

# SAFETY DATA SHEET

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: BEST IMAGE SOY SERIES  
 General Use: Printing ink  
 Product Description: A mixture of pigments in oleoresinous vehicles.

MANUFACTURER: KOREA SPECIAL INK IND.Co.,LTD  
 ADDRESS: Juandong 1385-7, Namgu, Incheon, KOREA  
 EMERGENCY TELEPHONE NUMBER: Telephone; 82-32-865-3031 8:30-17:30 Kor M-F  
 Facsimile; 82-32-865-3036 24Hrs Every day

## 2. HAZARDS IDENTIFICATION



UN Hazard Classification  
 HAZARD CLASS : Not Applicable  
 UN/NA NUMBER : Not Applicable

GHS Classification\* :

Physical Flammable Liquid – Not classified  
 Health Acute Toxicity (oral) – Not classified  
 Acute Toxicity (inhalation) – Category 4  
 Eye Corrosion (serious damage/irritation) – Category 2B  
 Skin Corrosion – Category 2  
 Skin Sensitization – Category 1  
 Respiratory sensitizer – Not classified  
 Mutagenicity – Not classified  
 Aspiration Hazard – Not classified  
 Carcinogenicity – Not classified  
 Reproductive Toxicity – Not classified  
 Target Organ Toxicity (following single exposure ) – Category 2  
 Target Organ Toxicity (following repeated exposure ) – Category 2  
 Environmental  
 Aquatic Toxicity (acute) – Not classified  
 Aquatic Toxicity (chronic) – Not classified

\*Classified the product based on Japanese chemical substance registration.

### GHS Label Elements

<b>Symbols</b>	
Pictogram code	GHS07  GHS08 
<b>Signal word</b> Warning	
<b>Hazard Communication</b>	
<b>Hazard Code</b>	
H332	Harmful if inhaled (mist).
H320	Causes eye irritaion.
H317	May cause allergic skin reaction.
H335	May cause respiratory irritation.

H371	May cause damage to lungs.
<b>Prevention</b>	
<b>Summary</b>	
	Avoid breathing mist ●Wear suitable protective clothing and gloves. After handle this product, wash hands immediately and gargle sufficiently ●Read well Safety Data Sheets (SDS) before handling ●If you feel unwell or allergy, seek medical advice immediately.
<b>Prevention Code</b>	
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume/gas/mist/vapours/spray
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection
P281	Use personal protective equipment as required.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P309+P311	IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.
P314	Get medical advice/attention if you feel unwell.
P321	Specific treatment (see Prevention on this label).
P363	Wash contaminated clothing before reuse.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local, state and federal regulation.

**Other Precautionary Statements**

keep away from heat/sparks/open flame. – No smoking.  
Use only in a well-ventilated area.  
Store container tightly closed in cool/well-ventilated place.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substances presenting a health or environmental hazard within the meaning of Regulation (EC) No 1272/2008 and Directive 67/548/EEC.

COMPOSITION	CONTENT		EU CLP & DSD (Risk Classification(*)	
	CAS#	wt%		
Rosin modified phenolic resin	70955-45-2	20 - 30	-	-
Vegetable oils mixture [ Ingredient ]	Various	20 - 30	-	-
Tung oil	8001-20-5		-	-
Soybean oil	8001-22-7		-	-
Petroleum hydrocarbon	64742-46-7	20 - 30	-	-
Pigment (Black: Carbon black)	1333-86-4	10 - 20	-	-
Pigments (Yellow, Magenta, Cyan)	Various	10 - 20	-	-
Additives	Various	1 - 5	-	-

(\*) For full text of Products EU CLP & DSD see section 15

**4. FIRST AID MEASURES**

**EYE CONTACT :** In case of eye irritation, flush immediately with clean & large amounts of water for at least 15minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Get immediate medical attention.

**SKIN CONTACT** : Itching or burning of the skin. Immediately flush the skin with plenty of water while removing contaminated clothing and shoes. Wash skin thoroughly with mild soap / water. Get immediate medical attention. Wash contaminated clothing before reuse.

**Inhalation** : Remove person to fresh air. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, give artificial respiration.

**INGESTION** : Get immediate medical attention. Do not induce vomiting unless directed by medical personnel.

## 5. FIRE-FIGHTING MEASURES

**Suitable Extinguish Media** : Use dry chemical, carbon dioxide, or foam to extinguish fire. Water may be ineffective but should be used spray/fog for cooling and suffocating. Use water to dilute spills and to flush them away from sources of ignition.

**Special Fire Fighting Procedures** : Exposed firefighters must wear proper protective equipment and positive pressure self-contained breathing apparatus with full face mask. Do not inhale combustion gases.

