

**1. Identification**

**Product identifier** Flexicolor Final Rinse and Replenisher

**Other means of identification**

**SDS number** PCD 6338

**Product code** 5270103

**Recommended use** Photographic processing chemical.

**Recommended restrictions** For industrial use only.

**Manufacturer/Importer/Supplier/Distributor information**

**Supplier** Kodak Alaris Inc

**Address** 336 Initiative Drive  
Rochester, NY 14624

**e-mail** EHS-Questions@Kodakalaris.com

**Emergency telephone number** 1-800-424-9300 OR +1 703-741-5970

**2. Hazard(s) identification**

**Physical hazards** Not classified.

**Health hazards** Skin corrosion/irritation Category 2  
 Serious eye damage/eye irritation Category 2A  
 Sensitization, skin Category 1  
 Specific target organ toxicity, repeated exposure (oral) Category 2 (kidney)

**Environmental hazards** Not classified.

**OSHA defined hazards** Not classified.

**Label elements**



**Signal word** Warning

**Hazard statement** Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause damage to organs (kidney) through prolonged or repeated exposure by ingestion.

**Precautionary statement**

**Prevention** Do not breathe mist or vapor. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Wear eye protection/face protection. Wear protective gloves.

**Response** If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention if you feel unwell. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

**Storage** Store away from incompatible materials.

**Disposal** Dispose of contents/container in accordance with local/regional/national/international regulations.

**Hazard(s) not otherwise classified (HNOC)** None known.

**Supplemental information** None.

**3. Composition/information on ingredients**

**Mixtures**

Chemical name	Common name and synonyms	CAS number	%
Diethylene glycol		111-46-6	5 - 10
Mixture of C12-15 alcohol ethoxylates		68131-39-5	1 - 5
Copper dinitrate		3251-23-8	0.1 - 1
Mixture of 5-chloro-2-methyl-4-isothiazolin-3-one (26172-55-4) and 2-methyl-4-isothiazolin-3-one (2682-20-4)(3:1)		55965-84-9	0.1 - 1
Acetic acid		64-19-7	0 - 1
Ethylene glycol		107-21-1	0 - 1
Ethylene oxide		75-21-8	0 - 1

All concentrations are in percent by weight. Chemical ranges are provided in lieu of exact percentages, which are withheld as trade secrets.

#### 4. First-aid measures

##### Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

##### Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.

##### Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

##### Ingestion

Rinse mouth. Get medical attention if symptoms occur.

##### Most important symptoms/effects, acute and delayed

Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. Edema. Prolonged exposure may cause chronic effects.

##### Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

##### General information

If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

#### 5. Fire-fighting measures

##### Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

##### Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

##### Specific hazards arising from the chemical

During fire, gases hazardous to health may be formed.

##### Special protective equipment and precautions for firefighters

Wear self-contained breathing apparatus and protective clothing. Fire or excessive heat may produce hazardous decomposition products.

##### Fire fighting equipment/instructions

Move containers from fire area if you can do so without risk.

##### Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

##### General fire hazards

No unusual fire or explosion hazards noted.

#### 6. Accidental release measures

##### Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up**

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.

**Environmental precautions****7. Handling and storage****Precautions for safe handling**

Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities**

Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

**8. Exposure controls/personal protection****Occupational exposure limits**

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Components	Type	Value
Ethylene oxide (CAS 75-21-8)	STEL	5 ppm
	TWA	1 ppm

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Components	Type	Value
Acetic acid (CAS 64-19-7)	PEL	25 mg/m3 10 ppm

**US. ACGIH Threshold Limit Values**

Components	Type	Value	Form
Acetic acid (CAS 64-19-7)	STEL	15 ppm	
	TWA	10 ppm	
Copper dinitrate (CAS 3251-23-8)	TWA	1 mg/m3	Dust and mist.
		0.2 mg/m3	Fume.
Ethylene glycol (CAS 107-21-1)	STEL	10 mg/m3	Aerosol, inhalable.
	TWA	50 ppm	Vapor fraction
Ethylene oxide (CAS 75-21-8)	TWA	25 ppm	Vapor fraction
	TWA	1 ppm	

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value	Form
Acetic acid (CAS 64-19-7)	STEL	37 mg/m3 15 ppm	
	TWA	25 mg/m3 10 ppm	
	TWA	1 mg/m3	Dust and mist.
Ethylene oxide (CAS 75-21-8)	Ceiling	9 mg/m3	Fume.
		5 ppm	

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value	Form
	TWA	0.18 mg/m <sup>3</sup>	
		0.1 ppm	

**US. Workplace Environmental Exposure Level (WEEL) Guides**

Components	Type	Value
Diethylene glycol (CAS 111-46-6)	TWA	10 mg/m <sup>3</sup>

**Biological limit values****ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
Ethylene oxide (CAS 75-21-8)	5 µg/g	S-(2-hydroxyethyl) mercapturic acid (HEMA)	Creatinine in urine	*
	5000 pmol/g	N-(2-hydroxyethyl)-valine (HEV) hemoglobin adducts	Hemoglobin adducts	*

\* - For sampling details, please see the source document.

