



## Safety Data Sheet (SDS)

Revision / Review Date: 1/23/15

### 1. Chemical Product and Company Identification

Product Name:	Merrox BCF
Distributed By:	HB Chemical 1665 Enterprise Parkway Twinsburg Oh 44087 Phone - 330-920-8023
SDS Prepared By (w Suppliers Input):	HB Chemical
Common name:	DBEEF / TP90B
Chemical Name / Family:	Dibutoxyethoxyethyl formal/ Acetal
Molecular Formula:	C17 H36 O6
Molecular Weight via GPC, Mn:	336.465
Product Use:	Plasticizer
CAS No:	143-29-3, 112-34-5

For emergency health, safety, and environmental information, calls 330-920-8023

For emergency transportation information, in the United States: call CHEMTREC at 800-424-9300

### 2. Hazard(s) Identification

<u>Warning:</u>	Not available.
<u>Signs and Symptoms of Exposure:</u>	Not available.
<u>Primary Routes of Entry:</u>	Not available.
<u>Medical Conditions Generally Aggravated by Exposure:</u>	Not available.
<u>Emergency overview:</u>	A clear colorless, oily liquid which is not normally irritating to eyes and skin. Ingestion and prolonged contact should be avoided.
<u>Eye Contact:</u>	May cause eye irritation.
<u>Skin Contact:</u>	May cause skin irritation.
<u>Ingestion:</u>	May cause digestive irritation.
<u>Inhalation:</u>	May cause respiratory irritation.
<u>HMIS Hazard Ratings:</u>	Health- 1, Flammability -2, Reactivity - 0, Protection-C

HMIS limitation statement:

The HMIS hazard ratings numbers are meant to give a quick indication of the relative hazards associated with the product. All of the information contained in the SDS should be consulted to assist with the safe handling of this material.

**3. Composition / Information on Ingredients**

Weight Percent / Typical	Composition	CAS Registry Number
98%	diethyleneglycolmonobutyl formal	143-29-3
1.0 %	diethyleneglycolmonobutyl formal	112-34-5

**4. First Aid Measures**

Inhalation:

Remove to fresh air; give artificial respiration or oxygen if necessary.

Eyes:

Flush eyes with water for 15 minutes. Call a physician if irritation develops.

Skin:

Wash skin with soap and water. If in contact with hot product, treat as a burn.

Ingestion:

Do not induce vomiting. Never give anything by mouth to unconscious person. Seek medical attention.

**5. Fire-Fighting Measures**

Suitable Extinguishing Media:

Water spray, dry chemical, carbon dioxide, foam.

Special Fire Fighting Procedures:

Full eye protection and protective clothing are required for all indoor/outdoor fires and spills. Fire fighters should wear self-contained breathing apparatus. Treat as burning oil. Keep drums as cool as possible to avoid expansion, explosions, and splattering.

Hazardous Combustion Products:

This product will decompose under extreme temperatures forming oxides of carbon and organic acids.

Unusual fire and explosion hazards:

Not available.

**6. Accidental Release Measures**

Steps to be taken in case material is spilled:

Wear appropriate protective equipment and gloves and clothing. Contain spill with inert absorbent or earth. Transfer to secure containers and dispose of according to local and state regulations. Thought should always be given to collecting the material in such a manner that it could be recycled. Clean/scrub affected area with detergent. Spills in excess of the RQ must be

reported to the local emergency response organizations. Major spills should also be reported to the National Response Center.

Environmental Disposal Information:

Prevent run-off into sewers or natural waterways.

Waste Disposal:

All containers should be effectively labeled to facilitate the appropriate disposal or reclaim.

**7. Handling and Storage**

Empty Containers:

Empty containers can be rinsed with a suitable solvent/surfactant and steamed to remove residual product and fumes before disposal or reuse in accordance with applicable regulations.

Precautions to be taken in handling:

Perform drum and tote filling in well-ventilated area wearing protective eye shields and clothing.

Storage:

Store in a cool, dry, ventilated area. Keep containers closed when not in use.

**8. Exposure Controls / Personal Protection**

Exposure Controls:

Not available.

Respiratory Protection:

Respiratory protection approved by NIOSH/MSHA for protection against organic vapors should be used to avoid inhalation of excessive air contaminates. Avoid hot vapors when mixing or packaging.

Ventilation:

Local exhaust ventilation should be used to control the emission of air contaminates. General dilution ventilation may assist with the reduction of air contaminant concentrations.

Hand protection:

Wear gloves.

Eye Protection:

Safety glasses with side shields.

Skin and Body Protection:

Wear impervious clothing, boots and apron as appropriate.

Other Precautions:

Exercise good chemical handling practice. Wash with soap and water before eating, drinking or using toilet facilities. Clean contaminated clothing before reuse.

Facilities:

There should be a shower facility and eyewash in the building where this product is being stored and handled.

