



Additives|Coatings

MSDS BioX-001

Oxobiodegradable Coatings
(Date Issued: 01.12.16)

1. IDENTIFICATION OF THE PREPARATION

Product Name	BIOX-001
Application	Used as an oxobiodegradable additive in packaging applications
Company Identification	NICHEM SOLUTIONS Plot No.A-408,Rd.No.28,Ramnagar,Wagle Estate,Thane (W)-400 604. Maharashtra, INDIA.
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2. COMPOSITION OF INGREDIENTS

Description	Contents	HS Code No.	CAS Reg No.
Based on mixture of transition metal salts & metal oxides	Titanium dioxide	28230010	13463-67-7

3. HAZARD IDENTIFICATION

Contact with Eyes: May cause irritation

Contact with Skin: May cause skin sensitization (numbness, itching)

Ecological Hazards: Not persistent in soil or water, immobile in soil

4. FIRST AID MEASURES

General information: Bring affected persons out of danger area. Observe self-protection (body protection, eye protection, respiratory protection).

After skin contact: On skin contact, rinse thoroughly with water. Remove contaminated or saturated clothing immediately. If irritation persists, supply with medical care immediately. Keep warm in a comfortable position and cover with blanket.

After eye contact: With eye held open, thoroughly rinse immediately with plenty of water for at least 15 minutes. Remove contact lenses if easily possible. Seek medical attention.

After swallowing: Have patient rinse out mouth with water. Drink plenty of salt water. Induce vomiting. Consult doctor immediately.

5. FIRE FIGHTING MEASURES

- Does not contain any inflammable substance, therefore, no special fire-fighting measures need to be followed.
- Suitable extinguishers – Carbon Dioxide, Foam.
- Wear full protective clothing including chemical protection suit.
- Prevent run-off water from entering drains.
- If polluted water reaches drainage systems or water courses, immediately inform appropriate authorities.

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6. ACCIDENTAL RELEASE MEASURES

Experience on Humans

Effect on Skin: May cause skin sensitization (itching) . Wash with plenty of water.

Effect on eyes: May cause irritation. Wash with plenty of water.

Effect on ingestion: Induce vomiting. Give stomach wash, if ingested

7. HANDLING AND STORAGE

HANDLING: Information for safe handling:

The usual precautionary measures for dealing with chemicals should be observed. Protect from impurities. Never return spilt product to original container. Wear personal protective equipment; see section 8. Avoid contact with skin, eyes and clothing. Ensure there is good room ventilation. Provide for installation of emergency shower and eye bath. Change work clothes that have been contaminated with product. Wash contaminated clothing immediately with water.

STORAGE CONDITION: Requirement to be met by storerooms and containers:

Only use polyethylene material (HDPE) bottles/containers thoroughly covered with lid. Always close container tightly after removal of product.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

General Protective and hygienic measures

Protection of hands: Wear protective gloves made of PVC, neoprene or natural rubber.

Eye protection: Wear safety goggles.

Body protection: Change work clothes immediately if spilled with the product.

9. PHYSICAL & CHEMICAL PROPERTIES

Physical Properties	
Form	Powder
Colour	Light Grey to Dark Grey
Odor	Odorless
Chemical Properties	
Base	Mixture of transition metal salts & metal oxides
Bulk Density	0.20 – 0.30 gm/cc
Flash Point	Not Applicable
Solubility	Insoluble in water & solvents
Stability	Stable at ambient temperature under normal conditions of use

10. STABILITY AND REACTIVITY

- Stable at Room Temperature
- It is not affected by atmospheric oxygen
- **Conditions to be avoided:** None
- **Substances to be avoided:** None
- **Reactivity:** The product is inert to most acids
- **Solubility:** It is insoluble in water & solvents.

11. TOXICOLOGICAL INFORMATION

Chronic Toxicity has not been demonstrated by **Titanium Dioxide**

They are not listed as a carcinogen by MAK, IARC, NTP, OSHA, and ACGIH.

Carcinogenicity: No evidence of carcinogenic effects

Teratogenicity: No evidence of teratogenic effects

Mutagenicity: No evidence of mutagenic effects

The LD50 value (Oral: Rat & Mice) is approximately 10,000 mg/kg body weight.

12. ECOLOGICAL INFORMATION

Eco-toxicity: None

Mobility: Insoluble in water & solvents

Persistence and Biodegradability: Not persistent in soil or water. Immobile in soil

Risk of bioaccumulation: None

Other adverse effects: None

13. DISPOSAL CONSIDERATIONS

Recommendation: Product

Product may be packed in secure containers and sent to certified, desalinated land fill areas for land filling with leachate control in accordance with local legal regulations and after permission given by the responsible local legal authority

Unclean packaging:

Rinse empty containers with water prior to disposal. Take decontaminated packaging to local recycling centre.

14. TRANSPORT INFORMATION

Product is safe for transport by Roadways, Airways or Waterways. No special precautions need to be taken for the product with adequate packing in plastic bottles/containers – as mentioned in Section 7.

Not classified as dangerous for transport as per IATA guidelines

Classification: Not regulated by IATA

15. REGULATORY INFORMATION

Labeling of substances in line with EC Directive 67/546/EEC and amendment.

Not classified as dangerous for supply/use

Risk Phrases	R41: Risk of serious damage to eyes
Safety Phrases	S7: Keep container tightly closed S25: Avoid contact with eyes S26: In case of contact with eyes, rinse immediately with plenty of water & seek medical advice S28: After contact with skin wash immediately with plenty of water S36/37/39: Wear suitable protective clothing, gloves, eye/face protection S45/46: If swallowed or in case of accident or if you feel unwell, seek medical advice immediately (show the label if possible)

16. OTHER INFORMATION

Disclaimer: NICHEM SOLUTIONS has internally & externally verified the effectiveness & efficacy of its products by a standard protocol. We expect to reproduce the same results at customer's end by adopting same protocol. We take responsibility for the uniform quality of our products. However, NICHEM SOLUTIONS will not be responsible for any consequential liability of any nature for whatsoever reason.

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