MATERIAL SAFETY DATA SHEET

Revision date: February 5, 2015

SECTION 1: IDENTIFICATION

Product Identifier: 2-Color Ink Pad and Refill Ink

Product Code(s): 6193

Product Use: Ink for marking porous surfaces

Chemical Family: Water-based pigmented ink

Manufacturer's name and address: Identity Group
1480 Gould Drive
Cookeville, TN, USA 35806

Information Telephone #: 931-432-4000 (Monday – Friday 8:00 am – 5:00 pm Central Standard Time)

24 Hr. Emergency Telephone #: Chemtrec 1-800-424-9300 (Within Continental U.S.)
Chemtrec 1-703-527-3887 (Outside U.S.)

SECTION 2: HAZARDS IDENTIFICATION

Classification:

Acute Toxicity, Oral	Category 3	
Acute toxicity, Inhalation	Category 3	
Acute toxicity, Dermal	Category 3	
Skin corrosion	Category 1B	
Serious eye damage	Category 1	
Germ cell mutagenicity	Category 2	
Specific target organ toxicity – repeated exposure, Oral	Category 2	Kidney
Acute aquatic toxicity	Category 3	
Chronic aquatic toxicity	Category 2	

Labeling:

Symbols:

Signal Word: Warning

Hazard statements:

H301 + H311 + H331	Toxic if swallowed, in contact with skin or inhaled
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H341	Suspected of causing genetic defects
H373	May cause damage to organs (Kidney) through prolonged or repeated exposure if swallowed
H411	Toxic to aquatic life with long lasting effects

Precautionary statements:

P202	Do not handle until all safety precautions have been read and understood
P264	Wash skin thoroughly after handling
P273	Avoid release to the environment
P281	Use personal protective equipment as required
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.

P305+351+338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P501 Dispose of contents/container to an approved waste disposal plant.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS #	Wt. %	GHS Classification	Hazard Statements	Pictograms
Ethylene glycol	107-21-1	10 - 20	Acute Toxicity, Oral (Cat. 4) Specific target organ toxicity – repeated exposure, Oral (Cat. 2) Kidney	H302 H373	
Phenol	108-95-2	0.2	Acute toxicity, Oral (Cat. 3) Acute toxicity, Inhalation (Cat. 3) Acute toxicity, Dermal (Cat. 3) Skin corrosion (Cat. 1B) Serious eye damage (Cat. 1) Germ cell mutagenicity (Cat. 2) Specific target organ toxicity – repeated exposure (Cat. 2) Acute aquatic toxicity (Cat. 3) Chronic aquatic toxicity (Cat. 2)	H301 H311 H331 H314 H318 H341 H373 H402 H411	

SECTION 4: FIRST AID MEASURES

Inhalation: Immediately remove person to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Seek immediate medical attention/advice.
Skin contact: This material does not constitute a skin irritation or sensitization hazard.
Eye contact: Flush eyes with water for at least 15 minutes while holding eyelids open. When symptoms persist or in all cases of doubt, seek medical advice.
Ingestion: This material does not pose an ingestion hazard aside from choking.
Notes for physician: Treat symptomatically.

SECTION 5: FIRE FIGHTING MEASURES

Suitable extinguishing media: Dry chemical, foam, carbon dioxide and water fog

Fire hazards/conditions of flammability: This material is not flammable.

Explosion data: Sensitivity to mechanical impact / static discharge: Not expected to be sensitive to mechanical impact or static discharge.

Special fire-fighting procedures/equipment:
Firefighters should wear protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame.

Hazardous combustion products: Oxides of carbon and nitrogen, irritating fumes and smoke.

NFPA Rating: Health: 2 Flammability: 0 Instability: 0 Special Hazards: 0

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions: All persons dealing with clean-up should wear the appropriate protective equipment. Do not eat, drink or smoke while participating in clean up.

Environmental precautions: Ensure spilled product does not enter drains, sewers, waterways or confined spaces. For large spills, dike the area to prevent spreading.

Spill response/cleanup: Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). Notify the appropriate authorities as required.

