UNITED STATES SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

| SCHED | ULE | 13D |
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| | | |

Under the Securities Exchange Act of 1934 (Amendment No. 2)

Materialise NV

(Name of Issuer)

Ordinary Shares, no nominal value per share (Title of Class of Securities)

57667T100 (CUSIP Number)

Wilfried Vancraen Technologielaan 15 3001 Leuven Belgium +32 (16) 39 66 11

(Name, address and telephone number of person authorized to receive notices and communications on behalf of filing persons)

December 31, 2020 (Date of event which requires filing of this statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§ 240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box. \Box

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| | Wilfried V | | | | | |
| 2. | | | PPROPRIATE BOX IF A MEMBER OF A GROUP | | | |
| | (a) □ | (b) [| | | | |
| 3. | SEC USE ONLY | | | | | |
| 3. | SEC USE | ONLY | | | | |
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| 5. | CHECK II | F DISC | CLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) | | | |
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| 6. | CITIZENS | SHIP (| OR PLACE OF ORGANIZATION | | | |
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| | PERSON | | | | | |
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| | 60.42%(1) | | | | | |
| 14. | . , | | ORTING PERSON | | | |
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(1) Based on 54,169,257 ordinary shares of Materialise NV outstanding as of January 5, 2021.

CUSIP No. 57667T100

| 1. | NAME OI | FREP | ORTING PERSONS | | | | |
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| | Hilde Inge | laere | | | | | |
| 2. | | HE A | PPROPRIATE BOX IF A MEMBER OF A GROUP | | | | |
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| | The Kingd | lom of | Belgium | | | | |
| ! | | 7. | SOLE VOTING POWER | | | | |
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| | MBER OF SHARES | | 13,599,082 | | | | |
| | EFICIALLY | 8. | SHARED VOTING POWER | | | | |
| | WNED BY | | 19,130,864 | | | | |
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| | 60.42%(1) | | | | | | |
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(1) Based on 54,169,257 ordinary shares of Materialise NV outstanding as of January 5, 2021.

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| 1. | NAME OF | REPORTING PERSONS | | | | | |
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| 2. | Idem CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP | | | | | | |
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| | EACH PORTING | 9. SOLE DISPOSITIVE POWER | | | | | |
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| | | 10. SHARED DISPOSITIVE FOWER | | | | | |
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| | 13,638,324 | | | | | | |
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| 12 | DEDCENT | OF CLASS REPRESENTED BY AMOUNT IN ROW (11) | | | | | |
| 13. | PERCENT | OF CLASS REFRESENTED DT AMOUNT IN ROW (II) | | | | | |
| | 25.18%(1) | | | | | | |
| 14. | TYPE OF I | REPORTING PERSON | | | | | |
| | PN | | | | | | |

⁽¹⁾ Based on 54,169,257 ordinary shares of Materialise NV outstanding as of January 5, 2021.

This Amendment No. 2 to Statement on Schedule 13D (this "Amendment") is filed jointly by (i) Wilfried Vancraen, (ii) Hilde Ingelaere and (iii) Idem (collectively the "Reporting Persons") pursuant to Rule 13d-2(a) under the Securities Exchange Act of 1934, as amended. This Amendment amends and supplements the Statement on Schedule 13D (the "Original Schedule 13D") originally filed by the Reporting Persons and Ailanthus NV (a limited liability company (*naamloze vennootschap*) that was organized and existed under the laws of Belgium and previously owned and controlled by Mr. Vancraen and Ms. Ingelaere ("Ailanthus")) with the Securities and Exchange Commission (the "SEC") on July 10, 2014 relating to the ordinary shares, no nominal value per share (the "Shares"), of Materialise NV, a limited liability company (*naamloze vennootschap*) organized and existing under the laws of the Kingdom of Belgium (the "Issuer"), as amended by Amendment No. 1 to Statement on Schedule 13D filed by the Reporting Persons and Ailanthus with the SEC on November 24, 2020 ("Amendment No. 1" and, the Original Schedule 13D as amended by Amendment No. 1, the "Schedule 13D").

