W R GRACE & CO Form SC 13G/A February 11, 2005

SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

SCHEDULE 13G

Amendment No. 1

INFORMATION STATEMENT PURSUANT TO RULES 13d-1 AND 13d-2 UNDER THE SECURITIES EXCHANGE ACT OF 1934

W. R. Grace & Co.
(NAME OF ISSUER)

Common Stock, \$0.01 par value (TITLE OF CLASS OF SECURITIES)

38388F108 (CUSIP NUMBER)

December 31, 2004 (Date of Event which requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

[] Rule 13d-1(b)

[x] Rule 13d-1(c)

[] Rule 13d-1(d)

(Page 1 of 16 Pages)

* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

(1)	S.S. OR I	EPORTING PERSON .R.S. IDENTIFICATION NO. PERSON artners Fund II, L.P.								
(2)		APPROPRIATE BOX IF A ME	MBER OF A GROUP **	(a) [] (b) [x]						
(3)	SEC USE (NLY								
(4)	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware									
NUMBER OF	(5)	SOLE VOTING POWER								
SHARES										
BENEFICIA:	LLY (6)	SHARED VOTING POWER 1,000,000								
OWNED BY										
EACH	(7)	SOLE DISPOSITIVE POWER 0								
REPORTING										
PERSON WI	TH (8)	SHARED DISPOSITIVE POWE 1,000,000	R							
(9)		AMOUNT BENEFICIALLY OWN EPORTING PERSON	ED							
(10)		IF THE AGGREGATE AMOUNT) EXCLUDES CERTAIN SHARE	S **	[]						
(11)	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 1.5%									
(12)	TYPE OF F	EPORTING PERSON **								
		** SEE INSTRUCTIONS BE	FORE FILLING OUT!							
CUSIP No.	38388F108	13	G	PAGE 3 of 16 PAGES						
(1)		EPORTING PERSON .R.S. IDENTIFICATION NO. PERSON								

Ardsley Partners Institutional Fund, L.P.

(2)	CHECK	THE	APPROPRIATE BOX IF A MEMBER OF A GROUP **			[[x	-		
(3)	SEC USE ONLY								
(4)	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware								
		(5)	SOLE VOTING POWER 0						
SHARES BENEFICIAL OWNED BY	LLY	(6) 	SHARED VOTING POWER 520,000						
EACH		(7) SOLE DISPOSITIVE POWER 0							
REPORTING PERSON WIT	ГН	(8)	SHARED DISPOSITIVE POWER 520,000						
(9)		CH R	AMOUNT BENEFICIALLY OWNED EPORTING PERSON						
(10)	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES ** []								
(11)	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 0.8%								
(12)	TYPE PN	OF R	EPORTING PERSON **						
			** SEE INSTRUCTIONS BEFORE FILLING OUT!						
CUSIP No.	38388	F108	13G	PAGE	4 of	16	PAGES		
(1)	NAME OF REPORTING PERSON S.S. OR I.R.S. IDENTIFICATION NO. OF ABOVE PERSON Ardsley Offshore Fund Ltd.								
(2)	CHECK		APPROPRIATE BOX IF A MEMBER OF A GROUP **			[[x			
(3)	SEC U		NLY						

(4) CITIZENSHIP OR PLACE OF ORGANIZATION British Virgin Islands

SHARES BENEFICIALLY OWNED BY EACH REPORTING		(5)	SOLE VOTING POWER 0						
		(6) SHARED VOTING POWER 1,420,000							
		(7)	SOLE DISPOSITIVE POWER 0						
		(8) SHARED DISPOSITIVE POWER 1,420,000							
(9)		 SATE CH RE	AMOUNT BENEFICIALLY OWNED EPORTING PERSON						
(10)	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES ** []								
	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 2.2%								
(12)	TYPE C	F RI	EPORTING PERSON **						
			** SEE INSTRUCTIONS BEFORE FILLING OUT!						
CUSIP No.	38388F	108	13G	PAGE	5 of	16 PAGE			
(1)	S.S. C	OR I.	EPORTING PERSON R.S. IDENTIFICATION NO. PERSON dvisory Partners						
(2)	CHECK	THE	APPROPRIATE BOX IF A MEMBER OF A GROUP **		(a) (b)	[] [x]			
(3)	SEC US	SE ON	NLY						
(4)	CITIZE Connec		IP OR PLACE OF ORGANIZATION						
NUMBER OF)	(5)	SOLE VOTING POWER						

