

Form 5500 Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	Annual Return/Report of Employee Benefit Plan This form is required to be filed for employee benefit plans under sections 104 and 4065 of the Employee Retirement Income Security Act of 1974 (ERISA) and sections 6057(b) and 6058(a) of the Internal Revenue Code (the Code). <p style="text-align: center;">▶ Complete all entries in accordance with the instructions to the Form 5500.</p>	OMB Nos. 1210-0110 1210-0089 <div style="text-align: center; font-size: 24pt; font-weight: bold;">2017</div> This Form is Open to Public Inspection
---	---	---

Part I	Annual Report Identification Information
For calendar plan year 2017 or fiscal plan year beginning <u>01/01/2017</u> and ending <u>12/31/2017</u>	
A	This return/report is for: <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div> ☐ a multiemployer plan </div> <div> ☐ a multiple-employer plan (Filers checking this box must attach a list of participating employer information in accordance with the form instructions.) </div> </div> <div style="margin-top: 5px;"> ☒ a single-employer plan <div style="margin-left: 100px;">☐ a DFE (specify) _____</div> </div>
B	This return/report is: <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div> ☐ the first return/report ☐ an amended return/report </div> <div> ☐ the final return/report ☐ a short plan year return/report (less than 12 months) </div> </div>
C	If the plan is a collectively-bargained plan, check here. ▶ ☒
D	Check box if filing under: <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div> ☒ Form 5558 ☐ special extension (enter description) </div> <div> ☐ automatic extension </div> <div> ☐ the DFVC program </div> </div>

Part II	Basic Plan Information —enter all requested information		
1a	Name of plan <u>W.R. GRACE & CO. - CT -RET. PLAN FOR HOURLY EES. --- TENNESSEE</u>	1b	Three-digit plan number (PN) ▶ <u>134</u>
		1c	Effective date of plan <u>01/10/1977</u>
2a	Plan sponsor's name (employer, if for a single-employer plan) Mailing address (include room, apt., suite no. and street, or P.O. Box) City or town, state or province, country, and ZIP or foreign postal code (if foreign, see instructions) <u>W. R. GRACE & CO. -CT</u> <u>7500 GRACE DRIVE, BUILDING 100</u> <u>COLUMBIA, MD 21044</u>	2b	Employer Identification Number (EIN) <u>13-5114230</u>
		2c	Plan Sponsor's telephone number <u>410-531-4000</u>
		2d	Business code (see instructions) <u>325100</u>

Caution: A penalty for the late or incomplete filing of this return/report will be assessed unless reasonable cause is established.

Under penalties of perjury and other penalties set forth in the instructions, I declare that I have examined this return/report, including accompanying schedules, statements and attachments, as well as the electronic version of this return/report, and to the best of my knowledge and belief, it is true, correct, and complete.

SIGN HERE	Filed with authorized/valid electronic signature.	10/11/2018	KERRIE WOLFE
	Signature of plan administrator	Date	Enter name of individual signing as plan administrator
SIGN HERE			
	Signature of employer/plan sponsor	Date	Enter name of individual signing as employer or plan sponsor
SIGN HERE			
	Signature of DFE	Date	Enter name of individual signing as DFE

For Paperwork Reduction Act Notice, see the Instructions for Form 5500.

Form 5500 (2017)
v. 170203

3a Plan administrator's name and address ☐ Same as Plan Sponsor ADMINISTRATIVE COMMITTEE 7500 GRACE DRIVE, BUILDING 100 COLUMBIA, MD 21044	3b Administrator's EIN 13-2880089 3c Administrator's telephone number 410-531-4000
4 If the name and/or EIN of the plan sponsor or the plan name has changed since the last return/report filed for this plan, enter the plan sponsor's name, EIN, the plan name and the plan number from the last return/report: a Sponsor's name c Plan Name	4b EIN 4d PN
5 Total number of participants at the beginning of the plan year	5 107
6 Number of participants as of the end of the plan year unless otherwise stated (welfare plans complete only lines 6a(1) , 6a(2) , 6b , 6c , and 6d).	
a(1) Total number of active participants at the beginning of the plan year	6a(1) 56
a(2) Total number of active participants at the end of the plan year	6a(2) 55
b Retired or separated participants receiving benefits	6b 31
c Other retired or separated participants entitled to future benefits	6c 15
d Subtotal. Add lines 6a(2) , 6b , and 6c	6d 101
e Deceased participants whose beneficiaries are receiving or are entitled to receive benefits.	6e 9
f Total. Add lines 6d and 6e	6f 110
g Number of participants with account balances as of the end of the plan year (only defined contribution plans complete this item)	6g
h Number of participants who terminated employment during the plan year with accrued benefits that were less than 100% vested	6h 2
7 Enter the total number of employers obligated to contribute to the plan (only multiemployer plans complete this item).....	7
8a If the plan provides pension benefits, enter the applicable pension feature codes from the List of Plan Characteristics Codes in the instructions: 1B	
b If the plan provides welfare benefits, enter the applicable welfare feature codes from the List of Plan Characteristics Codes in the instructions:	

9a Plan funding arrangement (check all that apply) (1) ☐ Insurance (2) ☐ Code section 412(e)(3) insurance contracts (3) ☒ Trust (4) ☐ General assets of the sponsor	9b Plan benefit arrangement (check all that apply) (1) ☐ Insurance (2) ☐ Code section 412(e)(3) insurance contracts (3) ☒ Trust (4) ☐ General assets of the sponsor
---	---

10 Check all applicable boxes in 10a and 10b to indicate which schedules are attached, and, where indicated, enter the number attached. (See instructions)

a Pension Schedules

- (1) ☒ **R** (Retirement Plan Information)
- (2) ☐ **MB** (Multiemployer Defined Benefit Plan and Certain Money Purchase Plan Actuarial Information) - signed by the plan actuary
- (3) ☒ **SB** (Single-Employer Defined Benefit Plan Actuarial Information) - signed by the plan actuary

b General Schedules

- (1) ☐ **H** (Financial Information)
- (2) ☒ **I** (Financial Information – Small Plan)
- (3) ☐ 0 **A** (Insurance Information)
- (4) ☐ **C** (Service Provider Information)
- (5) ☒ **D** (DFE/Participating Plan Information)
- (6) ☐ **G** (Financial Transaction Schedules)

Part III Form M-1 Compliance Information (to be completed by welfare benefit plans)

11a If the plan provides welfare benefits, was the plan subject to the Form M-1 filing requirements during the plan year? (See instructions and 29 CFR 2520.101-2.) ☐ Yes ☐ No

If "Yes" is checked, complete lines 11b and 11c.

11b Is the plan currently in compliance with the Form M-1 filing requirements? (See instructions and 29 CFR 2520.101-2.) ☐ Yes ☐ No

11c Enter the Receipt Confirmation Code for the 2017 Form M-1 annual report. If the plan was not required to file the 2017 Form M-1 annual report, enter the Receipt Confirmation Code for the most recent Form M-1 that was required to be filed under the Form M-1 filing requirements. (Failure to enter a valid Receipt Confirmation Code will subject the Form 5500 filing to rejection as incomplete.)

Receipt Confirmation Code _____

SCHEDULE SB (Form 5500) Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	Single-Employer Defined Benefit Plan Actuarial Information This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA) and section 6059 of the Internal Revenue Code (the Code). ▶ File as an attachment to Form 5500 or 5500-SF.	OMB No. 1210-0110 2017 This Form is Open to Public Inspection
--	--	---

For calendar plan year 2017 or fiscal plan year beginning 01/01/2017 and ending 12/31/2017

▶ **Round off amounts to nearest dollar.**
▶ **Caution:** A penalty of \$1,000 will be assessed for late filing of this report unless reasonable cause is established.

