

Issuing Date 21-Nov-2014

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

**Product identifier**

**Product Code(s)** TWK2080H  
**Product name** RELIABLEH (MOD)  
**Substance or Preparation** Preparation  
Contains 1,2-Benzisothiazolin-3-one

**Relevant identified uses of the substance or mixture and uses advised against**

**Recommended Use** ink  
**Uses advised against** No information available

**Details of the supplier of the safety data sheet**

**Manufacturer:**  
Collins Inkjet Corporation  
1201 Edison Drive  
Cincinnati, Ohio 45216  
PH: 513-948-9000  
Info@collinsinkjet.com

For further information, please contact

**Emergency telephone number** Chemtrec 1-800-424-9300

**Section 2: HAZARDS IDENTIFICATION**

**Classification of the substance or mixture**

Regulation (EC) No 1272/2008

<b>Skin sensitization</b>	Category 1 - (H317)
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**Classification according to Directive 67/548/EEC or 1999/45/EC**  
Full text of R-phrases: see section 16

**Symbol(s)**  
Xi - Irritant

**R-code(s)**  
R43

**Label elements**

**Product identifier**  
Contains 1,2-Benzisothiazolin-3-one



**Signal word**  
WARNING

**Hazard statements**

H360D - May damage the unborn child

**Precautionary Statements - EU (§28, 1272/2008)**

P280 - Wear eye protection/ face protection

P321 - Specific treatment (see supplemental first aid instructions on this label)

**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	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Reg. No
Triethanolamine	EEC No. Present	102-71-6	1 - 5	Xi;R36	Eye Irrit. 2 (H319)	
Lactam	Listed	-	0.1 - 3	Xi; R36/37/38 Repr.Cat.2; R61	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Repr. 1B (H360D) STOT SE 3 (H335)	
Ethyl alcohol	EEC No. Present	64-17-5	0.1 - <1	F; R11	Flam. Liq. 2 (H225)	
Isothiazolin derivative	Listed	-	0.01 - <0.1	Xn; R22 Xi; R38-41 R43 N; R50	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Skin Sens. 1 (H317) Aquatic Acute 1 (H400)	

**Full text of R-phrases: see section 16**

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

**NOTE**

Remaining components are either not hazardous or below threshold limits.

### Section 4: FIRST AID MEASURES

**Description of first aid measures**

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<b>General advice</b>	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Immediate medical attention is not required.
<b>Inhalation</b>	Remove to fresh air. If symptoms persist, call a physician.
<b>IF ON SKIN</b>	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.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
<b>Ingestion</b>	Do NOT induce vomiting. Drink plenty of water. Immediate medical attention is not required. Rinse mouth.
<b>Self-protection of the first aider</b>	Use personal protective equipment as required.
<b><u>Most important symptoms and effects, both acute and delayed</u></b>	
<b><u>Indication of any immediate medical attention and special treatment needed</u></b>	
<b>Notes to Physician</b>	May cause sensitization of susceptible persons. Use of epinephrine may be indicated.

## Section 5: FIRE FIGHTING MEASURES

### Extinguishing media

#### **Suitable extinguishing media**

Use. Carbon dioxide (CO<sub>2</sub>). Dry chemical. Alcohol resistant foam.

#### **Unsuitable extinguishing media**

None

### 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 gases and vapors In the event of fire and/or explosion do not breathe fumes  
May cause sensitization by inhalation and skin contact

### Advice for fire-fighters

Wear self-contained breathing apparatus and protective suit.

## Section 6: ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

#### **Personal precautions**

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

### Environmental Precautions

Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system.

### 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**

After cleaning, flush away traces with water. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Prevent product from entering drains.

Reference to other sections**Section 7: HANDLING AND STORAGE**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.

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.

Specific end use(s)**Risk Management Methods (RMM)**

The information required is contained in this Material Safety Data Sheet.

**Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters

Chemical name	Eu	United Kingdom	France	Spain	Germany
Glycol					TWA: 1000 mg/m <sup>3</sup> Ceiling / Peak: 2000 mg/m <sup>3</sup>
Triethanolamine 102-71-6				VLA-ED: 5 mg/m <sup>3</sup> VLA-ED	TWA: 5 mg/m <sup>3</sup> Ceiling / Peak: 20 mg/m <sup>3</sup>
Lactam		STEL: 309 mg/m <sup>3</sup> STEL: 75 ppm TWA: 103 mg/m <sup>3</sup> TWA: 25 ppm Skin	TWA: 40 mg/m <sup>3</sup> TWA: 10 ppm STEL: 80 mg/m <sup>3</sup> STEL: 20 ppm	S* VLA-EC: 75 ppm VLA-EC; 309 mg/m <sup>3</sup> VLA-EC VLA-ED: 25 ppm VLA-ED; 103 mg/m <sup>3</sup> VLA-ED	TWA: 20 ppm TWA: 82 mg/m <sup>3</sup> Ceiling / Peak: 40 ppm Ceiling / Peak: 164 mg/m <sup>3</sup>
Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
Triethanolamine 102-71-6		TWA: 5 mg/m <sup>3</sup>	MAC: 5 mg/m <sup>3</sup> MAC	TWA: 5 ppm	TWA: 0.5 ppm TWA: 3.1 mg/m <sup>3</sup>
Lactam			MAC: 20 ppm MAC; 80 mg/m <sup>3</sup> MAC (fume)	TWA: 10 ppm TWA: 40 mg/m <sup>3</sup> STEL: 80 mg/m <sup>3</sup> STEL: 20 ppm Skin	TWA: 20 mg/m <sup>3</sup> TWA: 5 ppm
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
Glycol		STEL: 2000 mg/m <sup>3</sup>			
Triethanolamine 102-71-6	STEL 1.6 ppm STEL (inhalable fraction); 10 mg/m <sup>3</sup> STEL (inhalable fraction) MAK: 0.8 ppm MAK (inhalable fraction); 5 mg/m <sup>3</sup> MAK (inhalable fraction)	STEL: 20 mg/m <sup>3</sup>		TWA: 5 mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>
Lactam	Skin STEL 80 ppm STEL; 320 mg/m <sup>3</sup> STEL MAK: 20 ppm MAK; 80 mg/m <sup>3</sup> MAK (mists)	STEL: 40 ppm STEL: 160 mg/m <sup>3</sup>	NDSch: 240 mg/m <sup>3</sup> NDS: 120 mg/m <sup>3</sup> Skin	TWA: 20 mg/m <sup>3</sup> TWA: 5 ppm Skin STEL: 10 ppm STEL: 30 mg/m <sup>3</sup>	TWA: 101 mg/m <sup>3</sup> TWA: 25 ppm Skin

**Derived No Effect Level (DNEL)** No information available

**Predicted No Effect Concentration (PNEC)** No information available.

#### 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

#### General information

<b>Physical state</b>	liquid	<b>Appearance</b>	black
<b>Odor</b>	Acrylic		

#### Important health, safety and environmental information

<b>Flash Point</b>	> 100 °C	<b>This temperature may be significantly lower under particular conditions (slow oxidation on finely divided materials)</b>	Seta closed cup.
<b>Boiling point / boiling range</b>	No information available	<b>pH</b>	
<b>PH</b>	8 - 10	<b>Autoignition temperature</b>	>200 °C
<b>Vapor Pressure</b>	No information available	<b>VOC Content</b>	No information available
<b>Viscosity</b>	< 15 cps	<b>Solubility</b>	Soluble in water
<b>Specific gravity</b>	1.0 - 1.1	<b>Evaporation Rate</b>	No information available
<b>Vapor Density</b>	Heavier than air		
		<b>Flammability Limit in Air</b>	No information available

#### OTHER INFORMATION

**Melting point / melting range** No information available

## Section 10: STABILITY AND REACTIVITY

#### Reactivity

No data available.

#### Chemical stability

Stable under normal conditions.

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

#### Possibility of hazardous reactions

**Hazardous polymerization**

Hazardous polymerization does not occur.

**Hazardous Reactions**

None under normal processing.

**Conditions to avoid****Incompatible materials**

Strong oxidizing agents.

**Hazardous decomposition products**

Carbon oxides.

## Section 11: TOXICOLOGICAL INFORMATION

**Information on toxicological effects****Acute toxicity****Product Information**

The product has not been tested.

<b>Inhalation</b>	May cause irritation of respiratory tract. Avoid breathing vapors or mists.
<b>Eye contact</b>	Contact with eyes may cause irritation. Avoid contact with eyes. May cause irreversible damage to eyes.
<b>IF ON SKIN</b>	May cause sensitization by skin contact. May cause irritation. Avoid contact with skin.
<b>Ingestion</b>	MAY BE HARMFUL IF SWALLOWED. May cause gastrointestinal discomfort if consumed in large amounts. Do NOT taste or swallow.

