

SAFETY DATA SHEET

Issuing date 2013/06/21
Version 1

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Identification of the product S900 CYAN

Recommended uses and restrictions on use Inkjet ink

Supplier SAM YOUNG INK & PAINT MFG. CO., LTD.
679-13 Naegi-ri, Poseung-eup, Pyeongtaek-si,
Gyeonggi-do 451-821, Korea
Tel: +82-31-686-7745
Fax: +82-31-686-7853

Emergency Telephone Number 031-686-7745

Reference number GHKOENR0047673 - 1

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Physical and chemical hazards
Not classified

Health Hazards

Acute dermal toxicity	Category 4
Specific Target Organ Toxicity (Single Exposure)	Category 1
Specific Target Organ Toxicity (Repeated Exposure)	Category 2

Environmental hazards

Chronic aquatic toxicity	Category 3
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GHS Label elements



Signal Word DANGER

Hazard Statements

- H303 - May be harmful if swallowed
- H312 - Harmful in contact with skin
- H370 - Causes damage to organs
- H373 - May cause damage to organs through prolonged or repeated exposure.
- H412 - Harmful to aquatic life with long lasting effects

Precautionary Statement

Precautionary Statements - Safety Measures

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray
 P264 - Wash hands thoroughly after handling
 P270 - Do not eat, drink or smoke when using this product
 P273 - Avoid release to the environment
 P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection

Precautionary Statement - Response

P312 - Call a POISON CENTER or doctor/ physician if you feel unwell
 P314 - Get medical advice/ attention if you feel unwell
 P321 - Specific treatment
 P322 - Specific measures
 P363 - Wash contaminated clothing before reuse
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
 P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower
 P307 + P311 - IF exposed: Call a POISON CENTER or doctor/ physician
 P370 + P378 - In case of fire: Use appropriate extinguishant

Precautionary Statement - Storage

P403 + P235 - Store in a well-ventilated place. Keep cool
 P405 - Store locked up

Precautionary Statement - Disposal

P501 - Dispose of contents/ container to an approved waste disposal plant

Other hazards not defined in GHS No information available

Other hazards which do not result in classification No information available

Country / local information No information available

Important dangerous hazardous property and influence No information available

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture Mixture

Chemical Name	Weight (%)	CAS No.
Ethylene glycol monobutyl ether acetate	80-90%	112-07-2
Pigment	1-10%	* 1
Polymer	1-10%	* 1
Lactone compound	1-10%	* 1

*1: Listed

SECTION 4. FIRST-AID MEASURES

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes
 Immediate medical attention is required

Skin contact Remove as much as possible by wiping
 Wash off immediately with soap and plenty of water
 Get medical attention immediately if symptoms occur

Inhalation	Move to fresh air If symptoms persist, call a physician If breathing is irregular or stopped, provide cardiopulmonary resuscitation Keep at rest
Ingestion	Immediate medical attention is required
Notes to physician	Treat symptomatically
Anticipated acute and delayed effects	No information available
Most Important Symptoms/Effects	No information available
Protection of first-aiders	No information available

SECTION 5. FIRE-FIGHTING MEASURES

Suitable/unsuitable extinguishing media	
Extinguishing media	Water spray Carbon dioxide (CO ₂) Foam Dry powder Dry sand
Extinguishing media which shall not be used for safety reasons	No information available
Specific hazards arising from the chemical	No information available
Special protective equipment for fire-fighters	Wear personal protective equipment Evacuate area and fight fire from a safe distance
Specific methods	May ignite combustibles (wood paper, oil, clothing, etc.) Cool drums with water spray

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures	Wear suitable protective equipment Evacuate non-essential personnel
Environmental precautions	Dike to collect large liquid spills Try to prevent the material from entering drains or water courses
Recovery and neutralization	Soak up with inert absorbent material A lot of leakage things have the flow first stopped by earth and sand etc., and need to be led to a safe place Keep in suitable and closed containers for disposal.
Secondary disaster prevention measures	Remove all sources of ignition

SECTION 7. HANDLING AND STORAGE

Handling	
Technical measures	Ensure adequate ventilation
Advice on safe handling	Wash hands before breaks and immediately after handling the product Smoking, eating and drinking should be prohibited in the application area
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice

Storage

Technical measures/Storage conditions Keep container tightly closed in a dry and well-ventilated place
Keep away from direct sunlight
Keep at temperature at 5 to 35C.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**Exposure Guideline**

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Chemical Name	ISHA - Occupational Exposure Limits (Korea)	ISHA - Permissible Exposure Limits (Korea)	ACGIH-TLV
Ethylene glycol monobutyl ether acetate	TWA 20 ppm TWA 131 mg/m ³	-	TWA 20 ppm

Engineering measures Ensure adequate ventilation

Personal protective equipment

Respiratory protection In case of insufficient ventilation wear suitable respiratory equipment

Eye protection Goggles

Hand protection Rubber/latex/neoprene or other suitable chemical resistant gloves

Skin and body protection Long sleeved clothing Chemical resistant apron Antistatic boots

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

Physical State Liquid

Color Blue

Odor Slight smell

Odor Threshold No information available

pH VALUE No information available

Melting point/range No information available

Boiling Point/Range No information available

Flash point 83 C (Cleveland Open Cup (COC))

Evaporation rate No information available

Flammability (solid, gas) No information available

Flammability Limits in Air No information available

Vapor pressure No information available

Solubility

Water solubility Practically insoluble

Solubility in other solvents No information available

Vapor density No information available

Specific Gravity No information available

Partition Coefficient No information available

(n-octanol/water)

Autoignition temperature No information available

Decomposition temperature No information available

Viscosity No information available

Molecular Weight No information available

Density 0.96 - 1.00 g/cm³ / 25 C

Bulk Specific Gravity No information available

SECTION 10. STABILITY AND REACTIVITY**Stability / Hazardous Reactions**

Stability Stable at room temperature and atmospheric pressure.

Hazardous Reactions This product does not have the reactivity with the water.

