

**FEDERAL SERVICE FOR SURVEILLANCE ON CONSUMER RIGHTS PROTECTION  
AND HUMAN WELL-BEING**

**FEDERAL STATE-FUNDED HEALTHCARE INSTITUTION  
CENTRE FOR HYGIENE & EPIDEMIOLOGY IN VLADIMIR REGION**

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**Ref. No.: 4874  
dated 03.10.2013**

**APPROVED**  
**Deputy Chief Doctor of Federal State-  
Funded Healthcare Institution  
Centre for Hygiene and Epidemiology in  
Vladimir Region**

*signature* **A.N. Brychenkov**

*stamp text:* FEDERAL SERVICE FOR  
SURVEILLANCE ON CONSUMER RIGHTS  
PROTECTION AND HUMAN WELL-BEING  
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INSTITUTION  
CENTRE FOR HYGIENE & EPIDEMIOLOGY IN  
VLADIMIR REGION  
FOR DOCUMENTS

**EXPERT OPINION No. 1446**

**For Compliance of the Products with the Uniform Sanitary Epidemiological and Hygienic Requirements  
for Goods Subject to Sanitary and Epidemiological Supervision (Control)**

- 1. Name of Products:** Liquid ceramic heat-insulating coatings of Korund series: Korund, Korund-ANTICOR, Korund-FACADE, Korund-WINTER, Korund-Anticondensate.
- 2. Manufacturing Company:** NPO FULLEREN, LLC 33, Marshala Chuikova street, Volgograd, Russia, 400131
- 3. Expert opinion recipient:** NPO FULLEREN, LLC 33, Marshala Chuikova street, Volgograd, Russia, 400131
- 4. Submitted materials:**
  - Specifications TU 5760-001-83663241-2008;
  - Test Report issued by Testing Laboratory Centre of Mikron LLC (Accreditation Certificates No. ПОСР.RU.0001.21AB72, ГСЭН.РУ.ИОА.764) No. 1/09-47 dated 25 September 2013;
- 5. Application of Products:** for industrial and domestic purposes for thermal and anticorrosive insulation of both the external and internal enclosure structures, pipelines, air ducts of all configurations, made of metal, plastic, concrete, brick, and other construction materials, suitable for operating temperatures from -60°C to +260°C.

## **PRODUCTS EXAMINATION REPORT**

The products are intended for industrial and domestic use for thermal and anticorrosive insulation of both the external and internal enclosure structures, pipelines, air ducts of all configurations, made of metal, plastic, concrete, brick, and other construction materials, for operating temperatures from -60°C to +260°C.

Considering the application of the products, the sanitary and epidemiological examination of the materials submitted for the products (data from the specifications and technical documentation, laboratory results for the products) was conducted according to the provisions of Section 6 of the “Requirements for Polymer and Polymer-Containing Construction Materials and Furniture”, Chapter II of the Uniform Sanitary Epidemiological and Hygienic Requirements for Goods Subject to Sanitary and Epidemiological Supervision (Control) approved by decision of the Customs Union Commission No. 299 dated 28.05.2010.

The sanitary and epidemiological evaluation of the products was conducted with the use of data from the Specifications TU 5760-001-83663241-2008, laboratory results obtained by the Testing Laboratory Centre of Mikron LLC (Accreditation Certificates No. POCC.RU.0001.21AB72, ГСЭН.РУ.ЦОА.764), which, according to the application and the provisions of Section 6 of the “Requirements for Polymer and Polymer-Containing Construction Materials and Furniture”, the Uniform Sanitary Requirements, conducted laboratory studies of migration from the product samples into air (loading – 1.0 m<sup>2</sup>/m<sup>3</sup>, air exchange rate – 0.5 air changes/hour, temperature - 20°C, exposure - 24 hours) of acrylonitrile, methylmethacrylate, dibutyl phthalate, dioctyl phthalate, styrene, methanol, formaldehyde. The organoleptic indicators of the products (odour) were determined.

The studies revealed that migration of the above-mentioned substances into air and the organoleptic indicators conform to sanitary-epidemiological and hygienic requirements.

Considering the results of the expert review of the specifications and technical documentation as well as the above-mentioned hygienic characteristics, the products can be recommended for industrial and domestic use for thermal and anticorrosive insulation of both the external and internal enclosure structures, pipelines, air ducts of all configurations, made of metal, plastic, concrete, brick, and other construction materials, for operating temperatures from -60°C to +260°C, subject to the observance of the requirements outlined in Section 6 of the “Requirements for Polymer and Polymer-Containing Construction Materials and Furniture”, Chapter II of the Uniform Sanitary Epidemiological and Hygienic Requirements for Goods Subject to Sanitary and Epidemiological Supervision (Control) approved by decision of the Customs Union Commission No. 299 dated 28.05.2010, and the following sanitary and hygienic recommendations:

- odour - max. 2 marks;
- in-service migration of chemical substances into air, mg/m<sup>3</sup>, max.:
  - acrylonitrile – 0.03;
  - methylmethacrylate – 0.01;
  - formaldehyde – 0.01;
  - dibutyl phthalate – 0.1;
  - dioctyl phthalate – 0.02;
  - styrene – 0.002;
  - methyl alcohol – 0.5;

- Periodic laboratory control of the finished products should be organized in agreement with the local Rospotrebnadzor authorities.
- Personnel handling the products should be provided with the personal protective gears for protection of skin (special clothing, gloves), eyes (safety goggles), and respiratory organs (respirators).
- The products should be stored in the manufacturer's package, protected from direct sunlight exposure, at least 1 m away from heating devices, at a temperature above 0°C.
- The products are to be transported by road or rail in accordance with the transportation rules applicable to this type of transport.
- Marking of the products should contain the following information:
  - name of the country of origin;
  - name and address of the manufacturing company; trademark (if any);
  - name (designation) of the product; designation of these Specifications;
  - lot number;
  - manufacture date (month, year);
  - net weight;
  - gross weight,
  - brief description of use;
  - rules and conditions for safe application, storage, transportation, use,
  - shelf life or guarantee period.
  - conditions ensuring preservation of the products over their lifetime.

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\* applicant's name, name and location of a foreign applicant may be written using Latin letters.

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## **CONCLUSIONS:**

Based on the results of the documentation review, liquid ceramic heat-insulating coatings of Korund series: Korund, Korund-ANTICOR, Korund-FACADE, Korund-WINTER, Korund-Anticondensate can be recommended for industrial and domestic use for thermal and anticorrosive insulation of both the external and internal enclosure structures, pipelines, air ducts of all configurations, made of metal, plastic, concrete, brick, and other construction materials, for operating temperatures from -60°C to +260°C, subject to compliance of organoleptic, sanitary and chemical properties of the products with the requirements outlined in Section 6 of the "Requirements for Polymer and Polymer-Containing Construction Materials and Furniture", the Uniform Sanitary Epidemiological and Hygienic Requirements for Goods Subject to Sanitary and Epidemiological Supervision (Control) approved by decision of the Customs Union Commission No. 299 dated 28.05.2010, and provided that the safety measures are observed in accordance with the requirements of sanitary and epidemiological regulations SP 2.2.2.1327-03 "Hygienic Requirements for the Organization of Industrial Processes, Equipment and Tools", and that the above sanitary and hygienic recommendations are met.

Expert Doctor of Federal State-Funded Healthcare Institution  
Centre for Hygiene and Epidemiology  
in Vladimir Region

*signature*

D.D. Omelchenko