			0							
SHARES										
		. ,	SHARED VOTING POWER 2,995,000							
OWNED BY										
EACH		(7)	SOLE D	ISPOSITIVE 1	POWER					
REPORTING										
PERSON WIT	ГН		SHARED 2,995,0	DISPOSITIVI 000	E POWER					
(9)	BY EA	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 2,995,000								
(10)	IN RO	OW (9		AGGREGATE A	AMOUNT				[]	
(11)	PERCE	ENT O		REPRESENTE	D					
	TYPE PN;		EPORTING	G PERSON **						
CUSIP No.	38388	3F108			13G		PAGE	6 of	16 PAGES	
(1)	S.S. OF AF	OR I BOVE		G PERSON DENTIFICATIO	ON NO.					
(2)	CHEC	THE	APPROPI	RIATE BOX II	F A MEMBER	OF A GROUP **			[] [x]	
(3)	SEC (
(4)	CITIZENSHIP OR PLACE OF ORGANIZATION Connecticut									
NUMBER OF			SOLE VO	OTING POWER						
BENEFICIAL			SHARED 1,520,0	VOTING POWI	ER					

EACH		(7)	SOLE DISPOSITIVE POWER 0			
REPORTING						
PERSON WIT	ГН	(8)	SHARED DISPOSITIVE POWER 1,520,000			
(9)		CH R	AMOUNT BENEFICIALLY OWNED EPORTING PERSON			
(10)			IF THE AGGREGATE AMOUNT) EXCLUDES CERTAIN SHARES **			[]
(11)			F CLASS REPRESENTED IN ROW (9)			
(12)	TYPE PN	OF R	EPORTING PERSON **			
			** SEE INSTRUCTIONS BEFORE FILLING OUT!			
CUSIP No.	38388	F108	13G	PAGE 7	of 10	6 PAGES
(1)	S.S. OF AB	OR I OVE	EPORTING PERSON .R.S. IDENTIFICATION NO. PERSON Hempleman			
(2)	CHECK	THE	APPROPRIATE BOX IF A MEMBER OF A GROUP **		(a) (b)	[] [x]
(3)	SEC U	SE O	NLY			
(4)	Unite	d St				
NUMBER OF			SOLE VOTING POWER 465,000			
BENEFICIAI	LLY		SHARED VOTING POWER 2,995,000			
OWNED BY EACH		(7)	SOLE DISPOSITIVE POWER 465,000			
REPORTING PERSON WIT	гн	(8)	SHARED DISPOSITIVE POWER			

2,995,000

(9) AGGREGATE AMOUNT BENEFICIALLY OWNED
BY EACH REPORTING PERSON
3,460,000

(10) CHECK BOX IF THE AGGREGATE AMOUNT
IN ROW (9) EXCLUDES CERTAIN SHARES ** []

(11) PERCENT OF CLASS REPRESENTED
BY AMOUNT IN ROW (9)
5.2%

(12) TYPE OF REPORTING PERSON **
IN

** SEE INSTRUCTIONS BEFORE FILLING OUT!

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The Schedule 13G filed on September 2, 2004 is hereby amended by this Amendment No. 1 to the Schedule 13G.

ITEM 1(a). NAME OF ISSUER:

The name of the issuer is W. R. Grace & Co. (the "Company").