Prohibited materials: None specific

Special spill response procedures: In case of a transportation accident, in the United States contact CHEMTREC at 1-800-424-9300 or International at 1-703-527-3887.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling: No special precautions needed.

Conditions for safe storage: Store in a cool, dry, well-ventilated area. Store away from incompatibles, temperature extremes and out of direct sunlight.

Incompatible materials: Strong oxidizing agents; strong reducing agents; acids

Special packaging materials: No special materials required.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with workplace control parameters:

Component	CAS No.	Value	Control Parameters	Source
Ethylene glycol	107-21-1	C	100 mg/m3	USA ACGIH Threshold Limit Values (TLV)
			Remarks	Eye and Upper Respiratory Tract irritation Eye irritation Not classifiable as a human carcinogen

Component	CAS No.	Value	Control Parameters	Source
Phenol	108-95-2	TWA	5 ppm	USA ACGIH Threshold Limit Values (TLV)
			Remarks	Central nervous system impairment Upper respiratory tract irritation Lung damage Not classifiable as a human carcinogen Danger of cutaneous absorption
		TWA	5 ppm 19 mg/m3	USA NIOSH Recommended Exposure Limits
			Remarks	Potential for dermal absorption
		C	15.6 ppm 60 mg/m3	USA NIOSH Recommended Exposure Limits
			Remarks	Potential for dermal absorption 15 minute ceiling value
		TWA	5 ppm 19 mg/m3	USA OSHA Table Z-1 Limits for Air Contaminants – 1910.1000
			Remarks	Skin designation The value in mg/m3 is approximate

Ventilation and engineering measures: Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits.

Respiratory protection: If the TLV is exceeded, a NIOSH/MSHA-approved respirator is advised. Confirmation of which type of respirator is most suitable for the intended application should be obtained from respiratory protection suppliers.

Skin protection: Impervious gloves must be worn when using this product if skin contact is possible. Advice should be sought from glove suppliers.

Eye / face protection: Good industrial hygiene practices should be used when handling this product including preventing eye contact and minimizing skin contact and inhalation.

Other protective equipment: No special protection required.

General hygiene considerations: No special considerations required.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid (ink)
Appearance: Black, red
Odor: None
Odor Threshold: N/Av
Specific Gravity: Approximately 1.0
pH: Not determined
Boiling point: 212 deg. F
Melting/Freezing point: Not determined
Coefficient of water/oil distribution: Not determined
Vapor pressure (mm Hg @ 20ºC / 68ºF): Not determined
Vapor density (Air = 1): Not determined
Evaporation rate (n-Butyl acetate = 1): Slower than butyl acetate
Solubility in water: Partially soluble

Flash Point	>200 ºF, TCC
Auto-ignition temperature	Not applicable
Lower flammable limit (% by vol)	Not applicable
Upper flammable limit (% by vol)	Not applicable
Flame Projection Length	Not available
Flashback observed	Not available

SECTION 10: STABILITY AND REACTIVITY

Chemical stability:	Stable under the recommended storage and handling conditions prescribed.
Possibility of hazardous reactions:	None are known.
Conditions to avoid:	Avoid temperature extremes.
Materials to avoid and incompatibility:	See Section 7 (Handling and Storage) for further details.
Hazardous decomposition products:	None known; refer to hazardous combustion products in Section 5.

SECTION 11: TOXICOLOGICAL INFORMATION

Routes of exposure: *Skin – May cause irritation* .

Toxicological data:

Ingredient		LD_{50} Oral, rat	LD_{50} Rabbit, dermal	Skin corrosion/irritation Skin, rabbit	Serious eye damage/eye irritation Eyes, rabbit
Ethylene glycol		4,700 mg/kg	10,626 mg/kg	No skin irritation	Mild eye irritation – 24 h
Phenol		317 mg/kg	630 mg/kg	Severe skin irritation – 24 h	Corrosive
		Convulsions or effect on seizure threshold			

This substance has not been evaluated as a mixture.

Carcinogenic status:

IARC:	3 – Group 3: Not classifiable as to its carcinogenicity in humans (Phenol)
NTP:	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive effects: Laboratory experiments have shown teratogenic effects (Ethylene glycol)

Teratogenicity: No information found.

