

MEGA evaluations for the preparation of REACH exposure scenarios for decamethylcyclopentasiloxane

1 Introduction

The measured data for workplace exposure evaluated in the following have been gathered and documented in accordance with the principles of the measurement system of the German social accident insurance institutions for exposure assessment (MGU¹, formerly BGMG). The quality of the MGU is upheld by a quality management system that in essence satisfies the requirements of DIN EN ISO 9001. The test laboratories are operated in accordance with DIN EN ISO 17025 “General requirements for the competence of testing and calibration laboratories”.

To measure decamethylcyclopentasiloxane exposure at the workplace, a defined volume of air is sucked by a suitable pump through a tenax stainless steel tube. The volatile organic hazardous substance contained in the air is adsorbed by the Tenax. For analysis, the hazardous substance is evaporated in a thermal desorber and analysed by gas chromatography. After chromatographic separation, analysis is performed simultaneously by a flame ionisation detector (FID) and a mass spectrometer (MS). Qualitative analysis is performed by the MS, and quantitative analysis by the FID. The quantification limit is 3.0 µg/m³ for a test air volume of 2 L. Source: VOC (Volatile Organic Compounds) (ref. no. [8936](#), cf. Octamethylcyclotetrasiloxane). In: IFA-Arbeitsmappe Messung von Gefahrstoffen. 45. Lfg. X/2010. Ed.: Deutsche Gesetzliche Unfallversicherung (DGUV), Berlin. Erich Schmidt, Berlin 2011 – loose-leaf edition.

All the surveyed data in the MGU are brought together in the MEGA exposure database (measured data on exposure to hazardous substances at the workplace). If individual values fall below the measurement method’s analytical quantification limit, half the value is adopted in the evaluation. The MEGA^{Pro} software developed by the IFA (formerly BGIA) makes it possible to statistically analyse the data of the MEGA exposure database on the basis of various selection criteria and evaluation strategies.

For measurements in interiors, measured values for decamethylcyclopentasiloxane are also available in the MEGA exposure database. These are documented in the report “Innenraumarbeitsplätze – Vorgehensempfehlung für die Ermittlungen zum Arbeitsumfeld” (Ed.: Hauptverband der gewerblichen Berufsgenossenschaften (HVBG), Sankt Augustin, 2005, in German).

¹ Gabriel, S.; Koppisch, D.; Range, D.: The MGU – a monitoring system for the collection and documentation of valid workplace exposure data. Gefahrstoffe – Reinhalt. Luft 70 (2010) No. 1/2, pp. 43-49
<http://www.dguv.de/ifa>, Webcode [m200066](#)

2 Data situation and evaluation strategy

2.1 Overview of the measured values collected in the MGU, data period 2000 to 2010

There is no workplace limit for decamethylcyclopentasiloxane.
Information on the sampling systems can be found in the IFA work folder (cf. Octamethylcyclotetrasiloxane; IFA-Arbeitsmappe, in German).

General description	Number of measured values (%)
Total	767
Type of sampling: Stationary	635 (82.8%)
Type of sampling: Personal	132 (17.2%)
Sampling time \geq 0.5 h and exposure time \geq 6 h (comparable to shift measurements)	638 (83.2%)
Sampling time < 0.5 h <u>or</u> exposure time < 6 h	129 (16.8%)
Number of data < quantification limit (Values < quantification limit were adopted in the calculation with half their values)	513 (66.5%)
Examples: Exposure conditions	
Without mechanical ventilation	307
With mechanical ventilation	265
No details	180
Without local exhaust ventilation	282
With local exhaust ventilation	109
No details	374

General description of
decamethylcyclopentasiloxane
measurements in
106 branches of industry and
156 work areas

2.2 Criteria for inclusion of measured data in the evaluation

- Measured data relating to exposure
- Sampling time \geq 1 hour
- Exposure time \geq 6 hours
- Data sets comprising fewer than ten measured data were disregarded.

2.3 Evaluation strategy

The evaluation was performed on the basis of industry groups (Appendix 1) and work area groups (Appendix 2) and broken down further according to type of sampling (stationary or personal).

3 Abbreviations and indices

The following abbreviations and indices are used in the evaluation tables:

+ The distribution value is below the largest analytical quantification limit in the data set.

\$ With reference to the given limit value, the percentage of values below the limit value is given.

! The number of measured values below the analytical quantification limit (a. q.) is greater than the number of measured values represented by this cumulative frequency value. No concentration is therefore given for this cumulative frequency value.

