Westlake Polymers LLC
Lake Charles Plants
Longview Plants
P.O. Box 8388
Longview, TX 75607

Low Density Polyethylene, LDPE – Regulatory Fact Sheet
EM182AA

US Food & Drug Administration Statement

Westlake Polymers LLC confirms that prime grade EM182AA, as manufactured and shipped from Westlake facilities, can be used in complying with Title 21 of the Code of Federal Regulations, CFR, per the conditions below:

> EM182AA is a homopolyethylene resin that is defined under 21 CFR § 177.1520(a)(2)(i) and complies with extractive limitations set forth in paragraph (c) 2.1, 2.2 thereunder. EM182AA does not contain formulation additives. EM182AA may be used in cooking applications pursuant to paragraph (c) 2.2 under § 177.1520. This resin may be used in complying with food-contact applications defined by Parts 177, 176, and 175 subject to the provisions of use and food contact types as specified under each Part.

Westlake confirms that prime grade EM182AA is produced with raw materials and operating practices that would not render the polymer unsafe or unsuitable for contact with food within the meaning of Sections 402 and 409 of the Federal Food, Drug, and Cosmetic Act and its implementing regulations including the Good Manufacturing Practice regulation, 21 CFR §174.5 “General Provisions applicable to indirect food additives”.

EU Food Contact Statement

Westlake Polymers LLC confirms that prime grade EM182AA resin, as manufactured and shipped from Westlake facilities, may be used in complying with food contact applications under EU Directive 2002/72/EU and its amendments up to 2008/39/EC. Westlake confirms that EM182AA is produced using monomers listed in the European Union Commission Directive 2002/72/EC and its amendments up to 2008/39/EC. EM182AA does not contain any type of additive, therefore there are no chemicals subject to restrictions under these Directives.

The Directive requires that the final article made from EM182AA must meet either the global migration limit of 60 mg/kg of food or 10 mg/square decimeter of the plastic as specified in Directive 2007/19/EC amending Directive 2002/72/EC. Because fabrication into the food contact article or material may affect migration, only the converter can guarantee that migration limits will not be exceeded and therefore Westlake does not carry out the specific EU migration or extraction tests on articles or materials. It is the responsibility of the converter to comply with these requirements.

Westlake can confirm that prime grade EM182AA is produced with raw materials and operating practices that would not endanger human health, create an unacceptable change in the composition of the food, or create deterioration in the organoleptic characteristics thereof within the meaning of the Good Manufacturing Practice regulations under the Framework Directive 1935/2004 and Commission Regulation 2023/2006. Westlake facilities all incorporate a Quality Management System which fully recognizes the position in the supply chain of the LDPE resins as raw materials for plastic packaging that may come into contact with food.

Health Canada Food Contact Statement

Westlake Polymers LLC confirms that LDPE resin grade EM182AA, as manufactured and shipped from Westlake facilities, has No Objection Letter status under file # KS 08042204 from Health

Canada, Health Products and Food Branch. Westlake further confirms that the information in that file is accurate.

Heavy Metals

Westlake Polymers LLC confirms that we do not intentionally add during the polymerization or formulation processes the heavy metals, lead, cadmium, mercury, and hexavalent chromium to prime grade EM182AA. Based on raw material supplier assurances and the use in our process, EM182AA contains less than 100 ppm total combined concentration of lead, mercury, cadmium, and hexavalent chromium, and therefore meets the heavy metal criteria set forth in the California Toxics in Packaging Prevention Act (AB2021), Toxics in Packaging Clearing House - CONEG model legislation, the EU directive 94/62/EC, EU RoHS (2002/95/EU) and EU WEEE (2002/96/EU). Raw materials containing such heavy metals as arsenic, antimony, barium, beryllium, cobalt, nickel, tin, or selenium are not used in the manufacture of this resin.

Animal based materials

Westlake Polymers LLC confirms that prime grade EM182AA resin, as manufactured and shipped from Westlake facilities, is produced with chemicals that are synthetically derived, and free from animal derived materials (ADM), including bovine derived materials. Based on our raw material supplier assurances, and the use in our process, and our delivery of the LDPE resin to your company, we can confirm that EM182AA does not contain any animal products or byproducts, including ruminants, milk or milk derivatives, derivatives of wool and hair of ruminants, and thus is free from Transmissible Spongiform Encephalopathies, TSE, and Bovine Spongiform Encephalopathies, BSE.

