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# Outlook for Russian EVA HFFR market

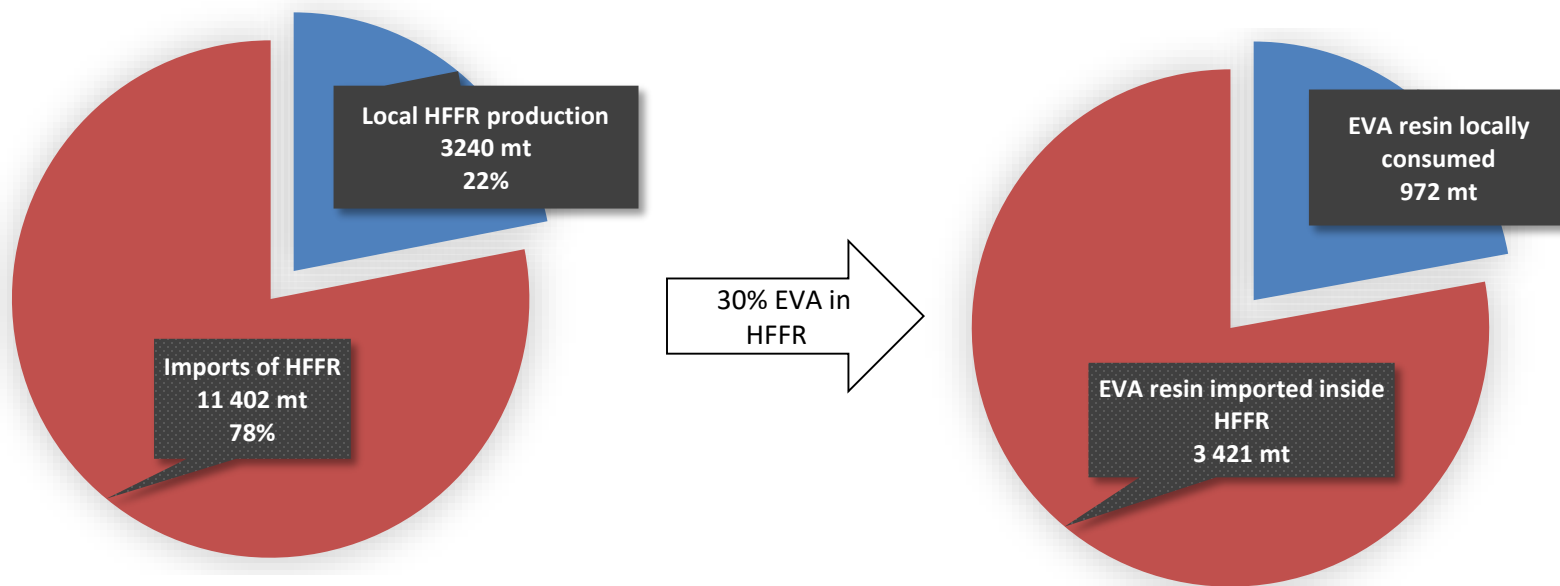




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# EVA HFFR compounds in 2016 in Russia

## Imports vs Local production



- HFFR is halogen free flame retardant compounds made of EVA resin (30%) + mineral flame retardant filler (60%) + additives (10%)
  - Thus total potential market for EVA HFFR grades is about 4500 mt per year
  - Most popular EVA resin grade for EVA HFFR compound is VA=28% and MI=5%



# Suppliers of EVA HFFR compounds in Russia in 2016

| <b>EVA HFFR Producer</b>                            | <b>Origin</b> | <b>Trademark</b> | <b>MT</b>     |
|---|---------------|------------------|---------------|
| Russian HFFR compounders                            | Russia        | Different        | 3 240         |
| Prominvest  | Ukraine       | Promvulk, Vintes | 5 736         |
| La M Plast  | Italy         | Revil            | 2 284         |
| Nexans Deutschland                                  | Germany       | Nexans           | 649           |
| Cabopol Polymer Compounds                           | Portugal      | Cabopol          | 625           |
| Vibiplast   | Italy         | Segment          | 593           |
| Melos   | Germany       | Melos            | 520           |
| Crosspolimeri                                       | Italy         | Fragom           | 394           |
| Condore   | Germany       | Conguard         | 295           |
| Faraotti Industrie Plastich                         | Italy         | Fainplast        | 220           |
| Iqap Masterbatch                                    | Spain         | Cromofix         | 45            |
| Prysmian Cavi E Sistemi                             | Italy         | Prysmian         | 39            |
| Secri   | China         | Secri            | <u>2</u>      |
| <b>Total HFFR consumption in Russia in 2016, mt</b> |               |                  | <b>14 642</b> |

- Imported European HFFR compounds are rather expensive



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## Russian HFFR compounders in 2016

| <b>Russian EVA HFFR Producer</b>                   | <b>Trademark</b> | <b>MT (HFFR)</b> | <b>MT (EVA)</b> |
|--|------------------|------------------|-----------------|
| Konkord, Smolensk                                  | Lekron           | 3 200            | 960             |
| Bashplast, Sterlitamak                             | NGP              | 0*               | 0               |
| Vladimirsky Himicheskiy Zavod, Vladimir            | -                | 0*               | 0               |
| NIFHI Karpova, Obninsk                             | -                | 5                | 2               |
| Polymer Compound, Tomsk                            | Tompson          | 0*               | 0               |
| Vestplast, Moscow/Pereslavl                        | -                | 10               | 3               |
| Tatcabel/RCI Himtek, Kazan                         | -                | 0*               | 0               |
| Polycom, Obukhovo                                  | FRCom            | 15               | 5               |
| Capital, Ulyanovsk                                 | Simplen          | 5                | 2               |
| TD Technologiya, Dzerzhinsk                        | -                | 5                | 2               |
| Volgoprompolymer, Volgograd                        | Volmixtim        | 0*               | 0               |
| <b>Total HFFR production in Russia in 2016, mt</b> |                  | <b>3 240</b>     | <b>972</b>      |

\* Only laboratory samples made in 2016

- The only serious local producer of EVA HFFR compounds in Russia in 2016 was Konkord



# Summary

- Domestic production of EVA-based HFFR cable compounds will develop fast in 2017-2018 substituting big portion of imported Ukrainian and European HFFR compounds
- LG Chem has new potential market in Russia for additional 3500 mt per year of cable EVA (ES28005) and POE (LC180)
- Ecoplastics is the only company developing LG Chem's EVA cable HFFR business in Russia since opening Daesan EVA plant