



## MATERIAL SAFETY DATA SHEET

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: **POLYPRINT PD205W WHITE PIGMENT INK**

Product Use: Ink-Jet Printing Ink

Company Identification

DISTRIBUTOR:

**POLYPRINT SA**

**Monastiriou 301**

**54628 Thessaloniki, Greece**

**Tel: 0030 2310 246418**

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Components (% by weight)

<b>Material</b>	<b>CAS Number</b>	<b>%</b>
Water	7732-18-5	49-79
*Ethylene Glycol	107-21-1	10-20
Humectant	**	1-10
Titanium Dioxide Pigment	13463-67-7	5-15
Polymer	**	5-15

\*Disclosure as a toxic chemical is required under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

Components (Remarks)

\*\*The specific identity for each component not identified by a CAS Registry Number is withheld as a trade secret.

### 3. HAZARDS IDENTIFICATION

#### Potential Health Effects

THIS PRODUCT CAN BE USED SAFELY WHEN USED AS DIRECTED AND WHEN APPLICABLE SAFETY PRECAUTIONS ARE FOLLOWED.

#### POTENTIAL HEALTH EFFECTS FROM PRODUCT

Potential routes of overexposure to this product are skin contact, eye contact and inhalation of vapor.

Ingestion is not expected to be a significant route of exposure for this product under normal use conditions.

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There is no toxicity data available for this specific formulation. Any potential hazards are presumed to be due to exposure to the components.

#### ADDITIONAL HEALTH EFFECTS

Since this mixture has not been tested as a whole to determine the hazards by all routes of exposure, information is provided for each hazardous component of the mixture to meet requirements of OSHA's Hazard Communication Standard (29 CFR 1910.1200).

The effects noted occur from exposure to the pure component unless otherwise noted.

#### INFORMATION FOR COMPONENTS

##### ETHYLENE GLYCOL

**Eye Contact** - May cause slight transient (temporary) eye irritation. Corneal injury is unlikely. Vapors or mists may cause eye irritation.

**Skin Contact** - Essentially nonirritating to skin. Repeated skin exposure to large quantities may result in absorption of harmful amounts.

**Inhalation** - At room temperature, exposure to vapors are minimal due to physical properties; higher temperatures may generate vapor levels sufficient to cause adverse effects.

**Ingestion** - Single dose oral toxicity is considered to be moderate. Excessive exposure may cause central nervous system effects, cardiopulmonary effects (metabolic acidosis), and kidney failure. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; however, swallowing amounts larger than that may cause serious injury, even death.

**Systemic (Other Target Organ) Effects** - Excessive exposure may cause irritation to upper respiratory tract. Observations in animals include kidney and liver effects and deposition of calcium salts in various tissues after long-term dietary intake of ethylene glycol.

**Cancer Information** - Ethylene glycol did not cause cancer in long-term animal studies.

**Teratology (Birth Defects)** - Based on animal studies, ingestion of very large amounts of ethylene glycol appears to be the major and possibly only route of exposure to produce birth defects. Exposures by inhalation (tested nose-only in animals to prevent ingestion) or skin contact, the primary routes of occupational exposure, had minimal or essentially no effect on the fetus.

**Reproductive Effects** - Ingestion of large amounts of ethylene glycol has been shown to interfere with reproduction in animals. Specifically, growth retardation and decreased litter size in rats and mice and mating frequency in mice were observed.

##### HUMECTANT

**Eye Contact** - May cause slight transient (temporary) eye irritation. Corneal injury is unlikely.

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Skin Contact - Prolonged or repeated exposure not likely to cause significant skin irritation. A single prolonged exposure is not likely to result in the material being absorbed through the skin in harmful amounts.

Inhalation - At room temperature, vapors are minimal due to physical properties. If heated or sprayed as an aerosol, airborne material may cause upper respiratory irritation.

Ingestion - Single dose oral toxicity is considered to be extremely low. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; swallowing amount larger than that may cause injury. Signs and symptoms of excessive exposure may be central nervous system effects and increased blood sugar levels.

Systemic (Other Target Organ) Effects - Repeated excessive exposure may cause increased fat levels in blood. Observations in animals include kidney, liver, and gastrointestinal effects with very large oral doses.

Cancer Information - Did not cause cancer in long-term animal studies.

Teratology - Birth defects are unlikely. Exposures having no adverse effects on the mother should have no effect on the fetus.

