Kao Collins Inc.

Safety Data Sheet

Issuing Date 16-May-2018

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Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Code(s) **TSK2039**

Product name **BEAR**

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use ink

Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Company Name
Kao Collins Inc.
1201 Edison Drive
Cincinnati, OH 45216
PH: 513-948-9000
Info@kaocollins.com
For further information, please contact

1.4. Emergency telephone number

Emergency telephone number Chemtrec 1-800-424-9300

Emergency Telephone International Chemtrec: +1 703-527-3887

Section 2: HAZARD IDENTIFICATION

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Chronic aquatic toxicity	Category 2 - (H411)
Flammable Liquids	Category 2 - (H225)

2.2. Label elements

Product identifier

Signal word
Danger

Hazard statements
H411 - Toxic to aquatic life with long lasting effects
H225 - Highly flammable liquid and vapor

Precautionary Statements - EU (§28, 1272/2008)
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking

P370 + P378 - In case of fire: Use .? to extinguish

2.3. Other hazards
Toxic to aquatic life.

General Hazards
May cause skin and eye irritation. MAY CAUSE RESPIRATORY TRACT IRRITATION.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical Name	EC No	CAS-No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Reg. No
Ethyl alcohol	EEC No. Present	64-17-5	60 - 99	Flam. Liq. 2 (H225)	No data available
Chromium Complex azo dye mixture	-	PROPRIETARY	1 - 5	Aquatic Chronic 2 (H411)	No data available
Isopropyl alcohol	EEC No. Present	67-63-0	1 - 5	Eye Irrit. 2 (H319) STOT SE 3 (H336) Flam. Liq. 2 (H225)	No data available
Glycol Ether	Listed	-	1 - 5	No data available	No data available

Full text of H- and EUH-phrases: see section 16

NOTE
Chromium Complex azo dye mixture does not contain Chromium (VI). Remaining components are either not hazardous or below threshold limits.

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

General advice In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Immediate medical attention is required.

Inhalation If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If symptoms persist, call a physician.

Skin Contact Wash off immediately with plenty of water.

Eye contact In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Ingestion Do NOT induce vomiting. Rinse mouth with water and afterwards drink plenty of water or milk. Call a physician or poison control center immediately. Rinse mouth.

Self-protection of the first aider Remove all sources of ignition.

4.2. Most important symptoms and effects, both acute and delayed

4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

Section 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media
Use. Alcohol resistant foam. Dry chemical. Carbon dioxide (CO2). Water spray.

Unsuitable extinguishing media
No information available

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating and toxic gases and vapors

Hazardous combustion products Carbon oxides.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit. Use personal protective equipment as required.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions
Remove all sources of ignition. Evacuate personnel to safe areas. Ensure adequate ventilation.

For emergency responders
Use personal protection recommended in Section 8.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

6.3. Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Pick up and transfer to properly labeled containers.

6.4. Reference to other sections

See section 7 for more information.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Handling
Ensure adequate ventilation. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Use only in an area containing flame proof equipment. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Avoid contact with eyes, skin and clothing. Do not eat, drink or smoke when using this product.

Hygiene Measures
When using do not eat or drink. Regular cleaning of equipment, work area and clothing is recommended.

7.2. Conditions for safe storage, including any incompatibilities

Storage
Keep tightly closed in a dry and cool place. Keep in properly labeled containers.

7.3. Specific end use(s)

Risk Management Methods (RMM)
The information required is contained in this Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Chemical Name	European Union	United Kingdom	France	Spain	Germany
Ethyl alcohol 64-17-5		TWA: 1000 ppm TWA: 1920 mg/m³	TWA: 1000 ppm TWA: 1900 mg/m³ STEL: 5000 ppm STEL: 9500 mg/m³	VLA-ED: 1000 ppm VLA-ED; 1910 mg/m³ VLA-ED	TWA: 500 ppm TWA: 960 mg/m³
Isopropyl alcohol 67-63-0		STEL: 1250 mg/m³ STEL: 500 ppm TWA: 400 ppm TWA: 999 mg/m³	STEL: 400 ppm STEL: 980 mg/m³	VLA-EC: 500 ppm VLA-EC; 1250 mg/m³ VLA-EC VLA-ED: 400 ppm VLA-ED; 998 mg/m³ VLA-ED	TWA: 200 ppm TWA: 500 mg/m³
Glycol Ether		STEL: 150 ppm STEL: 924 mg/m³ TWA: 308 mg/m³ TWA: 50 ppm Skin	TWA: 50 ppm TWA: 308 mg/m³	S* VLA-ED: 50 ppm VLA-ED; 308 mg/m³ VLA-ED	TWA: 50 ppm TWA: 310 mg/m³