California Proposition 65

Westlake Polymers LLC confirms that prime grade EM182AA resin, as manufactured and shipped from Westlake facilities, may be used in compliance with California's "Safe Drinking Water and Toxic Enforcement Act of 1986" (Proposition 65). EM182AA contains no substances known to the State of California to cause cancer or reproduction toxicity at levels of exposure subject to the requirements of Proposition 65.

Ozone Depleting Substances

Westlake Polymers LLC confirms that prime grade EM182AA resin, as manufactured and shipped from Westlake facilities, is not manufactured with ingredients, which contain ozone depleting substances, Class I (Group 1, 2, 3, or 4) or Class II, as listed under 40 CFR Part 82. Therefore, this resin is not subject to the labeling requirements of 40 CFR § 82.106 (Warning statement requirements).

Latex

Westlake Polymers LLC confirms that prime grade EM182AA resin, as manufactured and shipped from Westlake facilities, does not contain chemical substances identifiable as "natural rubber latex", "dry natural rubber latex", or "synthetic latex".

Allergens

Westlake Polymers LLC confirms that prime grade EM182AA resin, as manufactured and shipped from Westlake facilities, does not contain ingredients designated as "allergens" or sensitizers per the list below:

PEANUTS (including peanut butter, peanut flour)
TREE NUTS (including almond, Brazil, cashew, hazelnut, macadamia, pecan, pine, pistachio, walnut)

MILK (including butter, casein, cheese, curds, whey, cream, custard, pudding, sodium caseinate, sour cream, yogurt)
EGGS (including mayonnaise, meringue, egg whites)
WHEAT/GLUTEN (including flour, bran, cereal extracts, cracker meal, farina, graham flour, barley and malt, wheat germ, wheat gluten, wheat starch, semolina, rye and oats)
SOY (including miso and tofu - but NOT soy oil)
FISH
SHELLFISH (shrimp, crab, lobster, oyster, clam, scallops, crayfish)
Sulphur Dioxide and Sulfites – (not an allergen but cause problems, particularly with asthmatics.
FOOD COLORS – including FD&D Yellow #5.
CELERY (including celery root, stalk, leaf and/or seed)
SEEDS (including cottonseed, poppy, sesame and sunflower)
NATURAL RUBBER LATEX
MONOSODIUM GLUTAMATE, MSG
ASPARTAME

Therefore this resin may be used in complying with the US FDA Food Allergen Labeling and Consumer Protection Act (FALCPA) and EU Directive 2003/89/EC and does not require labeling.

RoHS

Westlake Polymers LLC confirms that prime grade EM182AA resin, as manufactured and shipped from Westlake facilities, is not manufactured with ingredients that would intentionally add the chemicals and metals listed below:

Lead
Cadmium
Mercury
Hexavalent Chromium
PBB (Polybrominated biphenyls)
PBDE (Polybrominated diphenyl ethers) –including Decabromodiphenyl ether
Chlorinated Paraffin
Hexabromocyclododecane

Therefore, based on raw material supplier assurances and the use in our process, Westlake confirms that prime grade EM182AA may be used in complying with the European Directive RoHS (2002/95/EU) and its amendments.

Specific chemicals and chemical groups:

EM182AA, as manufactured and shipped from Westlake facilities, does not intentionally incorporate during the polymerization or formulation processes the following chemicals:

1. Asbestos
2. Acrylamide
3. Aromatic Amines
4. Azo compounds
5. Benzene
6. Benzophenone and alkyl or aryl substituted benzophenones
7. Bisphenol A, BPA
8. Bisphenol F, BPF
9. Brominated flame retardants, including Penta-, Octa-, & Deca- bromodiphenyl ethers