Conditions to avoid	High temperature
Materials to avoid	Acids and oxidizer
Hazardous decomposition products	No information available

SECTION 11. TOXICOLOGICAL INFORMATION

Information about an exposure path with a high possibility No information available

Health hazard information

Acute toxicity No Information available as a product

Chemical Name	Acute Toxicity - Oral	Acute Toxicity - Dermal	Acute Toxicity - Inhalation
Ethylene glycol monobutyl ether acetate	LD50 = 1600 - 7000 mg/kg (Rat)	LD50 = 1500 mg/kg (Rabbit)	-

Skin corrosion/irritation No information available

Serious Eye Damage/Eye Irritation No information available

Respiratory Sensitization No information available

Skin Sensitization No information available

Carcinogenicity No Information available as a product

Chemical Name	Korean Carc.	ACGIH	IARC
Ethylene glycol monobutyl ether acetate	2	A3	-

Germ cell mutagenicity No information available

Reproductive toxicity No information available

STOT - Single Exposure No information available

STOT - Repeated Exposure No information available

Aspiration hazard No information available

SECTION 12. ECOLOGICAL INFORMATION

Environmental hazards No Information available as a product

Chemical Name	Fish	Crustacea	Algae
Ethylene glycol monobutyl ether acetate	-	EC50 = 67.5 mg/L 48h	-

Persistence and degradability No information available

Bioaccumulative potential No information available

Mobility in soil No information available

Other information No information available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste from Residues/Unused Products	This product and the container must be discarded based on a rule of , "Waste administration (Korea)".
Contaminated packaging	Dispose of in accordance with local regulations

SECTION 14. TRANSPORT INFORMATION

UN number	-
UN Proper shipping name	-
UN Classification	-
Packaging group	-
Marine Pollutant	Not applicable
Special safety measures	Ground and bond containers when transferring material

SECTION 15. REGULATORY INFORMATION

Industrial Safety and Health Act(Korea)
Toxic Chemicals Control Act(Korea)
Safety Control of Dangerous Substances Act(Korea)
Wastes Control Act (Korea)
A civil law except the above and foreign legal regulation
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SECTION 16. OTHER INFORMATION

Literary reference	Classification and Labelling of Chemical Substances and material safety data sheets(Korea-MOEL Public Notice No.2012-14) ACGIH IARC
First making date	
Issuing date	2013/06/21
Version / Revision Date	
Version	1
Revision Date	-
Other information	No information available
Manufacturer	TOYO INK CO., LTD. 1, Sakae, Kawagoe City, Saitama, 350-0803, JAPAN +81-49-233-2240

- The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication
- The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text
- When you export this product or the chemical substances including this product, please certainly obey the law of the export destination countries. If you have any questions, please contact our sales division.

SAFETY DATA SHEET

Issuing date 2013/06/21
Version 1

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Identification of the product S900 BLACK

Recommended uses and restrictions on use Inkjet ink

Supplier SAM YOUNG INK & PAINT MFG. CO., LTD.
679-13 Naegi-ri, Poseung-eup, Pyeongtaek-si,
Gyeonggi-do 451-821, Korea
Tel: +82-31-686-7745
Fax: +82-31-686-7853

Emergency Telephone Number 031-686-7745

Reference number GHKOENR0047674 - 1

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Physical and chemical hazards
Not classified

Health Hazards

Acute dermal toxicity	Category 4
Carcinogenicity	Category 2
Specific Target Organ Toxicity (Single Exposure)	Category 1
Specific Target Organ Toxicity (Repeated Exposure)	Category 2

Environmental hazards

Chronic aquatic toxicity	Category 3
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GHS Label elements



Signal Word DANGER

Hazard Statements

- H303 - May be harmful if swallowed
- H312 - Harmful in contact with skin
- H351 - Suspected of causing cancer
- H370 - Causes damage to organs
- H373 - May cause damage to organs through prolonged or repeated exposure.
- H412 - Harmful to aquatic life with long lasting effects

Precautionary Statement

Precautionary Statements - Safety Measures

- P201 - Obtain special instructions before use
 P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray
 P264 - Wash hands thoroughly after handling
 P270 - Do not eat, drink or smoke when using this product
 P273 - Avoid release to the environment
 P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
 P281 - Use personal protective equipment as required
 P202 - Do not handle until all safety precautions have been read and understood

Precautionary Statement - Response

- P312 - Call a POISON CENTER or doctor/ physician if you feel unwell
 P314 - Get medical advice/ attention if you feel unwell
 P321 - Specific treatment
 P322 - Specific measures
 P363 - Wash contaminated clothing before reuse
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
 P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower
 P307 + P311 - IF exposed: Call a POISON CENTER or doctor/ physician
 P308 + P313 - IF exposed or concerned: Get medical advice/ attention
 P370 + P378 - In case of fire: Use appropriate extinguishant

Precautionary Statement - Storage

- P403 + P235 - Store in a well-ventilated place. Keep cool
 P405 - Store locked up

Precautionary Statement - Disposal

- P501 - Dispose of contents/ container to an approved waste disposal plant

Other hazards not defined in GHS No information available

Other hazards which do not result in classification No information available

Country / local information No information available

Important dangerous hazardous property and influence No information available

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture Mixture

Chemical Name	Weight (%)	CAS No.
Ethylene glycol monobutyl ether acetate	80-90%	112-07-2
Carbon black	1-10%	1333-86-4
Polymer	1-10%	* 1
Lactone compound	1-10%	* 1

*1: Listed

SECTION 4. FIRST-AID MEASURES

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes
 Immediate medical attention is required

Skin contact	Remove as much as possible by wiping Wash off immediately with soap and plenty of water Get medical attention immediately if symptoms occur
Inhalation	Move to fresh air If symptoms persist, call a physician If breathing is irregular or stopped, provide cardiopulmonary resuscitation Keep at rest
Ingestion	Immediate medical attention is required
Notes to physician	Treat symptomatically
Anticipated acute and delayed effects	No information available
Most Important Symptoms/Effects	No information available
Protection of first-aiders	No information available

SECTION 5. FIRE-FIGHTING MEASURES

Suitable/unsuitable extinguishing media	
Extinguishing media	Water spray Carbon dioxide (CO ₂) Foam Dry powder Dry sand
Extinguishing media which shall not be used for safety reasons	No information available
Specific hazards arising from the chemical	No information available
Special protective equipment for fire-fighters	Wear personal protective equipment Evacuate area and fight fire from a safe distance
Specific methods	May ignite combustibles (wood paper, oil, clothing, etc.) Cool drums with water spray

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures	Wear suitable protective equipment Evacuate non-essential personnel
Environmental precautions	Dike to collect large liquid spills Try to prevent the material from entering drains or water courses
Recovery and neutralization	Soak up with inert absorbent material A lot of leakage things have the flow first stopped by earth and sand etc., and need to be led to a safe place Keep in suitable and closed containers for disposal.
Secondary disaster prevention measures	Remove all sources of ignition

SECTION 7. HANDLING AND STORAGE

Handling	
Technical measures	Ensure adequate ventilation

Advice on safe handling Wash hands before breaks and immediately after handling the product
Smoking, eating and drinking should be prohibited in the application area