A Name of plan <u>W.R. GRACE & CO. - CT -RET. PLAN FOR HOURLY EES. --- TENNESSEE</u>	B Three-digit plan number (PN) ▶ <u>134</u>
C Plan sponsor's name as shown on line 2a of Form 5500 or 5500-SF <u>W. R. GRACE & CO. -CT</u>	D Employer Identification Number (EIN) <u>13-5114230</u>

E Type of plan: ☒ Single ☐ Multiple-A ☐ Multiple-B	F Prior year plan size: ☐ 100 or fewer ☐ 101-500 ☒ More than 500
---	---

Part I	Basic Information
---------------	--------------------------

1 Enter the valuation date: Month <u>01</u> Day <u>01</u> Year <u>2017</u>			
2 Assets:			
a Market value	2a	<u>9711146</u>	
b Actuarial value	2b	<u>9733286</u>	
3 Funding target/participant count breakdown	(1) Number of participants	(2) Vested Funding Target	(3) Total Funding Target
a For retired participants and beneficiaries receiving payment	<u>36</u>	<u>4656833</u>	<u>4656833</u>
b For terminated vested participants	<u>15</u>	<u>383639</u>	<u>383639</u>
c For active participants	<u>56</u>	<u>3790571</u>	<u>4041996</u>
d Total	<u>107</u>	<u>8831043</u>	<u>9082468</u>
4 If the plan is in at-risk status, check the box and complete lines (a) and (b)..... ☐			
a Funding target disregarding prescribed at-risk assumptions	4a		
b Funding target reflecting at-risk assumptions, but disregarding transition rule for plans that have been in at-risk status for fewer than five consecutive years and disregarding loading factor	4b		
5 Effective interest rate	5	<u>5.88 %</u>	
6 Target normal cost	6	<u>180346</u>	

Statement by Enrolled Actuary
To the best of my knowledge, the information supplied in this schedule and accompanying schedules, statements and attachments, if any, is complete and accurate. Each prescribed assumption was applied in accordance with applicable law and regulations. In my opinion, each other assumption is reasonable (taking into account the experience of the plan and reasonable expectations) and such other assumptions, in combination, offer my best estimate of anticipated experience under the plan.

SIGN HERE		
Signature of actuary	<u>08/08/2018</u>	Date
<u>TRICIA SCHWABENBAUER</u>	<u>17-07200</u>	Most recent enrollment number
Type or print name of actuary	<u>410-547-2990</u>	Telephone number (including area code)
<u>AON CONSULTING, INC.</u>		
Firm name		
<u>500 EAST PRATT STREET BALTIMORE, MD 21202</u>		
Address of the firm		

If the actuary has not fully reflected any regulation or ruling promulgated under the statute in completing this schedule, check the box and see instructions ☐

Part II Beginning of Year Carryover and Prefunding Balances

	(a) Carryover balance	(b) Prefunding balance
7 Balance at beginning of prior year after applicable adjustments (line 13 from prior year)	0	1528768
8 Portion elected for use to offset prior year's funding requirement (line 35 from prior year)	0	176522
9 Amount remaining (line 7 minus line 8)	0	1352246
10 Interest on line 9 using prior year's actual return of <u>9.56</u> %	0	129275
11 Prior year's excess contributions to be added to prefunding balance:		
a Present value of excess contributions (line 38a from prior year)		0
b(1) Interest on the excess, if any, of line 38a over line 38b from prior year Schedule SB, using prior year's effective interest rate of <u>6.07</u> %		0
b(2) Interest on line 38b from prior year Schedule SB, using prior year's actual return		0
c Total available at beginning of current plan year to add to prefunding balance		0
d Portion of (c) to be added to prefunding balance		0
12 Other reductions in balances due to elections or deemed elections	0	642872
13 Balance at beginning of current year (line 9 + line 10 + line 11d – line 12)	0	838649

Part III Funding Percentages

14 Funding target attainment percentage	14	97.93%
15 Adjusted funding target attainment percentage	15	107.16%
16 Prior year's funding percentage for purposes of determining whether carryover/prefunding balances may be used to reduce current year's funding requirement	16	100.06%
17 If the current value of the assets of the plan is less than 70 percent of the funding target, enter such percentage.	17	%

Part IV Contributions and Liquidity Shortfalls**18** Contributions made to the plan for the plan year by employer(s) and employees:

(a) Date (MM-DD-YYYY)	(b) Amount paid by employer(s)	(c) Amount paid by employees	(a) Date (MM-DD-YYYY)	(b) Amount paid by employer(s)	(c) Amount paid by employees
04/06/2018	400000	0			
Totals ▶			18(b)	400000	18(c) 0

19 Discounted employer contributions – see instructions for small plan with a valuation date after the beginning of the year:

a Contributions allocated toward unpaid minimum required contributions from prior years.	19a	0
b Contributions made to avoid restrictions adjusted to valuation date	19b	0
c Contributions allocated toward minimum required contribution for current year adjusted to valuation date	19c	372210

20 Quarterly contributions and liquidity shortfalls:

- a** Did the plan have a "funding shortfall" for the prior year? ☐ Yes ☒ No
- b** If line 20a is "Yes," were required quarterly installments for the current year made in a timely manner? ☐ Yes ☐ No
- c** If line 20a is "Yes," see instructions and complete the following table as applicable:

Liquidity shortfall as of end of quarter of this plan year			
(1) 1st	(2) 2nd	(3) 3rd	(4) 4th

Part V Assumptions Used to Determine Funding Target and Target Normal Cost

21 Discount rate:				
a Segment rates:	1st segment: 4.16 %	2nd segment: 5.72 %	3rd segment: 6.48 %	☐ N/A, full yield curve used
b Applicable month (enter code)				21b 4
22 Weighted average retirement age.....				22 63
23 Mortality table(s) (see instructions) ☐ Prescribed - combined ☒ Prescribed - separate ☐ Substitute				

Part VI Miscellaneous Items

24 Has a change been made in the non-prescribed actuarial assumptions for the current plan year? If "Yes," see instructions regarding required attachment	☒ Yes ☐ No
25 Has a method change been made for the current plan year? If "Yes," see instructions regarding required attachment.....	☐ Yes ☒ No
26 Is the plan required to provide a Schedule of Active Participants? If "Yes," see instructions regarding required attachment.....	☒ Yes ☐ No
27 If the plan is subject to alternative funding rules, enter applicable code and see instructions regarding attachment	27

Part VII Reconciliation of Unpaid Minimum Required Contributions For Prior Years

28 Unpaid minimum required contributions for all prior years	28	0
29 Discounted employer contributions allocated toward unpaid minimum required contributions from prior years (line 19a)	29	0
30 Remaining amount of unpaid minimum required contributions (line 28 minus line 29)	30	0

Part VIII Minimum Required Contribution For Current Year

31 Target normal cost and excess assets (see instructions):			
a Target normal cost (line 6)	31a	180346	
b Excess assets, if applicable, but not greater than line 31a	31b	0	
32 Amortization installments:	Outstanding Balance		Installment
a Net shortfall amortization installment.....	187831		30844
b Waiver amortization installment	0		0
33 If a waiver has been approved for this plan year, enter the date of the ruling letter granting the approval (Month _____ Day _____ Year _____) and the waived amount	33		
34 Total funding requirement before reflecting carryover/prefunding balances (lines 31a - 31b + 32a + 32b - 33).....	34	211190	
	Carryover balance	Prefunding balance	Total balance
35 Balances elected for use to offset funding requirement.....	0	211190	211190
36 Additional cash requirement (line 34 minus line 35)	36	0	
37 Contributions allocated toward minimum required contribution for current year adjusted to valuation date (line 19c)	37	372210	
38 Present value of excess contributions for current year (see instructions)			
a Total (excess, if any, of line 37 over line 36)	38a	372210	
b Portion included in line 38a attributable to use of prefunding and funding standard carryover balances	38b	211190	
39 Unpaid minimum required contribution for current year (excess, if any, of line 36 over line 37)	39	0	
40 Unpaid minimum required contributions for all years.....	40	0	

Part IX Pension Funding Relief Under Pension Relief Act of 2010 (See Instructions)

41 If an election was made to use PRA 2010 funding relief for this plan:			
a Schedule elected	☐ 2 plus 7 years ☐ 15 years		
b Eligible plan year(s) for which the election in line 41a was made	☐ 2008 ☐ 2009 ☐ 2010 ☐ 2011		
42 Amount of acceleration adjustment	42		
43 Excess installment acceleration amount to be carried over to future plan years	43		

SCHEDULE D (Form 5500) <small>Department of the Treasury Internal Revenue Service</small> <small>Department of Labor Employee Benefits Security Administration</small>	DFE/Participating Plan Information This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA). ► File as an attachment to Form 5500.	OMB No. 1210-0110 2017 This Form is Open to Public Inspection.
---	--	--

For calendar plan year 2017 or fiscal plan year beginning 01/01/2017 and ending 12/31/2017

A Name of plan <u>W.R. GRACE & CO. - CT -RET. PLAN FOR HOURLY EES. --- TENNESSEE</u>	B Three-digit plan number (PN) ►	<u>134</u>
C Plan or DFE sponsor's name as shown on line 2a of Form 5500 <u>W. R. GRACE & CO. -CT</u>	D Employer Identification Number (EIN) <u>13-5114230</u>	

