration reaches the criterion of 10 ppm

The tests were carried out between 14/06/2024 and 09/07/2024 on samples received by our subcontractor on 14/06/2024. (Apave file 24.0189 V3)

Table 5 : Result mechanical strength

Sample code	Pre-treatment	Observed physical changes
24PQA1414 – 1 / 12	Mechanical strength (MS)	No deformation, loose carbon in filter no 8

Table 6 : Capacity Cyclohexane, influent concentration 1000 ppm (20°C, 70% RH, 15 l/min)

Sample code	State	Breakthrough time (min)*
24PQA1414 – 1	MS	>120
24PQA1414 – 2	MS	85
24PQA1414 – 3	MS	119

\* Time point at which the effluent concentration reaches the criterion of 10 ppm.

Table 7 : Capacity Sulphur dioxide, influent concentration 1000 ppm (20°C, 70% RH, 15 l/min)

Sample code	State	Breakthrough time (min)*
24PQA1414 – 4	MS	>120
24PQA1414 – 5	MS	>120
24PQA1414 – 6	MS	93

\* Time point at which the effluent concentration reaches the criterion of 5 ppm.

Table 8 : Capacity Chlorine, influent concentration 1000 ppm (20°C, 70% RH, 15 l/min)

Sample code	State	Breakthrough time (min)*
24PQA1414 – 7	MS	91
24PQA1414 – 8	MS	55**
24PQA1414 – 9	MS	>120

\* Time point at which the effluent concentration reaches the criterion of 0.5 ppm.

\*\* Loose carbon, which is audible when shaking the canister

Table 9 : Capacity Ammonia, influent concentration 1000 ppm (20°C, 70% RH, 15 l/min)

Sample code	State	Breakthrough time (min)*
24PQA1414 – 10	MS	>120
24PQA1414 – 11	MS	>120
24PQA1414 – 12	MS	>120

\* Time point at which the effluent concentration reaches the criterion of 25 ppm.

End of the test report

## 6 CONCLUSION

The tests described in the report comply with the requirements of standard EN 14387: 2004 + A1: 2008.