Hygiene measures Handle in accordance with good industrial hygiene and safety practice

Storage

Technical measures/Storage conditions Keep container tightly closed in a dry and well-ventilated place
Keep away from direct sunlight
Keep at temperature at 5 to 35C.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**Exposure Guideline** -

Chemical Name	ISHA - Occupational Exposure Limits (Korea)	ISHA - Permissible Exposure Limits (Korea)	ACGIH-TLV
Ethylene glycol monobutyl ether acetate	TWA 20 ppm TWA 131 mg/m ³	-	TWA 20 ppm
Carbon black	TWA 3.5 mg/m ³	-	TWA 3 mg/m ³

Engineering measures Ensure adequate ventilation

Personal protective equipment

Respiratory protection In case of insufficient ventilation wear suitable respiratory equipment

Eye protection Goggles

Hand protection Rubber/latex/neoprene or other suitable chemical resistant gloves

Skin and body protection Long sleeved clothing Chemical resistant apron Antistatic boots

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

Physical State Liquid

Color Black

Odor Slight smell

Odor Threshold No information available

pH VALUE No information available

Melting point/range No information available

Boiling Point/Range No information available

Flash point 83 C (Cleveland Open Cup (COC))

Evaporation rate No information available

Flammability (solid, gas) No information available

Flammability Limits in Air No information available

Vapor pressure No information available

Solubility

Water solubility Practically insoluble

Solubility in other solvents No information available

Vapor density No information available

Specific Gravity No information available

Partition Coefficient (n-octanol/water) No information available

Autoignition temperature No information available

Decomposition temperature No information available

Viscosity No information available

Molecular Weight No information available

Density 0.96 - 1.00 g/cm³ / 25 C

Bulk Specific Gravity No information available

SECTION 10. STABILITY AND REACTIVITY

Stability / Hazardous Reactions

Stability	Stable at room temperature and atmospheric pressure.
Hazardous Reactions	This product does not have the reactivity with the water.
Conditions to avoid	High temperature
Materials to avoid	Acids and oxidizer
Hazardous decomposition products	No information available

SECTION 11. TOXICOLOGICAL INFORMATION

Information about an exposure path with a high possibility No information available

Health hazard information

Acute toxicity No Information available as a product

Chemical Name	Acute Toxicity - Oral	Acute Toxicity - Dermal	Acute Toxicity - Inhalation
Ethylene glycol monobutyl ether acetate	LD50 = 1600 - 7000 mg/kg (Rat)	LD50 = 1500 mg/kg (Rabbit)	-
Carbon black	LD50 > 15400 mg/kg (Rat)	LD50 > 3 g/kg (Rabbit)	-

Skin corrosion/irritation No information available

Serious Eye Damage/Eye Irritation No information available

Respiratory Sensitization No information available

Skin Sensitization No information available

Carcinogenicity No Information available as a product

Chemical Name	Korean Carc.	ACGIH	IARC
Ethylene glycol monobutyl ether acetate	2	A3	-
Carbon black	2	A3	2B

Germ cell mutagenicity No information available

Reproductive toxicity No information available

STOT - Single Exposure No information available

STOT - Repeated Exposure No information available

Aspiration hazard No information available

SECTION 12. ECOLOGICAL INFORMATION

Environmental hazards No Information available as a product

Chemical Name	Fish	Crustacea	Algae
Ethylene glycol monobutyl ether acetate	-	EC50 = 67.5 mg/L 48h	-

Persistence and degradability No information available

Bioaccumulative potential No information available

Mobility in soil No information available

Other information No information available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste from Residues/Unused Products This product and the container must be discarded based on a rule of , "Waste administration (Korea)".

Contaminated packaging Dispose of in accordance with local regulations

SECTION 14. TRANSPORT INFORMATION

UN number -

UN Proper shipping name -

UN Classification -

Packaging group -

Marine Pollutant Not applicable

Special safety measures Ground and bond containers when transferring material

SECTION 15. REGULATORY INFORMATION

Industrial Safety and Health Act(Korea)
 Toxic Chemicals Control Act(Korea)
 Safety Control of Dangerous Substances Act(Korea)
 Wastes Control Act (Korea)
 A civil law except the above and foreign legal regulation
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SECTION 16. OTHER INFORMATION

Literary reference Classification and Labelling of Chemical Substances and material safety data sheets(Korea-MOEL Public Notice No.2012-14)
 ACGIH
 IARC

First making date
Issuing date 2013/06/21

Version / Revision Date
Version 1
Revision Date -

Other information No information available

Manufacturer TOYO INK CO., LTD.
 1, Sakae, Kawagoe City, Saitama, 350-0803, JAPAN
 +81-49-233-2240

- The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication
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- When you export this product or the chemical substances including this product, please certainly obey the law of the export destination countries. If you have any questions, please contact our sales division.

SAFETY DATA SHEET

Issuing date 2013/06/21
Version 1

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Identification of the product S900 L-CYAN

Recommended uses and restrictions on use Inkjet ink

Supplier SAM YOUNG INK & PAINT MFG. CO., LTD.
679-13 Naegi-ri, Poseung-eup, Pyeongtaek-si,
Gyeonggi-do 451-821, Korea
Tel: +82-31-686-7745
Fax: +82-31-686-7853

Emergency Telephone Number 031-686-7745

Reference number GHKOENR0047676 - 1

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Physical and chemical hazards
Not classified

Health Hazards

Acute dermal toxicity	Category 4
Specific Target Organ Toxicity (Single Exposure)	Category 1
Specific Target Organ Toxicity (Repeated Exposure)	Category 2

Environmental hazards

Chronic aquatic toxicity	Category 3
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GHS Label elements



Signal Word DANGER

Hazard Statements

- H303 - May be harmful if swallowed
- H312 - Harmful in contact with skin
- H370 - Causes damage to organs
- H373 - May cause damage to organs through prolonged or repeated exposure.
- H412 - Harmful to aquatic life with long lasting effects

Precautionary Statement

Precautionary Statements - Safety Measures

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray
 P264 - Wash hands thoroughly after handling
 P270 - Do not eat, drink or smoke when using this product
 P273 - Avoid release to the environment
 P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection

Precautionary Statement - Response

P312 - Call a POISON CENTER or doctor/ physician if you feel unwell
 P314 - Get medical advice/ attention if you feel unwell
 P321 - Specific treatment
 P322 - Specific measures
 P363 - Wash contaminated clothing before reuse
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
 P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower
 P307 + P311 - IF exposed: Call a POISON CENTER or doctor/ physician
 P370 + P378 - In case of fire: Use appropriate extinguishant