Chemical Name	Italy	Portugal	Netherlands	Finland	Denmark
Ethyl alcohol 64-17-5		TWA: 1000 ppm	MAC: 500 ppm MAC; 1000 mg/m³ MAC	TWA: 1900 mg/m³ TWA: 1000 ppm STEL: 2500 mg/m³ STEL: 1300 ppm	TWA: 1000 ppm TWA: 1900 mg/m³
Isopropyl alcohol 67-63-0		STEL: 500 ppm STEL: 400 ppm TWA: 200 ppm	MAC: 250 ppm MAC; 650 mg/m³ MAC	TWA: 500 mg/m³ TWA: 200 ppm STEL: 620 mg/m³ STEL: 250 ppm	TWA: 200 ppm TWA: 490 mg/m³
Glycol Ether	TWA: 308 mg/m³ TWA: 50 ppm	STEL: 150 ppm TWA: 100 ppm	MAC: 50 ppm MAC; 300 mg/m³ MAC	TWA: 310 mg/m³ TWA: 50 ppm Skin	TWA: 300 mg/m³ TWA: 50 ppm Skin

Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
Ethyl alcohol 64-17-5	STEL 2000 ppm STEL; 3800 mg/m³ STEL MAK: 1000 ppm MAK; 1900 mg/m³ MAK	STEL: 1000 ppm STEL: 1920 mg/m³	NDS: 1900 mg/m³	TWA: 500 ppm TWA: 950 mg/m³ STEL: 1187.5 mg/m³ STEL: 625 ppm	TWA: 1000 ppm TWA: 1900 mg/m³
Isopropyl alcohol 67-63-0	STEL 800 ppm STEL; 2000 mg/m³ STEL MAK: 200 ppm MAK; 500 mg/m³ MAK	STEL: 400 ppm STEL: 1000 mg/m³	NDSCh: 1200 mg/m³ NDS: 900 mg/m³ Skin	TWA: 100 ppm TWA: 245 mg/m³ STEL: 150 ppm STEL: 306.25 mg/m³	TWA: 200 ppm Skin
Glycol Ether	Skin STEL 100 ppm STEL; 614 mg/m³ STEL (isomers mixtures) MAK: 50 ppm MAK (mixed isomers); 307 mg/m³ MAK (mixed isomers)	STEL: 50 ppm STEL: 300 mg/m³	NDSCh: 480 mg/m³ NDS: 240 mg/m³	TWA: 300 mg/m³ TWA: 50 ppm Skin STEL: 375 mg/m³ STEL: 75 ppm	TWA: 308 mg/m³ TWA: 50 ppm Skin

Derived No Effect Level (DNEL) No information available

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering Measures Ensure adequate ventilation, especially in confined areas. Showers. Eyewash stations.

Personal Protective Equipment

Eye/Face Protection Wear safety glasses with side shields (or goggles). If splashes are likely to occur:. Goggles.

Skin and body protection Antistatic boots. Wear fire/flame resistant/retardant clothing. For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

Environmental exposure controls No information available.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	liquid		
Appearance	Black	**Odor**	Alcohol
Color	No information available	**Odor Threshold**	No information available

Property	**Values**	**Remarks • Method**
pH		No information available
Melting point / freezing point		No information available
Boiling point/range (°C) VALUE	70 °C	No information available
Flash point	< 20.9 °C	Seta Closed Cup
Evaporation rate		No information available
Flammability (solid, gas)		No information available
Flammability Limit in Air		
Upper flammability limit:		No information available
Lower flammability limit:		No information available
Vapor pressure		No information available
Vapor density		No information available
Relative density	0.80 - 0.90	No information available
Water solubility		No information available
Solubility(ies)	miscible	No information available
Partition coefficient		No information available
Autoignition temperature	>200 °C	No information available
Decomposition temperature		No information available
Kinematic viscosity		No information available
Dynamic viscosity	< 15 cps	No information available
Explosive properties	No information available	
Oxidizing properties	No information available	

9.2. Other information

Softening point	No information available
Molecular weight	No information available
VOC content	No information available
Density	No information available
Bulk density	No information available

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under normal conditions.

Explosion data

Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.

10.3. Possibility of hazardous reactions

Hazardous polymerization
None under normal processing.

Hazardous Reactions
None under normal processing.

10.4. Conditions to avoid

Heating in air. Heat, flames and sparks.

10.5. Incompatible materials

Strong oxidizing agents. Acids. Chlorinated compounds.

10.6. Hazardous decomposition products

Carbon oxides.

Section 11: TOXICOLOGY INFORMATION

11.1. Information on toxicological effects

Acute toxicity

Product Information
The product has not been tested.

Inhalation May cause irritation of respiratory tract. Avoid breathing vapors or mists.

Eye contact Avoid contact with eyes. May cause irritation.

