

Issuing Date 21-Nov-2014

Revision date 11-Feb-2015

Revision Number 1

**1. Identification of the Substance/Preparation and of the Company/Undertaking**

**Product identifier**

**Product name** RELIABLEH (MOD)

**Other means of identification**

**Product Code(s)** TWK2080H  
**Synonyms** No information available

**Item Numbers:** 5780202, 5780202FX,  
5780238, 5780238FX

**Recommended use of the chemical and restrictions on use**

**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

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

**2. Hazards Identification**

**Classification**

**OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Reproductive Toxicity	Category 1B
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**Label elements**

**EMERGENCY OVERVIEW**

**DANGER**

**Hazard statements**

May damage fertility or the unborn child



**Appearance** black

**Physical state** liquid

**Odor** Acrylic

**Precautionary Statements - Prevention**

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Use personal protective equipment as required

**Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)****OTHER INFORMATION**

• Causes mild skin irritation

Unknown acute toxicity

3.07525% of the mixture consists of ingredient(s) of unknown toxicity

**3. Composition/information on Ingredients**

Chemical name	CAS-No	Weight %	Trade secret
Triethanolamine	102-71-6	1 - 5	*
Lactam	Proprietary	0.1 - 3	*
Ethyl alcohol	64-17-5	0.1 - <1	*

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

**NOTE**

Remaining components are either not hazardous or below threshold limits.

**4. First aid measures****FIRST AID MEASURES**

<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>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>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>Inhalation</b>	Remove to fresh air. 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.

**Most important symptoms and effects, both acute and delayed**

<b>Most Important Symptoms and Effects</b>	Hives.
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**Indication of any immediate medical attention and special treatment needed**

<b>Notes to Physician</b>	May cause sensitization of susceptible persons. Use of epinephrine may be indicated.
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**5. Fire-fighting measures****Suitable extinguishing media**

Use Carbon dioxide (CO2) Dry chemical Alcohol resistant foam

Unsuitable extinguishing media None.

**Specific hazards arising from the chemical**

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.

**Explosion data**

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

**Protective equipment and precautions for firefighters**

Wear self-contained breathing apparatus and protective suit.

**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**

**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.

**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.

**7. Handling and Storage**

**Precautions for safe handling**

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

**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.

**Incompatible Products** Strong oxidizing agents.

**8. Exposure Controls/Personal Protection**

**Control parameters**

**Exposure guidelines** This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Triethanolamine 102-71-6	TWA: 5 mg/m <sup>3</sup>	-	-

**Appropriate engineering controls**

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

**Individual protection measures, such as personal protective equipment**

<b>Eye/Face Protection</b>	Tight sealing safety goggles.
<b>Skin and body protection</b>	For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn.
<b>Respiratory protection</b>	None under normal use conditions.
<b>Hygiene Measures</b>	Wash contaminated clothing before reuse. When using do not eat or drink.

**9. Physical and Chemical Properties**

**Information on basic physical and chemical properties**

<b>Physical state</b>	liquid	<b>Odor</b>	Acrylic
<b>Appearance</b>	black	<b>Odor Threshold</b>	No information available
<b>color</b>	No information available		
<b>Property</b>	<b>Values</b>	<b>Remarks/ • method</b>	
<b>pH</b>	8 - 10		
<b>Melting point / freezing point</b>			
<b>Boiling point / boiling range</b>	No information available		
<b>Flash Point</b>	> 100 °C	Seta closed cup	
<b>Evaporation Rate</b>	No information available		
<b>flammability (solid, gas)</b>	No information available		
<b>Flammability Limit in Air</b>			
<b>Upper Flammability Limit</b>	No information available		
<b>Lower Flammability Limit</b>	No information available		
<b>Vapor Pressure</b>	No information available		
<b>Vapor Density</b>	No information available		
<b>Specific gravity</b>	1.0 - 1.1	None known	
<b>Water solubility</b>	Practically insoluble (~0.4 ug/mL)		
<b>Solubility in other solvents</b>	No information available		
<b>Partition coefficient: n-octanol/water</b>	No information available		
<b>Autoignition temperature</b>	>200 °C		
<b>Decomposition temperature</b>	No information available		
<b>Kinematic viscosity</b>	No information available		
<b>Dynamic viscosity</b>	No information available		
<b>Explosive properties</b>	No information available		
<b>Oxidizing properties</b>	No information available		