Precautionary Statement - Storage

P403 + P235 - Store in a well-ventilated place. Keep cool
 P405 - Store locked up

Precautionary Statement - Disposal

P501 - Dispose of contents/ container to an approved waste disposal plant

Other hazards not defined in GHS No information available

Other hazards which do not result in classification No information available

Country / local information No information available

Important dangerous hazardous property and influence No information available

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture Mixture

Chemical Name	Weight (%)	CAS No.
Ethylene glycol monobutyl ether acetate	85-95%	112-07-2
Pigment	0.1-10%	* 1
Polymer	1-10%	* 1
Lactone compound	1-10%	* 1

*1: Listed

SECTION 4. FIRST-AID MEASURES

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes
 Immediate medical attention is required

Skin contact Remove as much as possible by wiping
 Wash off immediately with soap and plenty of water
 Get medical attention immediately if symptoms occur

Inhalation	Move to fresh air If symptoms persist, call a physician If breathing is irregular or stopped, provide cardiopulmonary resuscitation Keep at rest
Ingestion	Immediate medical attention is required
Notes to physician	Treat symptomatically
Anticipated acute and delayed effects	No information available
Most Important Symptoms/Effects	No information available
Protection of first-aiders	No information available

SECTION 5. FIRE-FIGHTING MEASURES

Suitable/unsuitable extinguishing media	
Extinguishing media	Water spray Carbon dioxide (CO ₂) Foam Dry powder Dry sand
Extinguishing media which shall not be used for safety reasons	No information available
Specific hazards arising from the chemical	No information available
Special protective equipment for fire-fighters	Wear personal protective equipment Evacuate area and fight fire from a safe distance
Specific methods	May ignite combustibles (wood paper, oil, clothing, etc.) Cool drums with water spray

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures	Wear suitable protective equipment Evacuate non-essential personnel
Environmental precautions	Dike to collect large liquid spills Try to prevent the material from entering drains or water courses
Recovery and neutralization	Soak up with inert absorbent material A lot of leakage things have the flow first stopped by earth and sand etc., and need to be led to a safe place Keep in suitable and closed containers for disposal.
Secondary disaster prevention measures	Remove all sources of ignition

SECTION 7. HANDLING AND STORAGE

Handling	
Technical measures	Ensure adequate ventilation
Advice on safe handling	Wash hands before breaks and immediately after handling the product Smoking, eating and drinking should be prohibited in the application area
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice

Storage

Technical measures/Storage conditions Keep container tightly closed in a dry and well-ventilated place
Keep away from direct sunlight
Keep at temperature at 5 to 35C.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**Exposure Guideline**

-

Chemical Name	ISHA - Occupational Exposure Limits (Korea)	ISHA - Permissible Exposure Limits (Korea)	ACGIH-TLV
Ethylene glycol monobutyl ether acetate	TWA 20 ppm TWA 131 mg/m ³	-	TWA 20 ppm

Engineering measures Ensure adequate ventilation

Personal protective equipment

Respiratory protection In case of insufficient ventilation wear suitable respiratory equipment

Eye protection Goggles

Hand protection Rubber/latex/neoprene or other suitable chemical resistant gloves

Skin and body protection Long sleeved clothing Chemical resistant apron Antistatic boots

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

Physical State Liquid

Color Blue

Odor Slight smell

Odor Threshold No information available

pH VALUE No information available

Melting point/range No information available

Boiling Point/Range No information available

Flash point 83 C (Cleveland Open Cup (COC))

Evaporation rate No information available

Flammability (solid, gas) No information available

Flammability Limits in Air No information available

Vapor pressure No information available

Solubility

Water solubility Practically insoluble

Solubility in other solvents No information available

Vapor density No information available

Specific Gravity No information available

Partition Coefficient (n-octanol/water) No information available

Autoignition temperature No information available

Decomposition temperature No information available

Viscosity No information available

Molecular Weight No information available

Density 0.96 - 1.00 g/cm³ / 25 C

Bulk Specific Gravity No information available

SECTION 10. STABILITY AND REACTIVITY**Stability / Hazardous Reactions**

Stability Stable at room temperature and atmospheric pressure.

Hazardous Reactions This product does not have the reactivity with the water.

Conditions to avoid	High temperature
Materials to avoid	Acids and oxidizer
Hazardous decomposition products	No information available

SECTION 11. TOXICOLOGICAL INFORMATION

Information about an exposure path with a high possibility No information available

Health hazard information

Acute toxicity

No Information available as a product

Chemical Name	Acute Toxicity - Oral	Acute Toxicity - Dermal	Acute Toxicity - Inhalation
Ethylene glycol monobutyl ether acetate	LD50 = 1600 - 7000 mg/kg (Rat)	LD50 = 1500 mg/kg (Rabbit)	-

Skin corrosion/irritation No information available

Serious Eye Damage/Eye Irritation No information available

Respiratory Sensitization No information available

Skin Sensitization No information available

Carcinogenicity

No Information available as a product

Chemical Name	Korean Carc.	ACGIH	IARC
Ethylene glycol monobutyl ether acetate	2	A3	-

Germ cell mutagenicity No information available

Reproductive toxicity No information available

STOT - Single Exposure No information available

STOT - Repeated Exposure No information available

Aspiration hazard No information available

SECTION 12. ECOLOGICAL INFORMATION

Environmental hazards

No Information available as a product

Chemical Name	Fish	Crustacea	Algae
Ethylene glycol monobutyl ether acetate	-	EC50 = 67.5 mg/L 48h	-

Persistence and degradability No information available

Bioaccumulative potential No information available

Mobility in soil No information available

Other information No information available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste from Residues/Unused Products	This product and the container must be discarded based on a rule of , "Waste administration (Korea)".
Contaminated packaging	Dispose of in accordance with local regulations

SECTION 14. TRANSPORT INFORMATION

UN number	-
UN Proper shipping name	-
UN Classification	-
Packaging group	-
Marine Pollutant	Not applicable
Special safety measures	Ground and bond containers when transferring material

SECTION 15. REGULATORY INFORMATION

Industrial Safety and Health Act(Korea)
Toxic Chemicals Control Act(Korea)
Safety Control of Dangerous Substances Act(Korea)
Wastes Control Act (Korea)
A civil law except the above and foreign legal regulation
 - -

SECTION 16. OTHER INFORMATION

Literary reference	Classification and Labelling of Chemical Substances and material safety data sheets(Korea-MOEL Public Notice No.2012-14) ACGIH IARC
First making date	
Issuing date	2013/06/21
Version / Revision Date	
Version	1
Revision Date	-
Other information	No information available
Manufacturer	TOYO INK CO., LTD. 1, Sakae, Kawagoe City, Saitama, 350-0803, JAPAN +81-49-233-2240

- The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication
- The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text
- When you export this product or the chemical substances including this product, please certainly obey the law of the export destination countries. If you have any questions, please contact our sales division.