IF ON SKIN Avoid contact with skin. May cause irritation.

Ingestion Do NOT taste or swallow. May be harmful if swallowed.

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 7,298.16 mg/kg
ATEmix (dermal) 13,774.80 mg/kg
ATEmix (inhalation-dust/mist) 147.00 mg/l

Unknown acute toxicity

89.4036 % of the mixture consists of ingredient(s) of unknown toxicity.
4.347 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.
82.54065 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.
89.4036 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).
89.4036 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).
7.347 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Ethyl alcohol	= 7060 mg/kg (Rat)		= 124.7 mg/L (Rat) 4 h
Isopropyl alcohol	= 1870 mg/kg (Rat)	= 4059 mg/kg (Rabbit)	= 72600 mg/m³ (Rat) 4 h
Glycol Ether	= 5.35 g/kg (Rat)	= 9500 mg/kg (Rabbit)	

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Sensitization No information available.

Mutagenic effects No information available.

Carcinogenic effects No information available.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Target organ effects Eyes, Lungs, blood, Skin, Central Nervous System (CNS), blood, kidney, liver, Reproductive System.

Aspiration hazard No information available.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Toxic to aquatic life Toxic to aquatic life with long lasting effects

Ecotoxicity effects

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Contains 0.459 % of components with unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Toxicity to Fish	Crustacea
Ethyl alcohol		100: 96 h Pimephales promelas mg/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through 12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static	9268 - 14221: 48 h Daphnia magna mg/L LC50 10800: 24 h Daphnia magna mg/L EC50 2: 48 h Daphnia magna mg/L EC50 Static
Isopropyl alcohol	1000: 72 h Desmodesmus subspicatus mg/L EC50 1000: 96 h Desmodesmus subspicatus mg/L EC50	11130: 96 h Pimephales promelas mg/L LC50 static 1400000: 96 h Lepomis macrochirus µg/L LC50 9640: 96 h Pimephales promelas mg/L LC50 flow-through	13299: 48 h Daphnia magna mg/L EC50
Glycol Ether		10000: 96 h Pimephales promelas mg/L LC50 static	1919: 48 h Daphnia magna mg/L LC50

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

Chemical Name	Partition coefficient
Ethyl alcohol	-0.32
Isopropyl alcohol	0.05
Glycol Ether	-0.064

12.4. Mobility in soil

Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

No information available

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from residues/unused products Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14: TRANSPORT INFORMATION

IMDG/IMO

14.1 UN-No	UN1210
14.2 Proper shipping name	Printing Ink, Flammable
14.3 Hazard Class	3
14.4 Packing group	II
14.5 Marine pollutant	Not applicable
14.6 Special Provisions	None
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code	No information available

RID

14.1 UN-No	Not Regulated
14.2 Proper shipping name	Not Regulated
14.3 Hazard Class	Not Regulated
14.4 Packing group	Not Regulated
14.5 Environmental hazard	Not applicable
14.6 Special Provisions	None

ADR

14.1 UN-No	UN1210
14.2 Proper shipping name	Printing ink Flammable liquid, n.o.s
14.3 Hazard Class	3
14.4 Packing group	II
14.5 Environmental hazard	Not applicable
14.6 Special Provisions	None

IATA

14.1 UN-No	UN1210
14.2 Proper shipping name	Printing Ink, Flammable
14.3 Hazard Class	3
14.4 Packing group	II
14.5 Environmental hazard	Not applicable
14.6 Special Provisions	None

Section 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Authorizations and/or restrictions on use:
This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants
Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009 Not applicable

International Inventories

Component	TSCA	DSL/NDSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Ethyl alcohol 64-17-5 (60 - 99)	X	X	X	X	X	X	X	X
Isopropyl alcohol	X	X	X	X	X	X	X	X

67-63-0 (1 - 5)								
Glycol Ether (1 - 5)	X	X	X	X	X	X	X	X

Legend Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances All the components of this product are listed or are exempted on the Philippine Inventory of Chemicals and Chemical Substances (PICCS). No component of this product is listed on the Priority Chemical List (PCL). No component of this product is listed on the Chemical Control Order (CCO) list. No component of this product is regulated by the Philippine Drug Enforcement Agency (PDEA). No component of this product is regulated by the Philippine National Police (PNP).
AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

No information available

Section 16: OTHER INFORMATION

Full text of H-Statements referred to under section 3
H225 - Highly flammable liquid and vapor
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness
H411 - Toxic to aquatic life with long lasting effects
Legend
SVHC: Substances of Very High Concern for Authorization:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Prepared by
Kao Collins Inc.
1201 Edison Drive
Cincinnati, OH 45216
PH: 513-948-9000
Info@kaocollins.com

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Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Disclaimer
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End of Safety Data Sheet