* Measured values below the analytical quantification limit of the measuring method concerned are adopted in the evaluation with half the analytical quantification limit value.

Appendix 1

Statistic evaluations for industry groups

Decamethylcyclopentasiloxane, sampling time ≥ 0.5 h and exposure time ≥ 6 h

Industry groups, general

D.No. = Data set number/ Designation Branch of industry	Number of measured data	Number of firms	Frequency < number of values %	Number of Alls*	Largest quantification limit in mg/m ³	≤ limit value % \$	Concentrations in mg/m ³		
							50 percentile *	90 percentile *	95 percentile *
D.No. 7 Decamethylcyclopentasiloxane no limitation	638	208	424 66.5	24	0.011		! a. q.	0.021	0.04
D.No. 15 Decamethylcyclopentasiloxane Transport, shipping, transport companies and similar	101	27	57 56.4	3	0.005		! a. q.	0.0318	0.0609
D.No. 16 Decamethylcyclopentasiloxane Waste and waste water disposal; Hazardous waste	78	21	69 88.5	1	0.006		! a. q.	0.0106	0.0373
D.No. 37 Decamethylcyclopentasiloxane Manufacture and processing of plastic and rubber products	30	9	6 20	2	0.006		0.019	0.055	0.122
D.No. 38 Decamethylcyclopentasiloxane Processing of metals	18	9	14 77.8	3	0.006		! a. q.	0.012	0.0205
D.No. 39 Decamethylcyclopentasiloxane Manufacture of machinery and vehicles	85	21	37 43.5	7	0.006		0.0075	0.0175	0.0325
D.No. 40 Decamethylcyclopentasiloxane Repair shop	24	4	15 62.5	2	0.005		! a. q.	0.0142	0.0178
D.No. 41 Decamethylcyclopentasiloxane Electrical engineering, general, Fine mechanics, optics	28	17	24 85.7	1	0.006		! a. q.	0.0084	0.0166
D.No. 42 Decamethylcyclopentasiloxane Processing and treatment of wood	16	7	13 81.3	4	0.006		! a. q.	+ 0.0054	0.0062

D.No. = Data set number/ Designation Branch of industry	Number of measured data	Number of firms	Frequency < number of values %	Number of AIs*	Largest quantification limit in mg/m ³	≤ limit value % §	Concentrations in mg/m ³		
							50 percen- tile *	90 percen- tile *	95 percen- tile *
D.No. 43 Decamethylcyclopentasiloxane Leather industry, Textile industry	26	7	11 42.3	2	0.006		+ 0.005	0.0312	0.0601
D.No. 44 Decamethylcyclopentasiloxane Wholesale trade with chemicals, metal; Wholesale trade with textiles, metal haberdashery	45	22	26 57.8	2	0.011		! a. q.	0.02	0.024
D.No. 45 Decamethylcyclopentasiloxane Storage and warehousing; Retail sale (with non-specialised goods)	14	4	11 78.6	3	0.005		! a. q.	0.01	0.017
D.No. 46 Decamethylcyclopentasiloxane Inland water transport; Tanker and freight ship transport (shipping companies) (Maritime shipping); Tanker and freight ship transport (shipping companies) (Inland water transport)	14	7	13 92.9	2	0.005		! a. q.	! a. q.	+ 0.005
D.No. 47 Decamethylcyclopentasiloxane Airplane; Airports, airfields	43	4	41 95.3	1	0.005		! a. q.	! a. q.	! a. q.

