

June 5, 2018

Ms. Sybille Jacquart  
Unilin BVBA  
Rue De La Foret 2  
B 6690 Vielsalm  
Belgium

Dear Ms. Jacquart:

This letter is in response to a written request received from Spanolux SPRL (Spanolux) on May 7, 2018, for California Air Resources Board (CARB) re-approval to be a no-added formaldehyde (NAF)-based resin manufacturer of composite wood products destined for sale, supply, or use in California, and a request to change the company name from Spanolux to Unilin BVBA (Unilin). Your application includes a request to manufacture medium density fiberboard (MDF), and thin medium density fiberboard (tMDF) with a NAF-based resin. Pursuant to the Composite Wood Airborne Toxic Control Measure (ATCM), title 17, California Code of Regulations, sections 93120-93120.12, your request to renew and amend the Executive Order as a NAF manufacturer has been approved.

The enclosed Executive Order N-18-177 specifies ongoing conditions that must be met by Unilin as a manufacturer of NAF products for sale, supply, or use in California. Section 93120.3(c)(4) specifies that the Executive Order issued to NAF manufacturers has a duration of two years, and the manufacturer may apply for re-approval as provided in the section. At the appropriate time, you may address your application for re-approval to me at the address noted in the letterhead.

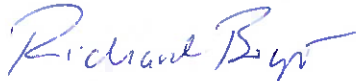
At the request of your resin suppliers, we have held the resin formulation data that they sent to CARB on behalf of Unilin confidential. Please note that approval of your Executive Order is contingent upon the use of the resins specified by your resin suppliers, and CARB must be notified in advance of any changes in resin supply that Unilin decides to make for its NAF products.

For more information about CARB's NAF and ultra-low-emitting formaldehyde (ULEF) program, please visit us at:  
[http://www.arb.ca.gov/toxics/compwood/naf\\_ulef/naf\\_ulef.htm](http://www.arb.ca.gov/toxics/compwood/naf_ulef/naf_ulef.htm).

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If you have any questions regarding this matter, please contact us via email at [compwood@arb.ca.gov](mailto:compwood@arb.ca.gov). You may also contact Tamara Palhovskaia, Air Resources Technician, at (916) 327-1502 or via email at [tamara.palhovskaia@arb.ca.gov](mailto:tamara.palhovskaia@arb.ca.gov).

Sincerely,

A handwritten signature in blue ink that reads "Richard Boyd".

Richard Boyd, Chief  
Risk Reduction Branch  
Transportation and Toxics Division

Enclosure

cc: (via email)

Maria Vacaru  
Air Resources Engineer  
Toxics Control Section  
Risk Reduction Branch

Tamara Palhovskaia  
Air Resources Technician  
Toxics Control Section  
Risk Reduction Branch

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER N-18-177

Relating to CARB approval to use No-added Formaldehyde Resins by  
Composite Wood Product Manufacturers under  
section 93120.3, title 17, California Code of Regulations

**Unilin BVBA**

WHEREAS, the California Air Resources Board (CARB) has adopted the "Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products" (the "ATCM"; title 17, California Code of Regulations, sections 93120-93120.12), which establishes formaldehyde emission standards for composite wood products;

WHEREAS, section 93120.1(a)(29) of the ATCM defines "no-added formaldehyde (NAF)-based resins" to mean resins formulated with NAF as part of the resin cross linking structure for making hardwood plywood (HWPW), particleboard (PB), medium density fiberboard (MDF), or thin medium density fiberboard (tMDF) including, but not limited to resins made from soy, polyvinyl acetate, or methylene diisocyanate;

WHEREAS, section 93120.3(c) of the ATCM allows manufacturers of HWPW, PB, MDF, and tMDF who use NAF-based resins to apply for written approval from the Executive Officer for an exemption from the requirements of section 93120.3(b) of the ATCM;

WHEREAS, section 93120.3(c) of the ATCM allows manufacturers of HWPW, PB, MDF, and tMDF who use NAF-based resins to submit an application for an exemption from the requirements of section 93120.3(b) of the ATCM to the Executive Officer, which includes: (A) a statement indicating which product types will be manufactured using NAF-based resins for sale in California; (B) the chemical formulation of the candidate NAF-based resin(s), including base resins, catalysts, and other additives used in manufacturing; (C) the name of their CARB-approved third-party certifier (TPC); and (D) data on emissions performance of the candidate NAF-based resin(s);