**HAZARDOUS DECOMPOSITION PRODUCTS** : Products of combustion are hazardous including carbon monoxide and Carbon dioxide.

## 6. ACCIDENTAL RELEASE MEASURES

**GENERAL** : Consult an expert on the disposal of recovered material. Ensure disposal in compliance with government requirements and ensure conformity to local disposal regulations. Notify the appropriate authorities immediately. Take all additional action necessary to prevent and remedy the adverse effects of the spill.

**LAND SPILL** : Vapor protective clothing should be worn for and leaks. Shut off ignition sources; no flames, smoking or flames in hazard area. Keep public away. Take up with sand or other noncombustible absorbent material and place into containers for later disposal. Prevent additional discharge of product, if possible to do so without hazard.

**WATER SPILL** : Remove from surface by skimming or with suitable absorbents. Do not flush to sewer or waterways. Prevent release to the environment if possible.

## 7. HANDLING AND STORAGE

### Handling

Avoid contact with eyes. Avoid prolonged repeated skin contact and breathing mists/vapours. Use only with adequate ventilation. Use good hygiene practices. Wash hands before eating, drinking, smoking. Remove contaminated clothing and clean before re-use. Keep away from heat and flame. Keep operating temperatures below ignition temperatures at all times. Use nonsparking tools.

### Storage

**STORAGE TEMPERATURE** (min. / max. ) : 59°F (15°C) / 86°F (30°C)

**AVERAGE SHELF LIFE** : 2 years at 59°F (15°C)

**SPECIAL SENSITIVITY** : Heat. Air (Oxygen).

Risk of rapid polymerization / possibly rupturing container by fire, high heat sources, raising temperature.

Store in tightly closed containers in cool, dry, well-ventilated area away from heat, sources of ignition and incompatibles. Ground lines and equipment used during transfer to reduce the possibility of static

spark-initiated fire or explosion. Store at ambient or lower temperature. Store out of direct sunlight. Protect against physical damage.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Limits

Substance	CAS#	OSHA		ACGIH	
		TWA	STEL	TWA	STEL
Petroleum hydrocarbon	64742-46-7	n/e	n/e	5mg/m <sup>3</sup>	n/e
Carbon black	1333-86-4	3.5mg/m <sup>3</sup>	n/e	3.5mg/m <sup>3</sup>	n/e

n/e – none established

OSHA Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200) :  
Carbon black is considered hazardous ingredient (List on "Table Z-1" ) .

ACGIH : Petroleum hydrocarbon (as oil mist) TLV; 5mg/m<sup>3</sup> as TWA [ACGIH2004], Carbon black TLV ; 3.5mg/m<sup>3</sup> as TWA & A4 (not classifiable as a human carcinogen)[ACGIH2004].

### Engineering Controls

**VENTILATION** : Local exhaust ventilation may be necessary to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source. Provide mechanical ventilation for confined spaces. Use explosion-proof ventilation equipment.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Wear chemical safety splash-proof goggles for eye protection and face shield. Avoid skin contact. Wear impervious gloves for skin protection. Use NIOSH approved respirators when necessary.

## 9. PHYSICAL and CHEMICAL PROPERTIES

APPEARANCE : Viscous Paste

Color : Various Colors

ODOR : Mild

FLASH POINT : > 132°C / 270°F

BOILING POINT : 270–320°C (Mineral oil)

MELTING POINT : Not Applicable

VAPOR PRESSURE : No Data Available

VAPOR DENSITY (AIR=1) : No Data Available

MOLECULAR FORMULA : Mixture

MOLECULAR WEIGHT : Mixture

SPECIFIC GRAVITY : 0.9–1.2 at 25°C / 77°F

SOLUBILITY IN WATER : Insoluble

pH : No Data Available

## 10. STABILITY AND REACTIVITY

**Condition to avoid** : Avoid open flames, welding arcs, or other high temperature sources which include thermal decomposition.

**Incompatibles** : Oxidizing agents

**Hazardous Reactions/Decomposition Products** : Reacts with strong oxidizing agents. Thermal decomposition products may include oxides of carbon and nitrogen.