The Original Schedule 13D was originally filed as a result of a recapitalization of the Issuer that occurred in connection with the closing of its initial public offering of American Depositary Shares on June 30, 2014, which recapitalization resulted in the Reporting Persons and Ailanthus receiving certain Shares. Amendment No. 1 was filed as a result of the proposed merger of Ailanthus into the Issuer (the "Merger").

Capitalized terms used but not defined herein shall have the respective meanings set forth in the Schedule 13D.

ITEM 2. IDENTITY AND BACKGROUND

References to Ailanthus in the first paragraph under Item 2 of the Schedule 13D are hereby deleted, the fourth paragraph under Item 2 of the Schedule 13D is hereby deleted and the existing fifth and sixth paragraphs under Item 2 of the Schedule 13D are hereby reclassified respectively as the fourth and fifth paragraphs thereunder.

ITEM 4. PURPOSE OF TRANSACTION

The third, fourth, fifth, sixth and seventh paragraphs under Item 4 of the Schedule 13D are hereby amended and restated by replacing such paragraphs with the following six paragraphs:

At the request of Ailanthus NV (a company that was previously 100% owned by Mr. Vancraen and Ms. Ingelaere, "Ailanthus"), of Mr. Vancraen and of Ms. Ingelaere, an extraordinary shareholders' meeting of the Issuer was held on December 31, 2020. The purpose of the meeting was to decide on a proposal to merge Ailanthus into the Issuer (the "Merger"). At the meeting, the shareholders of the Issuer decided to approve the Merger.

Following shareholder approval, the Merger was consummated on December 31, 2020 pursuant to a merger deed (the "Merger Deed"). In connection with the Merger, the Issuer acquired 13,428,688 existing Shares held by Ailanthus, which Shares the Issuer annulled immediately following the Merger, and the Issuer issued to Mr. Vancraen and Ms. Ingelaere, in their capacity as shareholders of Ailanthus, 13,428,688 new Shares (the "New Shares") (with 134,241 of such New Shares being issued to Mr. Vancraen and 13,294,447 of such New Shares being issued to Ms. Ingelaere). The Merger constituted a part of the restructuring of the family assets held by the family Vancraen-Ingelaere.

In connection with and prior to the Merger, the Issuer entered into an indemnification agreement (the "Indemnification Agreement") with Ailanthus, Mr. Vancraen, Ms. Ingelaere and Lunebeke NV, a company owned by Mr. Vancraen and Ms. Ingelaere (collectively, the "indemnifying parties"). Pursuant to the Indemnification Agreement, among other things, the indemnifying parties agreed to reimburse the Issuer for: (i) costs incurred by the Issuer in connection with the Merger, (ii) possible liabilities of the Issuer as a result of the Merger, and (ii) possible negative tax consequences, if any, for certain of the Issuer's shareholders.

In addition, in connection with the Merger, the Issuer entered into a letter agreement (the "Letter Agreement"), dated December 31, 2020, with Mr. Vancraen and Ms. Ingelaere pursuant to which, among other things, the Issuer granted certain demand and "piggyback" registration rights to Mr. Vancraen and Ms. Ingelaere in respect of the New Shares.

The foregoing descriptions of the terms of the Merger Deed, the Indemnification Agreement and the Letter Agreement are intended as summaries only and are qualified in their entirety by reference to the Merger Deed, the Indemnification Agreement and the Letter Agreement, which are filed as exhibits to this Schedule 13D and incorporated by reference herein.

