



Flexisorb™ OD-120ZnR

Concentrated chelate-free Zinc Ricinoleate dispersion

Overview

- Concentrated chelate-free zinc ricinoleate dispersion readily dilutes in water
- Maintains excellent clarity down to 10% as supplied, with excellent cold temperature stability
- Use as a stand alone Odor Control Agent, or as an Additive in Hard and Soft Surface cleaning formulations
- Liquid form for compounding or spray application
- Effective in liquid, spray, fogging or mist applications
- Naturally renewable odor neutralizer that traps and absorbs odors-not a masking agent
- Not a bactericide, fungicide or sanitizer
- Compatible with fragrances and most formulating ingredients
- Effectively fixates a wide range of odorous compounds
- Binds with organic waste and decomposition odors
- Captures odors associated with humans, animals, food, chemical processes and smoke
- Effective against smelly acids, amines, mercaptans and thioethers, including hydrogen sulfide and ammonia
- WERCS ID number: WPS1169718
- WERCS Validation number: 1169718

Applications

- Bathrooms and shower rooms
- Kitchen and food storage areas
- Automotive, RV and boat
- Waste cans, garbage bags, dumpsters
- Paints and coatings
- Litter and litter boxes
- Sewage plants, landfills
- Stock yards, paper plants

Technical Information

Flexisorb OD-120ZnR is an optimized Odor Control Agent for use as a stand alone product or an additive in Hard and Soft Surface cleaning products. Chelate-free, OD-120ZnR is a liquid zinc ricinoleate dispersion that readily dilutes down to 10% as supplied and maintains excellent clarity without the need for volatile clarifying solvents. Flexisorb OD-120ZnR is an odor neutralizer...not an antimicrobial or chemical masking agent. More effective than related copper and magnesium salts of the same valence, Flexisorb OD-120ZnR zinc salt forms unique fixating complexes that trap and absorb odor causing substances, and remain stable even if the treated substrate dries.

Renewably sourced material with 63% bio-based content which is derived from castor seed oil.

Formulary

Flexisorb OD-120ZnR is readily dilutable in water, diluting to a clear solution in water, maintaining excellent clarity down to 10% as supplied. Some fragrance oils can be pre-dissolved in Flexisorb OD-120ZnR, while others may require their own emulsification package. Give us a call for formulation guidance in producing concentrates and ready-to-use products that maintain extended shelf-life clarity and for incorporating fragrances.

Use of deionized water and a preservative is recommended. Nipacide BIT 20, Proxel GXL and Verigard 19S have been found to provide adequate protection. Typical active preservative concentration is 0.05-0.5% weight percent. Preservative effectiveness should be determined by the formulator.

Typical Properties

PROPERTY	VALUE
Appearance	Clear to slightly hazy, light amber liquid
Odor	Mild
Ionic character	Anionic
Zinc salt actives	20%
Water solubility	Dilutes 1:10 to clear solution
pH, as is	9.0-10.0
Density@25°C	1.04±0.02
Boiling point	>100°C
Flash point	Does not ignite below 100°C
Storage	Stable to freezing
Shelf life	12 months

Packaging and Handling

Flexisorb OD-120ZnR is available in:
275 gallon totes (Net Wt. 2250 lbs)
55 gallon plastic drums (Net Wt. 450 lbs)
5 gallon pails (Net Wt. 40 lbs)

Refer to the Safety Data Sheet (SDS) for information on the safe use, handling, and disposal of this product.

DOT Classification: Non-Regulated

Whether you're looking for a replacement product or an ingredient for a specific attribute, give us a call. We can provide assistance based upon your particular formulation requirements and composition; please feel free to contact us.

Please refer to back page for important information

Flexisorb OD-120ZnR Natural Odor Neutralizer

Flexisorb OD-120ZnR is a naturally renewable odor neutralizer that traps and absorbs odors...not an antimicrobial or chemical odor masking agent. Flexisorb OD-120ZnR is a complex zinc ricinoleate salt of purified and naturally renewable ingredients, in a readily dilutable dispersion.

Designed for ease of use, Flexisorb OD-120ZnR readily dilutes in water to form a stable solution down to 10% as supplied. A preservative is required for long term clarity and functionality. Give us a call for OD-120ZnR formulation guidance.

Effective Odor Neutralization

The mechanism for odor fixation by Flexisorb OD-120ZnR is complicated, being a combination of adsorption, complex formation, and in some instances a chemical formation such as mercaptans to mercaptides. More effective than related copper and magnesium salts of the same valence, and related organic acids of the same carbon number, Flexisorb OD-120ZnR zinc salt forms unique fixating complexes specific to the odor causing substances that cause intensive odor with low odor thresholds such as low molecular weight organic acids, amines, mercaptans, dialkyl sulfides, dialkyl disulfides, NH_3 , H_2S and SO_2 .

Range of Application

Flexisorb OD-120ZnR traps, absorbs, and fixes odor-intensive organic substances. Substances with low odor thresholds with sulfur such as thiols and thioethers, or nitrogen-containing functional groups such as ammonia and dimethylamine, or low molecular weight carboxylic acids such as isovaleric acid and hexenoic acid are effectively neutralized by OD-120ZnR. Odorous food and animal decomposition products such as putrescine and cadaverine, and industrial by-products such as hydrogen sulfide and sulfur dioxide and others are effectively controlled by Flexisorb OD-120ZnR and formulations that contain it.

Formulary

Concentration of Flexisorb OD-120ZnR in the formulation depends on the application since the odor absorbing properties are related to the reaction of the odor causing chemical with the Flexisorb OD-120ZnR. Some applications may require as little as 1/100th of the listed formulations.

Add all ingredients in order listed. Add Flexisorb OD-120ZnR to water with sufficient agitation. If a fragrance is desired, some fragrance oils can be pre-dissolved in the OD-120ZnR for addition, others may require their own emulsification package. Preservative should be added to these formulations. Some preservative candidates include Nipacide BIT 20, Proxel GXL, and Verigard 19S (typically, these preservatives are effective at active concentrations between 0.05 and 0.5% by weight in final product). Preservative effectiveness should be determined by the formulator. Use deionized water to further improve shelf stability of diluted products.

Ready-to-Use Odor Absorbers		
Ingredient	Wt. %	Wt. %
Water	to 100%	to 100%
Flexisurf LDP	1.0-2.0	
Sodium citrate	1.0-2.0	
Flexisorb OD-120ZnR	1.0*	5.0-20.0*
Preservative	q.s.	q.s.
Dye/Fragrance	q.s.	q.s.
Active Zinc salt	0.2	1.0-4.0
Appearance:	Clear/ stable	Clear/stable
Add ingredients in order listed.		
*Dilutions between 10-20% Flexisorb OD-120ZnR result in clear, stable solutions. Dilutions of less than 10% Flexisorb OD-120ZnR require additional stabilizers such as Flexisurf LDP and sodium citrate with a pH of 9.0 ± 0.5 to maintain long term clarity.		

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