## 11. TOXICOLOGICAL INFORMATION

### Corrosive and Irritant Properties

Petroleum hydrocarbon	Oral LD50 (rat) > 5,000mg/kg
	Dermal LD(rabbit) > 5,000mg/kg
	Inhalation LD50(rat) = 2.18mg/L
Cobalt compound	Oral LD50 (rat) = 3900mg/kg

Petroleum Hydrocarbon

Acute Toxicity (inhalation)– Category 4

Skin Corrosion/irritation-- Category 3  
Eye Corrosion/irritation-- Category 2B  
Aspiration hazard – Category 1  
Target Organ Toxicity (following single exposure ) – Category 2  
Target Organ Toxicity (following repeated exposure ) – Category 1

#### Carbon Black –GHS Information

Carcinogenicity – Category 2\*\*  
\*\* Classified on the basis of evaluation as Group 2B (Possibly carcinogenic to humans) according to IARC. Printing inks are not classifiable as to their carcinogenicity to humans (Group 3).  
Target Organ Toxicity (following repeated exposure) – Category 1  
Causes damage to lungs.

#### Cobalt compound

Skin Sensitization – Category 1  
Carcinogenicity – Category 2\*  
\* IARC : Cobalt and compounds are possibly carcinogenic to humans (Group 2B). But The material concerned was not classified so that there was the description of "There is inadequate evidence for the carcinogenicity of cobalt---- and cobalt[ III ] acetate in experimental animals." (4.5 Evaluation of IARC Monographs/mono52–16.11/10/09)

Other evaluation of Carcinogenicity are not applicable by EPA, EU,and NTP.

## 12. ECOLOGICAL INFORMATION

No information available

GHS Information – Not classified

## 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with Federal, State and local regulations.  
Empty containers must be handled with care due to product residue.

## 14. TRANSPORT INFORMATION

U.S. Department of Transportation (DOT)  
Proper SHIPPING NAME : Not applicable  
HAZARD CLASS : Not applicable  
UN/NA NO : Not applicable  
Packing Group : Not applicable  
Labels Required : Not applicable

The following description is transport in accordance with ADR for road, RID for rail, IMDG for sea and ICAO for air transport.

ADR/RID/IMDG/ICAO/IATA Class : Not applicable  
UN Number : Not applicable  
Label : Not applicable  
Packing group: Not applicable  
Proper SHIPPING NAME : Not applicable

## 15. REGULATORY INFORMATION

(1). U.S. Federal Regulations  
Toxic Substances Control Act (TSCA) information

All components of these products are included on the 8 (b) TSCA Inventory list.

### Superfund Amendments and Reauthorization Act (SARA) Title III Information

These products contains none of the substances subject to reporting requirements of SARA section 313 (40 CFR 372)

**National Fire Protection Assotiation (NFPA) Ratings:** This information is intended solely for the use of individuals trained in the NFPA system.

Health : 1  
Flammability : 1  
Reactivity : 0

### (2). EU Regulations

**European Inventory of Existing Chemicals (EINECS) :** All of the components of this product are included on EINECS.

The following information is based on current EU (directives 67/548/EEC – 28th update [2001/59/EC], 1999/45/EC, 2001/58/EC and CLP Hazard classification [Regulation (EC) No 1272/2008]).

#### EU CLP & DSD Classification :

Designation according to EC guidelines in label :

CLP	CLP Hazardous substance : none CLP Classification : No classification standards applicable
DSD	Contains [Cobalt driers]. May produce allergic skin reaction. S: 7-24/25-26-28-36/37-61

**Code letter and hazard designnation of product:** No symbol

**Risk (R) Phrases:** none

By the component of under cobalt dryer 1%, not classified Risk phrase R42/43.

**Safety (S) Phrases :**

- S7 Keep container tightly closed
- S24/25 Avoid contact with eyes and skin
- S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S28 After contact with skin, wash immediately with plenty of water and seek medical advice.
- S36/37 Wear suitable protective clothing and gloves.
- S61 Avoid release to the environment. Refer to special instructions/Safety data sheet

#### Components Hazard Information :

Petroleum hydrocarbon

Cas No.64742-46-7 is classified into R45 (May cause cancer) for DSD, or into Carc.1B, GHS08, Dgr and H350 for CLP, but this product is refined highly, and this material removes a cancer-causing material. IARC classified Group 3.

Cobalt compound (Co CAS No. 7440-48-4 )\*

CLP	Resp. Sens. 1	GHS08	H334
	Skin Sens. 1	Dgr	H317
	Aquatic		H413
	Chronic 4		

DSD Xn Harmful

R42/43 May cause sensitization by inhalation and skin contact.

R68 Possible risk irreversible effects.

\*Cobalt in the material concerned is not classified. in the CLP and DSD Regulations

for the content of under 0.1%.

Follow all regulations in your country.

<b>16. OTHER INFORMATION</b>
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Revision Indicator : New MSDS

To the best of our knowledge, the information contained herein is accurate. However, neither KOREA SPECIAL INK IND. Co., LTD. Nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.