Other than as described in this Item 4 or Item 6 of the Schedule 13D, none of the Reporting Persons have any plan or proposal relating to or that would result in:

- (a) the acquisition by any person of additional securities of the Issuer or the disposition of securities of the Issuer;
- (b) an extraordinary corporate transaction, such as a merger, reorganization or liquidation, involving the Issuer or any of its subsidiaries;
- (c) a sale or transfer of a material amount of assets of the Issuer or any of its subsidiaries;
- (d) any change in the present Board of Directors or management of the Issuer, including any plans or proposals to change the number or terms of directors or to fill any existing vacancies on the Board of Directors of the Issuer;
- (e) any material change in the present capitalization or dividend policy of the Issuer;
- (f) any other material change in the Issuer's business or corporate structure;
- (g) any changes in the Issuer's charter, by-laws or instruments corresponding thereto or other actions which may impede the acquisition of control of the Issuer by any person;
- (h) a class of securities of the Issuer being delisted from a national securities exchange or ceasing to be authorized to be quoted in an interdealer quotation system of a registered national securities association;
- (i) a class of equity securities of the Issuer becoming eligible for termination of registration pursuant to Section 12(g)(4) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"); or
- (j) any action similar to those enumerated above.

However, the Reporting Persons may change their purpose or formulate different plans or proposals with respect thereto at any time.

ITEM 5. INTEREST IN SECURITIES OF THE ISSUER

Paragraphs (a), (b) and (c) of Item 5 of the Schedule 13D are hereby amended and restated as follows:

(a) (b)

| <u>Entity</u> | Shares Held Directly | Sole Voting Power | Shared Voting Power | Sole Dispositive Power | Shared Dispositive Power | Beneficial Ownership | Percentage of Class(1) |
|----------------------|-------------------------|----------------------|---------------------------|------------------------------|--------------------------------|-------------------------|------------------------|
| Wilfried Vancraen(2) | 5,492,540(3) | 5,492,540 | 27,237,406 | 5,492,540 | 27,237,406 | 32,729,946(3) | 60.42% |
| Hilde Ingelaere(4) | 13,599,082(5) | 13,599,082 | 19,130,864 | 13,599,082 | 19,130,864 | 32,729,946(5) | 60.42% |
| Idem(6) | 13,638,324(7) | 13,638,324 | _ | 13,638,324 | _ | 13,638,324(7) | 25.18% |

(1) The percentage is calculated based upon 54,169,257 Shares outstanding as of January 5, 2021.

- (2) The Shares over which Mr. Vancraen has sole voting power and dispositive power represent the Shares held directly by Mr. Vancraen, and the Shares over which Mr. Vancraen has shared voting power and dispositive power represent the Shares held directly by each of Ms. Ingelaere and Idem. Mr. Vancraen and Ms. Ingelaere, who are married, may be deemed to share voting power and dispositive power over the Shares the other owns directly.
- (3) Includes 27,135 American Depositary Shares, each representing one Share ("ADSs"), which were inadvertently not reported in Amendment No. 1 to Statement on Schedule 13D filed on November 24, 2020.
- (4) The Shares over which Ms. Ingelaere has sole voting power and dispositive power represent the Shares held directly by Ms. Ingelaere, and the Shares of which Ms. Ingelaere has shared voting power and dispositive power represent the Shares held directly by each of Mr. Vancraen and Idem. Ms. Ingelaere and Mr. Vancraen, who are married may be deemed to share voting power and dispositive power over these Shares the other owns directly.
- (5) Includes 27,135 ADSs, which were inadvertently not reported in Amendment No. 1 to Statement on Schedule 13D filed on November 24, 2020.
- (6) Idem is controlled and managed by Mr. Vancraen and Ms. Ingelaere, who may be deemed to share voting power and dispositive power over these Shares.
- (7) Includes 1,616,712 ADSs.
- (c) The following table lists all transactions, other than the transactions related to the Merger described above in Item 4, in the Shares that were effected during the past sixty days by the Reporting Persons. All such transactions were effected by Idem and were sales of Shares in the form of ADSs on the open market.

| ADSs Sold | Price Per ADS (\$)(1) | Date of Sale |
|-----------|-----------------------|--------------|
| 16,916 | 40.4128 | 11/9/2020 |
| 26,600 | 40.192 | 11/11/2020 |
| 16,160 | 41.1311 | 11/12/2020 |
| 10,100 | 40.2665 | 11/13/2020 |
| 14,153 | 40.6535 | 11/16/2020 |
| 24,985 | 41.1704 | 11/17/2020 |
| 36,000 | 41.6233 | 11/18/2020 |
| 35,700 | 42.7965 | 11/19/2020 |
| 28,200 | 43.9175 | 11/20/2020 |
| 45,500 | 44.7838 | 11/23/2020 |
| 13,929 | 44.6367 | 11/24/2020 |
| 17,700 | 44.01 | 11/25/2020 |