ITEM 1(b). ADDRESS OF ISSUER'S PRINCIPAL EXECUTIVE OFFICES: $\,$ 7500 Grace Drive, Columbia, Maryland 21044

ITEM 2(a). NAME OF PERSON FILING:

This statement is filed by:

- (i) Ardsley Partners Fund II, L.P., a Delaware limited partnership ("AP II"), with respect to the shares of Common Stock (defined in Item 2(d) below) directly owned by it;
- (ii) Ardsley Partners Institutional Fund, L.P., a Delaware limited partnership ("Ardsley Institutional"), with respect to the shares of Common Stock directly owned by it;
- (iii) Ardsley Offshore Fund Ltd., a British Virgin Islands Corporation
 ("Ardsley Offshore"), with respect to the shares of Common Stock
 directly owned by it;
- (iv) Ardsley Advisory Partners, a Connecticut general partnership ("Ardsley") which serves as Investment Manager of Ardsley Offshore and the Investment Adviser of AP II, Ardsley Institutional and certain managed accounts, with respect to the shares of Common Stock directly owned by Ardsley Offshore, AP II, Ardsley Institutional and the managed accounts;
- (v) Ardsley Partners I, a Connecticut general partnership ("Ardsley Partners") which serves as General Partner of AP II and Ardsley Institutional; and
- (vi) Philip J. Hempleman, the Managing Partner of Ardsley and Ardsley Partners, with respect to the shares of Common Stock owned by AP II, Ardsley Institutional, Ardsley Offshore and the managed accounts and with respect to the shares of Common Stock he owns individually.

The foregoing persons are hereinafter sometimes collectively referred to as the "Reporting Persons". Any disclosures herein with respect to persons other than the Reporting Persons are made on information and belief after making inquiry to the appropriate party.

ITEM 2(b). ADDRESS OF PRINCIPAL OFFICE OR, IF NONE, RESIDENCE:

The address of the business office of each of the Reporting Persons, with the exception of Ardsley Offshore, is 262 Harbor Drive, Stamford, Connecticut 06902.

The address of the registered office of Ardsley Offshore is Romasco Place, Wickhams Cay 1, Roadtown Tortola, British Virgin Islands.

ITEM 2(c). CITIZENSHIP:

AP II and Ardsley Institutional are Delaware limited partnerships. Ardsley Offshore is a British Virgin Islands Corporation. Ardsley and Ardsley Partners are Connecticut general partnerships. Mr. Hempleman is a United States Citizen.

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ITEM 2(d). TITLE OF CLASS OF SECURITIES: Common Stock, \$0.01 par value ("Common Stock")

ITEM 2(e). CUSIP NUMBER: 38388F108

ITEM 3. IF THIS STATEMENT IS FILED PURSUANT TO RULES 13d-1(b), OR 13d-2(b), CHECK WHETHER THE PERSON FILING IS A:

- (a) [] Broker or dealer registered under Section 15 of the Act
- (b) [] Bank as defined in Section 3(a)(6) of the Act
- (c) [] Insurance Company as defined in Section 3(a)(19) of the $\,$ Act
- (d) [] Investment Company registered under Section 8 of the Investment Company Act
- (e) [] Investment Adviser registered under Section 203 of the Investment Advisers Act of 1940
- (f) [] Employee Benefit Plan, Pension Fund which is subject to the provisions of the Employee Retirement Income Security Act of 1974 or Endowment Fund; see Rule 13d-1(b)(1)(ii)(F)
- (g) [] Parent Holding Company, in accordance with Rule 13d-1(b)(ii)(G); see item 7
- (h) [] Group, in accordance with Rule 13d-1 (b) (1) (ii) (H)

If this statement is filed pursuant to Rule 13d-1(c), check the box. [X]