Part I	Information on interests in MTIAs, CCTs, PSAs, and 103-12 IEs (to be completed by plans and DFEs) (Complete as many entries as needed to report all interests in DFEs)
---------------	--

a Name of MTIA, CCT, PSA, or 103-12 IE: W. R. GRACE & CO. MASTER RET. TRUST

b Name of sponsor of entity listed in (a): W. R. GRACE & CO.

c EIN-PN <u>36-6807393-101</u>	d Entity code <u>M</u>	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions) <u>10669334</u>
---------------------------------------	-------------------------------	---

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
-----------------	----------------------	---

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
-----------------	----------------------	---

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
-----------------	----------------------	---

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
-----------------	----------------------	---

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
-----------------	----------------------	---

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
-----------------	----------------------	---

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

a Name of MTIA, CCT, PSA, or 103-12 IE:**b** Name of sponsor of entity listed in (a):**c** EIN-PN**d** Entity
code**e** Dollar value of interest in MTIA, CCT, PSA, or
103-12 IE at end of year (see instructions)**a** Name of MTIA, CCT, PSA, or 103-12 IE:**b** Name of sponsor of entity listed in (a):**c** EIN-PN**d** Entity
code**e** Dollar value of interest in MTIA, CCT, PSA, or
103-12 IE at end of year (see instructions)**a** Name of MTIA, CCT, PSA, or 103-12 IE:**b** Name of sponsor of entity listed in (a):**c** EIN-PN**d** Entity
code**e** Dollar value of interest in MTIA, CCT, PSA, or
103-12 IE at end of year (see instructions)**a** Name of MTIA, CCT, PSA, or 103-12 IE:**b** Name of sponsor of entity listed in (a):**c** EIN-PN**d** Entity
code**e** Dollar value of interest in MTIA, CCT, PSA, or
103-12 IE at end of year (see instructions)**a** Name of MTIA, CCT, PSA, or 103-12 IE:**b** Name of sponsor of entity listed in (a):**c** EIN-PN**d** Entity
code**e** Dollar value of interest in MTIA, CCT, PSA, or
103-12 IE at end of year (see instructions)**a** Name of MTIA, CCT, PSA, or 103-12 IE:**b** Name of sponsor of entity listed in (a):**c** EIN-PN**d** Entity
code**e** Dollar value of interest in MTIA, CCT, PSA, or
103-12 IE at end of year (see instructions)**a** Name of MTIA, CCT, PSA, or 103-12 IE:**b** Name of sponsor of entity listed in (a):**c** EIN-PN**d** Entity
code**e** Dollar value of interest in MTIA, CCT, PSA, or
103-12 IE at end of year (see instructions)**a** Name of MTIA, CCT, PSA, or 103-12 IE:**b** Name of sponsor of entity listed in (a):**c** EIN-PN**d** Entity
code**e** Dollar value of interest in MTIA, CCT, PSA, or
103-12 IE at end of year (see instructions)**a** Name of MTIA, CCT, PSA, or 103-12 IE:**b** Name of sponsor of entity listed in (a):**c** EIN-PN**d** Entity
code**e** Dollar value of interest in MTIA, CCT, PSA, or
103-12 IE at end of year (see instructions)**a** Name of MTIA, CCT, PSA, or 103-12 IE:**b** Name of sponsor of entity listed in (a):**c** EIN-PN**d** Entity
code**e** Dollar value of interest in MTIA, CCT, PSA, or
103-12 IE at end of year (see instructions)

Part II Information on Participating Plans (to be completed by DFEs)

(Complete as many entries as needed to report all participating plans)

a Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN

SCHEDULE I (Form 5500) Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	Financial Information—Small Plan This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA), and section 6058(a) of the Internal Revenue Code (the Code). ► File as an attachment to Form 5500.	OMB No. 1210-0110
		2017
		This Form is Open to Public Inspection

For calendar plan year 2017 or fiscal plan year beginning 01/01/2017 and ending 12/31/2017	
A Name of plan W.R. GRACE & CO. - CT -RET. PLAN FOR HOURLY EES. --- TENNESSEE	B Three-digit plan number (PN) ► 134
C Plan sponsor's name as shown on line 2a of Form 5500 W. R. GRACE & CO. -CT	
D Employer Identification Number (EIN) 13-5114230	

Complete Schedule I if the plan covered fewer than 100 participants as of the beginning of the plan year. You may also complete Schedule I if you are filing as a small plan under the 80-120 participant rule (see instructions). Complete Schedule H if reporting as a large plan or DFE.

Part I	Small Plan Financial Information
---------------	---

Report below the current value of assets and liabilities, income, expenses, transfers and changes in net assets during the plan year. Combine the value of plan assets held in more than one trust. Do not enter the value of the portion of an insurance contract that guarantees during this plan year to pay a specific dollar benefit at a future date. Include all income and expenses of the plan including any trust(s) or separately maintained fund(s) and any payments/receipts to/from insurance carriers. **Round off amounts to the nearest dollar.**

1 Plan Assets and Liabilities:		(a) Beginning of Year	(b) End of Year
a Total plan assets	1a	9705053	10669334
b Total plan liabilities	1b		
c Net plan assets (subtract line 1b from line 1a)	1c	9705053	10669334
2 Income, Expenses, and Transfers for this Plan Year:		(a) Amount	(b) Total
a Contributions received or receivable:			
(1) Employers	2a(1)	400000	
(2) Participants	2a(2)		
(3) Others (including rollovers)	2a(3)		
b Noncash contributions	2b		
c Other income	2c	1062007	
d Total income (add lines 2a(1), 2a(2), 2a(3), 2b, and 2c)	2d		1462007
e Benefits paid (including direct rollovers)	2e	428358	
f Corrective distributions (see instructions)	2f		
g Certain deemed distributions of participant loans (see instructions)	2g		
h Administrative service providers (salaries, fees, and commissions)	2h		
i Other expenses	2i	69368	
j Total expenses (add lines 2e, 2f, 2g, 2h, and 2i)	2j		497726
k Net income (loss) (subtract line 2j from line 2d)	2k		964281
l Transfers to (from) the plan (see instructions)	2l		

3 Specific Assets: If the plan held assets at any time during the plan year in any of the following categories, check "Yes" and enter the current value of any assets remaining in the plan as of the end of the plan year. Allocate the value of the plan's interest in a commingled trust containing the assets of more than one plan on a line-by-line basis unless the trust meets one of the specific exceptions described in the instructions.		Yes	No	Amount
a Partnership/joint venture interests	3a		X	
b Employer real property	3b		X	
c Real estate (other than employer real property)	3c		X	
d Employer securities	3d		X	
e Participant loans	3e		X	
f Loans (other than to participants)	3f		X	
g Tangible personal property	3g		X	

Part II Compliance Questions

4 During the plan year:	Yes	No	Amount
a Was there a failure to transmit to the plan any participant contributions within the time period described in 29 CFR 2510.3-102? Continue to answer "Yes" for any prior year failures until fully corrected. (See instructions and DOL's Voluntary Fiduciary Correction Program.)		X	
b Were any loans by the plan or fixed income obligations due the plan in default as of the close of plan year or classified during the year as uncollectible? Disregard participant loans secured by the participant's account balance.		X	
c Were any leases to which the plan was a party in default or classified during the year as uncollectible?		X	
d Were there any nonexempt transactions with any party-in-interest? (Do not include transactions reported on line 4a.)		X	
e Was the plan covered by a fidelity bond?	X		15000000
f Did the plan have a loss, whether or not reimbursed by the plan's fidelity bond, that was caused by fraud or dishonesty?		X	
g Did the plan hold any assets whose current value was neither readily determinable on an established market nor set by an independent third party appraiser?		X	
h Did the plan receive any noncash contributions whose value was neither readily determinable on an established market nor set by an independent third party appraiser?		X	
i Did the plan at any time hold 20% or more of its assets in any single security, debt, mortgage, parcel of real estate, or partnership/joint venture interest?		X	
j Were all the plan assets either distributed to participants or beneficiaries, transferred to another plan, or brought under the control of the PBGC?		X	
k Are you claiming a waiver of the annual examination and report of an independent qualified public accountant (IQPA) under 29 CFR 2520.104-46? If "No," attach an IQPA's report or 2520.104-50 statement. (See instructions on waiver eligibility and conditions.)	X		
l Has the plan failed to provide any benefit when due under the plan?		X	
m If this is an individual account plan, was there a blackout period? (See instructions and 29 CFR 2520.101-3.)			
n If 4m was answered "Yes," check the "Yes" box if you either provided the required notice or one of the exceptions to providing the notice applied under 29 CFR 2520.101-3			

5a Has a resolution to terminate the plan been adopted during the plan year or any prior plan year?..... ☐ Yes ☒ No
 If "Yes," enter the amount of any plan assets that reverted to the employer this year _____.