Reproductive Effects - Reproductive effects seen in female animals are believed to be due to altered nutritional status resulting from extremely high doses in their diets.

Similar effects have been seen in animals fed synthetic diets.

#### Carcinogenicity Information

The following components are listed by IARC, NTP, OSHA or ACGIH as carcinogens.  
None

## 4. FIRST AID MEASURES

### First Aid

#### INHALATION

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

#### SKIN CONTACT

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing. Consult a physician. Wash contaminated clothing before reuse.

#### EYE CONTACT

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

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## INGESTION

Ingestion is not an expected route of exposure during normal use of the product. If ingested, consult a physician.

## 5. FIRE FIGHTING MEASURES

### Flammable Properties

Flash Point : >93.3 oC (>200 oF)  
Method: Closed Cup  
Approximate Flammable Limits in Air, % by Volume  
LEL: 3.2  
UEL: 15.3  
Autoignition Temperature: 398 oC

### **Product is a non-flammable water-based solution.**

Hazardous combustion products (gases/vapors) produced in fire can include carbon monoxide, carbon dioxide and smoke.

### Extinguishing Media

Use media appropriate for surrounding material.

### Fire Fighting Instructions

This product is not flammable. Use normal firefighting procedures for the area.

## 6. ACCIDENTAL RELEASE MEASURES

### Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

### Initial Containment

Dike spill.

### Spill Clean Up

Soak up with absorbent material.

## 7. HANDLING AND STORAGE

### Handling (Personnel)

Avoid contact with eyes, skin, or clothing.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal Protective Equipment

### EYE/FACE PROTECTION

Wear safety glasses. Wear coverall chemical splash goggles and face shield when the possibility exists for eye and face contact due to splashing or spraying of the material.

### RESPIRATORS

Respirators are not needed for normal use.

### PROTECTIVE CLOTHING

If there is potential for significant dermal contact wear appropriate impervious clothing and gloves.

### Applicable Exposure Limits and Exposure Data

#### WATER

PEL (OSHA): None Established

TLV (ACGIH): None Established

AEL\* (Manufacturer): None Established

LD<sub>50</sub> (rat, oral) : >90 mL/kg (RTECS)

LC<sub>50</sub> (rat, inhalation/4 hr.): No data available

#### ETHYLENE GLYCOL

PEL (OSHA): None Established

TLV (ACGIH): Ceiling: 100 mg/m<sup>3</sup>, aerosol

AEL\* (Manufacturer): 50ppm, 8Hr. TWA, Vapor

IEL (2000/39/EC): 52 mg/m<sup>3</sup>, 20 ppm, skin

STEL 104 mg/m<sup>3</sup>, 40 ppm

LD<sub>50</sub> (rat, oral): 4,700 mg/kg (RTECS)

LD<sub>50</sub> (rabbit, dermal): 9,530 uL/kg (RTECS)

LC<sub>50</sub> (rat, inhalation/4 hr.) : >200 mg/m<sup>3</sup> (RTECS)

#### HUMECTANT

PEL (OSHA): 5 mg/m<sup>3</sup>, 8 Hr. TWA (mist, respirable fraction)

15 mg/m<sup>3</sup>, 8 Hr. TWA (mist, total dust)

AEL\* (Manufacturer): None Established

TLV (ACGIH) : 10 mg/m<sup>3</sup>, 8 Hr. TWA (mist)

LD<sub>50</sub> (rat, oral) : >17,000 mg/kg (supplier)

LC<sub>50</sub> (rat, inhalation/4 hr.) : >4.9 mg/liter (supplier)

#### TITANIUM DIOXIDE PIGMENT

PEL (OSHA): 15 mg/m<sup>3</sup> 8 Hr. TWA (total dust)

AEL\* (Manufacturer): 10mg/m<sup>3</sup> 8 Hr. TWA (total dust)

TLV (ACGIH): 10 mg/m<sup>3</sup> 8 Hr. TWA (total dust), A4

LD<sub>50</sub> (rat, oral) : >24,000 mg/kg (supplier)

LC<sub>50</sub> (rat, inhalation/4 hr.) : >10,000 mg/kg (supplier)

#### POLYMER

PEL (OSHA): None Established

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TLV (ACGIH): None Established  
AEL\* (Manufacturer): None Established  
LD<sub>50</sub> (rat, oral): No data available  
LC<sub>50</sub> (rat, inhalation/4 hr.): No data available