Industry groups: Stationary measurements

D.No. = Data set number/ Designation Branch of industry	Number of measured data	Number of firms	Frequency < number of values %	Number of AIs*	Largest quantification limit in mg/m³	≤ limit value % \$	Concentrations in mg/m³		
							50 percen- tile *	90 percen- tile *	95 percen- tile *
D.No. 108 Decamethylcyclopentasiloxane Total	548	187	379 69.2	24	0.011		! a. q.	0.019	0.0366
D.No. 56 Decamethylcyclopentasiloxane Transport, shipping, transport com- panies and similar	90	27	49 54.4	3	0.005		! a. q.	0.04	0.0645
D.No. 57 Decamethylcyclopentasiloxane Waste and waste water disposal, Hazardous waste	76	21	67 88.2	1	0.006		! a. q.	0.0132	0.0376
D.No. 58 Decamethylcyclopentasiloxane Manufacture and processing of plas- tic and rubber products	22	8	5 22.7	2	0.006		0.015	0.0542	0.091
D.No. 59 Decamethylcyclopentasiloxane Processing of metals	13	8	11 84.6	3	0.005		! a. q.	0.00635	0.00905
D.No. 60 Decamethylcyclopentasiloxane Manufacture of machinery and vehi- cles	66	17	27 40.9	7	0.006		0.008	0.0172	0.032
D.No. 61 Decamethylcyclopentasiloxane Repair shop	23	4	14 60.9	2	0.005		! a. q.	0.0149	0.0179
D.No. 62 Decamethylcyclopentasiloxane Electrical engineering, general, Fine mechanics, optics,	23	16	19 82.6	1	0.006		! a. q.	0.0094	0.0193
D.No. 63 Decamethylcyclopentasiloxane Processing and treatment of wood	12	5	11 91.7	4	0.006		! a. q.	! a. q.	+ 0.005
D.No. 64 Decamethylcyclopentasiloxane Leather industry, Textile industry	20	4	9 45	2	0.006		+ 0.005	0.018	0.018
D.No. 65 Decamethylcyclopentasiloxane Wholesale trade with chemicals, metal; Wholesale trade with textiles, metal haberdashery	32	18	22 68.8	2	0.011		! a. q.	0.013	0.016

D.No. = Data set number/ Designation Branch of industry	Number of measured data	Number of firms	Frequency < number of values %	Number of AII's*	Largest quantification limit in mg/m ³	≤ limit value % \$	Concentrations in mg/m ³		
							50 percen- tile *	90 percen- tile *	95 percen- tile *
D.No. 66 Decamethylcyclopentasiloxane Storage and warehousing; Retail sale (with non-specialised goods)	10	3	10 100	3	0.005		! a. q.	! a. q.	! a. q.
D.No. 67 Decamethylcyclopentasiloxane Inland water transport; Tanker and freight ship transport (shipping companies) (Maritime shipping); Tanker and freight ship transport (shipping companies) (Inland water transport)	14	7	13 92.9	2	0.005		! a. q.	! a. q.	+ 0.005
D.No. 68 Decamethylcyclopentasiloxane Airplane; Airports, airfields	43	4	41 95.3	1	0.005		! a. q.	! a. q.	! a. q.

Industry groups: Personal measurements

D.No. = Data set number/ Designation Branch of industry	Number of measured data	Number of firms	Frequency < number of values %	Number of AIs*	Largest quantification limit in mg/m ³	≤ limit value % §	Concentrations in mg/m ³		
							50 percentile *	90 percentile *	95 percentile *
D.No. 69 Decamethylcyclopentasiloxane Transport, shipping, transport companies and similar	11	1	8 72.7	1	0.005		! a. q.	0.0078	0.0089
D.No. 70 Decamethylcyclopentasiloxane Waste and waste water disposal, Hazardous waste	2	2	2 100	1	0.005				
D.No. 71 Decamethylcyclopentasiloxane Manufacture and processing of plastic and rubber products	8	4	1 12.5	2	0.005				
D.No. 72 Decamethylcyclopentasiloxane Processing of metals	5	2	3 60	1	0.006				
D.No. 73 Decamethylcyclopentasiloxane Manufacture of machinery and vehicles	19	8	10 52.6	4	0.005		! a. q.	0.0139	0.0227
D.No. 74 Decamethylcyclopentasiloxane Repair shop	1	1	1 100	1	0.005				
D.No. 75 Decamethylcyclopentasiloxane Electrical engineering, general, Fine mechanics, optics	5	4	5 100	1	0.006				
D.No. 76 Decamethylcyclopentasiloxane Processing and treatment of wood	4	2	2 50	1	0.005				
D.No. 77 Decamethylcyclopentasiloxane Leather industry, Textile industry	6	3	2 33.3	1	0.006				
D.No. 78 Decamethylcyclopentasiloxane Wholesale trade with chemicals, metal; Wholesale trade with textiles, metal haberdashery	13	7	4 30.8	1	0.011		0.016	0.041	0.05
D.No. 79 Decamethylcyclopentasiloxane Storage and warehousing; Retail sale (with non-specialised goods)	4	1	1 25	1	0.005				

