

Safety Data Sheet (SDS)

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

Issue date 07/22/2015

Reviewed on 07/22/2015

1 Identification**Product identifier****Trade name: Image Armor E-SERIES DTG Inks - Black****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 the central nervous system, the kidneys and the heart through prolonged or repeated exposure.



GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

Label elements:**GHS label elements**

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

Hazard pictograms:

GHS07 GHS08

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

Ethylene glycol
1,2-benzisothiazol-3(2H)-one

Hazard statements:

May cause an allergic skin reaction.

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May cause damage to the central nervous system, the kidneys and the heart through prolonged or repeated exposure.

Precautionary statements:

- Avoid breathing dust/fume/gas/mist/vapors/spray.
- Contaminated work clothing must not be allowed out of the workplace.
- Do not breathe dust/fume/gas/mist/vapors/spray.
- Wear protective gloves.
- Get medical advice/attention if you feel unwell.
- If on skin: Wash with plenty of water.
- If skin irritation or rash occurs: Get medical advice/attention.
- Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
- Wash contaminated clothing before reuse.
- Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:

NFPA ratings (scale 0 - 4)



HMS-ratings (scale 0 - 4)



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 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: 1333-86-4 RTECS: FF 5150100	Carbon black ⚠ Skin Irrit. 2, H315; ⚠ Eye Irrit. 2A, H319; ⚠ STOT SE 3, H335	1-5%
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	<0.5%
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	<0.1%

* **4 First-aid measures**

Description of first aid measures:

General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation: Remove affected person to fresh air. Seek medical attention if symptoms persist.

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- **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 several 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.
- **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:**
Wear protective equipment. Keep unprotected persons away.
Avoid contact with skin, eyes and clothing.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.
- **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:**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
Avoid contact with skin, eyes and clothing
Avoid breathing fume/gas/mist/vapors/spray.
- **Information about protection against explosions and fires:** Keep protective respiratory device available.
- **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 35 °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:** None.

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- **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:**

· **Components with occupational exposure limits:**

107-21-1 Ethylene glycol

TLV	Short-term value: NIC-127* mg/m ³ Long-term value: NIC-10** NIC-63.5* mg/m ³ , NIC-25* ppm Ceiling limit value: (100) mg/m ³ (H); *inh. fraction + vapor,P:**inh. fraction, H
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56-81-5 Glycerol

PEL	Long-term value: 15* 5** mg/m ³ mist; *total dust **respirable fraction
TLV	TLV withdrawn-insufficient data human occup. exp.

1333-86-4 Carbon black

PEL	Long-term value: 3.5 mg/m ³
REL	Long-term value: 3.5* mg/m ³ *0.1 in presence of PAHs;See Pocket Guide Apps.A+C
TLV	Long-term value: 3* mg/m ³ *inhalable fraction

- **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.
 Store protective clothing separately.

- **Breathing equipment:** Not required.

- **Protection of hands:**



Protective gloves

- **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

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· **Body protection:**



Protective work clothing

* 9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

· **Form:**

Liquid

· **Color:**

Cyan (Blue), Magenta (Red), or Yellow

· **Odor:**

Faint

· **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:**

5.1 %

· **Other information:**

No further relevant information available.

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* 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.

11 Toxicological information

- **Information on toxicological effects:**
- **Acute toxicity:**

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

107-21-1 Ethylene glycol		
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)
56-81-5 Glycerol		
Oral	LD50	12600 mg/kg (rat)
Dermal	LD50	>10000 mg/kg (rabbit)
Inhalative	LC50/96 hours	>50.000 mg/l (Trout)
1333-86-4 Carbon black		
Oral	LD50	10000 mg/kg (rat)
2634-33-5 1,2-benzisothiazol-3(2H)-one		
Oral	LD50	1020 mg/kg (rat)
Inhalative	LC50/4 h	0.8 mg/l (Trout) (96 hr)

- **Primary irritant effect:**
- **On the skin:** May cause an allergic skin reaction.
- **On the eye:** No irritating effect.
- **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.

· **Carcinogenic categories:**

· IARC (International Agency for Research on Cancer):	
1333-86-4 Carbon black	2B

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

None of the ingredients are listed.

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

None of the ingredients are listed.

12 Ecological information

 · **Toxicity:**

 · **Aquatic toxicity:**

107-21-1 Ethylene glycol

EC50	3.536 mg/l (Green algae)
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2634-33-5 1,2-benzisothiazol-3(2H)-one

EC50	4.4 mg/l (daphnia) (48 hr)
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 · **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 product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

 · **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:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Observe all federal, state and local environmental regulations when disposing of this material.

 · **Uncleaned packagings:**

 · **Recommendation:** Disposal must be made according to official regulations.

* 14 Transport information

 · **UN-Number:**

· DOT, ADR, ADN, IMDG, IATA	Non-Regulated Material
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 · **UN proper shipping name:**

· DOT, ADR, ADN, IMDG, IATA	Non-Regulated Material
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 · **Transport hazard class(es):**

· DOT, ADR, ADN, IMDG, IATA	Non-Regulated Material
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· Class:	Non-Regulated Material
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 · **Packing group:**

· DOT, ADR, IMDG, IATA	Non-Regulated Material
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 · **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

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* 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
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121-44-8	Triethylamine
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- **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

- **California Proposition 65:**

- **Chemicals known to cause cancer:**

1333-86-4	Carbon black
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- **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):**

107-21-1	Ethylene glycol	A4
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1333-86-4	Carbon black	A4
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121-44-8	Triethylamine	A4
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- **NIOSH-Ca (National Institute for Occupational Safety and Health):**

1333-86-4	Carbon black
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- **GHS label elements**

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

- **Hazard pictograms:**



GHS07 GHS08

- **Signal word:** Warning

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

Ethylene glycol

1,2-benzisothiazol-3(2H)-one

- **Hazard statements:**

May cause an allergic skin reaction.

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May cause damage to the central nervous system, the kidneys and the heart through prolonged or repeated exposure.

Precautionary statements:

- Avoid breathing dust/fume/gas/mist/vapors/spray.
- Contaminated work clothing must not be allowed out of the workplace.
- Do not breathe dust/fume/gas/mist/vapors/spray.
- Wear protective gloves.
- Get medical advice/attention if you feel unwell.
- If on skin: Wash with plenty of water.
- If skin irritation or rash occurs: Get medical advice/attention.
- Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
- Wash contaminated clothing before reuse.
- 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: 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: 1333-86-4 RTECS: FF 5150100	Carbon black ⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	1-5%
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	<0.5%
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	<0.1%
All ingredients are listed.		

Information about limitation of use:

- 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: 07/22/2015 / 2

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)
- HMSI: Hazardous Materials Identification System (USA)
- LC50: Lethal concentration, 50 percent

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LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids, Hazard Category 2

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1

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

SDS created by MSDS Authoring Services www.msdsauthoring.com +1-877-204-9106