



**LG Chem, Ltd. / Tech Center**

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**Regulatory Data Sheet of Lucene™ Polyolefin Elastomers**

Product Name : Lucene™ LC100 (Ethylene-1-Octene-Copolymer)

**1. EU Registration, Evaluation and Authorization of Chemicals**

**1.1 Pre registration**

As an only representatives of us, LG Chem Europe GmbH have completed the pre-registration of substances in our products.

The disclosure of the pre-registration number is optional and non-obligatory under REACH and due to our policy. We do not disclosure pre-registration number we have completed.

**1.2 Registration**

LG Chem has completed the pre-registration for our substances and also completed the registrations of our own substances that we have manufactured by ourselves, without any violation of their deadlines for our EU export tonnage.

The substance suppliers of LG Chem have reported that they have registered their substances, following their deadlines for our EU export tonnage.

**1.3 Only Representative**

- Name : LG Chem Europe GmbH
- Address : Lyoner str 15, Atricom C6, Frankfurt am Main, D-60528, Germany
- PIC Name : Yun Ju, Lee (Senior Manager)
- PIC Tel : +49-697-1044-5116
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**2. Substances of Very Hazardous Materials (SVHC)**

None of chemical substances included in the most updated candidate list (See link to Candidate List of the 155 substances(last updated 16.Jun.2014) of very high concern (SVHC) are contained in this product.

Please see linked list of 155 Substances of Very High Concern (SVHC).

<http://echa.europa.eu/candidate-list-table>

3. **EU Directive 94/62/EC : Packaging and Packaging Waste (PPW)**

This product is under the limit set (100ppm) for heavy metals defined as lead, cadmium, mercury and chromium (VI)

4. **Dual-Use Additives**

None of food additives included in the most updated list (See link to Current EU approved additives and their E numbers updated on Nov./2010 of Food Standard Agency) are contained in this product.

5. **EU Directive 2002/72/EC & 10/2011/EC(Food Contact) : OML**

This product complies with the requirements for use in foodstuffs under EU Directive 10/2011/EC and amendment number 1282/2011, including a limit of 10 mg/dm<sup>2</sup> on the overall migration from finished plastic article into food. Please note that it is the responsibility of both the converter and food packers to make sure that the finished products are in compliance with the imposed OML and SML.

6. **EU Directive 2002/72/EC & 10/2011/EC(Food Contact) : SML**

Substances(s) with specific migration limit are as follows :

<u>Substance</u>	<u>CAS No.</u>	<u>SML (mg/kg)</u>
1-Octene	111-66-0	15

Please note that it is the responsibility of both the converter and food packers to make sure that the finished products are in compliance with the imposed OML and SML.

7. **EU RoHS (Restriction of Hazardous Substances)**

Directive 2011/65/EC : This product does not contain Cd, Pb, Hg, Cr(+6), PBBs, PBDEs

8. **EU Directive 2007/68/EC : Allergens**

None of allergens included in the most updated list (EU Directive 2007/68/EC, Annex III a) are contained in this product.

9. **EU Directive 2003/53/EC**

1) Cement and Chromium (VI)

This product does not contain cement and chromium (VI).

2) Nonylphenol  $C_6H_4(OH)C_9H_{19}$  & Nonylphenol ethoxylate  $(C_2H_4O)_n C_{15}H_{24}O$

This product does not contain Nonylphenol and Nonylphenol ethoxylate in the formulation. And there is no potential chemicals which generate nonylphenol compound.

10. **EU Directive 1895/2005 : Epoxy-Derivative**

This product does not contain BADGE, BFDGE, NOGE.

BADGE : 2,2-bis(4-hydroxyphenyl)propane bis(2,3-epoxypropyl) ether (Cas No 001675-54-3) and their derivatives.

BFDGE : bis(hydroxyphenyl) methane bis(2,3-epoxypropyl) ethers (CAS No 039817-09-9) and their derivatives.

NOGE : Other Novolac Glycidyl Ethers and their derivatives.

11. **Other Hazardous Substances**

According to other regulations and specific customer's requirements, this product do not use following substances in the formulation.

- 1) Animal product associated with Bovine Spongiform Encephalopathy (BSE) or Transmissible Spongiform Encephalopathy (TSE)
- 2) Halogen Substances : Br, Cl
- 3) Bisphenol-A and/or its derivatives.
- 4) N-Ethyl ortho-toluene Sulfonamide (CAS No 1077-66-1)
- 5) N-Ethyl para-toluene Sulfonamide (CAS No 80-39-7)
- 6) BHT (Butylated Hydroxytoluene)
- 7) TNPP (Trisnonylphenyl Phosphite)
- 8) Radioactive particles and radioactive-contaminated material.
- 9) Paraffin Oil, Tri-i-propanol amine, Benzophenone
- 10) 4-Methyl benzophenone

12. **United States Food and Drug Administration**

This product complies with the US FDA Regulation 21 CFR 177.1520(c)(3.2c) and may be used with all type of food under conditions of use C through H as described in table 2 of 21 CFR176.170(c).

Disclaimer:

This statement is based on our current level of knowledge and covers commercial and experimental resins as supplied by LG Chem at the date of issue. Since conditions of use are outside of LG Chem's control. LG Chem makes no warranties expressed or implied and assume no liability in connection with any use of this information. It is the responsibility of the manufacturer to check and confirm that the final article meets both the technical and regulatory requirements of the application.

July 22. 2014

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