**Appropriate engineering controls**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

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

**Eye/face protection** Chemical respirator with organic vapor cartridge and full facepiece.

**Skin protection****Hand protection**

Use protective gloves made of: Nitrile. Rubber (natural, latex). Neoprene. Polyvinyl chloride (PVC). Butyl rubber.

**Other**

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

**Respiratory protection**

Chemical respirator with organic vapor cartridge and full facepiece.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

**9. Physical and chemical properties****Appearance****Physical state**

Liquid.

**Form**

Liquid.

**Color**

Light green

**Odor**

odorless

**Odor threshold**

Not available.

**pH**

4.5

**Melting point/freezing point**

Not available.

**Initial boiling point and boiling range**

> 212 °F (> 100 °C)

**Flash point**

does not flash

**Evaporation rate**

Not available.

**Flammability (solid, gas)**

Not applicable.

**Upper/lower flammability or explosive limits**

<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.

<b>Vapor pressure</b>	18 mm Hg
<b>Vapor density</b>	0.6
<b>Relative density</b>	1.014

**Solubility(ies)**

**Solubility (water)** Complete.

**Partition coefficient (n-octanol/water)** Not available.

**Auto-ignition temperature** Not available.

**Decomposition temperature** Not available.

**Viscosity** Not available.

**Other information**

**Explosive properties** Not explosive.

**Oxidizing properties** Not oxidizing.

**10. Stability and reactivity**

**Reactivity** The product is stable and non-reactive under normal conditions of use, storage and transport.

**Chemical stability** Material is stable under normal conditions.

**Possibility of hazardous reactions** Hazardous polymerization does not occur.

**Conditions to avoid** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Contact with incompatible materials.

**Incompatible materials** Strong oxidizing agents.

**Hazardous decomposition products** No dangerous reaction known under conditions of normal use.

**11. Toxicological information****Information on likely routes of exposure**

**Inhalation** Prolonged inhalation may be harmful.

**Skin contact** Causes skin irritation. May cause an allergic skin reaction.

**Eye contact** Causes serious eye irritation.

**Ingestion** May cause damage to organs through prolonged or repeated exposure by ingestion. May cause burns of the gastrointestinal tract if swallowed.

**Symptoms related to the physical, chemical and toxicological characteristics** Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. Edema.

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

<b>Components</b>	<b>Species</b>	<b>Test Results</b>
Acetic acid (CAS 64-19-7)		
<b><u>Acute</u></b>		
<b>Dermal</b>		
LD50	Rabbit	1060 mg/kg
<b>Inhalation</b>		
LC50	Rat	11.4 mg/l, 4 Hours
<b>Oral</b>		
LD50	Rat	3320 mg/kg

Components	Species	Test Results
		3.31 g/kg
Copper dinitrate (CAS 3251-23-8)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Rat	794 mg/kg
Diethylene glycol (CAS 111-46-6)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	11890 mg/kg
<b>Oral</b>		
LD50	Rat	12570 mg/kg
Ethylene glycol (CAS 107-21-1)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	9530 mg/kg
<b>Oral</b>		
LD50	Cat	1650 mg/kg
Ethylene oxide (CAS 75-21-8)		
<b>Acute</b>		
<b>Inhalation</b>		
LC50	Rat	1450 ppm, 4 Hours
<b>Oral</b>		
LD50	Rat	72 mg/kg
Mixture of 5-chloro-2-methyl-4-isothiazolin-3-one (26172-55-4) and 2-methyl-4-isothiazolin-3-one (2682-20-4)(3:1) (CAS 55965-84-9)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	660 mg/kg
<b>Oral</b>		
LD50	Rat	457 ml/kg
<b>Skin corrosion/irritation</b>	Causes skin irritation.	
<b>Serious eye damage/eye irritation</b>	Causes serious eye irritation.	
<b>Respiratory or skin sensitization</b>		
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.	
<b>Skin sensitization</b>	May cause an allergic skin reaction.	
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
<b>Carcinogenicity</b>	Not classifiable as to carcinogenicity to humans.	
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>		
TRADE SECRET (CAS Proprietary)	1 Carcinogenic to humans.	
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)</b>		
TRADE SECRET (CAS Proprietary)	Cancer	
<b>US. National Toxicology Program (NTP) Report on Carcinogens</b>		
TRADE SECRET (CAS Proprietary)	Known To Be Human Carcinogen.	
<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.	
<b>Specific target organ toxicity - single exposure</b>	Not classified.	
<b>Specific target organ toxicity - repeated exposure</b>	May cause damage to organs (kidney) through prolonged or repeated exposure by ingestion.	
<b>Aspiration hazard</b>	Not an aspiration hazard.	