**9. Physical and Chemical Properties**

<u>Physical Form:</u>	Oily liquid
<u>Appearance &amp; Odor:</u>	Light yellow liquid/ bland odor/ Clear/ Mild ester odor
<u>Refractive Index:</u>	25C 1.435
<u>Specific Gravity:</u>	0.960 @ 25C
<u>Solubility in Water:</u>	<0.005%
<u>Flash Point, TAG CC F:</u>	400°F 93° C
<u>Percent Volatiles (by weight):</u>	Not available
<u>Evaporation Rate (Water ~ I):</u>	<1 (butyl acetate=1)
<u>Vapor Pressure ( mm Hg):</u>	<.01 mm Hg @25C
<u>Vapor Density (Air ~ I):</u>	Not available
<u>Boiling Point (°F) Initial:</u>	>180°C (356°F) 285° C (545° F)
<u>Auto ignition Temperature, °C:</u>	Not available
<u>Flammable Limits, %(V):</u>	Not available

## **10. Stability and Reactivity**

<u>Stability:</u>	This product is stable under normal conditions.
<u>Incompatibility (Materials to Avoid):</u>	Material reacts with strong oxidizing agents, bases and acid.
<u>Conditions to Avoid:</u>	Avoid extreme heat.
<u>Hazardous Polymerization:</u>	Will not occur under normal circumstances.
<u>Hazardous Decomposition:</u>	This product decomposes under high temperature and humidity into oxides of carbon. Thermal decomposition may yield formaldehyde-like materials.

## **11. Toxicological Information**

This material is not listed as a carcinogen or potential carcinogen by NTP, IARC, or OSHA.

<u>Oral:</u>	LD50 rat = 1746 mg/kg. LD50 mouse = 2700 mg/kg. LD50 Rats: >2000 mg/kg.
<u>Dermal:</u>	LD50 Rats: >2000 mg/kg.
<u>Skin Irritation:</u>	Rabbit: No irritation.
<u>Eye Irritation:</u>	Rabbit: Slight Irritation.

Sensitization:

Guinea pig: Not a skin sensitizer.

## **12. Ecological Information**

This product does not contain any ozone depleting compounds (ODC's).

Biodegradability: OECD Test Guideline 301 – 80-90% - Readily biodegradable.

48 hr. EC50 (Daphnia magna): 87 mg/L.

96 hr. LC50 (Rainbow Trout): 491 mg/L.

96 hr. NOEC (Rainbow Trout): 43 mg/L.

72 hr. EC50 Algae: 53 mg/L

## **13. Disposal Considerations**

Reclaim or Dispose of material in accordance with all applicable local, state, and federal regulations. Empty containers can be rinsed with a suitable solvent/surfactant and steamed to remove residual product and fumes before disposal or reuse in accordance with applicable regulations.

## **14. Transport Information**

D.O.T. Shipping Name: Not regulated.

Air - ICAO (international Civil Aviation Organization): Not regulated.

Sea - IMDG (International Maritime Dangerous Goods): Not regulated.

Canada Transport Hazardous Goods: Not restricted.

European Transportation: ADR/RID HAZ. CLASS.: Not regulated.

US Customs Harmonized Tariff Code: 2911.00.50.00

## **15. Regulatory Information**

All components of this material are on the TSCA Inventory.

All components of this material are on the Canadian DSL.

Australian Inventory of Chemical Substances (AICS): This product is listed on the AICS of Australia.

China (IECSC): This product is listed on the IECSC of China.

European EINECS: This product is listed on the EINECS of Europe.

Korean Existing Chemicals List (ECL): This product is listed on the ECL Inventory of Korea.

<u>Japan ENCS:</u>	This product is listed on the ENCS.
<u>Philippines (PICCS):</u>	This product is NOT LISTED on the PICCS of the Philippines.
<u>SARA 311/312 Hazards:</u>	Chronic.
<u>SARA 313 Ingredients:</u>	Glycol Ether Compounds.
<u>New Jersey RTK Label Information:</u> Dibutoxyethoxyethyl Formal, CAS No.143-29-3, 112-34-5, 50-00-0	
<u>Pennsylvania RTK Label Information:</u> Dibutoxyethoxyethyl Formal, CAS No.143-29-3, 112-34-5, 50-00-0	

## 16. Other Information

The above information has been compiled from what we believe to be credible sources. To our knowledge the information is accurate and reliable, however, it is not guaranteed. Any recommendations issued by HB Chemical personnel or literature is derived from experience and by no means should be taken as fact or construed as a recommendation to violate of any law, regulation or patent. It is the users responsibility to determine the suitability of any HB supplied material in their application. The individual conditions of each customer are well outside of our control and we cannot be held liable for its functionality and use. Please contact our office should you need specific information beyond what is supplied above. As with all Chemical usage safety precautions beyond the stated are highly recommended.