Safety Data Sheet

1. Identification of the substance/mixture and of the company/undertaking

Product name: Specialty Yellow Ink Type RYDTG2

Product code: 7460751

Synonyms: DTG-G4-Cart-Yellow.

Relevant identified uses of the substance or mixture and uses advised against:
Identified uses: ink or inkjet chemical

Supplier: EASTMAN KODAK COMPANY, 343 State Street, Rochester, New York 14650

IN EMERGENCY, telephone: 1-800-424-9300 or +1 703-527-3887.

For further information about this product, email us-pep@kodak.com.

2. Hazards identification

Classification of the chemical in accordance with paragraph (d) of 29 CFR 1910.1200:

Hazard class	Hazard category	Route of exposure
Skin irritation	Category 3	--
Skin sensitisation	Category 1A	--
Acute aquatic toxicity	Category 3	--
Chronic aquatic toxicity	Category 3	--

GHS-Labelling

Contains:
N,N-diethylethanamine (121-44-8), Ethoxylated tetramethyldecynediol (9014-85-1), 1,2-Benzisothiazol-3(2H)-one (2634-33-5), 2-methyl-2H-isothiazol-3-one (2682-20-4)

Symbol(s):

Signal word: Warning

Hazard statements: Causes mild skin irritation. May cause an allergic skin reaction. Harmful to aquatic life with long lasting effects.

Precautionary statements:

Prevention: Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves.

Response: IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/ attention. Take off contaminated clothing and wash it before reuse.

Disposal: Dispose of contents/container in accordance with local/regional/national/international regulation.

HMIS IV Hazard Ratings: Health - 2, Flammability - 1, Physical Hazard - 0

NFPA Hazard Ratings: Health - 2, Flammability - 1, Instability - 0

NOTE: HMIS IV and NFPA 704 (2007) hazard indexes involve data review and interpretation that may vary among companies. They are intended only for rapid, general identification of the magnitude of the potential hazards. To adequately address safe handling, ALL information in this MSDS must be considered.

3. Composition/information on ingredients

Weight percent	Components - (CAS-No.)
30 - 60	Glycerol (56-81-5)
1 - 5	Triethylene glycol (112-27-6)
0.1 - < 1	N,N-diethylethanamine (121-44-8)
0.1 - < 1	Ethoxylated tetramethyldecynediol (9014-85-1)
0.01 - < 0.05	1,2-Benzisothiazol-3(2H)-one (2634-33-5)
0.001 - < 0.005	2-methyl-2H-isothiazol-3-one (2682-20-4)

4. First aid measures

Inhalation: If symptomatic, move to fresh air. Get medical attention if symptoms persist.

Eyes: Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lens, if worn. Get medical attention if symptoms persist.

Skin: Wash off immediately with soap and plenty of water. Get medical attention if symptoms occur. Remove contaminated clothing and shoes. Wash contaminated clothing before re-use. Destroy or thoroughly clean contaminated shoes.

Ingestion: If swallowed, only induce vomiting as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

Most important symptoms and effects, both acute and delayed: Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching. Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain. Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Indication of any immediate medical attention and special treatment needed:

Treatment: No information available.

5. Firefighting measures

Extinguishing Media: Water spray, Dry chemical, Carbon dioxide (CO2), Foam.

Special hazards arising from the substance or mixture
Hazardous Combustion Products: Carbon oxides, Nitrogen oxides (NOx)

Special Fire-Fighting Procedures: Wear self-contained breathing apparatus and protective suit. Fire or excessive heat may produce hazardous decomposition products.

Unusual Fire and Explosion Hazards: None.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Refer to protective measures listed in sections 7 and 8.

Methods and materials for containment and cleaning up: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination.

Environmental precautions: Prevent runoff from entering drains, sewers, or streams.

For Large Spills: Prevent runoff from entering drains, sewers, or streams.

7. Handling and storage

Precautions for safe handling

Personal precautions: Avoid contact with eyes, skin, and clothing. Avoid breathing mist or vapour. Use only with adequate ventilation. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

Prevention of Fire and Explosion: Keep from contact with oxidizing materials.

Ventilation: Match ventilation rates to conditions of use so as not to exceed any applicable exposure limits (see Section 8).

Conditions for safe storage, including any incompatibilities: Keep in a dry, cool and well-ventilated place. Cool conditions (5 - 30°C). Keep container tightly closed. Keep away from food, drink and animal feeding stuffs. Keep away from incompatible substances (see Incompatibility section.)

