

**Safety Data Sheet (SDS)**

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 09/17/2015

Reviewed on 09/17/2015

**\* 1 Identification****· Product identifier****· Trade name: Image Armor DTG Series Ink - White****· Relevant identified uses of the substance or mixture and uses advised against:**

Water based Direct to Garment Pigmented Ink for printing directly onto fabrics and other substrates. For Use on natural based fiber products such as cotton and man-made fabrics such as polyester with pretreatment.

**· Product description**

Water based Direct to Garment Pigmented Ink for printing directly onto fabrics and other substrates. For Use on natural based fiber products such as cotton and man-made fabrics such as polyester with pretreatment.

**· Details of the supplier of the safety data sheet:****· Manufacturer/Supplier:**

Image Armor, LLC  
220 First Dr. NE  
New Philadelphia, OH 44663  
Phone: 877-673-4377  
Fax: 330-2676-7437  
www.imagearmorinks.com

**· Emergency telephone number:**

Image Armor LLC - 877-673-4377  
Brian Walker - 330-934-0524

**\* 2 Hazard(s) identification****· Classification of the substance or mixture:**

GHS08 Health hazard

STOT RE 2      H373 May cause damage to organs through prolonged or repeated exposure.

Aquatic Chronic 3      H412 Harmful to aquatic life with long lasting effects.

**· Label elements:****· GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

**· Hazard pictograms:**

GHS08

**· Signal word: Warning****· Hazard-determining components of labeling:**

Ethylene glycol

**· Hazard statements:**

May cause damage to organs through prolonged or repeated exposure.

Harmful to aquatic life with long lasting effects.

**· Precautionary statements:**

Do not breathe dust/fume/gas/mist/vapors/spray.

Avoid release to the environment.

Get medical advice/attention if you feel unwell.

Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. on page 2)

## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 09/17/2015

Reviewed on 09/17/2015

**Trade name: Image Armor DTG Series Ink - White**

- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**

HEALTH	2	Health = 2
FIRE	1	Fire = 1
REACTIVITY	0	Reactivity = 0

- **Hazard(s) not otherwise classified (HNOC):** None known

### \* 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous Components:**

CAS: 107-21-1	Ethylene glycol	5-10%
RTECS: KW 2975000	⚠ STOT RE 2, H373; ⚠ Acute Tox. 4, H302	
CAS: 56-81-5	Glycerol	5-10%
RTECS: MA 8050000		
CAS: 2634-33-5	1,2-benzisothiazol-3(2H)-one	≤ 2.5%
	⚠ Eye Dam. 1, H318; ⚠ Aquatic Acute 1, H400; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Skin Sens. 1, H317	

### \* 4 First-aid measures

- **Description of first aid measures:**
- **General information:**  
Symptoms of poisoning may occur after several hours; therefore medical observation is advised for at least 48 hours after the accident.
- **After inhalation:**  
Remove affected person to fresh air. Seek medical attention if symptoms persist.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**  
Immediately wash with water and soap and rinse thoroughly.  
If skin irritation occurs, consult a doctor.
- **After eye contact:**  
Rinse opened eye for at least 15 minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If swallowed drink 1-2 glasses of water, get medical attention.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed:** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed:**  
No further relevant information available.

### \* 5 Fire-fighting measures

- **Extinguishing media:**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture:**  
Decomposition may produce oxides of carbon, nitrogen, sulfur, hydrocarbons, fumes and smoke.

(Contd. on page 3)

## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 09/17/2015

Reviewed on 09/17/2015

**Trade name: Image Armor DTG Series Ink - White**

- **Advice for firefighters:**
- **Protective equipment:**  
As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear to prevent contact with skin and eyes.

\* **6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures:**  
Avoid contact with skin, eyes and clothing.
- **Environmental precautions:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to section 13.  
Ensure adequate ventilation.  
Dispose of the collected material according to regulations.
- **Reference to other sections:**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

\* **7 Handling and storage**

- **Handling**
- **Precautions for safe handling:**  
Avoid contact with skin, eyes and clothing  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities:**
- **Storage**
- **Requirements to be met by storerooms and receptacles:**  
Store in closed containers at temperatures between 5 °C and 25 °C. Do not store in direct sunlight. Keep from freezing. Keep out of reach of children.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** No further relevant information available..
- **Specific end use(s):** No further relevant information available.

