



Kerox Chemicals Pvt. Ltd.
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SAFETY DATA SHEET

Kerox EzFloMix™ Universal Pigments – Compliance 60000 Series

Date Prepared: 11 Jan 2016

Last Update: 09 March 2017

Revision: 2.0

Section 1: IDENTIFICATION

Product Name	Kerox EzFloMix™ Universal Pigments – Compliance 60000 Series
Chemical Name	Mixture
CAS Number	Mixture
Product Type	Inorganic and organic solid color powders mixed in a liquid polyester polymer resin and stabilized to a homogeneous dispersion
Manufacturer and Supplier Details	Kerox Chemicals Pvt. Ltd. No. 95, Basavanapura, Bannerghatta Road, Bangalore 560083, INDIA P: +91 – 802-842-9532 / 9774 / 9775 M: +91 – 988-672-6464 (Emergency Contact – 10 am to 5 pm IST) W: www.kerox.org E: keroxoffice@kerox.org
Recommended Use	For coloring Polyester Resins and Gelcoats, Epoxy Resins and Polyurethane Resins. Recommended usage 10% to 1% on the weight of the resin.
Restrictions	The ranges of colors manufactured are large and each color is identified by a product code. All colors in the Compliance 60000 Series are FREE of all Heavy Metals (lead, chromium, cadmium etc.), and banned Azo and Arylamide compounds, Phthalates, PCB's, Chlorinated Benzenes and Toluenes, Pesticides, and Flame Retardants.

Section 2: HAZARD IDENTIFICATION

Hazard Statement	The product is a mixture and has not been evaluated as a whole. The individual components in the product are not known to be a Health Hazard and the data below is for such individual components and not for the entire product.
Physical Hazards	Not Classified
Chemical Hazards	Not Classified
Health Hazards	Category: Not Classified.
Environmental Hazards	Not Known
Signal Word	Not Known
Precautionary Statement	It is highly recommended to use personal protection, especially gloves, while handling the product. Do not dispose the product in water streams. Product disposal should be done according to local environmental rules and regulations.
Label Requirements	Not Known
Known Toxicity	Category: Not Classified



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Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

The product is a mixture of inorganic and organic solid color powders in a liquid polyester polymer resin and stabilized to a homogeneous dispersion. The product mixture may contain some or all of the following chemical compounds in the percentages (w/w) shown. Due to the large number of production codes and formulations, the percentages reported are ranges of lower and upper limits.

Ingredient Name	Color Index	CAS Number	% (w/w)
Polyester Resin	NA	26123-45-5	20% - 80%
Titanium Dioxide	C.I. 77891	13463-67-7	1% - 60%
Dispersing Agents	NA	NA	0.5 % - 3%
Black Iron Oxide	C.I. 77499	12227-89-3	1% - 60%
Red Iron Oxide	C.I. 77491	1309-37-1	1% - 60%
Yellow Iron Oxide	C.I. 77492	51274-00-1	1% - 60%
Ultramarine Blue	C.I. 77007	57455-37-5	1% - 60%
Yellow GG	C.I. 21105	4531-49-1	1% - 60%
Yellow HR	C.I. 21108	5567-15-7	1% - 60%
Yellow HGR	C.I. 18795	129423-54-7	1% - 60%
Toluidine Red	C.I. 12120	2425-85-6	1% - 60%
Red 2B	C.I. 15865:2	7023-61-2	1% - 60%
Phthalocyanine Green	C.I. 74260	1328-53-6	1% - 60%
Dioxazine Carbazole	C.I. 51319	6358-30-1	1% - 60%
Carbon Black	C.I. 77266	1333-86-4	1% - 60%
Calcium Carbonate	C.I. 77220	1317-65-3	1% - 60%
Phthalocyanine Blue	C.I. 74160	147-14-8	1% - 60%

The Dispersing Agents, used in the range of 1% to 3% in the product formulations, are proprietary.

Section 4: FIRST AID MEASURES

Eye Contact	Thoroughly wash the eyes in a running stream of water for a minimum of 15 minutes. Seek medical aid.
Skin	If the product gets on the skin, thoroughly wash exposed area with soap and water. Remove contaminated clothing, and either discard or thoroughly launder before reuse.