8. Exposure controls/personal protection

Occupational exposure controls

Chemical name	Regulatory List	Value Type	Value
Glycerol	OSHA	Time weighted average	5 mg/m3
			Form of exposure: mist, respirable fraction
Glycerol		Time weighted average	15 mg/m3
			Form of exposure: mist, total particulate
		Time weighted average	10 mg/m3
			Form of exposure: total dust
			Remarks: mist
		Time weighted average	5 ppm
			Form of exposure: respirable fraction
			Remarks: mist

Appropriate engineering controls: Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. Controls should be sufficient so that applicable occupational exposure limits are not exceeded.

Individual protection measures, such as personal protective equipment

Eye protection: Wear safety glasses with side shields (or goggles).

Hand protection: Wear protective gloves/ protective clothing.

Respiratory protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. If respirators are used, a

program should be instituted to assure compliance with applicable federal, state, commonwealth, provincial, or local laws and regulations.

9. Physical and chemical properties

Physical form: liquid

Colour: yellow

Odour: No data available - testing not performed

Specific gravity: No data available - testing not performed

Vapour pressure: No data available - testing not performed

Vapour density: No data available - testing not performed

Water solubility: No data available - testing not performed

pH: No data available - testing not performed

Flash point: No data available - testing not performed

Evaporation rate: No data available - testing not performed

Flammability (Solid; gas): No data available - testing not performed

Upper explosion limit: No data available - testing not performed

Lower explosion limit: No data available - testing not performed

Partition coefficient: n-octanol/water: No data available - testing not performed

Auto-ignition temperature: No data available - testing not performed

Decomposition temperature: No data available - testing not performed

Viscosity: No data available - testing not performed

Explosive properties: No data available - testing not performed

Oxidizing properties: No data available - testing not performed

10. Stability and reactivity

Reactivity: No data available

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: Hazardous polymerisation does not occur.

Conditions to avoid: No data available

Incompatible materials: Strong oxidizing agents.

Hazardous decomposition products: None under normal conditions of use.

11. Toxicological information

Effects of Exposure

General advice:

Contains: N,N-diethylethanamine. Airborne exposure may cause visual disturbances.

Inhalation: Expected to be a low hazard for recommended handling.

Eyes: Expected to be a low hazard for recommended handling.

Skin: Causes mild skin irritation. May cause an allergic skin reaction.

Ingestion: May cause irritation of the gastrointestinal tract if swallowed.

Data for Glycerol (CAS 56-81-5):

Acute Toxicity Data:
Oral LD50 (Rat): 12,600 mg/kg

- Inhalation LC50 (Rat): > 570 mg/m3 / 1 hr
- Dermal LD50 (Rabbit): > 10 g/kg
- Skin irritation: slight
- Eye irritation: very slight

Data for Triethylene glycol (CAS 112-27-6):

Acute Toxicity Data:
Oral LD50 (Rat): 17 g/kg

- Inhalation LC50 (Rat): > 3.9 mg/l / 4 hr
- Dermal LD50 (Rabbit): >20 mL/kg
- Skin irritation: None.

- Eye irritation: none

Data for N,N-diethylethanamine (CAS 121-44-8):

Acute Toxicity Data:
Oral LD50 (Rat): 460 mg/kg

- Inhalation LC50: 1,000 mg/l / 4 hr
- Inhalation LC50 (Rat): 1250 ppm / 4 hr
- Dermal LD50: 570 mg/kg
- Dermal LD50 (Rabbit): 415 mg/kg
- Skin irritation: Extremely corrosive and destructive to tissue.
- Eye irritation: severe

Mutagenicity/Genotoxicity Data:

- Ames test: negative (in presence and absence of activation)
- Chromosomal aberration assay: positive (in presence of activation)

Data for Ethoxylated tetramethyldecynediol (CAS 9014-85-1):

Acute Toxicity Data:
Oral LD50 (Rat): 6,300 mg/kg

- Inhalation LC50 (Rat): > 20 mg/l / 1 hr
- Dermal LD50 (Rabbit): > 2,000 mg/kg (Highest dose tested - no evidence of absorption at this dose level.)
- Skin irritation: Mild skin irritation
- Eye irritation: severe

Definitions for the following section(s): LOEL =lowest-observed-effect level, LOAEL = lowest-observed-adverse-effect, NOAEL = no observed-adverse-effect level, NOEL =no-observed-effect level.