5b If, during this plan year, any assets or liabilities were transferred from this plan to another plan(s), identify the plan(s) to which assets or liabilities were transferred. (See instructions.)

5b(1) Name of plan(s)	5b(2) EIN(s)	5b(3) PN(s)

5c If the plan is a defined benefit plan, is it covered under the PBGC insurance program (See ERISA section 4021.)? ☒ Yes ☐ No ☐ Not determined.
 If "Yes" is checked, enter the My PAA confirmation number from the PBGC premium filing for this plan year 4066223. (See instructions.)

<div>SCHEDULE R (Form 5500) Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation</div>	<div>Retirement Plan Information</div> <div>This schedule is required to be filed under sections 104 and 4065 of the Employee Retirement Income Security Act of 1974 (ERISA) and section 6058(a) of the Internal Revenue Code (the Code).</div> <div>▶ File as an attachment to Form 5500.</div>	<div>OMB No. 1210-0110</div> <div>2017</div> <div>This Form is Open to Public Inspection.</div>
For calendar plan year 2017 or fiscal plan year beginning 01/01/2017 and ending 12/31/2017		
A Name of plan W.R. GRACE & CO. - CT -RET. PLAN FOR HOURLY EES. --- TENNESSEE		B Three-digit plan number (PN) ▶ 134
C Plan sponsor's name as shown on line 2a of Form 5500 W. R. GRACE & CO. -CT		D Employer Identification Number (EIN) 13-5114230
Part I	Distributions	
All references to distributions relate only to payments of benefits during the plan year.		
1 Total value of distributions paid in property other than in cash or the forms of property specified in the instructions		1 0
2 Enter the EIN(s) of payor(s) who paid benefits on behalf of the plan to participants or beneficiaries during the year (if more than two, enter EINs of the two payors who paid the greatest dollar amounts of benefits): EIN(s): 36-1561860		
Profit-sharing plans, ESOPs, and stock bonus plans, skip line 3.		
3 Number of participants (living or deceased) whose benefits were distributed in a single sum, during the plan year		3 0
Part II	Funding Information (If the plan is not subject to the minimum funding requirements of section 412 of the Internal Revenue Code or ERISA section 302, skip this Part.)	
4 Is the plan administrator making an election under Code section 412(d)(2) or ERISA section 302(d)(2)? ☐ Yes ☒ No ☐ N/A If the plan is a defined benefit plan, go to line 8.		
5 If a waiver of the minimum funding standard for a prior year is being amortized in this plan year, see instructions and enter the date of the ruling letter granting the waiver. Date: Month Day Year If you completed line 5, complete lines 3, 9, and 10 of Schedule MB and do not complete the remainder of this schedule.		
6 a Enter the minimum required contribution for this plan year (include any prior year accumulated funding deficiency not waived)		6a
b Enter the amount contributed by the employer to the plan for this plan year		6b
c Subtract the amount in line 6b from the amount in line 6a. Enter the result (enter a minus sign to the left of a negative amount)		6c
If you completed line 6c, skip lines 8 and 9.		
7 Will the minimum funding amount reported on line 6c be met by the funding deadline? ☐ Yes ☐ No ☐ N/A		
8 If a change in actuarial cost method was made for this plan year pursuant to a revenue procedure or other authority providing automatic approval for the change or a class ruling letter, does the plan sponsor or plan administrator agree with the change? ☐ Yes ☐ No ☒ N/A		
Part III	Amendments	
9 If this is a defined benefit pension plan, were any amendments adopted during this plan year that increased or decreased the value of benefits? If yes, check the appropriate box. If no, check the "No" box. ☐ Increase ☐ Decrease ☐ Both ☒ No		
Part IV	ESOPs (see instructions). If this is not a plan described under section 409(a) or 4975(e)(7) of the Internal Revenue Code, skip this Part.	
10 Were unallocated employer securities or proceeds from the sale of unallocated securities used to repay any exempt loan? ☐ Yes ☐ No		
11 a Does the ESOP hold any preferred stock? ☐ Yes ☐ No		
b If the ESOP has an outstanding exempt loan with the employer as lender, is such loan part of a "back-to-back" loan? (See instructions for definition of "back-to-back" loan.) ☐ Yes ☐ No		
12 Does the ESOP hold any stock that is not readily tradable on an established securities market? ☐ Yes ☐ No		
For Paperwork Reduction Act Notice, see the Instructions for Form 5500.		
Schedule R (Form 5500) 2017 v. 170203		

Part V Additional Information for Multiemployer Defined Benefit Pension Plans

13 Enter the following information for each employer that contributed more than 5% of total contributions to the plan during the plan year (measured in dollars). See instructions. *Complete as many entries as needed to report all applicable employers.*

a Name of contributing employer

b EIN

c Dollar amount contributed by employer

d Date collective bargaining agreement expires (If employer contributes under more than one collective bargaining agreement, check box ☐ and see instructions regarding required attachment. Otherwise, enter the applicable date.) Month _____ Day _____ Year _____

e Contribution rate information (If more than one rate applies, check this box ☐ and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents) _____

(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): _____

a Name of contributing employer

b EIN

c Dollar amount contributed by employer

d Date collective bargaining agreement expires (If employer contributes under more than one collective bargaining agreement, check box ☐ and see instructions regarding required attachment. Otherwise, enter the applicable date.) Month _____ Day _____ Year _____

e Contribution rate information (If more than one rate applies, check this box ☐ and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents) _____

(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): _____

a Name of contributing employer

b EIN

c Dollar amount contributed by employer

d Date collective bargaining agreement expires (If employer contributes under more than one collective bargaining agreement, check box ☐ and see instructions regarding required attachment. Otherwise, enter the applicable date.) Month _____ Day _____ Year _____

e Contribution rate information (If more than one rate applies, check this box ☐ and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents) _____

(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): _____

a Name of contributing employer

b EIN

c Dollar amount contributed by employer

d Date collective bargaining agreement expires (If employer contributes under more than one collective bargaining agreement, check box ☐ and see instructions regarding required attachment. Otherwise, enter the applicable date.) Month _____ Day _____ Year _____

e Contribution rate information (If more than one rate applies, check this box ☐ and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents) _____

(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): _____

a Name of contributing employer

b EIN

c Dollar amount contributed by employer

d Date collective bargaining agreement expires (If employer contributes under more than one collective bargaining agreement, check box ☐ and see instructions regarding required attachment. Otherwise, enter the applicable date.) Month _____ Day _____ Year _____

e Contribution rate information (If more than one rate applies, check this box ☐ and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents) _____

(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): _____

a Name of contributing employer

b EIN

c Dollar amount contributed by employer

d Date collective bargaining agreement expires (If employer contributes under more than one collective bargaining agreement, check box ☐ and see instructions regarding required attachment. Otherwise, enter the applicable date.) Month _____ Day _____ Year _____

e Contribution rate information (If more than one rate applies, check this box ☐ and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents) _____

(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): _____

- 14** Enter the number of participants on whose behalf no contributions were made by an employer as an employer of the participant for:

a The current year	14a	
b The plan year immediately preceding the current plan year	14b	
c The second preceding plan year	14c	

- 15** Enter the ratio of the number of participants under the plan on whose behalf no employer had an obligation to make an employer contribution during the current plan year to:

a The corresponding number for the plan year immediately preceding the current plan year	15a	
b The corresponding number for the second preceding plan year	15b	

- 16** Information with respect to any employers who withdrew from the plan during the preceding plan year:

a Enter the number of employers who withdrew during the preceding plan year	16a	
b If line 16a is greater than 0, enter the aggregate amount of withdrawal liability assessed or estimated to be assessed against such withdrawn employers	16b	

- 17** If assets and liabilities from another plan have been transferred to or merged with this plan during the plan year, check box and see instructions regarding supplemental information to be included as an attachment. ☐

Part VI Additional Information for Single-Employer and Multiemployer Defined Benefit Pension Plans

- 18** If any liabilities to participants or their beneficiaries under the plan as of the end of the plan year consist (in whole or in part) of liabilities to such participants and beneficiaries under two or more pension plans as of immediately before such plan year, check box and see instructions regarding supplemental information to be included as an attachment ☐

- 19** If the total number of participants is 1,000 or more, complete lines (a) through (c)

- a** Enter the percentage of plan assets held as:
 Stock: _____% Investment-Grade Debt: _____% High-Yield Debt: _____% Real Estate: _____% Other: _____%
- b** Provide the average duration of the combined investment-grade and high-yield debt:
☐ 0-3 years ☐ 3-6 years ☐ 6-9 years ☐ 9-12 years ☐ 12-15 years ☐ 15-18 years ☐ 18-21 years ☐ 21 years or more
- c** What duration measure was used to calculate line 19(b)?
☐ Effective duration ☐ Macaulay duration ☐ Modified duration ☐ Other (specify): _____

