Kao Collins Inc.

Safety Data Sheet

Issuing Date 07-Feb-2019 **Revision date**07-Feb-2019

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

1.1. Product identifier

Product Code(s) **TWK2080H**

Product name **RELIABLE**

Pure substance/mixture Mixture
Contains 1,2-Benzisothiazolin-3-one, 1-Methyl-2-pyrrolidone

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

Skin sensitization	Category 1 - (H317)
Reproductive toxicity	Category 1B - (H360D)

2.2. Label elements

Product identifier
Contains 1,2-Benzisothiazolin-3-one, 1-Methyl-2-pyrrolidone

Signal word
Danger

Hazard statements
H317 - May cause an allergic skin reaction

H360D - May damage the unborn child

Precautionary Statements - EU (§28, 1272/2008)
P201 - Obtain special instructions before use
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P308 + P313 - IF exposed or concerned: Get medical advice/attention
P321 - Specific treatment (see supplemental first aid instructions on this label)
P362 + P364 - Take off contaminated clothing and wash it before reuse

2.3. Other hazards

Causes mild skin irritation.

General Hazards

May cause skin and eye irritation. May cause irreversible damage to eyes.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	EC No	CAS No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Reg. No
Alcohol	Listed	-	1 - 5	Acute Tox. 5 (H303) Skin Irrit. 2 (H315) Eye Irrit. 2B (H320) Acute Tox 5 (H333)	No data available
Triethanolamine	EEC No. Present	102-71-6	1 - 5	Eye Irrit. 2 (H319)	No data available
Lactam	Listed	-	0.1 - 3	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Repr. 1B (H360D) STOT SE 3 (H335)	No data available
Ethyl alcohol	EEC No. Present	64-17-5	0.1 - <1	Flam. Liq. 2 (H225)	No data available
1,2-Benzisothiazolin-3-one	EEC No. Present	2634-33-5	0.01 - <0.1	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Skin Sens. 1 (H317) Aquatic Acute 1 (H400)	No data available

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

NOTE
Remaining components are either not hazardous or below threshold limits.
This product contains one or more candidate substance(s) of very high concern (Regulation (EC) No. 1907/2006 (REACH), Article 59)

Chemical name	CAS No	SVHC candidates
Lactam	-	X

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 not required.

Inhalation Remove to fresh air. If symptoms persist, call a physician.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician. Wash off immediately with soap and plenty of water.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.

Ingestion Do NOT induce vomiting. Drink plenty of water. Immediate medical attention is not required. Rinse mouth.

Self-protection of the first aider Use personal protective equipment as required.

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 May cause sensitization of susceptible persons. Use of epinephrine may be indicated.

Section 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

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

Unsuitable extinguishing media
None

5.2. Special hazards arising from the substance or mixture

Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes Thermal decomposition can lead to release of irritating and toxic gases and vapors In the event of fire and/or explosion do not breathe fumes May cause sensitization in susceptible persons

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions
Use personal protective equipment as required. Avoid contact with skin and eyes.

For emergency responders
Use personal protection recommended in Section 8.

6.2. Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. 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 Use personal protective equipment as required. Dam up. Cover liquid spill with sand, earth or other non-combustible absorbent material. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. Soak up with inert absorbent material.

6.4. Reference to other sections

See section 7 for more information.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Handling
Use personal protective equipment as required. Ensure adequate ventilation.

Hygiene Measures
Wash contaminated clothing before reuse. When using do not eat or drink.

7.2. Conditions for safe storage, including any incompatibilities

Storage
Keep out of the reach of children. Keep container tightly closed. Keep containers tightly closed in a cool, well-ventilated place.

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
Glycol					TWA: 1000 mg/m³
Triethanolamine 102-71-6				VLA-ED: 5 mg/m³ VLA-ED	
Lactam		STEL: 309 mg/m³ STEL: 75 ppm TWA: 103 mg/m³ TWA: 25 ppm Skin	TWA: 40 mg/m³ TWA: 10 ppm STEL: 80 mg/m³ STEL: 20 ppm	S* VLA-EC: 75 ppm VLA-EC; 309 mg/m³ VLA-EC VLA-ED: 25 ppm VLA-ED; 103 mg/m³ VLA-ED	TWA: 20 ppm TWA: 82 mg/m³ H*

Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
Triethanolamine 102-71-6		TWA: 5 mg/m³	MAC: 5 mg/m³ MAC	TWA: 5 ppm	TWA: 0.5 ppm TWA: 3.1 mg/m³
Lactam			MAC: 20 ppm MAC; 80 mg/m³ MAC (fume)	TWA: 10 ppm TWA: 40 mg/m³ STEL: 80 mg/m³ STEL: 20 ppm Skin	TWA: 20 mg/m³ TWA: 5 ppm

Chemical name	Austria	Switzerland	Poland	Norway	Ireland
Glycol		STEL: 2000 mg/m³			
Triethanolamine 102-71-6	STEL 1.6 ppm STEL (inhalable fraction); 10 mg/m³ STEL (inhalable fraction) MAK: 0.8 ppm MAK (inhalable fraction); 5 mg/m³ MAK (inhalable fraction)	STEL: 10 mg/m³		TWA: 5 mg/m³ STEL: 10 mg/m³	TWA: 5 mg/m³
Lactam	Skin STEL 80 ppm STEL; 320 mg/m³ STEL MAK: 20 ppm MAK; 80 mg/m³ MAK (mists)	STEL: 40 ppm STEL: 160 mg/m³	NDSCh: 240 mg/m³ NDS: 120 mg/m³ Skin	TWA: 20 mg/m³ TWA: 5 ppm Skin STEL: 10 ppm STEL: 30 mg/m³	TWA: 101 mg/m³ TWA: 25 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	Tight sealing safety goggles.
Hand protection	For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn.
Skin and body protection	Suitable protective clothing.
Respiratory protection	None under normal use conditions.

Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

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

Property	**Values**	**Remarks • Method**
pH		
Melting point / freezing point		No information available
Boiling point / boiling range		No information available
Flash point	> 100 °C 212 °F	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		
Relative density	1.0 - 1.1	
Water solubility		No information available
Solubility(ies)	Soluble in water	
Partition coefficient		No information available
Autoignition temperature	>200 °C °F	
Decomposition temperature		No information available
Kinematic viscosity		No information available
Dynamic viscosity	< 15 cps	
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
Liquid 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
Hazardous polymerization does not occur.

Hazardous Reactions
None under normal processing.

10.4. Conditions to avoid

10.5. Incompatible materials

Strong oxidizing agents.

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	Contact with eyes may cause irritation. Avoid contact with eyes.
IF ON SKIN	May cause sensitization by skin contact. May cause irritation. Avoid contact with skin.
Ingestion	May be harmful if swallowed. Do NOT taste or swallow.

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

ATEmix (oral)	34,664.80 mg/kg
ATEmix (inhalation-dust/mist)	28.86 mg/l
ATEmix (inhalation-vapor)	892.90 mg/l

Unknown acute toxicity
0 % of the mixture consists of ingredient(s) of unknown toxicity.
0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.
0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.
0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).
0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).
0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Triethanolamine	= 4190 mg/kg (Rat)	> 20000 mg/kg (Rabbit) > 16 mL/kg (Rat)	
Lactam	= 3914 mg/kg (Rat)	= 8 g/kg (Rabbit)	> 5.1 mg/L (Rat) 4 h
Ethyl alcohol	= 7060 mg/kg (Rat)		= 124.7 mg/L (Rat) 4 h
1,2-Benzisothiazolin-3-one	= 1020 mg/kg (Rat)		

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	This product contains Ethanol which is classified as a possible carcinogen when ingested in the form of an alcoholic beverage. This is irrelevant as this product is used for ink jet ink

applications not an alcoholic beverage.

Reproductive toxicity May cause harm to the unborn child. Possible risk of harm to the unborn child. May impair fertility. Possible risk of impaired fertility.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Target organ effects blood, Eyes, Skin, Gastrointestinal tract (GI).

Aspiration hazard No information available.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity effects

Not Established.

Contains 0 % of components with unknown hazards to the aquatic environment

Chemical name	Algae/aquatic plants	Toxicity to Fish	Crustacea
Triethanolamine	216: 72 h Desmodesmus subspicatus mg/L EC50 169: 96 h Desmodesmus subspicatus mg/L EC50	10600 - 13000: 96 h Pimephales promelas mg/L LC50 flow-through 450 - 1000: 96 h Lepomis macrochirus mg/L LC50 static 1000: 96 h Pimephales promelas mg/L LC50 static	1386: 24 h Daphnia magna mg/L EC50
Lactam	500: 72 h Desmodesmus subspicatus mg/L EC50	1072: 96 h Pimephales promelas mg/L LC50 static 1400: 96 h Poecilia reticulata mg/L LC50 static 4000: 96 h Leuciscus idus mg/L LC50 static 832: 96 h Lepomis macrochirus mg/L LC50 static	4897: 48 h Daphnia magna mg/L EC50
Ethyl alcohol		13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static 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

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

Chemical name	Partition coefficient
Triethanolamine	-2.53
Lactam	-0.46
Ethyl alcohol	-0.32
1,2-Benzisothiazolin-3-one	1.3

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.
Other Information	According to the European Waste Catalog, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

Section 14: TRANSPORT INFORMATION

IMDG/IMO

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 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	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

IATA

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

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 contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorization per REACH Annex XIV
Lactam -	30. 71.	

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
Alcohol (1 - 5)	X	X	X	X	X	X	X	X
Triethanolamine 102-71-6 (1 - 5)	X	X	X	X	X	X	X	X
Lactam (0.1 - 3)	X	X	X	X	X	X	X	X
Ethyl alcohol 64-17-5 (0.1 - <1)	X	X	X	X	X	X	X	X
1,2-Benzisothiazolin-3-one 2634-33-5 (0.01 - <0.1)	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
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
H302 - Harmful if swallowed
H303 - May be harmful if swallowed
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H319 - Causes serious eye irritation
H320 - Causes eye irritation
H333 - May be harmful if inhaled
H335 - May cause respiratory irritation

H360D - May damage the unborn child
H400 - Very toxic to aquatic life
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

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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