Repeated dose toxicity:

- Feeding study (28-day, Rat): NOEL; 6000 ppm
- Oral (90 days, Dog): NOEL; 200 mg/kg/day
- Oral (90 days, Dog): NOEL; 400 mg/kg/day (minor target organ effects: liver)

Reproductive Toxicity Data:

- Feeding Study (male and female Rat): NOEL for reproductive toxicity; 1,000 mg/kg/day

Data for 1,2-Benzisothiazol-3(2H)-one (CAS 2634-33-5):

Acute Toxicity Data:
Oral LD50 (Rat): 1,020 mg/kg

Data for 2-methyl-2H-isothiazol-3-one (CAS 2682-20-4):

Acute Toxicity Data:

Oral LD50 (Rat): 232 - 249 mg/kg (50% in water)

- Oral LD50 (Rat): 120 mg/kg (50% in water)
- Inhalation LC50 (Rat): 0.11 mg/l / 4 hr
- Dermal LD50 (Rabbit): 200 mg/kg
- Sensitisation: positive

Carcinogenicity

American Conference of Governmental Industrial Hygienists (ACGIH):	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
International Agency for Research on Cancer (IARC):	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
U.S. National Toxicology Program (NTP):	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
U.S. Occupational Safety and Health Administration (OSHA):	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
California Prop. 65	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

12. Ecological information

The following properties are ESTIMATED from the components of the preparations.

Potential Toxicity:

Toxicity to fish (LC50):	10 - 100 mg/l estimated
Toxicity to daphnia (EC50):	10 - 100 mg/l estimated

Persistence and degradability: Not readily biodegradable.

This product has not been tested for environmental effects.

Bioaccumulative potential

No data available

Mobility in soil

No information available.

13. Disposal considerations

Discharge, treatment, or disposal may be subject to federal, state, commonwealth, provincial, or local laws. Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport information

Not regulated for all modes of transportation.

For more transportation information, go to: www.kodak.com/go/ship.

15. Regulatory information

Notification status

Regulatory List	Notification status
TSCA	Not all listed
DSL	Not all listed
NDSL	None listed
EINECS	Not all listed
ELINCS	Listed
NLP	Listed
AICS	Not all listed
IECS	Not all listed
ENCS	Not all listed
ECI	Not all listed

NZIoC	Not all listed
PICCS	Not all listed
TCSI	Not all listed
TSCA 12(b)	Listed

"Not all listed" indicates one or more component is either not on the public Inventory or is subject to exemption requirements. If additional information is needed contact Kodak.

Other regulations

U.S. - CERCLA/SARA (40 CFR § 302.4 Designation of hazardous substances):	No components of this product are subject to the SARA Section 302 (40 CFR 302.4) reporting requirements.
U.S. - CERCLA/SARA - Section 302 (40 CFR § 355 Appendices A and B - The List of Extremely Hazardous Substances and Their Threshold Planning Quantities):	No components of this product are subject to the SARA Section 302 (40 CFR 355) reporting requirements.
U.S. - CERCLA/SARA - Section 313 (40 CFR § 372.65 Toxic Chemical Release Reporting):	No components of this product are subject to the SARA Section 313 (40 CFR 372.65) reporting requirements.
U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances:	No components found on the California Director's List of Hazardous Substances.
U.S. - California - 8 CCR Section 5200-5220 - Specifically Regulated Carcinogens:	No components found on the California Specifically Regulated Carcinogens List.
U.S. - California - 8 CCR Section 5203 Carcinogens:	No components found on the California Section 5203 Carcinogens List.
U.S. - California - 8 CCR Section 5209 Carcinogens:	No components found on the California Section 5209 Carcinogens List.
U.S. - Massachusetts - General Law Chapter 111F (MGL c 111F) - Hazardous Substances Disclosure by Employers (a.k.a. Right to Know Law):	Glycerol
U.S. - Minnesota Employee Right-to-Know (5206.0400, Subpart 5. List of Hazardous Substances):	Glycerol
U.S. - New Jersey - Worker and Community Right to Know	Glycerol

Act (N.J.S.A. 34:5A-1):

U.S. - Pennsylvania - Part XIII. Worker and Community Right-to-Know Act (Chapter 323 Hazardous Substance List, Appendix A): Glycerol , Proprietary , Water , Triethylene glycol , N,N-diethylethanamine

16. Other information

The data below reflects current legislative requirements whereas the product in your possession may carry a different version of the label depending on the date of manufacture.

US/Canadian Label Statements:

Specialty Yellow Ink Type RYDTG2

Contains:
N,N-diethylethanamine (121-44-8), Ethoxylated tetramethyldecynediol (9014-85-1), 1,2-Benzisothiazol-3(2H)-one (2634-33-5), 2-methyl-2H-isothiazol-3-one (2682-20-4)

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Response: IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/ attention. Take off contaminated clothing and wash it before reuse.

Disposal: Dispose of contents/container in accordance with local/regional/national/international regulation.

This Safety Data Sheet has been compiled and is solely intended for this product. The information is based upon the present state of our knowledge.

R-1, S-3, F-1, C-0