**Unknown acute toxicity** 3.07525% of the mixture consists of ingredient(s) of unknown toxicity.

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

<b>ATEmix (oral)</b>	52,530.00 mg/kg
<b>ATEmix (inhalation-dust/mist)</b>	155.30 mg/l

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Triethanolamine	= 4190 mg/kg ( Rat )	> 20 mL/kg ( Rabbit ) > 16 mL/kg ( Rat )	
Lactam	= 3598 mg/kg ( Rat )	= 8 g/kg ( Rabbit )	= 3.1 mg/L ( Rat ) 4 h
Ethyl alcohol	= 7060 mg/kg ( Rat )		= 124.7 mg/L ( Rat ) 4 h
Isothiazolin derivative	= 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** No information available.

**Reproductive toxicity** No information available.

<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Target organ effects</b>	Respiratory System, EYES, skin, Gastrointestinal tract (GI).
<b>Aspiration hazard</b>	No information available.

## Section 12: ECOLOGICAL INFORMATION

### Toxicity

#### Ecotoxicity effects

Not Established.

3.376036% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical name	Toxicity to Algae	Toxicity to Fish	Daphnia Magna (Water Flea)
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 1000: 96 h Pimephales promelas mg/L LC50 static 450 - 1000: 96 h Lepomis macrochirus mg/L LC50 static	1386: 24 h Daphnia magna mg/L EC50
Lactam	500: 72 h Desmodesmus subspicatus mg/L EC50	832: 96 h Lepomis macrochirus mg/L LC50 static 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	4897: 48 h Daphnia magna mg/L EC50
Ethyl alcohol		12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static	9268 - 14221: 48 h Daphnia magna mg/L LC50 2: 48 h Daphnia magna mg/L EC50 Static 10800: 24 h Daphnia magna mg/L EC50

### Persistence and degradability

No information available.

### Bioaccumulative potential

No information available.

Chemical name	Log Pow
Triethanolamine	-2.53
Lactam	-0.46
Ethyl alcohol	-0.32
Isothiazolin derivative	1.3

### Mobility in soil

#### **Mobility in soil**

No information available.

### Results of PBT and vPvB assessment

This substance is considered to be persistent, bioaccumulating and toxic (PBT).

### Other adverse effects

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**Section 13: DISPOSAL CONSIDERATIONS**

Waste treatment methods

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

**OTHER INFORMATION**                      According to the European Waste Catalogue, 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	
14.2 Proper shipping name	No information available
14.3	
14.4	
14.5 Marine pollutant	Lead compounds
14.6	
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available

RID

14.1	
14.2 Proper shipping name	No information available
14.3	
14.4	
14.5	
14.6 Special Provisions	274, 561

ADR

14.1	
14.2 Proper shipping name	No information available
14.3	
14.4	
14.5	
14.6 Special Provisions	[DOT]: 101

ICAO

14.1	
14.2 Proper shipping name	No information available
14.3	
14.4	
14.5	
14.6	

IATA

14.1	
14.2 Proper shipping name	No information available
14.3	
14.4	
14.5	
14.6 Special Provisions	A112



## Section 15: REGULATORY INFORMATION

### 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

#### International Inventories

Chemical name	TSCA	DSL/NDSL	EINECS/ELI NCS	ENCS	IECSC	KECL	PICCS	AICS
Triethanolamine 102-71-6	X	X	X	X	X	X	X	X
Lactam	X	X	X	X	X	X	X	X
Ethyl alcohol 64-17-5	X	X	X	X	X	X	X	X
Isothiazolin derivative	X	X	X	X	X	X	X	X

#### 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 Commercial Chemical Substances/EU 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

#### Chemical safety assessment

No information available

## Section 16: OTHER INFORMATION

#### Full text of R-phrases referred to under sections 2 and 3

R36 - Irritating to eyes

R61 - May cause harm to the unborn child

R50 - Very toxic to aquatic organisms

R43 - May cause sensitization by skin contact

R22 - Harmful if swallowed

R11 - Highly flammable

R41 - Risk of serious damage to eyes

R38 - Irritating to skin

R67 - Vapors may cause drowsiness and dizziness

R35 - Causes severe burns

R25 - Toxic if swallowed

R36/37/38 - Irritating to eyes, respiratory system and skin

**Full text of H-Statements referred to under sections 2 and 3**

H319 - Causes serious eye irritation

H302 - Harmful if swallowed

H315 - Causes skin irritation

H318 - Causes serious eye damage

H317 - May cause an allergic skin reaction

H400 - Very toxic to aquatic life

H360D - May damage the unborn child

H335 - May cause respiratory irritation

**Prepared by** Collins Inkjet Corporation  
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**Reason for revision** Not Applicable.

**This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006**

**End of Safety Data Sheet**