



## Material Safety Data Sheet

Prepared in accordance with ISO 11014-1/ANSI standard Z400.1-2004

Print Date Dec-09-2008

Revision Date Dec-09-2008

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product code** 97HTBK  
**Product name** Halftone Black  
**Product description** 9700 Series All Purpose Screen Ink

#### Manufacturer or supplier's details

UNITED STATES  
Nazdar Company  
8501 Hedge Lane Terrace  
Shawnee, KS 66227  
Tel: 1-913-422-1888  
Tel: 1-800-677-4657  
Fax: 1-913-422-2294

UNITED KINGDOM  
Nazdar Limited  
7 Barton Road  
Heaton Mersey Industrial Estate  
Stockport, Cheshire SK4 3EG  
Tel: +44 161 442 2111

#### Emergency Telephone Number

USA: Chemtrec: 1-800-424-9300  
Outside USA: Chemtrec: 1-703-527-3887

Website: [www.nazdar.com](http://www.nazdar.com)  
MSDS Information: 1-913-422-1888 ext 2305  
MSDS Contact: Regulatory Compliance  
email: [regcomp@nazdar.com](mailto:regcomp@nazdar.com)

### 2. HAZARDS IDENTIFICATION

*This product is a preparation. Health hazard information is based on its components.*

**Appearance** Viscous liquid.  
**Flammable Properties** Combustible liquid and vapor.  
**Emergency Overview** Harmful. Irritant. May cause drowsiness and dizziness.

**Eyes** Moderately irritating to the eyes.  
**Skin** Harmful in contact with skin. May be absorbed through the skin in harmful amounts. May cause skin irritation and/or dermatitis. Prolonged or repeated skin contact with liquid may cause defatting resulting in drying, redness and possible blistering. May be harmful if absorbed through skin.

**Inhalation** Harmful by inhalation. Avoid breathing vapors or mists. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. Inhalation of vapours is irritating to the respiratory system, may cause throat pain and cough.

**Ingestion** Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
2-Butoxyethanol	111-76-2	30 - 60
Ethylene glycol monobutyl ether acetate	112-07-2	10 - 30
Silica, amorphous fumed (crystalline free)	112945-52-5	5 - 10
Carbon black	1333-86-4	1 - 5

- When referencing TSCA, use Silica CAS# 7631-86-9. CAS# 112945-52-5 was created to help further categorize the family of Silica. It has not yet been listed on TSCA.

### 4. FIRST AID MEASURES

**Skin Contact** Wash off immediately with soap and plenty of water. Use a mild soap if available. Rinse immediately with plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation develops, get medical attention.

<b>Eye Contact</b>	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately if irritation develops and persists.
<b>Inhalation</b>	Move to fresh air. If breathed in, move person into fresh air. If breathing is irregular or stopped, administer artificial respiration. Get medical attention immediately.
<b>Ingestion</b>	If swallowed, DO NOT induce vomiting. Call a physician or Poison Control Centre immediately. Never give anything by mouth to an unconscious person.

## 5. FIRE-FIGHTING MEASURES

<b>Flammable Properties</b>	Combustible liquid and vapor.
<b>Suitable Extinguishing Media</b>	Foam. Carbon dioxide (CO <sub>2</sub> ). Dry chemical. Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Protective Equipment and Precautions for Firefighters</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Keep away from fire, sparks and heated surfaces. Keep container tightly closed. Cool containers / tanks with water spray. Fire or intense heat may cause violent rupture of packages.
<b>Specific Hazards Arising from the Chemical</b>	Thermal decomposition can lead to release of irritating gases and vapours. Burning produces obnoxious and toxic fumes.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Remove all sources of ignition. Heat, flames and sparks. Ventilate the area. Avoid breathing dust or vapor. Avoid contact with skin, eyes and clothing. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
<b>Methods for Cleaning Up</b>	Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Do not use sparking tools.
<b>Environmental Precautions</b>	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