SAFETY DATA SHEET

Issuing date 2013/06/21
Version 1

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Identification of the product S900 L-MAGENTA

Recommended uses and restrictions on use Inkjet ink

Supplier SAM YOUNG INK & PAINT MFG. CO., LTD.
679-13 Naegi-ri, Poseung-eup, Pyeongtaek-si,
Gyeonggi-do 451-821, Korea
Tel: +82-31-686-7745
Fax: +82-31-686-7853

Emergency Telephone Number 031-686-7745

Reference number GHKOENR0047677 - 1

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Physical and chemical hazards
Not classified

Health Hazards

Acute dermal toxicity	Category 4
Specific Target Organ Toxicity (Single Exposure)	Category 1
Specific Target Organ Toxicity (Repeated Exposure)	Category 2

Environmental hazards

Chronic aquatic toxicity	Category 3
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GHS Label elements



Signal Word DANGER

Hazard Statements

- H303 - May be harmful if swallowed
- H312 - Harmful in contact with skin
- H370 - Causes damage to organs
- H373 - May cause damage to organs through prolonged or repeated exposure.
- H412 - Harmful to aquatic life with long lasting effects

Precautionary Statement

Precautionary Statements - Safety Measures

- P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
- P260 - Do not breathe dust/fume/gas/mist/vapors/spray
- P264 - Wash hands thoroughly after handling
- P270 - Do not eat, drink or smoke when using this product
- P273 - Avoid release to the environment
- P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection

Precautionary Statement - Response

- P312 - Call a POISON CENTER or doctor/ physician if you feel unwell
- P314 - Get medical advice/ attention if you feel unwell
- P321 - Specific treatment
- P322 - Specific measures
- P363 - Wash contaminated clothing before reuse
- P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
- P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower
- P307 + P311 - IF exposed: Call a POISON CENTER or doctor/ physician
- P370 + P378 - In case of fire: Use appropriate extinguishant

Precautionary Statement - Storage

- P403 + P235 - Store in a well-ventilated place. Keep cool
- P405 - Store locked up

Precautionary Statement - Disposal

- P501 - Dispose of contents/ container to an approved waste disposal plant

Other hazards not defined in GHS No information available

Other hazards which do not result in classification No information available

Country / local information No information available

Important dangerous hazardous property and influence No information available

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture Mixture

Chemical Name	Weight (%)	CAS No.
Ethylene glycol monobutyl ether acetate	85-95%	112-07-2
Pigment	1-10%	* 1
Polymer	1-10%	* 1
Lactone compound	1-10%	* 1

*1: Listed

SECTION 4. FIRST-AID MEASURES

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes
Immediate medical attention is required

Skin contact Remove as much as possible by wiping
Wash off immediately with soap and plenty of water
Get medical attention immediately if symptoms occur

Inhalation	Move to fresh air If symptoms persist, call a physician If breathing is irregular or stopped, provide cardiopulmonary resuscitation Keep at rest
Ingestion	Immediate medical attention is required
Notes to physician	Treat symptomatically
Anticipated acute and delayed effects	No information available
Most Important Symptoms/Effects	No information available
Protection of first-aiders	No information available

SECTION 5. FIRE-FIGHTING MEASURES

Suitable/unsuitable extinguishing media	
Extinguishing media	Water spray Carbon dioxide (CO ₂) Foam Dry powder Dry sand
Extinguishing media which shall not be used for safety reasons	No information available
Specific hazards arising from the chemical	No information available
Special protective equipment for fire-fighters	Wear personal protective equipment Evacuate area and fight fire from a safe distance
Specific methods	May ignite combustibles (wood paper, oil, clothing, etc.) Cool drums with water spray

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures	Wear suitable protective equipment Evacuate non-essential personnel
Environmental precautions	Dike to collect large liquid spills Try to prevent the material from entering drains or water courses
Recovery and neutralization	Soak up with inert absorbent material A lot of leakage things have the flow first stopped by earth and sand etc., and need to be led to a safe place Keep in suitable and closed containers for disposal.
Secondary disaster prevention measures	Remove all sources of ignition

SECTION 7. HANDLING AND STORAGE

Handling	
Technical measures	Ensure adequate ventilation
Advice on safe handling	Wash hands before breaks and immediately after handling the product Smoking, eating and drinking should be prohibited in the application area
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice

Storage

Technical measures/Storage conditions Keep container tightly closed in a dry and well-ventilated place
Keep away from direct sunlight
Keep at temperature at 5 to 35C.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**Exposure Guideline**

-

Chemical Name	ISHA - Occupational Exposure Limits (Korea)	ISHA - Permissible Exposure Limits (Korea)	ACGIH-TLV
Ethylene glycol monobutyl ether acetate	TWA 20 ppm TWA 131 mg/m ³	-	TWA 20 ppm

Engineering measures Ensure adequate ventilation

Personal protective equipment

Respiratory protection In case of insufficient ventilation wear suitable respiratory equipment

Eye protection Goggles

Hand protection Rubber/latex/neoprene or other suitable chemical resistant gloves

Skin and body protection Long sleeved clothing Chemical resistant apron Antistatic boots

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

Physical State	Liquid
Color	Red
Odor	Slight smell
Odor Threshold	No information available
pH VALUE	No information available
Melting point/range	No information available
Boiling Point/Range	No information available
Flash point	83 C (Cleveland Open Cup (COC))
Evaporation rate	No information available
Flammability (solid, gas)	No information available
Flammability Limits in Air	No information available
Vapor pressure	No information available
Solubility	
Water solubility	Practically insoluble
Solubility in other solvents	No information available
Vapor density	No information available
Specific Gravity	No information available
Partition Coefficient (n-octanol/water)	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Viscosity	No information available
Molecular Weight	No information available
Density	0.96 - 1.00 g/cm ³ / 25 C
Bulk Specific Gravity	No information available

SECTION 10. STABILITY AND REACTIVITY**Stability / Hazardous Reactions**

Stability Stable at room temperature and atmospheric pressure.

Hazardous Reactions This product does not have the reactivity with the water.