10. Butylated Hydroxy Anisole, BHA
11. Butylated Hydroxy Toluene, BHT
12. t-Butylhydroquinone
13. Chlorofluorocarbons (CFC), Hydrochlorofluorocarbons (HCFC), Hydrofluorocarbons (HFC)
14. Diethylhexyl Adipate, DEHA
15. Dimethyl Fumarate
16. Dioxins
17. Epichlorohydrin, oxirane
18. Epoxy resins or their components including BADGE – Bisphenol A diglycidyl ether, BFDGE – Bisphenol F diglycidyl ether, NOGE – Novalac glycidyl ether
19. Fluoroteleomers
20. Furans
21. Genetically Modified Organisms, GMO
22. Hexachlorobenzene
23. Melamine
24. Nonyl Phenol, Octyl Phenol and isomers thereof
25. Nonyl, Octyl Phenol Ethoxylates, other Alkyl Phenol Ethoxylates
26. Organo tin compounds, including mono, di, tri, tetra-Butyl derivatives
27. Other heavy metals including arsenic, antimony, barium, beryllium, cobalt, nickel, tin, and selenium
28. Perfluorooctanoic acid, PFOA, and Perfluorooctane sulfonate, PFOS
29. Phthalates, including DEHP (diethyl hexyl phthalate), DBP (di-butyl phthalate), DEP (di-ethyl phthalate), BBP (butyl benzyl phthalate), DNHP (di-n-hexyl phthalate), DINP (di-isononyl phthalate), DIDP (di-isodecyl phthalate), and DNOP (di-n-octyl phthalate)
30. Polycarbonate
31. Polychlorinated Biphenyls, PCB, PCBs
32. Polychlorinated Terphenyls, PCT, PCTs
33. Polybrominated Biphenyls, PBB, PBBs
34. Polybrominated Terphenyls, PBT, PBTs
35. Polynuclear Aromatics, Polycyclic Aromatics
36. Polyvinyl chloride, Vinyl chloride monomer
37. Silicone
38. Toluene
39. Tris-(Nonylphenyl)phosphite, TNPP

REACH

Westlake Polymers LLC can confirm that it does not intentionally add to prime grade EM182AA any “Substances of Very High Concern”, svhc, as defined under EU Regulations 552/2009 and 1907/2006 as Restricted substances ANNEX XVII Appendices 1 – 10, substances recently classified as under Authorization - ANNEX XIV substances, and the newly listed July – August 2008 svhc substances:

	Chemical name	**CAS #**
1.	Anthracene	120-12-7
2.	4,4-Diaminodiphenylmethane	101-77-9
3.	Dibutylphthalate	84-74-2
4.	Cyclododecane	294-62-2
5.	Cobalt dichloride	7646-79-9
6.	Diarsenic trioxide	1327-53-3
7.	Diarsenic pentaoxide	1303-28-2
8.	Sodium dichromate, dehydrate	7789-12-0
9.	5-t-butyl-2,4,6-trinitro-*m*-xylene	81-15-2

10. Bis (2-ethylhexylphthalate)	117-81-7
11. Hexabromocyclododecane	25637-99-4
12. Alkanes, (C10 – C13, chloro)	85535-84-8
13. Bis (Tributyltin) oxide	56-35-9
14. Lead hydrogen arsenate	7784-40-9
15. Triethyl arsenate	15606-95-8

Because Westlake does not anticipate these chemical substances to be in the LDPE resins listed above at a concentration subject to REACH, >/= 1000ppm, Westlake does not analyze for their presence.

Finally, it is your responsibility to determine that our product is safe, lawful, and technically suitable for your intended uses. Please note that this fact sheet is provided to you as one of the means to assist you in analyzing our product, and does not serve to modify or amend our sales arrangement or contract with you.

Westlake Polymers LLC does not endorse or claim suitability of its product for any particular use. WESTLAKE MAKES NO WARRANTY OF MERCHANTABILITY AS TO ITS EM182AA RESIN. WESTLAKE MAKES NO WARRANTIES, EXPRESS OR IMPLIED, CONCERNING THE SUITABILITY OR FITNESS OF ANY WESTLAKE PRODUCT FOR ANY PARTICULAR USE. Westlake's liability and your exclusive remedy for any claim arising out of the sales of its products are expressly limited at Westlake's option to replacement of non-performing goods or payment not to exceed the purchase price plus transportation charges thereon in respect to any material which damage is proven and claimed.

The information in this fact sheet is valid for cited regulations published as of the date this document was prepared, as shown below. Updates may be prepared as the regulations are amended or pending revised information about the resin.
It is the customer's responsibility to seek updated regulatory information on any specific resin.

This fact sheet is being sent to your company for regulatory compliance purposes solely and no other person or entity may rely on this fact sheet without the prior written consent of Westlake.

The information in this fact sheet was prepared:
By: Mary A Schexnayer

Signature Mary A Schexnayder

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