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- ITEM 4. OWNERSHIP.
 - A. Ardsley Partners Fund II, L.P.
 - (a) Amount beneficially owned: 1,000,000
- (b) Percent of class: 1.5%. The percentages used herein and in the rest of Item 4 are calculated based upon the 66,000,159 shares of Common Stock issued and outstanding at October 31, 2004 as reflected in the Company's Form 10-Q filed on November 5, 2004.
 - (c) (i) Sole Power to vote or direct the vote: -0-
 - (ii) Shared power to vote or direct the vote: 1,000,000
 - (iii) Sole power to dispose or direct the disposition: -0-
 - (iv) Shared power to dispose or direct the disposition: 1,000,000
 - B. Ardsley Partners Institutional Fund, L.P.
 - (a) Amount beneficially owned: 520,000
 - (b) Percent of class: 0.8%
 - (c) (i) Sole Power to vote or direct the vote: -0-
 - (ii) Shared power to vote or direct the vote: 520,000
 - (iii) Sole power to dispose or direct the disposition: -0-
 - (iv) Shared power to dispose or direct the disposition: 520,000
 - C. Ardsley Offshore Fund Ltd.
 - (a) Amount beneficially owned: 1,420,000
 - (b) Percent of class: 2.2%
 - (c) (i) Sole Power to vote or direct the vote: -0-
 - (ii) Shared power to vote or direct the vote: 1,420,000
 - (iii) Sole power to dispose or direct the disposition: -0-
 - (iv) Shared power to dispose or direct the disposition: 1,420,000
 - D. Ardsley Advisory Partners
 - (a) Amount beneficially owned: 2,995,000
 - (b) Percent of class: 4.5%
 - (c) (i) Sole Power to vote or direct the vote: -0-
 - (ii) Shared power to vote or direct the vote: 2,995,000
 - (iii) Sole power to dispose or direct the disposition: -0-
 - (iv) Shared power to dispose or direct the disposition: 2,995,000
 - E. Ardsley Partners I
 - (a) Amount beneficially owned: 1,520,000
 - (b) Percent of class: 2.3%
 - (c) (i) Sole Power to vote or direct the vote: -0-
 - (ii) Shared power to vote or direct the vote: 1,520,000
 - (iii) Sole power to dispose or direct the disposition: -0-
 - (iv) Shared power to dispose or direct the disposition: 1,520,000
 - F. Philip J. Hempleman
 - (a) Amount beneficially owned: 3,460,000
 - (b) Percent of class: 5.2%
 - (c) (i) Sole Power to vote or direct the vote: 465,000
 - (ii) Shared power to vote or direct the vote: 2,995,000
 - (iii) Sole power to dispose or direct the disposition: 465,000
 - (iv) Shared power to dispose or direct the disposition: 2,995,000

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- ITEM 5. OWNERSHIP OF FIVE PERCENT OR LESS OF A CLASS. Not applicable.
- ITEM 6. OWNERSHIP OF MORE THAN FIVE PERCENT ON BEHALF OF ANOTHER PERSON.

Ardsley, the Investment Manager of Ardsley Offshore and the Investment Adviser of certain managed accounts, has the power to vote and direct the disposition of the proceeds from the sale of the shares of Common Stock owned by Ardsley Offshore and the managed accounts, and accordingly may be deemed the direct "beneficial owner" of such shares of Common Stock.

Ardsley, the Investment Adviser of AP II and Ardsley Institutional shares the power to vote and direct the disposition of the proceeds from the sale of the shares of Common Stock owned by AP II and Ardsley Institutional, and accordingly may be deemed the direct "beneficial owner" of such shares of Common Stock.

Ardsley Partners, the General Partner of AP II and Ardsley Institutional shares the power to vote and direct the disposition of the shares of Common Stock owned by AP II and Ardsley Institutional, and accordingly may be deemed the direct "beneficial owner" of such shares of Common Stock.

Mr. Hempleman is the Managing Partner of Ardsley and Ardsley Partners and in that capacity directs their operations and therefore may be deemed to be the indirect "beneficial owner" of the shares of Common Stock owned by Ardsley Offshore, AP II, Ardsley Institutional and the managed accounts. Mr. Hempleman also has the power to vote and direct the disposition of the proceeds from the sale of the shares of Common Stock that he owns individually.

