

## GLOBAL PRODUCT STRATEGY SAFETY SUMMARY

### KAO WAX EB-FF

*This document is a high-level summary intended to provide the general public with an overview of product safety for this substance. It is not intended to replace the Safety Data Sheet, which is available from suppliers and should be referred to for full details of recommended safety procedures for each type of use. It is not intended to replace or supersede manufacturer's instructions and warnings for their consumer products containing this substance.*

#### 1. Substance Identity

Brand Name: KAO WAX EB-FF

Chemical Name: N,N'-Ethylenebis(stearamide)

CAS Number: 110-30-5

#### 2. Uses and Applications

KAO WAX EB-FF is a lubricant of fatty amide base. KAO WAX EB-FF is used as lubricant for improving the flowability of acrylonitrile butadiene styrene resins (ABS resin), polystyrene (PS) and copolymers, poly vinyl chloride (PVC) and polyolefin, and as lubricant for shell molding. Further KAO WAX EB-FF is used as antiblocking agent for flexible PVC.

These molded resins containing KAO WAX EB-FF are used home electronics, electrical and electronic products, article for daily use, stationery, furniture and automobile components, and others.

#### 3. Physical/Chemical Properties

KAO WAX EB-FF has no identified physicochemical hazards.

Property	Value
Physical state	Pulverizing powder
Colour	White
Odour	Slightly characteristic odour

pH	7.2 (1% suspension(n-butanol/water=9/1))
Density (Specific gravity)	0.49 g/cm <sup>3</sup> (20°C) (68°F), 0.815 g/cm <sup>3</sup> (160°C) (320°F), 0.794 g/cm <sup>3</sup> (190°C) (374°F)
Melting point	141.5 – 146.5 °C (286.7 – 295.7°F)
Boiling point	No information available
Flash point	296 °C (564.8°F) (CLEVELAND open cup method)
Flammability or Explosive properties	UPPER LIMIT: No information available LOWER LIMIT: No information available
Auto – ignition temperature	No information available
Vapour pressure	13 Pa at 25 °C (77°F)
Water solubility	Insoluble
Octanol-water partition coefficient (log K <sub>ow</sub> )	No information available
Viscosity	10 mPa · s (160 °C) (320°F), 5 mPa · s (190 °C) (374°F), 4 mPa · s (200 °C) (392°F)

#### 4. Human Health Safety Assessment

Based on the available experimental data, KAO WAX EB-FF does not pose any hazards to human.

Effect Assessment	Result
Acute Toxicity oral/ dermal	No acute toxicity after oral/ dermal exposure in practical use The substance does not cause damage to any organs following single exposure.
Irritation skin/ eye	Based on the available data not considered to be irritating to skin or eyes.
Sensitization	Based on the available data not considered to cause allergic skin reaction.
Toxicity after repeated exposure	Based on the available data not considered to cause damage to organs through prolonged or repeated oral exposure in practical use.
Mutagenicity	Based on the available data not considered to cause genetic defects.
Carcinogenicity	Based on the available data not considered to cause cancer.
Toxicity for reproduction	Based on the available data not considered to be damaging to fertility or the unborn child.

## 5. Environmental Safety Assessment

Based on the available information, KAO WAX EB-FF is not expected to cause toxicity to aquatic organisms under test conditions. Adverse effects on microorganisms in waste water treatment plants are not expected. Though the substance is not readily biodegradable, the adverse effects in the environment are not expected, because of the low water solubility and the therefore very limited bioavailability. The chemical does not accumulate in the food chain, because KAO WAX EB-FF is not PBT/ vPvB.

Effect Assessment	Result
Aquatic Toxicity	No adverse effects observed in the range of the substances water solubility.
Biodegradation	Not readily biodegradable
PBT/ vPvB conclusion*	Not bioaccumulating in organisms and not toxic, hence not considered a PBT or vPvB substance.