**Chronic effects** May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful.

## 12. Ecological information

**Ecotoxicity** Harmful to aquatic life with long lasting effects.

Components		Species	Test Results
Copper dinitrate (CAS 3251-23-8)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Moina dubia)	0.037 - 0.044 mg/l, 48 hours
Fish	LC50	Winter flounder (Pleuronectes americanus)	0.057 - 0.1061 mg/l, 96 hours
Mixture of C12-15 alcohol ethoxylates (CAS 68131-39-5)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Ceriodaphnia dubia)	0.37 - 0.43 mg/l, 48 hours
Fish	LC50	Channel catfish (Ictalurus punctatus)	1.04 - 1.39 mg/l, 96 hours

**Persistence and degradability** Not readily biodegradable.

**Bioaccumulative potential**

**Mobility in soil** No data available.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport information

### DOT

Not regulated as dangerous goods.

### IATA

Not regulated as dangerous goods.

### IMDG

Not regulated as dangerous goods.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not established.

## 15. Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

### CERCLA Hazardous Substance List (40 CFR 302.4)

TRADE SECRET (CAS Proprietary)

Listed.  
Listed.  
Listed.  
Listed.

**SARA 304 Emergency release notification**

TRADE SECRET (CAS Proprietary) 10 LBS

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)**

TRADE SECRET (CAS Proprietary)

Cancer  
 Reproductive toxicity  
 Mutagenicity  
 Central nervous system  
 Skin sensitization  
 Skin irritation  
 Eye irritation  
 respiratory tract irritation  
 Acute toxicity  
 Flammability

**Superfund Amendments and Reauthorization Act of 1986 (SARA)****SARA 302 Extremely hazardous substance**

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
Ethylene oxide	75-21-8	10	1000		

**SARA 311/312 Hazardous chemical** Yes

**Classified hazard categories**

Skin corrosion or irritation  
 Serious eye damage or eye irritation  
 Respiratory or skin sensitization  
 Specific target organ toxicity (single or repeated exposure)

**SARA 313 (TRI reporting)**

Not regulated.

**Other federal regulations****Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

TRADE SECRET (CAS Proprietary)

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

TRADE SECRET (CAS Proprietary)

**Safe Drinking Water Act (SDWA)** Not regulated.**FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace**

TRADE SECRET (CAS Proprietary)

High priority  
 Other Flavoring Substances with OSHA PEL's

**US state regulations****California Proposition 65**

**WARNING:** This product can expose you to chemicals including Ethylene oxide, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**California Proposition 65 - CRT: Listed date/Carcinogenic substance**

TRADE SECRET (CAS Proprietary) Listed: July 1, 1987

**California Proposition 65 - CRT: Listed date/Developmental toxin**

TRADE SECRET (CAS Proprietary) Listed: August 7, 2009  
 Listed: June 19, 2015

**California Proposition 65 - CRT: Listed date/Female reproductive toxin**

TRADE SECRET (CAS Proprietary) Listed: February 27, 1987

**California Proposition 65 - CRT: Listed date/Male reproductive toxin**

TRADE SECRET (CAS Proprietary) Listed: August 7, 2009

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

TRADE SECRET (CAS Proprietary)



## International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

**Issue date** 07-27-2016  
**Revision date** 02-25-2019  
**Version #** 05  
**HMIS® ratings** Health: 2\*  
Flammability: 0  
Physical hazard: 0

**NFPA ratings** Health: 2  
Flammability: 0  
Instability: 0

**NFPA ratings**



**Disclaimer**

Kodak Alaris cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

**Revision information**

This document has undergone significant changes and should be reviewed in its entirety.