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Schedule SB, line 26—Schedule of Active Participant Data as of January 1, 2017

Attained Age	Number of Participants Years of Credited Service									
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+
<25		2								
25-29		1								
30-34		1								
35-39	1	1	1							
40-44	1	2	2							
45-49	3	3	2	3			2			
50-54	2	4			1	2	1			
55-59		1	2			2		1	1	
60-64		3	1				1	3	1	1
65-69								1		3
70+										

N-56

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Schedule SB, Part V—Statement of Actuarial Assumptions/Methods

Interest Rates for Minimum Funding Purposes	Based on segment rates with a four-month lookback (as of September 2016), each adjusted as needed to fall within the 25-year average interest rate stabilization corridor
1st Segment Rate	4.16%
2nd Segment Rate	5.72%
3rd Segment Rate	6.48%
Interest Rates for Maximum Tax Purposes	Based on segment rates with a four-month lookback (as of September 2016), without regard to interest rate stabilization
1st Segment Rate	1.52%
2nd Segment Rate	3.80%
3rd Segment Rate	4.79%
Retirement Age	
Active Participants	See Table 1.
Terminated Vested Participants	See Table 2.
Mortality Rates	
Healthy and Disabled	2017 static mortality table for annuitants and non-annuitants per §1.430(h)(3)-1(e)
Withdrawal Rates	See Table 3.
Disability Rates	See Table 4.
Form of Benefit Payment	See Table 5.
Decrement Timing	Beginning of year decrements
Surviving Spouse Benefit	It is assumed that 80% of males and 80% of females have an eligible spouse, and that males are three years older than their spouses.
Benefit Limits	Projected benefits are limited by the current IRC section 415 maximum benefit of \$215,000.

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Valuation of Plan Assets

Smoothed fair market value of assets over the current and prior two years, adjusted for contributions, benefit payments, administrative expenses, and expected earnings. The average value of assets calculated in this manner is further limited to not less than 90% nor more than 110% of fair market value.

A characteristic of this method is that the expected distribution of the value of plan assets is skewed toward understatement relative to the corresponding market values for expected long-term rates of return in excess of the third segment rate under IRC section 430(h)(2)(C)(iii).

Expected Return on Assets
2015 Plan Year

5.75%

The applicable third segment rate limitation is 6.81%.

2016 Plan Year

5.50%

The applicable third segment rate limitation is 6.65%.

2017 Plan Year

5.50%

The applicable third segment rate limitation is 6.48%.

Trust Expenses Included in Target Normal Cost

\$44,196, actual expenses from prior year with a 5.00% load

Actuarial Method

Standard unit credit cost method

Valuation Date

January 1, 2017

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Table 1

Retirement Rates—Active Participants

<u>Age</u>	<u>Rate</u>
55	5.00%
56	5.00%
57	5.00%
58	5.00%
59	5.00%
60	7.00%
61	9.00%
62	12.00%
63	16.00%
64	23.00%
65	28.00%
66	28.00%
67	26.00%
68	25.00%
69	25.00%
70+	100.00%

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Table 2

Retirement Rates—Terminated Vested Participants

<u>Age</u>	<u>Rate</u>
55	13.00%
56	5.00%
57	5.00%
58	5.00%
59	6.00%
60	7.00%
61	10.00%
62	13.00%
63	10.00%
64	18.00%
65+	100.00%

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Table 3—Page 1 of 2

Withdrawal Rates

Age	Years of Service			
	0-1	2-4	5-9	10+
20	18.00%	14.00%	15.00%	11.00%
21	22.00%	18.00%	15.00%	11.00%
22	24.00%	16.00%	15.00%	11.00%
23	25.00%	14.00%	15.00%	11.00%
24	25.00%	14.00%	14.00%	11.00%
25	21.00%	13.00%	13.00%	11.00%
26	19.00%	17.00%	8.00%	11.00%
27	13.00%	15.00%	7.00%	11.00%
28	10.00%	17.00%	8.00%	11.00%
29	7.00%	15.00%	8.00%	14.00%
30	13.00%	14.00%	9.00%	14.00%
31	13.00%	13.00%	12.00%	16.00%
32	15.00%	15.00%	12.00%	14.00%
33	15.00%	13.00%	13.00%	11.00%
34	16.00%	14.00%	14.00%	6.00%
35	13.00%	13.00%	13.00%	6.00%
36	13.00%	13.00%	12.00%	6.00%
37	12.00%	11.00%	11.00%	5.00%
38	10.00%	12.00%	9.00%	5.00%
39	8.00%	12.00%	9.00%	5.00%
40	8.00%	12.00%	9.00%	5.00%
41	8.00%	10.00%	9.00%	5.00%
42	10.00%	11.00%	9.00%	5.00%
43	13.00%	11.00%	10.00%	5.00%
44	14.00%	10.00%	9.00%	5.00%

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Table 3—Page 2 of 2

Withdrawal Rates

Age	Years of Service			
	0-1	2-4	5-9	10+
45	14.00%	9.00%	9.00%	4.00%
46	13.00%	9.00%	7.00%	4.00%
47	11.00%	10.00%	7.00%	3.00%
48	7.00%	11.00%	7.00%	3.00%
49	10.00%	12.00%	7.00%	4.00%
50	7.00%	13.00%	6.00%	3.00%
51	11.00%	13.00%	7.00%	3.00%
52	13.00%	12.00%	7.00%	4.00%
53	14.00%	11.00%	8.00%	3.00%
54	13.00%	10.00%	8.00%	4.00%
55+	0.00%	0.00%	0.00%	0.00%

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Table 4
Disability Rates

Age	Rate	Age	Rate
18	0.04%	45	0.16%
19	0.04%	46	0.19%
		47	0.22%
20	0.04%	48	0.26%
21	0.04%	49	0.29%
22	0.04%		
23	0.04%	50	0.33%
24	0.04%	51	0.37%
		52	0.41%
25	0.04%	53	0.45%
26	0.05%	54	0.50%
27	0.05%		
28	0.05%	55	0.55%
29	0.05%	56	0.61%
		57	0.72%
30	0.05%	58	0.83%
31	0.05%	59	0.91%
32	0.05%		
33	0.06%	60	1.04%
34	0.06%	61	1.19%
		62	1.37%
35	0.06%	63	1.57%
36	0.07%	64	2.04%
37	0.07%		
38	0.07%	65+	0.00%
39	0.08%		
40	0.08%		
41	0.09%		
42	0.09%		
43	0.10%		
44	0.13%		

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Table 5

Form of Benefit Payment

<u>Payment Form</u>	<u>Probability</u>
Single Life Annuity	50.00%
10 Year Certain and Life	5.00%
100% Joint and Survivor Annuity	20.00%
75% Joint and Survivor Annuity	5.00%
66% Joint and Survivor Annuity	5.00%
50% Joint and Survivor Annuity	15.00%

**SCHEDULE SB
(Form 5500)**Department of the Treasury
Internal Revenue ServiceDepartment of Labor
Employee Benefits Security Administration
Pension Benefit Guaranty Corporation**Single-Employer Defined Benefit Plan
Actuarial Information**

This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA) and section 6059 of the Internal Revenue Code (the Code).

▶ File as an attachment to Form 5500 or 5500-SF.

OMB No. 1210-0110

2017**This Form is Open to Public
Inspection**

For calendar plan year 2017 or fiscal plan year beginning 01/01/2017 and ending 12/31/2017

▶ Round off amounts to nearest dollar.

▶ Caution: A penalty of \$1,000 will be assessed for late filing of this report unless reasonable cause is established.