\* **8 Exposure controls/personal protection**

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters:**

<b>Components with occupational exposure limits:</b>	
<b>107-21-1 Ethylene glycol</b>	
TLV	Short-term value: NIC-127* mg/m <sup>3</sup> Long-term value: NIC-10** NIC-63.5* mg/m <sup>3</sup> , NIC-25* ppm Ceiling limit value: (100) mg/m <sup>3</sup> (H); *inh. fraction + vapor,P:**inh. fraction, H

(Contd. on page 4)

## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 09/17/2015

Reviewed on 09/17/2015

**Trade name: Image Armor DTG Series Ink - White**

<b>56-81-5 Glycerol</b>	
PEL	Long-term value: 15* 5** mg/m <sup>3</sup> mist; *total dust **respirable fraction
TLV	TLV withdrawn-insufficient data human occup. exp.
<b>13463-67-7 Titanium Dioxide</b>	
PEL	Long-term value: 15* mg/m <sup>3</sup> *total dust
REL	See Pocket Guide App. A
TLV	Long-term value: 10 mg/m <sup>3</sup> withdrawn from NIC

· **Additional information:** The lists that were valid during the creation of this SDS were used as basis.

· **Exposure controls:**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing and wash before reuse.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

· **Breathing equipment:** Not required.

· **Protection of hands:**



Protective gloves

· **Material of gloves:** Chemical resistant

· **Penetration time of glove material:**

The exact break-through time has to be determined and observed by the manufacturer of the protective gloves.

· **Eye protection:**



Tightly sealed goggles

· **Body protection:**



Protective work clothing

### \* 9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

**Form:**

Liquid

**Color:**

Various colors

· **Odor:**

Slight

(Contd. on page 5)

## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 09/17/2015

Reviewed on 09/17/2015

**Trade name: Image Armor DTG Series Ink - White**

- **Odor threshold:** Not determined.
- **pH-value @ 20 °C (68 °F):** 8.2
- **Change in condition**
  - Melting point/Melting range:** Not determined.
  - Boiling point/Boiling range:** 197 °C (387 °F)
- **Flash point:** 111 °C (232 °F)
- **Flammability (solid, gaseous):** Not applicable.
- **Ignition temperature:** 400 °C (752 °F)
- **Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not self-igniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
  - Lower:** 0.9 Vol %
  - Upper:** 53.0 Vol %
- **Vapor pressure @ 20 °C (68 °F):** 0.1 hPa
- **Density:**
  - Relative density:** Not determined.
  - Vapor density:** Not determined.
  - Evaporation rate:** Not determined.
- **Solubility in / Miscibility with:**
  - Water:** Fully miscible.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - Dynamic:** Not determined.
  - Kinematic:** Not determined.
- **Solvent content:**
  - Organic solvents:** 10.0 %
  - Solids content:** 15.1 %
- **Other information:** No further relevant information available.

### \* 10 Stability and reactivity

- **Reactivity:** No further relevant information available.
- **Chemical stability:** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:** Oxides of carbon, nitrogen, hydrocarbons, fumes, and smoke
- **Possibility of hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** Acids, bases and oxidizers
- **Incompatible materials:** Incompatible or can react with acids, bases and oxidizers.
- **Hazardous decomposition products:** No dangerous decomposition products known.

(Contd. on page 6)

## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 09/17/2015

Reviewed on 09/17/2015

**Trade name: Image Armor DTG Series Ink - White**

### \* 11 Toxicological information

· **Information on toxicological effects:**

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

<b>13463-67-7 Titanium Dioxide</b>		
Oral	LD50	>24000 mg/kg (rat)
Dermal	LD50	>10000 mg/kg (rabbit)
Inhalative	LC50/4 h	>6.82 mg/l (rat)
<b>107-21-1 Ethylene glycol</b>		
Oral	LD50	5840 mg/kg (rat)
Dermal	LD50	9530 mg/kg (rabbit)
Inhalative	LC50/96 hours	38.109 mg/l (Trout)
	LC50/48 hrs	16.103 mg/l (daphnia)
<b>56-81-5 Glycerol</b>		
Oral	LD50	12600 mg/kg (rat)
Dermal	LD50	>10000 mg/kg (rabbit)
Inhalative	LC50/96 hours	>50.000 mg/l (Trout)
<b>2634-33-5 1,2-benzisothiazol-3(2H)-one</b>		
Oral	LD50	1020 mg/kg (rat)
Inhalative	LC50/4 h	0.8 mg/l (Trout) (96 hr)

· **Primary irritant effect:**

· **On the skin:**

Irritant to skin and mucous membranes.

May cause an allergic skin reaction.

· **On the eye:**

Irritating effect.

Causes serious eye irritation.

· **Sensitization:** Sensitization possible through skin contact.

· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Irritant

· **Carcinogenic categories:**

· **IARC (International Agency for Research on Cancer):**

(a) Although IARC has classified titanium dioxide as possible carcinogenic to human (2B), their summary concludes: "No significant exposure to titanium dioxide is thought to occur during the use of products which titanium dioxide is bound to other materials, such as in cosmetics or in paints."