Germ Cell Mutagenicity: In vitro tests showed mutagenic effects (Phenol).
Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

Specific target organ toxicity – single exposure: No information found.

Specific target organ toxicity – repeated exposure: May cause damage to organs through prolonged or repeated exposure (kidney).

Epidemiology: No information found.

Conditions aggravated by overexposure: No information found.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity: No data is available on the mixture itself.

Ethylene glycol :	Toxicity to fish:	LC_{50}	Oncorhynchus mykiss	18,500 mg/l	96 h
	Toxicity to aquatic invertebrates:	EC_{50}	Daphnia magna (water flea)	74,000 mg/l	24 h
Phenol:	Toxicity to fish:	LC_{50}	Leuciscus idus	14-25 mg/l	48 h
	Toxicity to aquatic invertebrates:	EC_{50}	Daphnia magna (water flea)	56 mg/l	48 h
	Toxicity to algae:	EC_{50}	Chlorella vulgaris	370 mg/l	96 h

Mobility: This substance has not been evaluated as a mixture.

Persistence: Ethylene glycol: Ratio BOD/ThBOD 0.78%

Bioaccumulation potential: This substance has not been evaluated as a mixture.

Other adverse environmental effects: This substance has not been evaluated as a mixture.

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal recommendations: Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

Hazardous Waste Code /RCRA: Not regulated.

SECTION 14: TRANSPORT INFORMATION

This material is not UN / IATA regulated.

This material is not classified as ICAO/IATA-DGR Dangerous Goods.

This material is not classified as hazardous per the IMDG Code.

This material is not classified as hazardous per ADR.

This material is not classified as hazardous per the U.S. Department of Transportation (DOT).

This material is not UN / IATA regulated.

Marine Pollutant: No

SECTION 15: REGULATORY INFORMATION

Inventory Status: All listed ingredients appear on the Toxic Substances Control Act (TSCA) Inventory, EINECS/ELINCS, AICS, and DSL.

SARA 302: Sec. 302, Extremely Hazardous Substances, 40 CFR 355: Phenol CAS 108-95-2 0.2%

SARA 311/312 : 311/312 Acute Health Hazard, Chronic Health Hazard

SARA 313: Subject to reporting levels established by SARA Title III, Section 313: Ethylene glycol CAS 107-21-1
Phenol CAS 108-95-2

RCRA CODE: None

Hazardous Air Pollutants (HAPS): Ethylene glycol
Phenol

US State "Right to Know" Laws: California Proposition 65: None

Massachusetts Right To Know Components: Ethylene glycol
Phenol

Pennsylvania Right To Know Components: Ethylene glycol
Phenol

New Jersey Right To Know Components: Ethylene glycol
Phenol

SECTION 16: OTHER INFORMATION

HMIS Rating: Health: 2* Flammability: 0 Reactivity: 0

* Chronic hazard 0-Minimal 1- Slight 2- Moderate 3- Serious 4- Severe

Legend:

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Services
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR	Code of Federal Regulations
DOT	Department of Transportation
EPA	Environmental Protection Agency
HMIS	Hazardous Material Identifications System
HSDB	Hazardous Substances Data Bank
IARC	International Agency for Research on Cancer
Inh	Inhalation
MSHA	Mine Safety and Health Administration
NFPA	National Fire Protection Association
NIOSH	National Institute of Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible exposure limit
RCRA	Resource Conservation and Recovery Act
RTECS	Registry and Toxic Effects of Chemical Substances
SARA	Superfund Amendments and Reauthorization Act
STEL	Short Term Exposure Limit
TDG	Canadian Transportation of Dangerous Goods Act and Regulations
TLV	Threshold Limit Values
TPQ	Threshold Planning Quantity
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average
WHMIS	Workplace Hazardous Materials Identification System

References:

1. ACGIH, Threshold Limit Values and Biological Exposure Indices
2. International Agency for Research on Cancer Monographs
3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases (Chempendium, HSDB and RTECs)
4. Material Safety Data Sheets for manufacturers
5. US EPA Title III List of Lists
6. California Proposition 65 List