



BioSwitch™ X BIODEGRADABLE SWITCH PLATE LUBRICANT

Whitmore's BioSwitch™ X is a clean lubricant that protects switch plates from wear. Switch lubricants that rely on graphite are dirty to work with and leave permanent stains in clothing. BioSwitch™ X has the advantage of being non-staining to hands and clothing.

BioSwitch™ X is biodegradable as measured by the Modified Sturm test.

BioSwitch™ X can be applied by pouring, brushing, or spraying. No special spraying equipment is required. Any brand of pump-up weed sprayer can be used. Completely cover the switch with a thin layer of lubricant.

BENEFITS:

- REDUCES FRICTION AND WEAR – low coefficient of friction facilitates ease of switch operation. It minimizes effort and risk of injury.
- WIDE TEMPERATURE RANGE – one grade is suitable for year-round use.
- EASY TO APPLY – it can be poured, brushed, or sprayed.
- RESISTS CONTAMINANTS – does not attract dirt.
- BioResponsible™ – helps reduce the impact on the environment.

APPLICATIONS:

BioSwitch™ X is primarily for use as a lubricant for switch plates. Due to its ability to penetrate, it is effective on chains and wire ropes. Especially useful near waterways, where a biodegradable product is preferred.

ASTM #		TYPICAL CHARACTERISTICS
	ISO Grade	100
D-445	Kinematic Viscosity cSt @ 40°C	90
D-97	Pour Point, °F (°C)	5 (-15)
Gardner Method	Density, lb/gal @ 60°F (15.5°C) Specific Gravity, g/cc @ 60°F (15.5°C)	7.63 0.9160
D-92	Flash Point, °F (°C) Cleveland Open Cup (Base Oils)	>400 (204)
D-92	Flash Point, °F (°C)	>400 (204)
D-665	Rust Test Distilled Water	Pass
D-130	Copper Strip Corrosion 212°F (100°C) @ 3 hr	1A
	Color	Translucent brown

The above are average values. Minor variations which do not affect product performance are to be expected in normal manufacturing.

PACKAGING

Bulk	Nonreturnable Totes	Drums	Kegs	Pails
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Distributed By:



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WHITMORE'S

MATERIAL SAFETY DATA SHEET

I. IDENTIFICATION OF THE CHEMICAL PRODUCT AND COMPANY					
Product Name:	BioSwitch™ X	Manufacturer/Supplier:			
Chemical Family:	Synthetic Ester Blend	The Whitmore Manufacturing Company			
Use:	Switch Plate Lubricant	930 Whitmore Drive Rockwall, Texas 75087, U.S.A.			
Emergency Tel. No.:	CHEMTREC	U.S.A. & Canada	800-424-9300 (24 hrs)		
		International	703-527-3887 (Collect)		
II. COMPOSITION INFORMATION ON INGREDIENTS					
Hazardous Components	CAS No.	Wt%	OSHA PEL	ACGIH TLV	Other Limits of Exposure
None					
III. ADVERSE HUMAN HEALTH EFFECTS					
Eyes:	Any eye contact will cause irritation.				
Skin:	Prolonged skin contact may cause irritation.				
Inhalation:	Breathing fumes in confined areas at elevated temperatures will cause lung irritation.				
Ingestion:	May be harmful if swallowed.				
IV. FIRST AID MEASURES					
Eyes:	Flush with large amounts of cold water. If irritation persists, SEEK MEDICAL ATTENTION.				
Skin:	Thoroughly wash exposed area with soap and water.				
Inhalation:	Provide fresh air source. If irritation persists, SEEK MEDICAL ATTENTION.				
Ingestion:	If cathartic effect persists, SEEK MEDICAL ATTENTION.				
V. FIRE FIGHTING MEASURES					
Extinguishing Media:	Foam, Dry Chemical, Carbon Dioxide				
Unsuitable Extinguishing Media:	None known.				
Fire Fighting Protective Equipment:	If product is overheated, use organic NIOSHA/MSHA filter-type respirator.				
VI. ACCIDENTAL RELEASE MEASURES					
Personal Precautions:	Wear plastic or neoprene rubber gloves and safety goggles.				
Environmental Precautions:	Check state regulatory requirements.				
Spillage:	Absorb with dry, inert material and shovel up.				
VII. HANDLING AND STORAGE					
Handling:	Keep away from open flame or sparks.				
Storage:	Keep away from open flame or sparks.				
VIII. EXPOSURE CONTROL/PERSONAL PROTECTION					
Respiratory Protection:	None				
Hand Protection:	Protective gloves for hypersensitive persons.				
Eye Protection:	Safety Goggles				
Body Protection:	None				

HMS SYMBOLS

	1
	1
Reactivity	0
PPI	B

MSDS-426

Effective Date: 2-24-04

Revised Date: 10-01-08

IX. PHYSICAL AND CHEMICAL PROPERTIES							
Physical State:	Liquid	Color:	Amber	Odor:	Petroleum		
Boiling Range/point, °F (°C):	N/A	Melting Point, °F (°C):	N/A				
Flash Point (COC), °F (°C):	[>400 (204) (Base Oils)]	Autoignition Temperature, °F (°C):	>800 (>427)				
Explosive Properties:	LEL: N/A	UEL: N/A	Evaporation Rate (Butyl Acetate):	N/A			
Partition Coefficient (Log Pow):	N/A	Vapor Pressure (kPa):	N/A				
Density:	7.6 - 7.70 lb/gal	Flammability:	N/A				
Oxidizing Properties:	None	Solubilities in Water:	Nil	Vapor Density:	N/D	% Volatiles:	Nil
X. STABILITY AND REACTIVITY							
Stability:	Chemically stable under normal conditions.						
Conditions to Avoid:	None known.						
Materials to Avoid:	Strong oxidizing agents.						
Decomposition Products:	Oxides of carbon, sulfur, and hydrocarbons.						
XI. TOXICOLOGICAL INFORMATION							
Acute Toxicity:	None	Skin Irritancy:	Very Mild				
Chronic Toxicity:	None	Skin Sensitization:	None				
Sub-acute/Subchronic Toxicity:	Not Known	Genotoxicity:	Not Known				
California Prop 65:	None Listed	EC Classification (67/548/EEC):	N/A				
Carcinogenicity:	NTP: No	IARC:	No	OSHA:	No		
LC-50:	Not Available	LD-50:	Not Available				
XII. ECOLOGICAL INFORMATION							
Possible Effects:	None known.						
Behavior:	Relatively well behaved. Bioaccumulation potential nil.						
Environmental Fate:	Not thought to be toxic to marine or land organisms.						
XIII. WASTE DISPOSAL							
Product Disposal:	Contact waste disposal company or local authority for advice.						
Container Disposal:	Check state regulatory requirements.						
XIV. TRANSPORT INFORMATION							
DOT:	Not Regulated	UN No.:	Not Regulated				
Air Transport (ICAO/IATA):	Not Regulated						
Sea Transport (IMO/IMDG):	Not Regulated						
Road and Rail Transport (ADR/RID):	Not Regulated						
XV. REGULATORY INFORMATION							
Labeling Information:	N/A	EC Annex 1 Classification:	N/A				
R Phrases:	N/D						
S Phrases:	S2 Keep out of the reach of children.						
Ozone Depleting Chemicals:	None/Nil	TSCA:	All components listed.				
WHMIS (Canada):	N/A						
EPA Regulation 40 CFR Part 372 (SARA Section 313):	None						
XVI. OTHER INFORMATION							
None							

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