D.No. = Data set number/ Designation	Number of measured data	Number of firms	Frequency < number of values %	Number of AIs*	Largest quantification limit in mg/m ³	≤ limit value % \$	Concentrations in mg/m ³		
							50 percentile *	90 percentile *	95 percentile *
Branch of industry									
D.No. 80 Decamethylcyclopentasiloxane Inland water transport; Tanker and freight ship transport (shipping companies) (Maritime shipping) Tanker and freight ship transport (shipping companies) (Inland water transport)	0	0	0	0					
D.No. 81 Decamethylcyclopentasiloxane Airplane; Airports, airfields	0	0	0	0					

Industry groups: Measurements with local exhaust ventilation

D.No. = Data set number/ Designation Branch of industry	Number of measured data	Number of firms	Frequency < number of values %	Number of AIs*	Largest quantification limit in mg/m ³	≤ limit value % \$	Concentrations in mg/m ³		
							50 percentile *	90 percentile *	95 percentile *
D.No. 111 Decamethylcyclopentasiloxane Total	78	39	45 57.7	10	0.006		! a.B.	0.0364	0.0518
D.No. 95 Decamethylcyclopentasiloxane Transport, shipping, transport companies and similar	5	2	0	1					
D.No. 96 Decamethylcyclopentasiloxane Waste and waste water disposal, Hazardous waste	4	2	4 100	1	0.005				
D.No. 97 Decamethylcyclopentasiloxane Manufacture and processing of plastic and rubber products	11	6	2 18.2	2	0.006		0.02	0.0443	0.0675
D.No. 98 Decamethylcyclopentasiloxane Processing of metals	8	4	5 62.5	1	0.005				
D.No. 99 Decamethylcyclopentasiloxane, Manufacture of machinery and vehicles	15	5	6 40	3	0.005		0.0085	0.012	0.0127
D.No. 100 Decamethylcyclopentasiloxane Repair shop	2	1	2 100	1	0.005				
D.No. 101 Decamethylcyclopentasiloxane Electrical engineering, general, Fine mechanics, optics,	10	8	9 90	1	0.005		! a.B.	+ 0.005	0.0143
D.No. 102 Decamethylcyclopentasiloxane Processing and treatment of wood	0	0	0	0					
D.No. 103 Decamethylcyclopentasiloxane Leather industry, Textile industry	9	2	5 55.6	2	0.005				
D.No. 104 Decamethylcyclopentasiloxane Wholesale trade with chemicals, metal; Wholesale trade with textiles, metal haberdashery	1	1	0	1					

D.No. = Data set number/ Designation Branch of industry	Number of measured data	Number of firms	Frequency < number of values %	Number of AII's*	Largest quantification limit in mg/m ³	≤ limit value % \$	Concentrations in mg/m ³		
							50 percen- tile *	90 percen- tile *	95 percen- tile *
D.No. 105 Decamethylcyclopentasiloxane Storage and warehousing; Retail sale (with non-specialised goods)	0	0	0	0					
D.No. 106 Decamethylcyclopentasiloxane Inland water transport; Tanker and freight ship transport (shipping companies) (Maritime shipping); Tanker and freight ship transport (shipping companies) (Inland water transport)	0	0	0	0					
D.No. 107 Decamethylcyclopentasiloxane Airplane; Airports, airfields	0	0	0	0					

Industry groups: Measurements without local exhaust ventilation

D.No. = Data set number/ Designation Branch of industry	Number of measured data	Number of firms	Frequency < number of values %	Number of AIs*	Largest quantification limit in mg/m ³	≤ limit value %\$	Concentrations in mg/m ³		
							50 percentile *	90 percentile *	95 percentile *
D.No. 110 Decamethylcyclopentasiloxane Total	229	84	144 62.9	17	0.011		! a.B.	0.0221	0.0355
D.No. 82 Decamethylcyclopentasiloxane Transport, shipping, transport compa- nies and similar	47	8	19 40.4	3	0.005		0.008	0.0533	0.0699
D.No. 83 Decamethylcyclopentasiloxane Waste and waste water disposal, Hazardous waste	9	3	9 100	1	0.005				
D.No. 84 Decamethylcyclopentasiloxane Manufacture and processing of plastic and rubber products	3	3	1 33.3	1	0.006				
D.No. 85 Decamethylcyclopentasiloxane Processing of metals	8	5	7 87.5	3	0.006				
D.No. 86 Decamethylcyclopentasiloxane, Manufacture of machinery and vehi- cles	21	9	15 71.4	5	0.006		! a.B.	0.0079	0.00895
D.No. 87 Decamethylcyclopentasiloxane Repair shop	2	1	2 100	1	0.005				
D.No. 88 Decamethylcyclopentasiloxane Electrical engineering, general, Fine mechanics, optics	11	4	10 90.9	1	0.006		! a.B.	! a.B.	+ 0.00525
D.No. 89 Decamethylcyclopentasiloxane Processing and treatment of wood	9	5	6 66.7	2	0.005				
D.No. 90 Decamethylcyclopentasiloxane Leather industry, Textile industry	10	1	2 20	1	0.005		0.007	0.018	0.018
D.No. 91 Decamethylcyclopentasiloxane Wholesale trade with chemicals, metal; Wholesale trade with textiles, metal haberdashery	32	14	18 56.3	1	0.005		! a. q.	0.0188	0.0208