## 7. HANDLING AND STORAGE

<b>Handling</b>	Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Remove and wash contaminated clothing before re-use. Discard contaminated shoes. When using do not smoke. Take notice of labels and material safety data sheets for the working chemicals. Do not take internally. Harmful or fatal if swallowed.
<b>Storage</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep out of the reach of children. Keep away from heat and sources of ignition. Take notice of the directions of use on the label.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Guidelines

Component	Weight %	ACGIH TLV	OSHA PEL	Ontario TWAEV
2-Butoxyethanol	30 - 60	TWA: 20 ppm	TWA: 120 mg/m <sup>3</sup> TWA: 25 ppm Skin TWA: 50 ppm TWA: 240 mg/m <sup>3</sup>	TWA: 20 ppm Skin
Ethylene glycol monobutyl ether acetate	10 - 30	TWA: 20 ppm		TWA: 20 ppm
Carbon black	1 - 5	TWA: 3.5 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup>

Component	Weight %	NIOSH IDLH	Mexico OEL (TWA)
2-Butoxyethanol	30 - 60	700 ppm	TWA: 120 mg/m <sup>3</sup> TWA: 26 ppm STEL: 360 mg/m <sup>3</sup> STEL: 75 ppm
Carbon black	1 - 5	1750 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup> STEL: 7 mg/m <sup>3</sup>

NIOSH IDLH: Immediately Dangerous to Life or Health

**Engineering Measures** Use only with adequate ventilation. Use ventilation adequate to keep exposures below recommended exposure limits. See MSDS. In case of insufficient ventilation, wear suitable respiratory equipment.

### Personal Protective Equipment

#### Respiratory Protection

Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (dust). Respirator with a vapour filter.

#### Eye Protection

Ensure that eyewash stations and safety showers are close to the workstation location. Avoid contact with eyes. Safety glasses with side-shields. Goggles. Face-shield.

#### Skin Protection

Wear protective gloves/clothing. Solvent-resistant apron and boots.

### General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands before eating, drinking, or smoking. Remove and wash contaminated clothing before re-use. Regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Viscous liquid	<b>Physical State</b>	Liquid
<b>Odor</b>	Characteristic	<b>Odor Threshold</b>	No information available
<b>pH</b>	No information available	<b>Autoignition Temperature</b>	No information available
<b>Boiling point/Boiling Range</b>	>149°C / >300°F	<b>Melting Point/Range</b>	No information available
<b>Freezing Point/Range</b>	No information available	<b>Solubility</b>	No information available
<b>Evaporation Rate</b>	No information available	<b>Partition Coefficient (n-octanol/water)</b>	No information available
<b>Vapour Pressure</b>	No information available	<b>Vapour Density</b>	Heavier than air
<b>Flammability (solid, gas)</b>	No information available	<b>Flash Point</b>	62°C / 143°F
<b>Flammability Limits in Air</b>		<b>Method</b>	Pensky Martens Closed Cup (PMCC)
<b>Upper</b>	No information available	<b>Photochemically Reactive</b>	No
<b>Lower</b>	No information available		
<b>Weight Per Gallon (lbs/gal)</b>	8.27	<b>Specific Gravity</b>	0.99
<b>VOC by weight</b>	69.016	<b>VOC by volume</b>	No information available
<b>VOC lbs/gal</b>	5.708	<b>VOC grams/liter</b>	683.924

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable under normal conditions.
<b>Conditions to Avoid</b>	Heat, flames and sparks.
<b>Incompatible Products</b>	Strong acids. Strong bases. Strong oxidizing agents. Reducing agents.
<b>Hazardous Decomposition Products</b>	Thermal decomposition can lead to release of irritating gases and vapours. Carbon dioxide (CO <sub>2</sub> ). Carbon monoxide.
<b>Possibility of Hazardous Reactions</b>	None under normal processing.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
2-Butoxyethanol	470 mg/kg ( Rat )	2270 mg/kg ( Rat ) 220 mg/kg ( Rabbit )	2.21 mg/L ( Rat ) 4 h 450 ppm ( Rat ) 4 h
Ethylene glycol monobutyl ether acetate	1600 mg/kg ( Rat )	1480 mg/kg ( Rabbit )	
Silica, amorphous fumed (crystalline free)	3160 mg/kg ( Rat )		
Carbon black	15400 mg/kg ( Rat )	3 g/kg ( Rabbit )	