Conditions to avoid	High temperature
Materials to avoid	Acids and oxidizer
Hazardous decomposition products	No information available

SECTION 11. TOXICOLOGICAL INFORMATION

Information about an exposure path with a high possibility No information available

Health hazard information

Acute toxicity No Information available as a product

Chemical Name	Acute Toxicity - Oral	Acute Toxicity - Dermal	Acute Toxicity - Inhalation
Ethylene glycol monobutyl ether acetate	LD50 = 1600 - 7000 mg/kg (Rat)	LD50 = 1500 mg/kg (Rabbit)	-

Skin corrosion/irritation No information available

Serious Eye Damage/Eye Irritation No information available

Respiratory Sensitization No information available

Skin Sensitization No information available

Carcinogenicity No Information available as a product

Chemical Name	Korean Carc.	ACGIH	IARC
Ethylene glycol monobutyl ether acetate	2	A3	-

Germ cell mutagenicity No information available

Reproductive toxicity No information available

STOT - Single Exposure No information available

STOT - Repeated Exposure No information available

Aspiration hazard No information available

SECTION 12. ECOLOGICAL INFORMATION

Environmental hazards No Information available as a product

Chemical Name	Fish	Crustacea	Algae
Ethylene glycol monobutyl ether acetate	-	EC50 = 67.5 mg/L 48h	-

Persistence and degradability No information available

Bioaccumulative potential No information available

Mobility in soil No information available

Other information No information available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste from Residues/Unused Products	This product and the container must be discarded based on a rule of , "Waste administration (Korea)".
Contaminated packaging	Dispose of in accordance with local regulations

SECTION 14. TRANSPORT INFORMATION

UN number	-
UN Proper shipping name	-
UN Classification	-
Packaging group	-
Marine Pollutant	Not applicable
Special safety measures	Ground and bond containers when transferring material

SECTION 15. REGULATORY INFORMATION

Industrial Safety and Health Act(Korea)
Toxic Chemicals Control Act(Korea)
Safety Control of Dangerous Substances Act(Korea)
Wastes Control Act (Korea)
A civil law except the above and foreign legal regulation
 - -

SECTION 16. OTHER INFORMATION

Literary reference	Classification and Labelling of Chemical Substances and material safety data sheets(Korea-MOEL Public Notice No.2012-14) ACGIH IARC
First making date	
Issuing date	2013/06/21
Version / Revision Date	
Version	1
Revision Date	-
Other information	No information available
Manufacturer	TOYO INK CO., LTD. 1, Sakae, Kawagoe City, Saitama, 350-0803, JAPAN +81-49-233-2240

- The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication
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- When you export this product or the chemical substances including this product, please certainly obey the law of the export destination countries. If you have any questions, please contact our sales division.

SAFETY DATA SHEET

Issuing date 2013/06/21
Version 1

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Identification of the product S900 MAGENTA

Recommended uses and restrictions on use Inkjet ink

Supplier SAM YOUNG INK & PAINT MFG. CO., LTD.
679-13 Naegi-ri, Poseung-eup, Pyeongtaek-si,
Gyeonggi-do 451-821, Korea
Tel: +82-31-686-7745
Fax: +82-31-686-7853

Emergency Telephone Number 031-686-7745

Reference number GHKOENR0047591 - 1

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Physical and chemical hazards
Not classified

Health Hazards

Acute dermal toxicity	Category 4
Specific Target Organ Toxicity (Single Exposure)	Category 1
Specific Target Organ Toxicity (Repeated Exposure)	Category 2

Environmental hazards

Chronic aquatic toxicity	Category 3
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GHS Label elements



Signal Word DANGER

Hazard Statements

- H303 - May be harmful if swallowed
- H312 - Harmful in contact with skin
- H370 - Causes damage to organs
- H373 - May cause damage to organs through prolonged or repeated exposure.
- H412 - Harmful to aquatic life with long lasting effects

Precautionary Statement

Precautionary Statements - Safety Measures

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray
 P264 - Wash hands thoroughly after handling
 P270 - Do not eat, drink or smoke when using this product
 P273 - Avoid release to the environment
 P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection

Precautionary Statement - Response

P312 - Call a POISON CENTER or doctor/ physician if you feel unwell
 P314 - Get medical advice/ attention if you feel unwell
 P321 - Specific treatment
 P322 - Specific measures
 P363 - Wash contaminated clothing before reuse
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
 P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower
 P307 + P311 - IF exposed: Call a POISON CENTER or doctor/ physician
 P370 + P378 - In case of fire: Use appropriate extinguishant

Precautionary Statement - Storage

P403 + P235 - Store in a well-ventilated place. Keep cool
 P405 - Store locked up

Precautionary Statement - Disposal

P501 - Dispose of contents/ container to an approved waste disposal plant

Other hazards not defined in GHS No information available

Other hazards which do not result in classification No information available

Country / local information No information available

Important dangerous hazardous property and influence No information available

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture Mixture

Chemical Name	Weight (%)	CAS No.
Ethylene glycol monobutyl ether acetate	80-90%	112-07-2
Pigment	1-10%	* 1
Polymer	1-10%	* 1

*1: Listed

SECTION 4. FIRST-AID MEASURES

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes
 Immediate medical attention is required

Skin contact Remove as much as possible by wiping
 Wash off immediately with soap and plenty of water
 Get medical attention immediately if symptoms occur

Inhalation	Move to fresh air If symptoms persist, call a physician If breathing is irregular or stopped, provide cardiopulmonary resuscitation Keep at rest
Ingestion	Immediate medical attention is required
Notes to physician	Treat symptomatically
Anticipated acute and delayed effects	No information available
Most Important Symptoms/Effects	No information available
Protection of first-aiders	No information available

SECTION 5. FIRE-FIGHTING MEASURES

Suitable/unsuitable extinguishing media	
Extinguishing media	Water spray Carbon dioxide (CO ₂) Foam Dry powder Dry sand
Extinguishing media which shall not be used for safety reasons	No information available
Specific hazards arising from the chemical	No information available
Special protective equipment for fire-fighters	Wear personal protective equipment Evacuate area and fight fire from a safe distance
Specific methods	May ignite combustibles (wood paper, oil, clothing, etc.) Cool drums with water spray

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures	Wear suitable protective equipment Evacuate non-essential personnel
Environmental precautions	Dike to collect large liquid spills Try to prevent the material from entering drains or water courses
Recovery and neutralization	Soak up with inert absorbent material A lot of leakage things have the flow first stopped by earth and sand etc., and need to be led to a safe place Keep in suitable and closed containers for disposal.
Secondary disaster prevention measures	Remove all sources of ignition

SECTION 7. HANDLING AND STORAGE

Handling	
Technical measures	Ensure adequate ventilation
Advice on safe handling	Wash hands before breaks and immediately after handling the product Smoking, eating and drinking should be prohibited in the application area
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice

Storage

Technical measures/Storage conditions Keep container tightly closed in a dry and well-ventilated place
Keep away from direct sunlight
Keep at temperature at 5 to 35C.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**Exposure Guideline**

-

Chemical Name	ISHA - Occupational Exposure Limits (Korea)	ISHA - Permissible Exposure Limits (Korea)	ACGIH-TLV
Ethylene glycol monobutyl ether acetate	TWA 20 ppm TWA 131 mg/m ³	-	TWA 20 ppm

Engineering measures Ensure adequate ventilation

Personal protective equipment

Respiratory protection In case of insufficient ventilation wear suitable respiratory equipment

Eye protection Goggles

Hand protection Rubber/latex/neoprene or other suitable chemical resistant gloves

Skin and body protection Long sleeved clothing Chemical resistant apron Antistatic boots

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

Physical State Liquid

Color Red

Odor Slight smell

Odor Threshold No information available

pH VALUE No information available

Melting point/range No information available

Boiling Point/Range No information available

Flash point 83 C (Cleveland Open Cup (COC))

Evaporation rate No information available

Flammability (solid, gas) No information available

Flammability Limits in Air No information available

Vapor pressure No information available

Solubility

Water solubility Practically insoluble

Solubility in other solvents No information available

Vapor density No information available

Specific Gravity No information available

Partition Coefficient (n-octanol/water) No information available

Autoignition temperature No information available

Decomposition temperature No information available

Viscosity No information available

Molecular Weight No information available

Density 0.96 - 1.00 g/cm³ / 25 C

Bulk Specific Gravity No information available

SECTION 10. STABILITY AND REACTIVITY**Stability / Hazardous Reactions**

Stability Stable at room temperature and atmospheric pressure.

Hazardous Reactions This product does not have the reactivity with the water.

Conditions to avoid High temperature

Materials to avoid	Acids and oxidizer
Hazardous decomposition products	No information available

SECTION 11. TOXICOLOGICAL INFORMATION

Information about an exposure path with a high possibility No information available

Health hazard information

Acute toxicity No Information available as a product

Chemical Name	Acute Toxicity - Oral	Acute Toxicity - Dermal	Acute Toxicity - Inhalation
Ethylene glycol monobutyl ether acetate	LD50 = 1600 - 7000 mg/kg (Rat)	LD50 = 1500 mg/kg (Rabbit)	-

Skin corrosion/irritation No information available

Serious Eye Damage/Eye Irritation No information available

Respiratory Sensitization No information available

Skin Sensitization No information available

Carcinogenicity No Information available as a product

Chemical Name	Korean Carc.	ACGIH	IARC
Ethylene glycol monobutyl ether acetate	2	A3	-

Germ cell mutagenicity No information available

Reproductive toxicity No information available

STOT - Single Exposure No information available

STOT - Repeated Exposure No information available

Aspiration hazard No information available

SECTION 12. ECOLOGICAL INFORMATION

Environmental hazards No Information available as a product

Chemical Name	Fish	Crustacea	Algae
Ethylene glycol monobutyl ether acetate	-	EC50 = 67.5 mg/L 48h	-

Persistence and degradability No information available

Bioaccumulative potential No information available

Mobility in soil No information available

Other information No information available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste from Residues/Unused Products This product and the container must be discarded based on a rule of , "Waste administration (Korea)".

Contaminated packaging Dispose of in accordance with local regulations

SECTION 14. TRANSPORT INFORMATION

UN number -

UN Proper shipping name -

UN Classification -

Packaging group -

Marine Pollutant Not applicable

Special safety measures Ground and bond containers when transferring material

SECTION 15. REGULATORY INFORMATION

Industrial Safety and Health Act(Korea)
Toxic Chemicals Control Act(Korea)
Safety Control of Dangerous Substances Act(Korea)
Wastes Control Act (Korea)
A civil law except the above and foreign legal regulation
 - -

SECTION 16. OTHER INFORMATION

Literary reference Classification and Labelling of Chemical Substances and material safety data sheets(Korea-MOEL Public Notice No.2012-14)
 ACGIH
 IARC

First making date
Issuing date 2013/06/21

Version / Revision Date
Version 1
Revision Date -

Other information No information available

Manufacturer TOYO INK CO., LTD.
 1, Sakae, Kawagoe City, Saitama, 350-0803, JAPAN
 +81-49-233-2240

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- When you export this product or the chemical substances including this product, please certainly obey the law of the export destination countries. If you have any questions, please contact our sales division.

SAFETY DATA SHEET

Issuing date 2013/06/21
Revision Date 2013/06/21
Version 2

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Identification of the product S900 YELLOW

Recommended uses and restrictions on use Inkjet ink

Supplier SAM YOUNG INK & PAINT MFG. CO., LTD.
679-13 Naegi-ri, Poseung-eup, Pyeongtaek-si,
Gyeonggi-do 451-821, Korea
Tel: +82-31-686-7745
Fax: +82-31-686-7853

Emergency Telephone Number 031-686-7745

Reference number GHKOENR0047023 - 2

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Physical and chemical hazards
Not classified

Health Hazards

Acute dermal toxicity	Category 4
Specific Target Organ Toxicity (Single Exposure)	Category 1
Specific Target Organ Toxicity (Repeated Exposure)	Category 2

Environmental hazards

Chronic aquatic toxicity	Category 3
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GHS Label elements



Signal Word DANGER

Hazard Statements

- H303 - May be harmful if swallowed
- H312 - Harmful in contact with skin
- H370 - Causes damage to organs
- H373 - May cause damage to organs through prolonged or repeated exposure.
- H412 - Harmful to aquatic life with long lasting effects

Precautionary Statement

Precautionary Statements - Safety Measures

- P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
- P260 - Do not breathe dust/fume/gas/mist/vapors/spray
- P264 - Wash hands thoroughly after handling
- P270 - Do not eat, drink or smoke when using this product
- P273 - Avoid release to the environment
- P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection

Precautionary Statement - Response

- P312 - Call a POISON CENTER or doctor/ physician if you feel unwell
- P314 - Get medical advice/ attention if you feel unwell
- P321 - Specific treatment
- P322 - Specific measures
- P363 - Wash contaminated clothing before reuse
- P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
- P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower
- P307 + P311 - IF exposed: Call a POISON CENTER or doctor/ physician
- P370 + P378 - In case of fire: Use appropriate extinguishant

Precautionary Statement - Storage

- P403 + P235 - Store in a well-ventilated place. Keep cool
- P405 - Store locked up