A Name of plan W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. - Tennessee		B Three-digit plan number (PN) ▶ 134
C Plan sponsor's name as shown on line 2a of Form 5500 or 5500-SF W.R. Grace & Co.-CT		D Employer Identification Number (EIN) 13-5114230
E Type of plan: ☒ Single ☐ Multiple-A ☐ Multiple-B		F Prior year plan size: ☐ 100 or fewer ☐ 101-500 ☒ More than 500

Part I Basic Information

1 Enter the valuation date: Month <u>01</u> Day <u>01</u> Year <u>2017</u>			
2 Assets:			
a Market value.....		2a	9,711,146
b Actuarial value.....		2b	9,733,286
3 Funding target/participant count breakdown	(1) Number of participants	(2) Vested Funding Target	(3) Total Funding Target
a For retired participants and beneficiaries receiving payment.....	36	4,656,833	4,656,833
b For terminated vested participants.....	15	383,639	383,639
c For active participants.....	56	3,790,571	4,041,996
d Total.....	107	8,831,043	9,082,468
4 If the plan is in at-risk status, check the box and complete lines (a) and (b)..... ☐			
a Funding target disregarding prescribed at-risk assumptions.....		4a	
b Funding target reflecting at-risk assumptions, but disregarding transition rule for plans that have been in at-risk status for fewer than five consecutive years and disregarding loading factor.....		4b	
5 Effective interest rate.....	5	5.88%	
6 Target normal cost.....	6	180,346	

Statement by Enrolled Actuary

To the best of my knowledge, the information supplied in this schedule and accompanying schedules, statements and attachments, if any, is complete and accurate. Each prescribed assumption was applied in accordance with applicable law and regulations. In my opinion, each other assumption is reasonable (taking into account the experience of the plan and reasonable expectations) and such other assumptions, in combination, offer my best estimate of anticipated experience under the plan.

**SIGN
HERE**

Tricia Schwabenbauer

Signature of actuary

Tricia Schwabenbauer

Type or print name of actuary

Aon Consulting, Inc.

Firm name

500 East Pratt Street

Baltimore MD 21202

Address of the firm

08/08/2018

Date

1707200

Most recent enrollment number

410-547-2990

Telephone number (including area code)

If the actuary has not fully reflected any regulation or ruling promulgated under the statute in completing this schedule, check the box and see instructions ☐

For Paperwork Reduction Act Notice, see the Instructions for Form 5500 or 5500-SF.

Schedule SB (Form 5500) 2017

Part II Beginning of Year Carryover and Prefunding Balances

	(a) Carryover balance	(b) Prefunding balance
7 Balance at beginning of prior year after applicable adjustments (line 13 from prior year).....	0	1,528,768
8 Portion elected for use to offset prior year's funding requirement (line 35 from prior year)	0	176,522
9 Amount remaining (line 7 minus line 8).....	0	1,352,246
10 Interest on line 9 using prior year's actual return of <u>9.56%</u>	0	129,275
11 Prior year's excess contributions to be added to prefunding balance:		
a Present value of excess contributions (line 38a from prior year).....		0
b(1) Interest on the excess, if any, of line 38a over line 38b from prior year Schedule SB, using prior year's effective interest rate of <u>6.07%</u>		0
b(2) Interest on line 38b from prior year Schedule SB, using prior year's actual return.....		0
c Total available at beginning of current plan year to add to prefunding balance.....		0
d Portion of (c) to be added to prefunding balance.....		0
12 Other reductions in balances due to elections or deemed elections.....	0	642,872
13 Balance at beginning of current year (line 9 + line 10 + line 11d - line 12).....	0	838,649

Part III Funding Percentages

14 Funding target attainment percentage	14	97.93%
15 Adjusted funding target attainment percentage.....	15	107.16%
16 Prior year's funding percentage for purposes of determining whether carryover/prefunding balances may be used to reduce current year's funding requirement.....	16	100.06%
17 If the current value of the assets of the plan is less than 70 percent of the funding target, enter such percentage.	17	%

Part IV Contributions and Liquidity Shortfalls**18** Contributions made to the plan for the plan year by employer(s) and employees:

(a) Date (MM-DD-YYYY)	(b) Amount paid by employer(s)	(c) Amount paid by employees	(a) Date (MM-DD-YYYY)	(b) Amount paid by employer(s)	(c) Amount paid by employees
04/06/2018	400,000	0			
Totals ▶			18(b)	400,000	18(c) 0

19 Discounted employer contributions – see instructions for small plan with a valuation date after the beginning of the year:

a Contributions allocated toward unpaid minimum required contributions from prior years.....	19a	0
b Contributions made to avoid restrictions adjusted to valuation date	19b	0
c Contributions allocated toward minimum required contribution for current year adjusted to valuation date.....	19c	372,210

20 Quarterly contributions and liquidity shortfalls:

- a** Did the plan have a "funding shortfall" for the prior year?..... ☐ Yes ☒ No
- b** If line 20a is "Yes," were required quarterly installments for the current year made in a timely manner?..... ☐ Yes ☐ No
- c** If line 20a is "Yes," see instructions and complete the following table as applicable:

Liquidity shortfall as of end of quarter of this plan year

(1) 1st	(2) 2nd	(3) 3rd	(4) 4th

Part V Assumptions Used to Determine Funding Target and Target Normal Cost

21 Discount rate:				
a Segment rates:	1st segment: 4.16 %	2nd segment: 5.72 %	3rd segment: 6.48 %	☐ N/A, full yield curve used
b Applicable month (enter code)				21b 4
22 Weighted average retirement age				22 63
23 Mortality table(s) (see instructions) ☐ Prescribed - combined ☒ Prescribed - separate ☐ Substitute				

Part VI Miscellaneous Items

24 Has a change been made in the non-prescribed actuarial assumptions for the current plan year? If "Yes," see instructions regarding required attachment	☒ Yes ☐ No
25 Has a method change been made for the current plan year? If "Yes," see instructions regarding required attachment	☐ Yes ☒ No
26 Is the plan required to provide a Schedule of Active Participants? If "Yes," see instructions regarding required attachment	☒ Yes ☐ No
27 If the plan is subject to alternative funding rules, enter applicable code and see instructions regarding attachment	27

Part VII Reconciliation of Unpaid Minimum Required Contributions For Prior Years

28 Unpaid minimum required contributions for all prior years	28	0
29 Discounted employer contributions allocated toward unpaid minimum required contributions from prior years (line 19a)	29	0
30 Remaining amount of unpaid minimum required contributions (line 28 minus line 29)	30	0

Part VIII Minimum Required Contribution For Current Year

31 Target normal cost and excess assets (see instructions):			
a Target normal cost (line 6)	31a	180,346	
b Excess assets, if applicable, but not greater than line 31a	31b	0	
32 Amortization installments:	Outstanding Balance		Installment
a Net shortfall amortization installment	187,831		30,844
b Waiver amortization installment	0		0
33 If a waiver has been approved for this plan year, enter the date of the ruling letter granting the approval (Month _____ Day _____ Year _____) and the waived amount	33		
34 Total funding requirement before reflecting carryover/prefunding balances (lines 31a - 31b + 32a + 32b - 33)	34	211,190	
	Carryover balance	Prefunding balance	Total balance
35 Balances elected for use to offset funding requirement	0	211,190	211,190
36 Additional cash requirement (line 34 minus line 35)	36	0	
37 Contributions allocated toward minimum required contribution for current year adjusted to valuation date (line 19c)	37	372,210	
38 Present value of excess contributions for current year (see instructions)			
a Total (excess, if any, of line 37 over line 36)	38a	372,210	
b Portion included in line 38a attributable to use of prefunding and funding standard carryover balances	38b	211,190	
39 Unpaid minimum required contribution for current year (excess, if any, of line 36 over line 37)	39	0	
40 Unpaid minimum required contributions for all years	40	0	

Part IX Pension Funding Relief Under Pension Relief Act of 2010 (See Instructions)

41 If an election was made to use PRA 2010 funding relief for this plan:			
a Schedule elected	☐ 2 plus 7 years ☐ 15 years		
b Eligible plan year(s) for which the election in line 41a was made	☐ 2008 ☐ 2009 ☐ 2010 ☐ 2011		
42 Amount of acceleration adjustment	42		
43 Excess installment acceleration amount to be carried over to future plan years	43		

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Schedule SB, line 19—Discounted Employer Contributions
Year applied for contributions: 2017

Date	Amount	Days to Discount to 1/1/2017 at 5.88%	Interest Adjusted Contribution
April 6, 2018	<u>\$ 400,000</u>	460	<u>\$ 372,210</u>
Total Contribution	<u>\$ 400,000</u>		<u>\$ 372,210</u>

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Schedule SB, line 22—Description of Weighted Average Retirement Age

The average retirement age shown in line 22 has been calculated by assuming the following retirement rates and no decrements other than retirement for this calculation. All retirements are assumed to occur at beginning of year.