\*PBT=Persistent, Bioaccumulative and Toxic  
vPvB=Very Persistent and Very Bioaccumulative

## 6. Exposure

### Consumer

KAO WAX EB-FF is used to various resin molded articles for home electronics, electrical and electronic products, article for daily use, stationery, furniture and automobile components, and others. Since it is thought that this substance hardly elutes from these molded resins, it is thought that the exposure to KAO WAX EB-FF is at the safe level for consumers. Since no adverse effects were observed in any of the performed toxicological tests, these applications do not give rise to concern.

### Worker

The exposure can occur either in a KAO WAX EB-FF manufacturing facility or in the various industrial facilities that use KAO WAX EB-FF. Those working with the substance in industrial operations could be exposed during maintenance, sampling, testing, or other procedures. Since no adverse effects were observed in any of the performed toxicological tests working with these substances is not considered to be a risk. Nevertheless, as a general recommendation, only qualified and trained workers shall handle the neat substance. And generally each manufacturing facility offers a thorough training program for employees and appropriate work processes, as well as safety equipment (goggles and gloves) in place to limit unnecessary exposure. Safety showers and eye-wash stations are accessible nearby. Workers have been trained to follow the safety measures.

### Environment

It is thought that there is almost no discharged of this substance by use of the resin molded articles for consumers. Additionally, it is thought that there is also almost no discharged to waste water treatment plants from industrial sites such as manufacturing, preparation, handling and storage. Adverse effects of KAO WAX EB-FF towards aquatic organisms were not observed in any of the performed tests and the substance is not expected to accumulate in the food chain. Therefore all identified uses of the substance are assessed as safe for the environment.

## **7. Risk management recommendations**

When using chemicals make sure that there is adequate ventilation. Always use appropriate chemical resistant gloves to protect your hands and skin and always wear eye protection such as chemical goggles. Do not eat, drink, or smoke where chemicals are handled, processed, or stored. Wash hands and skin following contact. If the substance gets into your eyes, rinse eyes thoroughly for at least 15 minutes with tap water and seek medical attention.

All effluent releases that may contain the substance should be directed to a (municipal) waste water treatment plant that removes the substance from the final releases to the receiving water. Releases to air are not expected and therefore no specific recommendations are required.

## **8. Regulatory Information/Classification and Labelling**

Under GHS substances are classified according to their physical, health, and environmental hazards. The hazards are communicated via specific labels and the (M)SDS. GHS attempts to standardize hazard communication so that the intended audience (workers, consumers, transport workers, and emergency responders) can better understand the hazards of the chemicals in use.

### **Labeling according to UN GHS**

UN GHS is the basis for country specific GHS labeling.

KAO WAX EB-FF may be assigned to following GHS classification.

### **Classification and labeling information**

KAO WAX EB-FF is not labeled according to UN GHS which is the basis for country specific GHS labeling.

### **Hazard Statements:**

No hazard statements required

### **Signal Word**

No signal word required

The laws of manufacturing, sale, transport, use and disposal are different among countries or areas. Details are referred to Safety Data Sheet provided by the supplier.

## **9. Conclusion**

KAO WAX EB-FF is not classified as hazardous for human health or the environment. Further, as a result of the PBT/vPvB assessment it is found that the substance is not considered to be a PBT/vPvB.

Based on the lack of adverse effects in all tests performed a risk to the general public is not anticipated.

## 10. Contact information within company

For further information on this substance or product safety summaries in general, please contact:

Name                                      Kao Corporation, Global Chemical Business  
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E-mail address                            [chemical@kao.co.jp](mailto:chemical@kao.co.jp)

Additional information can be found at the International Council of Chemical Associations portal, found at <http://www.icca-chem.org/>.

## 11. Glossary

Acute Toxicity	Adverse effects that result from a single exposure
Biodegradation	Biological degradation of a substance in environments
Bioaccumulation	Accumulation of substances in environments
Carcinogenicity	Action influence to cause a cancer
Toxicity after repeated exposure	Adverse effects that result from repeated exposure
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
Hazard	Hazardous property for human health or environments
Mutagenicity	Effects to induce gene mutations
Toxicity for reproduction	Adverse effects for teratogenicity, embryotoxicity, and reproductivity
Sensitization	Inducibility of allergy

## 12. Date of Issue

Dec. 20, 2016