(1) The prices reported are weighted average prices. These ADSs were sold in multiple transactions at various prices calculated into the weighted average prices set forth in the chart above. The Reporting Persons undertake to provide to the staff of the Securities and Exchange Commission, upon request, full information regarding the number of ADSs sold at each separate price calculated into the weighted average prices set forth in the chart above.

ITEM 7. INFORMATION TO BE FILED AS EXHIBITS

Item 7 of the Schedule 13D is hereby amended and restated as follows:

- Exhibit 1 Restated Articles of Association of the Issuer (English translation) (incorporated by reference to Exhibit 3.1 to the Issuer's Report on Form 6-K/A (Amendment No. 1), furnished to the SEC on November 10, 2020)
- Exhibit 2 2014 Warrant Plan (English translation) (incorporated by reference to Exhibit 10.3 to the Issuer's Registration Statement on Form F-1 (Registration No. 333-194982), filed with the SEC on June 12, 2014)

| Exhibit 3 | Form of Warrant Agreement under 2014 Warrant Plan (English translation) (incorporated by reference to Exhibit 4.6 to the Issuer's Registration Statement on Form S-8 (Registration No. 333-197236), filed with the SEC on July 3, 2014) |
|------------|---|
| Exhibit 4 | 2015 Warrant Plan (English translation) (incorporated by reference to Exhibit 4.5 to the Issuer's Annual Report on Form 20-F for the year ended December 31, 2015, filed with the SEC on April 28, 2016) |
| Exhibit 5 | Form of Warrant Agreement under 2015 Warrant Plan (English translation) (incorporated by reference to Exhibit 4.4 to the Issuer's Registration Statement on Form S-8 (Registration No. 333-212445), filed with the SEC on July 8, 2016) |
| Exhibit 6 | Registration Rights Agreement, dated September 15, 2016, among the Issuer and the Holders party thereto (incorporated by reference to Exhibit 4.8 to the Issuer's Registration Statement on Form F-3 (Registration No. 333-213649), filed with the SEC on September 15, 2016) |
| Exhibit 7 | Merger Deed (English translation) (incorporated by reference to Exhibit 2.1 to the Issuer's Report on Form 6-K, furnished to the SEC on January 4, 2021) |
| Exhibit 8 | Indemnification Agreement, among the Issuer, Ailanthus NV, Wilfried Vancraen, Hilde Ingelaere and Lunebeke NV (English translation) (incorporated by reference to Exhibit 10.1 to the Issuer's Report on Form 6-K, furnished to the SEC on January 4, 2021) |
| Exhibit 9 | Letter Agreement Regarding Share Issuance and Registration Rights, dated December 31, 2020, among the Issuer, Wilfried Vancraen and Hilde Ingelaere (English translation) (incorporated by reference to Exhibit 10.2 to the Issuer's Report on Form 6-K, furnished to the SEC on January 4, 2021) |
| Exhibit 10 | Joint Filing Agreement, dated July 10, 2014, among Wilfried Vancraen, Hilde Ingelaere, Ailanthus NV and Idem (previously filed) |
| Exhibit 11 | Power of Attorney of Wilfried Vancraen, dated July 3, 2014 (previously filed) |
| Exhibit 12 | Power of Attorney of Hilde Ingelaere, dated July 3, 2014 (previously filed) |
| Exhibit 13 | Power of Attorney of Idem, dated July 3, 2014 (previously filed) |

SIGNATURE

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

Dated: January 5, 2021

WILFRIED VANCRAEN

By: /s/ Per Chilstrom, as attorney-in-fact

HILDE INGELAERE

By: /s/ Per Chilstrom, as attorney-in-fact

IDEM

By: /s/ Per Chilstrom, as attorney-in-fact