D.No. = Data set number/ Designation Branch of industry	Number of measured data	Number of firms	Frequency < number of values %	Number of AIs*	Largest quantification limit in mg/m ³	≤ limit value % \$	Concentrations in mg/m ³		
							50 percen- tile *	90 percen- tile *	95 percen- tile *
D.No. 92 Decamethylcyclopentasiloxane Storage and warehousing; Retail sale (with non-specialised goods)	10	2	7 70	2	0.005		! a. q.	0.012	0.021
D.No. 93 Decamethylcyclopentasiloxane Inland water transport; Tanker and freight ship transport (shipping companies) (Maritime ship- ping); 513540 Tanker and freight ship transport (shipping companies) (In- land water transport)	8	4	8 100	1	0.005				
D.No. 94 Decamethylcyclopentasiloxane Airplane Airports, airfields	0	0	0	0					

Appendix 2

Statistical evaluations for work area groups

Decamethylcyclopentasiloxane, sampling time ≥ 0.5 h and exposure time ≥ 6 h

Work area groups: General

D.No. = Data set number/ Designation Work area	Number of measured data	Number of firms	Frequency < number of values %	Number of AIs*	Largest quantification limit in mg/m ³	≤ limit value % §	Concentrations in mg/m ³		
							50 percen- tile *	90 percen- tile *	95 percen- tile *
D.No. 48 Decamethylcyclopentasiloxane Storing	128	52	92 71.9	7	0.006	! a. q.	0.015	0.022	
D.No. 49 Decamethylcyclopentasiloxane Transport and vehicles	62	17	26 41.9	2	0.005	0.008	0.061	0.071	
D.No. 50 Decamethylcyclopentasiloxane Pressing, Extruder	39	15	14 35.9	4	0.006	0.01	0.05	0.109	
D.No. 51 Decamethylcyclopentasiloxane Processing, Sanding	37	10	15 40.5	3	0.005	0.007	0.036	0.046	
D.No. 52 Decamethylcyclopentasiloxane Test facilities, Quality inspection	68	26	44 64.7	10	0.005	! a. q.	0.013	0.018	
D.No. 53 Decamethylcyclopentasiloxane Laboratory	21	9	15 71.4	6	0.006	! a. q.	0.01	0.018	
D.No. 54 Decamethylcyclopentasiloxane Surface coating	14	8	14 100	4	0.005	! a. q.	! a. q.	! a. q.	
D.No. 55 Decamethylcyclopentasiloxane Flight clearance, Airport	36	4	35 97.2	1	0.005	! a. q.	! a. q.	! a. q.	

Work area groups: Stationary measurements

D.No. = Data set number/ Designation Work area	Number of measured data	Number of firms	Frequency < number of values %	Number of Alls*	Largest quantification limit in mg/m ³	≤ limit value % \$	Concentrations in mg/m ³		
							50 percen- tile *	90 percen- tile *	95 percen- tile *
D.No. 112 Decamethylcyclopentasiloxane Storing	92	44	75 81.5	7	0.006		! a. q.	0.011	0.013
D.No. 113 Decamethylcyclopentasiloxane Transport and vehicles	62	17	26 41.9	2	0.005		0.008	0.061	0.071
D.No. 114 Decamethylcyclopentasiloxane Pressing, Extruder	28	13	13 46.4	4	0.006		+ 0.008	0.05	0.083
D.No. 115 Decamethylcyclopentasiloxane Processing, Sanding, Punching	31	9	12 38.7	3	0.005		0.007	0.025	0.048
D.No. 116 Decamethylcyclopentasiloxane Test facilities, Quality inspection	63	23	41 65.1	9	0.005		! a. q.	0.014	0.018
D.No. 117 Decamethylcyclopentasiloxane Laboratory	21	9	15 71.4	6	0.006		! a. q.	0.01	0.018
D.No. 118 Decamethylcyclopentasiloxane Surface coating	13	7	13 100	4	0.005		! a. q.	! a B.	! a. q.
D.No. 119 Decamethylcyclopentasiloxane Flight clearance, Airport	36	4	35 97.2	1	0.005		! a. q.	! a. q.	! a. q.