WHEREAS, the data on emissions performance of the candidate NAF-based resin required in section 93120.3(c) of the ATCM must be obtained by working with a CARB-approved TPC, and must include three months of routine quality control testing data, the correlation of the routine quality control testing data to primary or secondary testing data, and the results of one primary or secondary method test, as required in Appendix 2 of section 93120.12 of the ATCM;

WHEREAS, section 93120.3(c)(1) of the ATCM requires that 90 percent of the three months of routine quality control testing data and the result of one primary or secondary method test must be shown to be no higher than 0.04 parts per million (ppm), and that all data must be shown to be no higher than 0.05 ppm for HWPW and 0.06 ppm for PB, MDF, and tMDF;

WHEREAS, section 93120.3(c)(4) of the ATCM provides that the Executive Officer shall approve the application and issue an Executive Order if the evidence submitted by the applicant is sufficient to demonstrate that the applicant has met the requirements specified in section 93120.3(c)(1) of the ATCM;

WHEREAS, Spanolux SPRL (Spanolux or the "applicant") submitted an original application dated March 9, 2014;

WHEREAS, the original application from Spanolux specified the range in product manufacturing parameters, applicable post-press product treatments, base resin trade name(s) and base resin manufacturer(s)/supplier(s), and other ingredients added to the base resin by the applicant to manufacture NAF MDF and tMDF products;

WHEREAS, CARB was provided base resin/adhesive information specifying the base resin polymer type and minimum and maximum values of all major and any minor ingredients in the base resin on a percent weight of solids basis;

WHEREAS, the base resins/adhesive supplier, commercial name, and resin type are set forth in Confidential Attachment A;

WHEREAS, the Executive Officer found that the evidence submitted by the applicant met the criteria specified in section 93120.3 (d)(1);

WHEREAS, the original application from Spanolux was deemed complete on April 10, 2014, and Spanolux was issued Executive Order N-14-177, signed on April 15, 2014;

WHEREAS, section 93120.3(c) of the ATCM allows NAF product manufacturers to apply for re-approval by CARB by submitting an updated application;

WHEREAS, Spanolux submitted an updated application on February 2, 2016 to CARB for re-approval and a request to add additional resin systems to their Executive Order;

WHEREAS, the updated application for re-approval from Spanolux was deemed complete on May 6, 2016 and Spanolux was issued Executive Order N-16-177, signed on May 18, 2016;

WHEREAS, Spanolux submitted an updated application to CARB on May 7, 2018 for re-approval and a request to change their company name from “Spanolux SPRL” to “Unilin BVBA” (Unilin);

WHEREAS, the updated application from Unilin was deemed complete on May 17, 2018;

WHEREAS, the Executive Officer finds that the completed, updated application demonstrated the NAF manufacturer’s ability to continue to comply with section 93120.3(c) of the ATCM; and

WHEREAS, the Executive Officer approved Unilin’s request for re-approval and it is appropriate that Executive Order N-16-177 be superseded by this Executive Order N-18-177.

NOW, THEREFORE, IT IS ORDERED that Unilin is hereby approved as a NAF manufacturer of MDF and tMDF exempt from the requirements of section 93120.3(b) and Appendix 2 of section 93120.12 of the ATCM, provided that the following terms and conditions are met for products sold, supplied, offered for sale, or manufactured for sale in California:

1. Unilin must use the commercial resin listed and supplier listed in Section A of Confidential Attachment A of this Executive Order for the manufacture of MDF and tMDF products.
2. The chemical formulation of the base resin used for the manufacture of NAF composite wood products by Unilin must be within the ranges specified in Section B of Confidential Attachment A of this Executive Order.
3. As specified in Section B of Confidential Attachment A, Unilin is legally responsible for ensuring that the base resin is within the ranges specified in Section B of Confidential Attachment A of this Executive Order.
4. The application rate of the base resins used for the manufacture of NAF composite wood products by Unilin must be within the ranges specified in Section C of Confidential Attachment A of this Executive Order.
5. Other chemical components of the base resins (such as sizing wax and release wax) used for the manufacture of NAF composite wood products by Unilin must be within the ranges specified in Section D of Confidential Attachment A of this Executive Order.
6. The allowable operating parameters for press temperature and press time for the base resins used to manufacture the NAF composite wood products by Unilin must be within the ranges specified in Section E of Confidential Attachment A of this Executive Order.

7. Only the composite wood products with the product names listed in Section F of Confidential Attachment A of this Executive Order are authorized under this Executive Order.

BE IT FURTHER ORDERED that this Executive Order N-18-177 supersedes Executive Order N-16-177, which was issued on May 18, 2016.