(b) OSHA does not regulate Titanium Dioxide as a carcinogen. However, under 29 CFR 1910.1200 the SDS must convey the fact that Titanium Dioxide is a potential carcinogen to rats.

None of the ingredients are listed.

· **NTP (National Toxicology Program):**

None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

(Contd. on page 7)

## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 09/17/2015

Reviewed on 09/17/2015

**Trade name: Image Armor DTG Series Ink - White**

### \* 12 Ecological information

- **Toxicity:**

· <b>Aquatic toxicity:</b>	
<b>13463-67-7 Titanium Dioxide</b>	
EC50	>1000 mg/l (Water flea)
<b>107-21-1 Ethylene glycol</b>	
EC50	3.536 mg/l (Green algae)
<b>2634-33-5 1,2-benzisothiazol-3(2H)-one</b>	
EC50	4.4 mg/l (daphnia) (48 hr)

- **Persistence and degradability:** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential:** No further relevant information available.
- **Mobility in soil:** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Do not allow undiluted product or product that has not been neutralized to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment:**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects:** No further relevant information available.

### \* 13 Disposal considerations

- **Waste treatment methods:**
- **Recommendation:**  
Observe all federal, state and local environmental regulations when disposing of this material.  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### \* 14 Transport information

- **UN-Number:**
- **DOT, ADR, ADN, IMDG, IATA** Non-Regulated Material
- **UN proper shipping name:**
- **DOT, ADR, ADN, IMDG, IATA** Non-Regulated Material
- **Transport hazard class(es):**
- **DOT, ADR, ADN, IMDG, IATA**
- **Class:** Non-Regulated Material
- **Packing group:**
- **DOT, ADR, IMDG, IATA** Non-Regulated Material
- **Environmental hazards:** Not applicable.
- **Special precautions for user:** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.
- **UN "Model Regulation":** Non-Regulated Material

(Contd. on page 8)

## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 09/17/2015

Reviewed on 09/17/2015

**Trade name: Image Armor DTG Series Ink - White**

### \* 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
- **SARA (Superfund Amendments and Reauthorization):**

· **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

107-21-1 Ethylene glycol

121-44-8 Triethylamine

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **California Proposition 65:**

· **Chemicals known to cause cancer:**

13463-67-7 Titanium Dioxide

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

· **Carcinogenic categories:**

· **EPA (Environmental Protection Agency):**

None of the ingredients are listed.

· **TLV (Threshold Limit Value established by ACGIH):**

13463-67-7 Titanium Dioxide

A4

107-21-1 Ethylene glycol

A4

121-44-8 Triethylamine

A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health):**

13463-67-7 Titanium Dioxide

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms:**



GHS08

· **Signal word:** Warning

· **Hazard-determining components of labeling:**

Ethylene glycol

· **Hazard statements:**

May cause damage to organs through prolonged or repeated exposure.

Harmful to aquatic life with long lasting effects.

(Contd. on page 9)



## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 09/17/2015

Reviewed on 09/17/2015

**Trade name: Image Armor DTG Series Ink - White**

**Precautionary statements:**

- Do not breathe dust/fume/gas/mist/vapors/spray.
- Avoid release to the environment.
- Get medical advice/attention if you feel unwell.
- Dispose of contents/container in accordance with local/regional/national/international regulations.

**National regulations:**

The product is subject to be classified according with the latest version of the regulations on hazardous substances.

**State Right to Know:**

CAS: 13463-67-7	Titanium Dioxide ⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	15-35%
CAS: 107-21-1 RTECS: KW 2975000	Ethylene glycol ⚠ STOT RE 2, H373; ⚠ Acute Tox. 4, H302	5-10%
CAS: 56-81-5 RTECS: MA 8050000	Glycerol	5-10%
CAS: 121-44-8	Triethylamine ⚠ Flam. Liq. 2, H225; ⚠ Skin Corr. 1A, H314; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332	≤ 2.5%
CAS: 2634-33-5	1,2-benzisothiazol-3(2H)-one ⚠ Eye Dam. 1, H318; ⚠ Aquatic Acute 1, H400; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Skin Sens. 1, H317	≤ 2.5%
All ingredients are listed.		

**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**16 Other information**

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

**Date of preparation / last revision:** 09/17/2015 / 4

**Abbreviations and acronyms:**

- ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road
- ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
- IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- ACGIH: American Conference of Governmental Industrial Hygienists
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Acute Tox. 4: Acute toxicity, Hazard Category 4
- Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
- Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
- Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
- STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2
- Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1
- Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

**\* Data compared to the previous version altered.**