\* AEL is Manufacturer's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Physical Data

Form: Liquid  
Color: White  
Odor: Slight  
Solubility in Water: Miscible  
pH: About 7-8  
Specific Gravity: About 1.1

### Other Information

Flash Point : >93.3 oC (>200 oF)  
Method: Closed Cup

### Approximate Flammable Limits in Air, % by Volume

LEL: 3.2  
UE: 15.3  
Autoignition Temperature: 398 oC

## 10. STABILITY AND REACTIVITY

### Chemical Stability

Stable at normal temperatures and storage conditions.

### Incompatibility with Other Materials

None reasonably foreseeable.

### Decomposition

Decomposition does not occur during normal use.

### Polymerization

Polymerization will not occur.

## 11. TOXICOLOGICAL INFORMATION

### Animal Data

No data available for product.

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## **12. ECOLOGICAL INFORMATION**

Ecotoxicological Information  
No data available for product.

## **13. DISPOSAL CONSIDERATIONS**

Waste Disposal  
DO NOT DISCARD INTO ANY SEWERS, INTO ANY BODY OF WATER, OR ON THE GROUND.  
Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local laws and regulations.

## **14. TRANSPORTATION INFORMATION**

(Not meant to be all inclusive)

DOT (Domestic Surface, U.S.A.): Not regulated

ICAO/IATA (Air): Not regulated

IMO/IMDG (Ocean): Not regulated

## **15. REGULATORY INFORMATION**

(Not meant to be all inclusive - selected regulations represented)

### **U.S. Regulations**

Federal Regulations

TSCA Inventory Status - All components of this product are listed, or exempt from listing, on the TSCA 8(b) chemical inventory.

State Regulations

State Right-To-Know

WARNING - SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM (California Proposition 65)

None

### **European Union Regulations**

EU Inventory Status - All components of this product are listed, or are exempt from listing, on the EINECS chemical inventory.

Transport Information - This product is not classified as dangerous within the meaning of transport regulations.

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Labeling - EC-Directive 1999/45/EC

Preliminary assessment

Symbol and classification

Xn Harmful

R-Phrases R22 Harmful if swallowed

### **Switzerland**

Switzerland VOC Regulations (Ordinance 814.018, *Verordnung über die Lenkungsabgabe auf flüchtigen organischen Verbindungen*, as of 28 December 2000)

This product is exempt from Swiss VOC regulations.

## **16. OTHER INFORMATION**

HMIS® Rating

Health: 1

Flammability: 1

Reactivity: 0

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

MSDS Contact Information

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Revision History

July 11, 2007 New MSDS

May 2, 2008 Regulatory review

July 18 2008 Regulatory review

Key

ACGIH American Conference of Governmental Industrial Hygienists

AEL Acceptable Exposure Limit (manufacturer)

Cmpds Compounds

DOT Department of Transportation (U.S.A.)

ET Eastern Time (U.S.A.)

EU European Union

HMIS® Hazardous Material Information System (National Paint and Coatings Association)

IARC International Agency for Research on Cancer

IATA International Air Transport Association

ICAO International Civil Aviation Organization

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IEL Indicative Exposure Limit (EU Directive 2000/39/EC)  
IMDG International Maritime Dangerous Goods  
IMO International Maritime Organization  
LEL or LFL Lower Explosive Limit or Lower Flammable Limit  
M-F Monday through Friday  
NA North America  
NIOSH National Institute of Occupational Safety and Health (U.S.A.)  
NOHSC National Occupational Health and Safety Commission  
(Worksafe Australia)  
NOS Not Otherwise Specified  
NTP National Toxicology Program (U.S.A.)  
OEL Occupational Exposure Limit  
OSHA Occupational Safety and Health Administration (U.S.A.)  
PEL Permissible Exposure Limit  
RTECS Registry of Toxic Effects of Chemical Substances (NIOSH)  
STEL Short Term Exposure Limit  
TLV Threshold Limit Value  
TSCA Toxic Substances Control Act (U.S.A.)  
TWA Time-weighted Average  
UEL or UFL Upper Explosive Limit or Upper Flammable Limit  
U.S.A. United States of America  
VOC Volatile Organic Compound(s)  
WEEL Workplace Environmental Exposure Level

End of MSDS

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