BE IT FURTHER ORDERED that Unilin may change the resin system supplier listed in Section A of Confidential Attachment A if the new resin supplier supplies the same resin constituent listed in Confidential Attachment A, confirmatory emission tests are conducted, and the Chief of the Risk Reduction Branch within the Transportation and Toxics Division is notified in advance of using the new system for production.

BE IT FURTHER ORDERED that Unilin must conduct confirmatory testing for any new resin system by demonstrating that the results of one primary or secondary method tests for the new resin system supplier are no higher than 0.04 ppm for the NAF products authorized under this Executive Order.

BE IT FURTHER ORDERED that this Executive Order shall have a duration of two years, and the applicant may apply for re-approval as provided in section 93120.3(c)(4) of the ATCM.

BE IT FURTHER ORDERED that the application for re-approval specified in section 93120.3(c)(4) of the ATCM, as applicable, requires the applicant to submit the results of at least one primary or secondary method tests for the NAF products listed in Confidential Attachment A based on panels or a set of panels randomly selected and tested by an CARB-approved TPC, and the chemical formulation of the NAF-based resin(s). In addition, at least one primary or secondary method test must be provided for each facility, which operates in accordance with this Executive Order, and the applicant must also include a current list of their resin suppliers.

BE IT FURTHER ORDERED that section 93120.3(c)(6) of the ATCM, as applicable, specifies that if the applicant decides to change to a formaldehyde-based resin system, the applicant must notify CARB in advance of changing resin systems and must comply with the requirements of section 93120.3(b) of the ATCM for that product type.

BE IT FURTHER ORDERED that the Executive Officer may review and, for good cause, modify or revoke this Executive Order as provided in section 93120.3(c)(4) of the ATCM. The Executive Officer shall not modify or revoke this Executive Order without affording the applicant the opportunity for a hearing in accordance with the procedures specified in title 17, California Code of Regulations, section 60055.1 et seq.

BE IT FURTHER ORDERED that the applicant must maintain records in electronic or hard copy form for two years, for review by CARB upon request, as specified in section 93120.3(g) of the ATCM.

BE IT FURTHER ORDERED that the applicant must notify the Executive Officer in writing within 30 days of any change in their product manufacturing parameters or base resin manufacturer(s) or supplier(s) that constitute a modification outside the scope of their application for reduced testing under or an exemption from the requirements in section 93120.3(b) of the ATCM.

Executed at Sacramento, California this 5<sup>th</sup> day of June, 2018.



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Richard Boyd, Chief  
Risk Reduction Branch  
Transportation and Toxics Division

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Confidential

**Attachment A**  
**Formulation Data and Operating Parameters**  
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State of California  
AIR RESOURCES BOARD  
Executive Order N-18-177

**Unilin BVBA**

**Section A.**

**Resin Supplier:**

- Address:

**Huntsman**

Global Product EHS Management  
Huntsman

**Commercial Resin Name:**

- Resin Type:

**I-Bond® MDF FC 4392**

Methylene diphenyl diisocyanate (MDI)

**Section B.**

**Base Resin Chemical Formulation (Percent by Weight):**

Unilin BVBA remains legally responsible under this Executive Order for ensuring that the base resin specifications are within the ranges specified in the original application and any subsequent amendments to this Executive Order.

**Section C.**

**Base Resin Application Rate (kg/m<sup>3</sup>):**

- MDF and tMDF: 24.5 to 41.3

Confidential

**Attachment A**  
**Formulation Data and Operating Parameters**  
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State of California  
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**Unilin BVBA**

**Section D.**

**Other Ingredients Added by the Composite Wood Product Manufacturer  
(Amount Added per Pound of Base Resin on a 100 Percent Solids Basis):**

Emulsion Wax (CAS 802-74-2)	6% to 37%
Sulfate based Fire Retardant only for Firax Hydro Pure (L)	75% to 175%

**Section E.**

**Allowable Operating Parameters:**

- Press Temperature (°C)
  - MDF and tMDF (min/max): 200 to 215
- Press Time (Minutes):
  - MDF and tMDF (min/max): 1 to 6

**Section F.**

**Product Names & Types Authorized in Executive Order N-18-177:**

- S-Lux Pure, S-Lux Plus Pure, S-Pro Pure, Umidax Pure, Umidax Pure (MR50), Umidax L Pure, Umidax L Pure (MR50), Fibrabel Pure, Fibrabel L Pure, Fibrabel XL Pure, Fibrabel XXL Pure, Firax Hydro Pure, Firax L Hydro Pure NAF MDF and tMDF (thickness range = 6 to 40 mm)