**OTHER INFORMATION**

<b>Softening point</b>	No information available
<b>Molecular weight</b>	No information available
<b>VOC Content</b>	No information available
<b>Density</b>	No information available
<b>Bulk density</b>	No information available

**10. Stability and Reactivity**

**Reactivity**  
No data available

**Chemical stability**  
Stable under normal conditions.

**Possibility of hazardous reactions**  
None under normal processing.

**Hazardous polymerization**      Hazardous polymerization does not occur.

**Conditions to avoid**

Extremes of temperature and direct sunlight.

**Incompatible materials**

Strong oxidizing agents.

**Hazardous decomposition products**

Carbon oxides.

**11. Toxicological Information**

**Information on likely routes of exposure**

<b>Product Information</b>	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.

**Information on toxicological effects**

**Symptoms** No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**irritation** May cause irritation of respiratory tract. May cause skin and eye irritation.  
**Sensitization** No information available.  
**Mutagenic effects** No information available.  
**Carcinogenicity** The list below indicates any ingredient listed as a carcinogen:  
 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.

Chemical name	ACGIH	IARC	NTP	OSHA
Ethyl alcohol 64-17-5	-	Group 1	Known	X

*IARC: (International Agency for Research on Cancer)*

*Group 1 - Carcinogenic to Humans*

*Group 2A - Probably Carcinogenic to Humans*

*NTP: (National Toxicity Program)*

*Known - Known Carcinogen*

<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Chronic toxicity</b>	Repeated contact may cause allergic reactions in very susceptible persons. Avoid repeated exposure.
<b>Target organ effects</b>	Respiratory System, EYES, skin, Gastrointestinal tract (GI).
<b>Aspiration hazard</b>	No information available.

**Numerical measures of toxicity - Product Information**

**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>	52530 mg/kg
<b>ATEmix (dermal)</b>	109768 mg/kg
<b>ATEmix (inhalation-dust/mist)</b>	155.3 mg/l

**12. Ecological Information**

**ecotoxicity**

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

**Persistence and degradability**

No information available.

**Bioaccumulation/Accumulation**

No information available.

Chemical name	Log Pow
Triethanolamine 102-71-6	-2.53
Lactam	-0.46
Ethyl alcohol 64-17-5	-0.32

**Other adverse effects** .?

**13. Disposal Considerations**

**Waste treatment methods**

**Waste treatment methods** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated packaging** Do not re-use empty containers.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical name	California Hazardous Waste Status
Ethyl alcohol 64-17-5	Toxic; Ignitable

**14. Transport Information**

**DOT** Not regulated

**IATA** Not regulated

**15. Regulatory information**

**International Inventories**

Chemical name	TSCA	DSL/NDL	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

**Legend**

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory  
 DSL/NDL - 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

**U.S. Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	SARA 313 - Threshold Values %
Lactam -	1.0

**SARA 311/312 Hazard Categories**

Acute health hazard	yes
Chronic Health Hazard	yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

**Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

**U.S. State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals

**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Triethanolamine 102-71-6	X	X	X
Lactam	X	X	X
Ethyl alcohol 64-17-5	X	X	X
Magnesium nitrate 10377-60-3	X	X	X
Copper(II) nitrate, trihydrate (1:2:3) 10031-43-3	X	-	X

**U.S. EPA Label Information**

EPA Pesticide registration number Not applicable

**16. Other information**

<u>NFPA</u>	Health hazard 2	flammability 1	Instability 1	Physical and chemical properties -
<u>HMIS</u>	Health hazard 2	flammability 1	Physical hazards 1	Personal precautions X

Prepared by Collins Inkjet Corporation  
 1201 Edison Drive  
 Cincinnati, Ohio 45216

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Revision note

No information available

**Disclaimer**

The information provided in this Material Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

**End of Safety Data Sheet**