(a) Age	(b) Rate	(c) Weight	(d) Product (a) × (b) × (c)
55	5.00%	1.0000	2.75
56	5.00%	0.9500	2.66
57	5.00%	0.9025	2.57
58	5.00%	0.8574	2.49
59	5.00%	0.8145	2.40
60	7.00%	0.7738	3.25
61	9.00%	0.7196	3.95
62	12.00%	0.6549	4.87
63	16.00%	0.5763	5.81
64	23.00%	0.4841	7.13
65	28.00%	0.3727	6.78
66	28.00%	0.2684	4.96
67	26.00%	0.1932	3.37
68	25.00%	0.1430	2.43
69	25.00%	0.1072	1.85
70	100.00%	0.0804	5.63
Weighted Average			62.90

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Schedule SB, Part V—Statement of Actuarial Assumptions/Methods

Interest Rates for Minimum Funding Purposes	Based on segment rates with a four-month lookback (as of September 2016), each adjusted as needed to fall within the 25-year average interest rate stabilization corridor
1st Segment Rate	4.16%
2nd Segment Rate	5.72%
3rd Segment Rate	6.48%
Interest Rates for Maximum Tax Purposes	Based on segment rates with a four-month lookback (as of September 2016), without regard to interest rate stabilization
1st Segment Rate	1.52%
2nd Segment Rate	3.80%
3rd Segment Rate	4.79%
Retirement Age	
Active Participants	See Table 1.
Terminated Vested Participants	See Table 2.
Mortality Rates	
Healthy and Disabled	2017 static mortality table for annuitants and non-annuitants per §1.430(h)(3)-1(e)
Withdrawal Rates	See Table 3.
Disability Rates	See Table 4.
Form of Benefit Payment	See Table 5.
Decrement Timing	Beginning of year decrements
Surviving Spouse Benefit	It is assumed that 80% of males and 80% of females have an eligible spouse, and that males are three years older than their spouses.
Benefit Limits	Projected benefits are limited by the current IRC section 415 maximum benefit of \$215,000.

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Valuation of Plan Assets

Smoothed fair market value of assets over the current and prior two years, adjusted for contributions, benefit payments, administrative expenses, and expected earnings. The average value of assets calculated in this manner is further limited to not less than 90% nor more than 110% of fair market value.

A characteristic of this method is that the expected distribution of the value of plan assets is skewed toward understatement relative to the corresponding market values for expected long-term rates of return in excess of the third segment rate under IRC section 430(h)(2)(C)(iii).

Expected Return on Assets
2015 Plan Year

5.75%

The applicable third segment rate limitation is 6.81%.

2016 Plan Year

5.50%

The applicable third segment rate limitation is 6.65%.

2017 Plan Year

5.50%

The applicable third segment rate limitation is 6.48%.

Trust Expenses Included in Target Normal Cost

\$44,196, actual expenses from prior year with a 5.00% load

Actuarial Method

Standard unit credit cost method

Valuation Date

January 1, 2017

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Table 1

Retirement Rates—Active Participants

<u>Age</u>	<u>Rate</u>
55	5.00%
56	5.00%
57	5.00%
58	5.00%
59	5.00%
60	7.00%
61	9.00%
62	12.00%
63	16.00%
64	23.00%
65	28.00%
66	28.00%
67	26.00%
68	25.00%
69	25.00%
70+	100.00%

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Table 2

Retirement Rates—Terminated Vested Participants

<u>Age</u>	<u>Rate</u>
55	13.00%
56	5.00%
57	5.00%
58	5.00%
59	6.00%
60	7.00%
61	10.00%
62	13.00%
63	10.00%
64	18.00%
65+	100.00%

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Table 3—Page 1 of 2

Withdrawal Rates

Age	Years of Service			
	0-1	2-4	5-9	10+
20	18.00%	14.00%	15.00%	11.00%
21	22.00%	18.00%	15.00%	11.00%
22	24.00%	16.00%	15.00%	11.00%
23	25.00%	14.00%	15.00%	11.00%
24	25.00%	14.00%	14.00%	11.00%
25	21.00%	13.00%	13.00%	11.00%
26	19.00%	17.00%	8.00%	11.00%
27	13.00%	15.00%	7.00%	11.00%
28	10.00%	17.00%	8.00%	11.00%
29	7.00%	15.00%	8.00%	14.00%
30	13.00%	14.00%	9.00%	14.00%
31	13.00%	13.00%	12.00%	16.00%
32	15.00%	15.00%	12.00%	14.00%
33	15.00%	13.00%	13.00%	11.00%
34	16.00%	14.00%	14.00%	6.00%
35	13.00%	13.00%	13.00%	6.00%
36	13.00%	13.00%	12.00%	6.00%
37	12.00%	11.00%	11.00%	5.00%
38	10.00%	12.00%	9.00%	5.00%
39	8.00%	12.00%	9.00%	5.00%
40	8.00%	12.00%	9.00%	5.00%
41	8.00%	10.00%	9.00%	5.00%
42	10.00%	11.00%	9.00%	5.00%
43	13.00%	11.00%	10.00%	5.00%
44	14.00%	10.00%	9.00%	5.00%

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Table 3—Page 2 of 2

Withdrawal Rates

Age	Years of Service			
	0-1	2-4	5-9	10+
45	14.00%	9.00%	9.00%	4.00%
46	13.00%	9.00%	7.00%	4.00%
47	11.00%	10.00%	7.00%	3.00%
48	7.00%	11.00%	7.00%	3.00%
49	10.00%	12.00%	7.00%	4.00%
50	7.00%	13.00%	6.00%	3.00%
51	11.00%	13.00%	7.00%	3.00%
52	13.00%	12.00%	7.00%	4.00%
53	14.00%	11.00%	8.00%	3.00%
54	13.00%	10.00%	8.00%	4.00%
55+	0.00%	0.00%	0.00%	0.00%

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Table 4
Disability Rates

Age	Rate	Age	Rate
18	0.04%	45	0.16%
19	0.04%	46	0.19%
		47	0.22%
20	0.04%	48	0.26%
21	0.04%	49	0.29%
22	0.04%		
23	0.04%	50	0.33%
24	0.04%	51	0.37%
		52	0.41%
25	0.04%	53	0.45%
26	0.05%	54	0.50%
27	0.05%		
28	0.05%	55	0.55%
29	0.05%	56	0.61%
		57	0.72%
30	0.05%	58	0.83%
31	0.05%	59	0.91%
32	0.05%		
33	0.06%	60	1.04%
34	0.06%	61	1.19%
		62	1.37%
35	0.06%	63	1.57%
36	0.07%	64	2.04%
37	0.07%		
38	0.07%	65+	0.00%
39	0.08%		
40	0.08%		
41	0.09%		
42	0.09%		
43	0.10%		
44	0.13%		

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Table 5

Form of Benefit Payment

<u>Payment Form</u>	<u>Probability</u>
Single Life Annuity	50.00%
10 Year Certain and Life	5.00%
100% Joint and Survivor Annuity	20.00%
75% Joint and Survivor Annuity	5.00%
66% Joint and Survivor Annuity	5.00%
50% Joint and Survivor Annuity	15.00%

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Schedule SB, Part V—Summary of Plan Provisions

General Information

Original Effective Date	January 10, 1977				
Effective Date of Last Amendment	January 1, 2006				
Plan Year	January 1 to December 31				
Employer Fiscal Year	January 1 to December 31				
Employer ID Number	13-5114230				
Plan Administrator's ID Number	13-5114230				
Plan Number	134				
Plan Administrator	Administrative Committee				
Eligibility	Date of hire.				
Service					
Credited Service	From date of hire (maximum of 45 years).				
Vesting Service	1,000 hours of service.				
Normal Retirement					
Eligibility	Age 65.				
Benefit	Benefit level per month multiplied by credited service:				
	<table> <tr> <th>Effective Date</th><th>Benefit Level</th></tr> <tr> <td>September 1, 2005</td><td>\$50.00 Plus 1/36 of contribution</td></tr> </table>	Effective Date	Benefit Level	September 1, 2005	\$50.00 Plus 1/36 of contribution
Effective Date	Benefit Level				
September 1, 2005	\$50.00 Plus 1/36 of contribution				
Average Compensation	N/A				
Early Retirement					
Eligibility	Age 55.				
Benefit	Accrued benefit reduced 1/6% per month preceding age 62. No reduction at Rule of 90 (age plus service equals 90 or more).				
Disability Retirement					
Eligibility	Age 45 and 10 years of service or 15 years of service.				
Benefit	Accrued benefit.				

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Postponed Retirement

Eligibility

Actual retirement after age 65.

Benefit

A monthly benefit equal to the accrued benefit calculated as of the actual retirement date.

Preretirement Death

Eligibility

Five years of service or age 55.

Benefit

Accrued benefit at age 55.

Severance Benefit

Eligibility

Fewer Than Five Years of Service

0%

Five or More Years of Service

100%

Benefit

Accrued benefit at age 65.

Normal Form of Payment

Married

Reduced 50% joint and survivor.

Single

Life annuity.