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Inhalation	Remove victim from the exposure area, to an open area with fresh air. If the person is unconscious, administer artificial respiration and/or oxygen. Seek professional medical help immediately.
Ingestion	Seek professional medical help immediately. Do not induce vomiting, as this may be a breathing hazard.
Most Important Symptoms or Effects that are Acute or Delayed Potential Acute Health Effects	
Eyes	Prolonged exposure may cause irritation, redness, or tearing.
Skin	Prolonged or repeated contact may result in slight skin irritation and dryness.
Inhalation	Prolonged inhalation of volatile materials in the product may cause mucous membrane irritation and upper respiratory discomfort. It may also result in headaches and nausea.
Ingestion	Seek professional medical help immediately. Do not induce vomiting, as this may be a breathing hazard.
Section 5: FIRE-FIGHTING MEASURES	
Extinguishing Media	Use carbon dioxide or dry chemical extinguishers for small fires, and foam for large fires. Water spray may be used for fire extinguishing. In general, any Class B fire-extinguishing agent may be used.
Specific Hazards	Material is combustible, but not flammable. Elevated temperatures (above 300°C) can cause rapid volatilization of the polyester resin, which may ignite if air/oxygen is present. Thermal polymerization is also possible. Avoid using open flames, such as from welding or cutting torches, on or near pigment containers. Thermal decomposition may generate carbon monoxide, carbon dioxide and low molecular weight hydrocarbons. In general oxidation of inorganic and organic compounds is possible and there is a possibility of toxicity from gaseous by-products.
Recommendation for Fire-Fighters	Cool pigment containers with water spray. Emergency personnel, firefighters, and anyone who may be exposed to vapors or products of combustion, should wear a Self Contained Breathing Apparatus (SCBA).
Section 6: ACCIDENTAL RELEASE MEASURES	
Personal Precautions	The product is a highly viscous paste that flows slowly. Without protective clothing, do not handle the spill. Move away from the spill and keep a distance so that the material cannot come in contact.



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Protective Equipment	Wear protective clothing, especially gloves, goggles and shoes, while handling and cleaning up the spill.
Emergency Procedures	If there is a spill, first move away from the spill and keep a safe distance. If trained to handle the spill, follow the clean up measures below.
Environmental Safeguards	The product should not be discharged into drains, sewers and water streams. If the product has spilled, use sand or other suitable flow control materials to prevent the flow into drains, sewers and water bodies.
Clean Up Procedures	Spills can occur due to broken containers or during handling. Should a spill occur due to broken containers, gently turn the container upright, to prevent further product leakage. Move the container to a secondary containment area, or place it on top of a plastic sheet. For material that has spilled, take a scooping knife or a shovel, and remove all the material from the contaminated area, and transfer to a disposal plastic bag. If the spill is on open ground, scoop all soil that shows visible traces of the colored product, and transfer to the disposal bag. If the spill is on a room floor, desk, or table, wipe final traces of visible colored pigment with a soap solution or isopropyl alcohol, and transfer the wipe cloth/paper to the disposal bag. If the spills are large, dike the entire area around the spill, so as to prevent any material transfer to water streams, systems, or sewers.
Disposal	Spilled material that has been collected should only be disposed off as per local environment rules and regulations.

Section 7: HANDLING AND STORAGE

Precautions for Safe Handling	The product is safe to handle in small volume jars. After partial use of the material in the jar, ensure that the lid is put back and that the jar is stored back in the designated storage area. While handling large volume jars/containers, always ensure that the lid is put back after usage. While moving large jars, via forklifts, ensure that the jar is on a pallet and also follow the forklift operating safety regulations and guidelines. Do not attempt to lift a large jar with a forklift directly, since it could puncture the jar. Do not eat, drink or smoke around the product. Take precaution to eliminate any source of fire, including electrical equipment. After usage of the product, clean hands with soap and water and follow standard personal hygiene practices.
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Safe Storage Guidelines	Always store the product in designated storage areas. Do not leave the lids open during storage. Product should be stored in well-ventilated areas and always indoors. The indoor storage area should be away from direct sunlight. It should also be away from any heat sources and fire sources, including electrical outlets. Ensure that the product container/jar is properly labeled and dated. The product should have a separation barrier from all other materials.
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Section 8: EXPOSURE CONTROLS & PERSONAL PROTECTION

OSHA PEL & TLV	The product is a viscous slow flowing mixture. As such the inorganic and organic solid color powders are dispersed in the liquid polyester polymer resin, to form a homogenous mixture. The OSHA PEL & TLV have not been experimentally determined. However, since the solids are bound to the liquid resin in the mixture, any of the PEL & TLV parameters for the solid compounds are not applicable. Further, since there are no solvents in the mixture, there are no PEL & TLV data to report for any volatiles.
Appropriate Engineering Controls	The product should be used in well-ventilated areas. The product should be transferred from the containers into the usage materials using plastic or metal scoops, or other material transfer equipment.
Personal Protection	Wear personal protective equipment, especially gloves and goggles, while handling the product. To prevent accidental spill on the skin, wear a full arm shirt or protective garment and shoes.
Hygiene Measures	Should any product transfer to the skin, remove the material with a paper towel or cloth. Wash the area with soap and water. Do not smoke, eat or drink while using the product. If any accidental contact with the eyes, wash the eyes with water at an eye station.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colored viscous and slow flowing material
Odor	Very slightly aromatic
Specific Gravity	1.2 to 1.9
Melting and Boiling Point	The resin polymer in the product remains in liquid form up to 250 °C. The boiling point is not known. All the solids in the product have a much higher melting point and hence, a much higher boiling point.
Vapor Pressure	Experimentally not known. The liquid polymer resin has very low or negligible vapor pressure at room temperature.
Viscosity	The product has a viscosity in the range 800 cP to 5000 cP



