Kemamide® EBS

N,N'–Ethylenebisstearamide

Description

Kemamide® EBS fatty bisamide is a netrual solid with even higher melting point than the primary amide. It displays the same type of low solubility characteristics as the primary fatty amides, leading to incompatibility in organic systems. Kemamide® EBS has excellent color and color stability.

Applications

Ethylene Bisstearamides are used as synthetic waxes, as process lubricants for PVC and styrenics, as mold-release agents for phenolics, as antiblock agents for polyolefins, and in asphalts, paper coating, potting and dipping compounds for electrical components. Generally, their most important application is as internal and external lubricants in the processing of thermoplastics resins.

Available Forms

Powder

Prill

Packaging

Bag – 50lbs (22.68kgs)

Bulk Sack – 1000 lbs (454 kgs) ; 1200 lbs; 2000 lbs (907kgs)

Typical Properties

These properties are typical but do not constitute specifications

Properties	
Flash Point (COC), °C	296
Fire Point (COC), °C	315

Product Specifications

Properties	Specifications
Acid Value	0.0 – 7.0
Neutralization Equivalent	0.0 – 2.0
Total Amine Value	0.0 – 2.0
Gardner Color (1963)	0.0 – 3.0
Closed Tube Melt Point	140.0 – 146.0
Water %	0.00 – 0.20
Free Fatty Acids %	0.0 – 3.0
% thru 20 Mesh	99.0 – 100
% on 40 Mesh (Prill only)	0 – 2

FDA Status

Kemamide® W-20 fatty bisamide is sanctioned by the U.S. Food and Drug Administration (FDA) under Title 21 of the Code of Federal Regulations (21 CFR) as indicated in the following sections:

Application	
Adhesives for food packaging	175.105
Resinous and polymeric coatings	175.300
Resinous and polymeric coatings for polyolefin films	175.320
Xylene-formaldehyde resins condensed with 4,4'-isopropylidenediphenol-epichlorhydrin epoxy resins	175.380
Zinc-silicon dioxide matrix coatings	175.390
Components of paper and paperboard brought in contact with aqueous and fatty foods	176.170
Components of paper and paperboard brought in contact with dry foods	176.180
Cellophane	177.1200
Closures with sealing gaskets for food containers	177.1210
Ethylene-vinyl acetate copolymers	177.1350
Hydroxyethyl cellulose film, water-insoluble	177.1400
Polyoxymethylene copolymers	177.2470
Polyoxymethylene homopolymers	177.2480
Release agent (prior sanctions)	181.28

This FDA status information is intended to provide an overview only and is not intended to be an alternative to reading the FDA regulations. The above CFR sections should always be consulted for the complete context before any conclusion is made as to the allowed regulated use.

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EU Status

Kemamide® EBS may be used in food contact applications in the EU according to the provisions laid down in EU-Directive 10/2011 Annex 1 FMC substance No. 250, Ref. Number 53520 relating to plastic materials and articles intended to come into contact with foodstuff. No specific migration limit applies so that the generic specific migration limit is 60mg/kg food.

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Molded plastic: When incorporated into plastic molding powder, Kemamide® EBS fatty bisamide facilitates the powder's flow into all parts of the mold. It also improves pigment dispersion and mold release and, by reducing friction, it reduces static charge, thereby reducing dust pickup. Kemamide® EBS is also recommended as a mold release agent for acetal and PBT.

Cellophane: Used as an antistatic and antiblock additive in cellophane coatings. At levels of 0.1-0.5% by weight, this product will aid rather than interfere with heat-sealing operations.

Paper coatings: At approximately 1% improves the slip and gloss of paraffin/polymer coatings for paper and paperboard used in food packaging. Because of its high melting point, this product will not decompose during heat-sealing operations.

Hot-melt adhesives: Fatty bisamides function as cosolvent or coupling agents for the polyamide resin and paraffin wax components of hot-melt adhesives.

Adhesive tape: To prevent adhesive tape from sticking to itself when it is rolled up, fatty bisamide is used to impart antiblock properties. This does not reduce the tape's effectiveness in final end use.

Asphalts and potting compounds: Fatty bisamides find applications as components of specialized asphalts used in coating electrical cables (as fillers and insulation), blends for electrical potting compounds, mastic heat sealers for condensers, and other related uses. Fatty bisamide will reduce the cold flow of these asphalts, while providing suitable electrical properties. The asphalt's softening point can be raised approximately 10°F for each 1% fatty bisamide added.

Rubber: Fatty bisamides provide antiblack and lubricity properties when used in the molding and extrusion of synthetic rubbers.

Dental waxes: Bisamides contribute to the accuracy of impression and clean release of dental waxes.

Powdered metallurgy: Powdered fatty bisamide can be used at 0.5% as a lubricant and molding aid in powdered metal molding. These products burn off as well or better than fatty acids and allow for denser compacting of the powdered metal.

Wire drawing: Fatty bisamides can replace conventional fatty acid soaps as powdered lubricants in wire drawing operations. Their higher melting points allow higher drawing speeds for hard wires.

Lacquers and coatings: Bisamides can be used as pigment grinding aids and dispersants in lacquers and coatings**.**

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Additional Properties

Stability: Kemamide® EBS fatty bisamide is a stable, high-melting compound. Its melting point is significantly higher than that of a comparable monoamide

Compatibility: Our bisamide is compatible with most waxes and plasticizers. The polarity of its two central amide groups and the non polarity of the two fatty chains make this product an excellent surface-active agent which is incompatible with virtually all solvents and most polymer systems. When incorporated into polymers, Kemamide® EBS will "bloom" to the surface, coating it with a monomolecular layer. Its incompatibility is the basis for several other properties and many of the product's commercial applications.

Lubricity: This product's fatty chains impart excellent slip properties to surfaces upon which it collects. Because of this, Kemamide® EBS is a good blending agent, dispersant, and internal lubricant.

Corrosion resistance: A coating of fatty bisamide will improve a surface's resistance to salt, heat, moisture, and most solvents.

Antistatic properties: Fatty bisamide will lower the static charge generation in plastic film by reducing friction at the surface.

Electrical properties: Fatty bisamides can be used in many electrical applications without detracting from the electrical properties of the resins into which they are incorporated.

Safety and Handling

The Kemamide® compounds are not primary skin irritants by the Draize Test (Federal Hazardous Substances Act). Avoid contact with skin and eyes.

In case of accidental eye contact, flush with large amounts of water and call a physician. If swallowed, call a physician.

The Kemamide® compounds are not regulated by the Department of Transportation (DOT). They are not corrosive and not flammable by DOT definitions. However, if these products are supplied in powder form, in-process dusting should be minimized, otherwise an explosive hazard could develop. Avoid all sources of ignition when handling this product.

The Kemamide® compounds, although chemically stable, should be kept away from strong oxidizing agents. Holding the Kemamide® products in a molten state or exposure to high temperatures should be minimized to retain product quality.

Please consult the Material Safety Data Sheet for additional information on safety, handling and storage before using this product. Contact PMC Biogenix, Inc. for copies of the MSDS for this product.

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