Optional Methods of Settlement

Reduced benefit to be paid during participant's lifetime with the provision that after his death, a benefit equal to either 100%, 75%, 66%, or 50% is paid to his beneficiary.

Increased retirement benefit paid prior to Social Security benefit eligibility and reduced benefit paid thereafter in order to provide a uniform income.

A reduced benefit to be paid for 120 months certain and thereafter for life.

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

For the purpose of calculating a joint and survivor optional form of benefit the following factors (as adjusted) shall be applied:

J&S Option	(1) Participant and Beneficiary Age 65 Nearest Birthday	(2) Adjustment for Retirement Age ¹	(3) Adjustment for Age Difference Between Participant and Beneficiary ²	
			Years 1–10	Years 11 & Over
50%	0.88	0.004	0.005	0.003
66.67%	0.85	0.005	0.006	0.003
75%	0.82	0.006	0.007	0.005
100%	0.78	0.007	0.008	0.005

In no event shall the factor in column (1) exceed 0.99 on account of an increase thereof provided under column (2) or column (3), or both.

For the purpose of calculating any other optional form of benefit available, mortality with reference to the UP-84 mortality table and 6.50% interest.

Plan Changes Since the Prior Year

The funding valuation does not reflect any plan changes.

¹ Increase/decrease factor in column (1) by appropriate factor in column (2) for each year, based on nearest birthday, participant retires before/after age 65, respectively.

² Decrease/increase factor in column (1) by appropriate factor in column (3) for each year, based on nearest birthday, beneficiary is younger/older than participant, respectively.

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Other Information to Fully and Fairly Disclose the Actuarial Position of the Plan

Due to software limitations with the electronic filing process, information filed electronically cannot be controlled by the Enrolled Actuary. The values on the signed Schedule SB will govern to the extent there are any differences in the entries filed electronically and the actual data contained on the signed Schedule SB.

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Schedule SB, line 24—Change in Actuarial Assumptions

The funding valuation reflects the following assumption changes:

- A change in the retirement rates to better reflect anticipated future experience as the result of an assumption study.
- A change in the withdrawal rates to better reflect anticipated future experience as the result of an assumption study.

These changes were made to better reflect the anticipated plan experience. The funding assumption changes did not reduce the funding shortfall more than the thresholds stated in Internal Revenue Code Section 439(h)(5), so approval of the Commissioner is not required.

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Schedule SB, line 26—Schedule of Active Participant Data as of January 1, 2017

Attained Age	Number of Participants									
	Years of Credited Service									
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+
<25		2								
25-29		1								
30-34		1								
35-39	1	1	1							
40-44	1	2	2							
45-49	3	3	2	3			2			
50-54	2	4			1	2	1			
55-59		1	2			2		1	1	
60-64		3	1				1	3	1	1
65-69								1		3
70+										

N-56

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Schedule SB, line 32—Schedule of Amortization Bases

Type of Base	Present Value of Installment	Date Established	Years Remaining	Amortization Installment
Shortfall	\$ 187,831	January 1, 2017	7	\$ 30,844

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Schedule SB, line 19—Discounted Employer Contributions
Year applied for contributions: 2017

Date	Amount	Days to Discount to 1/1/2017 at 5.88%	Interest Adjusted Contribution
April 6, 2018	<u>\$ 400,000</u>	460	<u>\$ 372,210</u>
Total Contribution	<u>\$ 400,000</u>		<u>\$ 372,210</u>

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Schedule SB, line 22—Description of Weighted Average Retirement Age

The average retirement age shown in line 22 has been calculated by assuming the following retirement rates and no decrements other than retirement for this calculation. All retirements are assumed to occur at beginning of year.

(a) Age	(b) Rate	(c) Weight	(d) Product (a) × (b) × (c)
55	5.00%	1.0000	2.75
56	5.00%	0.9500	2.66
57	5.00%	0.9025	2.57
58	5.00%	0.8574	2.49
59	5.00%	0.8145	2.40
60	7.00%	0.7738	3.25
61	9.00%	0.7196	3.95
62	12.00%	0.6549	4.87
63	16.00%	0.5763	5.81
64	23.00%	0.4841	7.13
65	28.00%	0.3727	6.78
66	28.00%	0.2684	4.96
67	26.00%	0.1932	3.37
68	25.00%	0.1430	2.43
69	25.00%	0.1072	1.85
70	100.00%	0.0804	5.63
Weighted Average			62.90

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Schedule SB, Part V—Summary of Plan Provisions

General Information

Original Effective Date	January 10, 1977
Effective Date of Last Amendment	January 1, 2006
Plan Year	January 1 to December 31
Employer Fiscal Year	January 1 to December 31
Employer ID Number	13-5114230
Plan Administrator's ID Number	13-5114230
Plan Number	134
Plan Administrator	Administrative Committee

Eligibility Date of hire.

Service

Credited Service	From date of hire (maximum of 45 years).
Vesting Service	1,000 hours of service.

Normal Retirement

Eligibility Age 65.

Benefit Benefit level per month multiplied by credited service:

Effective Date	Benefit Level
September 1, 2005	\$50.00 Plus 1/36 of contribution

Average Compensation N/A

Early Retirement

Eligibility Age 55.

Benefit Accrued benefit reduced 1/6% per month preceding age 62. No reduction at Rule of 90 (age plus service equals 90 or more).

Disability Retirement

Eligibility Age 45 and 10 years of service or 15 years of service.

Benefit Accrued benefit.

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Postponed Retirement

Eligibility

Actual retirement after age 65.

Benefit

A monthly benefit equal to the accrued benefit calculated as of the actual retirement date.

Preretirement Death

Eligibility

Five years of service or age 55.

Benefit

Accrued benefit at age 55.

Severance Benefit

Eligibility

Fewer Than Five Years of Service

0%

Five or More Years of Service

100%

Benefit

Accrued benefit at age 65.

Normal Form of Payment

Married

Reduced 50% joint and survivor.

Single

Life annuity.

Optional Methods of Settlement

Reduced benefit to be paid during participant's lifetime with the provision that after his death, a benefit equal to either 100%, 75%, 66%, or 50% is paid to his beneficiary.

Increased retirement benefit paid prior to Social Security benefit eligibility and reduced benefit paid thereafter in order to provide a uniform income.

A reduced benefit to be paid for 120 months certain and thereafter for life.

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

For the purpose of calculating a joint and survivor optional form of benefit the following factors (as adjusted) shall be applied:

J&S Option	(1) Participant and Beneficiary Age 65 Nearest Birthday	(2) Adjustment for Retirement Age ¹	(3) Adjustment for Age Difference Between Participant and Beneficiary ²	
			Years 1–10	Years 11 & Over
50%	0.88	0.004	0.005	0.003
66.67%	0.85	0.005	0.006	0.003
75%	0.82	0.006	0.007	0.005
100%	0.78	0.007	0.008	0.005

In no event shall the factor in column (1) exceed 0.99 on account of an increase thereof provided under column (2) or column (3), or both.

For the purpose of calculating any other optional form of benefit available, mortality with reference to the UP-84 mortality table and 6.50% interest.

Plan Changes Since the Prior Year

The funding valuation does not reflect any plan changes.

¹ Increase/decrease factor in column (1) by appropriate factor in column (2) for each year, based on nearest birthday, participant retires before/after age 65, respectively.

² Decrease/increase factor in column (1) by appropriate factor in column (3) for each year, based on nearest birthday, beneficiary is younger/older than participant, respectively.

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Other Information to Fully and Fairly Disclose the Actuarial Position of the Plan

Due to software limitations with the electronic filing process, information filed electronically cannot be controlled by the Enrolled Actuary. The values on the signed Schedule SB will govern to the extent there are any differences in the entries filed electronically and the actual data contained on the signed Schedule SB.

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Schedule SB, line 32—Schedule of Amortization Bases

Type of Base	Present Value of Installment	Date Established	Years Remaining	Amortization Installment
Shortfall	\$ 187,831	January 1, 2017	7	\$ 30,844

Schedule SB Attachment (Form 5500)—2017 Plan Year
W.R. Grace & Co.-CT -Ret. Plan for Hourly Ees. -Tennessee
EIN: 13-5114230 PN: 134

Schedule SB, line 24—Change in Actuarial Assumptions

The funding valuation reflects the following assumption changes:

- A change in the retirement rates to better reflect anticipated future experience as the result of an assumption study.
- A change in the withdrawal rates to better reflect anticipated future experience as the result of an assumption study.

These changes were made to better reflect the anticipated plan experience. The funding assumption changes did not reduce the funding shortfall more than the thresholds stated in Internal Revenue Code Section 439(h)(5), so approval of the Commissioner is not required.