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Flammability	The product shows no flammability up to 250 °C, since this is the processing temperature of the liquid polymer resin, which is done in an air atmosphere. However, since the polymer is a hydrocarbon, it is combustible, such as when exposed to a flame. Further, since the product is a mixture of solids and liquids, with the solids having a significantly high melting point (> 500 °C), the flammability is limited to the chemical properties of the polymer resin. The product is free of any hydrocarbon solvents and is hence not flammable. There is no flash point for the product.
Solubility	The product is not soluble in water. It can be emulsified with water, soaps and detergents. The liquid polymer in the product is soluble in organic hydrocarbon solvents.

Section 10: STABILITY AND REACTIVITY

Chemical Stability	Product is stable under standard normal room temperature conditions.
Chemical Reactivity	The liquid polymer in the product has unsaturated double bonds, which can undergo cross-linking with monomers having double bonds, such as styrene. Such cross-linking can only be initiated by free radical polymerization.
Hazardous Polymerization	The product is stable to hazardous polymerization and it will not occur under normal room temperature conditions.
Conditions to Avoid	Prolonged exposure to direct sunlight or excessive heat. Strong oxidizing agents, acids and peroxides, except in small quantities during actual usage. Mixing with monomers having double bonds, such as styrene, except during actual usage and manufacturing.
Hazardous Decomposition Products	Thermal decomposition may generate carbon monoxide, carbon dioxide and low molecular weight hydrocarbons. Also see Section 5, Specific Hazards.

Section 11: TOXICOLOGICAL INFORMATION

Ingestion	Not known. Based on the input raw materials in the product, it is estimated that ingestion can be toxic and can cause irreversible damage.
Skin Contact	Prolonged or repeated exposure can cause slight to severe irritation.
Eye Contact	Exposure to the eyes can cause eye irritation.
Inhalation	Product has negligible vapor pressure and poses negligible danger due to the inhalation route.
Chronic Exposure	Not known.



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Section 12: ECOLOGICAL INFORMATION

Though the product is free of toxic compounds (Section 2), it should never enter the environment, either directly or indirectly. When used for coloring polyester, epoxy or polyurethane composites, the products are chemically and physically encapsulated in the composite matrix. In this form, the colors are stable. However, there is a possibility of some of the material leaching out into the environment, especially when exposed to solvents and chemicals that can react with the composite matrix. If such conditions are avoided, there is a very low probability for its free entry into the environment.

However, in general, all conditions for leaching of the final colored composite matrix should be strictly avoided or eliminated. Upon the end-of-life for the colored composite matrix, it should be disposed off as per prevailing environmental regulations.

Section 13: DISPOSAL CONSIDERTIONS

Container Disposal	It is highly recommended that the plastic container is completely empty prior to disposal. After the material is used, any trace amount of product remaining can be extracted with a disposable paper towel and cleaning solvent. The used paper towel should then be disposed as per local regulations. The cleaned container can be recycled or disposed off as per local regulations.
Product Disposal	<p>The first recommendation for product disposal is to use all of it for making useful composite products.</p> <p>The second recommendation for product disposal is to incorporate it in a polyester resin at a high percentage loading, just like in fabrication, and immobilize the product by converting it into a solid. The solid composite matrix can then be used for practical applications or disposed off as per local regulations.</p> <p>The third recommendation for product disposal is to incinerate it at an approved incineration facility, as per local regulations.</p> <p>The fourth recommendation for product disposal is to transfer it to Government approved landfills as per prevailing Laws and Regulations.</p> <p>Under no circumstance should the product be discarded and dumped in garbage bins and sewers.</p>



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Section 14: TRANSPORTATION INFORMATION

General	Not Classified as Dangerous in the meaning of Transport Regulations
HS Code	3206.49.90
UN Number	Not Applicable
UN Proper Shipping Name	Not Applicable
Packing Group	Not Applicable
Environmental Hazards	Not Applicable
Special Precautions for User	Not Applicable
Transport in Bulk	Not Applicable – According to Annex II of MARPOL 73/78 and the IBC Code

Section 15: REGULATORY INFORMATION

Additional Regulations	Additional safety, health and environmental regulations specific for the product that is not indicated in this SDS are Not Known.
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Section 16: OTHER INFORMATION

This SDS was First Prepared on 11 Jan 2016.
It was Last Updated on 09 March 2017.
This update includes a review of all the information in the SDS and corrections to typographical errors.
This version is designated as Revision 2.0 and supersedes all previous versions of the SDS.