Work area groups: Personal measurements

D.No. = Data set number/ Designation Work area	Number of measured data	Number of firms	Frequency < number of values %	Number of AIs*	Largest quantification limit in mg/m ³	≤ limit value % §	Concentrations in mg/m ³		
							50 percen- tile *	90 percen- tile *	95 percen- tile *
D.No. 120 Decamethylcyclopentasiloxane Storing	36	12	17 47.2	4	0.005		0.006	0.023	0.035
D.No. 121 Decamethylcyclopentasiloxane Transport and vehicles	0	0	0	0					
D.No. 122 Decamethylcyclopentasiloxane Pressing, Extruder	11	5	1 9.1	2	0.005		0.012	0.047	0.112
D.No. 123 Decamethylcyclopentasiloxane Processing, Sanding, Punching	6	4	3 50	2	0.005				
D.No. 124 Decamethylcyclopentasiloxane Test facilities, Quality inspection	5	4	3 60	4	0.005				
D.No. 125 Decamethylcyclopentasiloxane Laboratory	0	0	0	0					
D.No. 126 Decamethylcyclopentasiloxane Surface coating	1	1	1 100	1	0.005				
D.No. 127 Decamethylcyclopentasiloxane Flight clearance, Airport	0	0	0	0					

Work area groups: Measurements without local exhaust ventilation

D.No. = Data set number/ Designation Work area	Number of measured data	Number of firms	Frequency < number of values %	Number of AIs*	Largest quantification limit in mg/m ³	≤ limit value % \$	Concentrations in mg/m ³		
							50 percen- tile *	90 percen- tile *	95 percen- tile *
D.No. 128 Decamethylcyclopentasiloxane Storing	74	26	49 66.2	6	0.006		! a. q.	0.016	0.02
D.No. 129 Decamethylcyclopentasiloxane Transport and vehicles	34	7	12 35.3	2	0.005		0.009	0.068	0.072
D.No. 130 Decamethylcyclopentasiloxane Pressing, Extruder	8	4	5 62.5	2	0.006				
D.No. 131 Decamethylcyclopentasiloxane Processing, Sanding, Punching	19	6	9 47.4	3	0.005		+ 0.005	0.011	0.018
D.No. 132 Decamethylcyclopentasiloxane Test facilities, Quality inspection	26	14	19 73.1	5	0.005		! a. q.	0.014	0.022
D.No. 133 Decamethylcyclopentasiloxane Laboratory	5	2	3 60	1	0.005				
D.No. 134 Decamethylcyclopentasiloxane Surface coating	2	2	2 100	2	0.005				
D.No. 135 Decamethylcyclopentasiloxane Flight clearance, Airport	0	0	0	0					

Work area groups: Measurements with local exhaust ventilation

D.No. = Data set number/ Designation Work area	Number of measured data	Number of firms	Frequency < number of values %	Number of AIs*	Largest quantification limit in mg/m ³	≤ limit value % \$	Concentrations in mg/m ³		
							50 percen- tile *	90 percen- tile *	95 percen- tile *
D.No. 136 Decamethylcyclopentasiloxane Storing	3	1	3 100	1	0.005				
D.No. 137 Decamethylcyclopentasiloxane Transport and vehicles	3	1	0	1					
D.No. 138 Decamethylcyclopentasiloxane Pressing, Extruder	11	7	5 45.5	4	0.006		0.007	0.047	0.0692
D.No. 139 Decamethylcyclopentasiloxane Processing, Sanding, Punching	12	4	6 50	2	0.005		+ 0.005	0.033	0.0396
D.No. 140 Decamethylcyclopentasiloxane Test facilities, Quality inspection	6	2	1 16.7	2	0.005				
D.No. 141 Decamethylcyclopentasiloxane Laboratory	1	1	1 100	1	0.005				
D.No. 142 Decamethylcyclopentasiloxane Surface coating	6	4	6 100	2	0.005				
D.No. 143 Decamethylcyclopentasiloxane Flight clearance, Airport	0	0	0	0					