### Chronic Toxicity

Component	ACGIH	IARC	NTP	OSHA
2-Butoxyethanol	A3			
Ethylene glycol monobutyl ether acetate	A3			
Carbon black		Group 2B		X

Carbon black is classified as a carcinogen by the IARC (possibly carcinogenic to humans, Group 2B). In their evaluation of carbon black, IARC indicates exposure to carbon black, per se, does not occur when it remains bound within a product matrix, specifically, rubber, ink, or paint. Carbon black is present only in a bound form in this preparation.

#### Legend:

ACGIH: (American Conference of Governmental Industrial Hygienists)  
 IARC: (International Agency for Research on Cancer)  
 OSHA: (Occupational Safety & Health Administration)

A3 - Animal Carcinogen  
 Group 2B - Possibly Carcinogenic to Humans  
 X - Present

<b>Sensitisation</b>	No information available
<b>Mutagenic Effects</b>	No information available
<b>Reproductive Effects</b>	No information available
<b>Developmental Effects</b>	No information available
<b>Teratogenicity</b>	No information available
<b>Chronic Effects</b>	Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effect, such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system.
<b>Target Organ Effects</b>	Blood, Central nervous system, Eyes, Hematopoietic System, Kidney, Liver, Lymphatic System, Respiratory system, Skin.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

We have no quantitative data concerning the ecological effects of this product. Environmental fate information is derived from consideration of the properties of the ingredients. Should not be released into the environment.

Component	Freshwater Algae	Freshwater Fish	Water Flea
2-Butoxyethanol		96 Hr LC50 Lepomis macrochirus: 2950 mg/L	24 Hr EC50 water flea: 1720 mg/L; 24 Hr LC50 Daphnia magna: 1698-1940 mg/L
Ethylene glycol monobutyl ether acetate	72 Hr EC50 Scenedesmus subspicatus: >500 mg/L		48 Hr EC50 water flea: 37 mg/L
Carbon black			24 Hr EC50 Daphnia magna: >5600 mg/L

<b>Persistence and Degradability</b>	No information available
<b>Bioaccumulation</b>	No information available
<b>Mobility in Environmental Media</b>	No information available

Component	log Pow
2-Butoxyethanol	0.81
Ethylene glycol monobutyl ether acetate	1.51

### 13. DISPOSAL CONSIDERATIONS

<b>Waste Disposal Methods</b>	Dispose of contents/container in accordance with local regulation.
<b>Contaminated Packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal.

### 14. TRANSPORT INFORMATION

#### DOT

Printing Ink, Not Regulated

#### ICAO/IATA

Not classified as dangerous in the meaning of transport regulations

#### IMDG/IMO

Not classified as dangerous in the meaning of transport regulations

### 15. REGULATORY INFORMATION

#### International Inventories

Listed on TSCA. For further information, please contact: Manufacturer, importer, supplier

#### U.S. Federal Regulations

##### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Component	CAS-No	Weight %	SARA 313 - Threshold Values
2-Butoxyethanol	111-76-2	30 - 60	1.0
Ethylene glycol monobutyl ether acetate	112-07-2	10 - 30	1.0

#### **Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product contains the following HAPs:

Component	CAS-No	Weight %
Ethylene glycol monobutyl ether acetate	112-07-2	10 - 30

#### U.S. State Regulations

##### **California Prop. 65**

WARNING! This product contains a chemical known in the State of California to cause cancer. WARNING! This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

Component	CAS-No	Weight %
Ethyl benzene (contaminant)	100-41-4	< 0.1
Epichlorohydrin	106-89-8	< 0.0001
Toluene	108-88-3	< 0.0001
Carbon black	1333-86-4	1 - 5
Benzene	71-43-2	< 0.0001

#### **State Right-to-Know**

Component	Minnesota	Florida	New Jersey	Pennsylvania	Massachusetts	Rhode Island