- ITEM 7. IDENTIFICATION AND CLASSIFICATION OF THE SUBSIDIARY WHICH ACQUIRED THE SECURITY BEING REPORTED ON BY THE PARENT HOLDING COMPANY. Not applicable.
- ITEM 8. IDENTIFICATION AND CLASSIFICATION OF MEMBERS OF THE GROUP. Not applicable.
- ITEM 9. NOTICE OF DISSOLUTION OF GROUP.
 Not applicable.

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ITEM 10. CERTIFICATION.

Each of the Reporting Persons hereby makes the following certification:

By signing below I certify, to the best of my knowledge and belief, the securities referred to above were acquired in the ordinary course of business, were not acquired for the purpose of and do not have the effect of changing or influencing the control of the issuer of such securities and were not acquired in connection with or as a participant in any transaction having such purposes or effect.

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SIGNATURES

After reasonable inquiry and to the best of their knowledge and belief, the undersigned certify that the information set forth in this statement is true, complete and correct.

DATED: February 11, 2005

ARDSLEY PARTNERS FUND II, L.P.

BY: ARDSLEY PARTNERS I,

GENERAL PARTNER

BY: /s/ Steve Napoli

Steve Napoli GENERAL PARTNER

ARDSLEY PARTNERS INSTITUTIONAL FUND, L.P.

BY: ARDSLEY PARTNERS I,

GENERAL PARTNER

BY: /s/ Steve Napoli

Steve Napoli GENERAL PARTNER

ARDSLEY OFFSHORE FUND LTD.

BY: /s/ Neil Glass

Neil Glass

Vice-President and Administrative Manager

ARDSLEY ADVISORY PARTNERS

BY: ARDSLEY PARTNERS I

GENERAL PARTNER

BY: /s/ Steve Napoli

Steve Napoli GENERAL PARTNER

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ARDSLEY PARTNERS I

BY: STEVE NAPOLI
GENERAL PARTNER

BY: /s/ Steve Napoli

Steve Napoli GENERAL PARTNER

PHILIP J. HEMPLEMAN, Individually

BY: /s/ Steve Napoli

Steve Napoli

As attorney in fact for Phillip J. Hempleman

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JOINT FILING AGREEMENT PURSUANT TO RULE 13d-1(k)(1)

The undersigned acknowledge and agree that the foregoing statement on Schedule 13G is filed on behalf of each of the undersigned and that all subsequent amendments to this statement on Schedule 13G shall be filed on behalf of each of the undersigned without the necessity of filing additional joint filing statements. The undersigned acknowledge that each shall be responsible for the timely filing of such amendments, and for the completeness and accuracy of the information concerning him, her or it contained herein, but shall not be responsible for the completeness and accuracy of the information concerning the other entities or persons, except to the extent that he, she or it knows or has reason to believe that such information is inaccurate.

Dated: February 11, 2005

ARDSLEY PARTNERS FUND II, L.P.

BY: ARDSLEY PARTNERS I, GENERAL PARTNER

BY: /s/ Steve Napoli

Steve Napoli GENERAL PARTNER

ARDSLEY PARTNERS INSTITUTIONAL FUND, L.P.

BY: ARDSLEY PARTNERS I,

GENERAL PARTNER

BY: /s/ Steve Napoli

Steve Napoli GENERAL PARTNER

ARDSLEY OFFSHORE FUND LTD.

BY: /s/ Neil Glass

Neil Glass

Vice-President and Administrative Manager

ARDSLEY ADVISORY PARTNERS BY: ARDSLEY PARTNERS I GENERAL PARTNER

BY: /s/ Steve Napoli _____

> Steve Napoli GENERAL PARTNER

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ARDSLEY PARTNERS I

BY: ARDSLEY PARTNERS I GENERAL PARTNER

BY: /s/ Steve Napoli

Steve Napoli GENERAL PARTNER

PHILIP J. HEMPLEMAN, Individually

BY: /s/ Steve Napoli

Steve Napoli

As attorney in fact for Phillip J. Hempleman