Precautionary Statement - Disposal

- P501 - Dispose of contents/ container to an approved waste disposal plant

Other hazards not defined in GHS No information available

Other hazards which do not result in classification No information available

Country / local information No information available

Important dangerous hazardous property and influence No information available

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture Mixture

Chemical Name	Weight (%)	CAS No.
Ethylene glycol monobutyl ether acetate	80-90%	112-07-2
Pigment	1-10%	* 1
Polymer	1-10%	* 1
Lactone compound	1-10%	* 1

*1: Listed

SECTION 4. FIRST-AID MEASURES

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes
Immediate medical attention is required

Skin contact Remove as much as possible by wiping
Wash off immediately with soap and plenty of water
Get medical attention immediately if symptoms occur

Inhalation	Move to fresh air If symptoms persist, call a physician If breathing is irregular or stopped, provide cardiopulmonary resuscitation Keep at rest
Ingestion	Immediate medical attention is required
Notes to physician	Treat symptomatically
Anticipated acute and delayed effects	No information available
Most Important Symptoms/Effects	No information available
Protection of first-aiders	No information available

SECTION 5. FIRE-FIGHTING MEASURES

Suitable/unsuitable extinguishing media	
Extinguishing media	Water spray Carbon dioxide (CO ₂) Foam Dry powder Dry sand
Extinguishing media which shall not be used for safety reasons	No information available
Specific hazards arising from the chemical	No information available
Special protective equipment for fire-fighters	Wear personal protective equipment Evacuate area and fight fire from a safe distance
Specific methods	May ignite combustibles (wood paper, oil, clothing, etc.) Cool drums with water spray

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures	Wear suitable protective equipment Evacuate non-essential personnel
Environmental precautions	Dike to collect large liquid spills Try to prevent the material from entering drains or water courses
Recovery and neutralization	Soak up with inert absorbent material A lot of leakage things have the flow first stopped by earth and sand etc., and need to be led to a safe place Keep in suitable and closed containers for disposal.
Secondary disaster prevention measures	Remove all sources of ignition

SECTION 7. HANDLING AND STORAGE

Handling	
Technical measures	Ensure adequate ventilation
Advice on safe handling	Wash hands before breaks and immediately after handling the product Smoking, eating and drinking should be prohibited in the application area
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice

Storage

Technical measures/Storage conditions Keep container tightly closed in a dry and well-ventilated place
Keep away from direct sunlight
Keep at temperature at 5 to 35C.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**Exposure Guideline**

-

Chemical Name	ISHA - Occupational Exposure Limits (Korea)	ISHA - Permissible Exposure Limits (Korea)	ACGIH-TLV
Ethylene glycol monobutyl ether acetate	TWA 20 ppm TWA 131 mg/m ³	-	TWA 20 ppm

Engineering measures Ensure adequate ventilation

Personal protective equipment

Respiratory protection In case of insufficient ventilation wear suitable respiratory equipment

Eye protection Goggles

Hand protection Rubber/latex/neoprene or other suitable chemical resistant gloves

Skin and body protection Long sleeved clothing Chemical resistant apron Antistatic boots

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance****Physical State**

Liquid

Color

Yellow

Odor

Slight smell

Odor Threshold

No information available

pH VALUE

No information available

Melting point/range

No information available

Boiling Point/Range

No information available

Flash point

83 C (Cleveland Open Cup (COC))

Evaporation rate

No information available

Flammability (solid, gas)

No information available

Flammability Limits in Air

No information available

Vapor pressure

No information available

Solubility**Water solubility**

Practically insoluble

Solubility in other solvents

No information available

Vapor density

No information available

Specific Gravity

No information available

Partition Coefficient (n-octanol/water)

No information available

Autoignition temperature

No information available

Decomposition temperature

No information available

Viscosity

No information available

Molecular Weight

No information available

Density0.96 - 1.00 g/cm³ / 25 C**Bulk Specific Gravity**

No information available

SECTION 10. STABILITY AND REACTIVITY**Stability / Hazardous Reactions****Stability**

Stable at room temperature and atmospheric pressure.

Hazardous Reactions

This product does not have the reactivity with the water.

Conditions to avoid	High temperature
Materials to avoid	Acids and oxidizer
Hazardous decomposition products	No information available

SECTION 11. TOXICOLOGICAL INFORMATION

Information about an exposure path with a high possibility No information available

Health hazard information

Acute toxicity No Information available as a product

Chemical Name	Acute Toxicity - Oral	Acute Toxicity - Dermal	Acute Toxicity - Inhalation
Ethylene glycol monobutyl ether acetate	LD50 = 1600 - 7000 mg/kg (Rat)	LD50 = 1500 mg/kg (Rabbit)	-

Skin corrosion/irritation No information available

Serious Eye Damage/Eye Irritation No information available

Respiratory Sensitization No information available

Skin Sensitization No information available

Carcinogenicity No Information available as a product

Chemical Name	Korean Carc.	ACGIH	IARC
Ethylene glycol monobutyl ether acetate	2	A3	-

Germ cell mutagenicity No information available

Reproductive toxicity No information available

STOT - Single Exposure No information available

STOT - Repeated Exposure No information available

Aspiration hazard No information available

SECTION 12. ECOLOGICAL INFORMATION

Environmental hazards No Information available as a product

Chemical Name	Fish	Crustacea	Algae
Ethylene glycol monobutyl ether acetate	-	EC50 = 67.5 mg/L 48h	-

Persistence and degradability No information available

Bioaccumulative potential No information available

Mobility in soil No information available

Other information No information available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste from Residues/Unused Products	This product and the container must be discarded based on a rule of , "Waste administration (Korea)".
Contaminated packaging	Dispose of in accordance with local regulations

SECTION 14. TRANSPORT INFORMATION

UN number	-
UN Proper shipping name	-
UN Classification	-
Packaging group	-
Marine Pollutant	Not applicable
Special safety measures	Ground and bond containers when transferring material

SECTION 15. REGULATORY INFORMATION

Industrial Safety and Health Act(Korea)
Toxic Chemicals Control Act(Korea)
Safety Control of Dangerous Substances Act(Korea)
Wastes Control Act (Korea)
A civil law except the above and foreign legal regulation
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SECTION 16. OTHER INFORMATION

Literary reference	Classification and Labelling of Chemical Substances and material safety data sheets(Korea-MOEL Public Notice No.2012-14) ACGIH IARC
First making date	
Issuing date	2013/06/21
Version / Revision Date	
Version	2
Revision Date	2013/06/21
Other information	No information available
Manufacturer	TOYO INK CO., LTD. 1, Sakae, Kawagoe City, Saitama, 350-0803, JAPAN +81-49-233-2240

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