

Safety Data Sheet

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

Product name: KODAK PHOTO-FLO 600 Solution

Product code: 1464528

Synonyms: None.

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

Identified uses: photographic processing chemical. For industrial use only.

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
Acute toxicity	Category 4	Oral
Serious eye damage	Category 1	--
Specific target organ toxicity - repeated exposure	Category 2	Oral
Acute aquatic toxicity	Category 2	--
Chronic aquatic toxicity	Category 2	--

GHS-Labeling

Contains:

Ethylene glycol (107-21-1), Octylphenoxypolyethoxyethanol (9036-19-5)

Symbol(s):



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Signal word: Danger

Hazard statements: Harmful if swallowed. Causes serious eye damage. May cause damage to organs through prolonged or repeated exposure if swallowed. (Kidney.) Toxic to aquatic life with long lasting effects.

Precautionary statements:

Prevention: Do not breathe dust or mist. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/ protective clothing/ eye protection/ face protection. Avoid release to the environment.

Response: IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. Get medical advice/ attention if you feel unwell. Collect spillage.

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

HMIS IV Hazard Ratings: Health - 3*, Flammability - 1, Physical Hazard - 0

NFPA Hazard Ratings: Health - 3, 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.)
35 - 40	Ethylene glycol (107-21-1)
25 - 30	Octylphenoxypolyethoxyethanol (9036-19-5)

4. First aid measures

Inhalation: If inhaled, remove to fresh air. Get medical attention immediately.

Eyes: Immediately flush the contaminated eye(s) with water for at least 60 minutes, while holding the eyelid(s) open. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Neutral saline solution may be used as soon as it is available. DO NOT INTERRUPT FLUSHING.

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Contact a physician or poison control center immediately. Continue flushing the eye(s) until the physician advises to stop. If necessary, continue flushing during transport to an emergency care facility.

Skin: Wash off immediately with soap and plenty of water. Get medical attention if irritation develops and persists. Wash contaminated clothing before re-use.

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

Most important symptoms and effects, both acute and delayed: Corrosive (Eye Burns):

Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

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. Kidney/Bladder Effects: Signs/symptoms may include changes in urine production, abdominal or lower back pain, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination.

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

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.

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

7. Handling and storage

Precautions for safe handling

Personal precautions: Do not get in eyes, on skin, or on clothing. Do not breathe vapours or spray mist. 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
Ethylene glycol	ACGIH	Time weighted average	25 ppm <i>Form of exposure: vapor fraction</i>
Ethylene glycol		Short term exposure limit	50 ppm <i>Form of exposure: vapor fraction</i>
		Short term exposure limit	10 mg/m ³ <i>Form of exposure: inhalable particulate matter, aerosol only</i>
		Ceiling Limit Value	50 ppm 125 mg/m ³ <i>Form of exposure: vapor</i>

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) and a face shield.

Hand protection: Wear protective gloves/ protective clothing.

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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: Colorless

Odour: odorless

Specific gravity: 1.0690

Vapour pressure: 24 mbar (24 mbar)

Vapour density: 0.6

Boiling point/boiling range: > 100 °C (> 212.0 °F)

Water solubility: complete

pH: 8

Flash point: > 93.33 °C (> 200.0 °F)

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: Not explosive

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Oxidizing properties: The substance or mixture is not classified as oxidizing.

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: The toxicological properties of this material have not been fully investigated and its handling and use may present additional hazards.

Contains: Ethylene glycol. severe effects after repeated or prolonged exposure Can cause kidney damage.

Contains: Octylphenoxypolyethoxyethanol. The toxicological properties of this material have not been fully investigated and its handling and use may be hazardous.

Inhalation: Airborne dust/mist/vapor may be irritating.

Eyes: Causes serious eye damage.

Skin: Causes mild skin irritation.

Ingestion: Harmful if swallowed. May cause irritation of the gastrointestinal tract if swallowed. May cause damage to organs through prolonged or repeated exposure if swallowed.

Data for Ethylene glycol (CAS 107-21-1):

Acute Toxicity Data:

Oral LDLo (Humans): 1,600 mg/kg

- Oral LD50 (Rat): 4,700 mg/kg

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- Inhalation LC50 (Rat): > 2.5 mg/l / 6 hr
- Dermal LD50 (Rabbit): 10,607 mg/kg
- Dermal LD50 (Rat): 10,600 mg/kg
- Dermal LD50 (Mouse): > 3,500 mg/kg
- Skin irritation: Mild skin irritation
- Sensitisation (human): none
- Sensitisation (Guinea pig): none
- Eye irritation: none

Data for Octylphenoxypolyethoxyethanol (CAS 9036-19-5):

Acute Toxicity Data:

Oral LD50 (Rat): 800 - 1,600 mg/kg

- Dermal LD50: 12,000 mg/kg
- Skin irritation: slight
- Sensitisation (human): negative
- 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.

Developmental Toxicity Data:

- Dermal (female Rat): LOEL for developmental toxicity; 400mg/kg/day
- Oral (female Rat): NOAEL for developmental toxicity; 600ppm

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

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California Prop. 65

0.1% is identified as a carcinogen or potential carcinogen by OSHA.

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. Ethylene glycol

12. Ecological information

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

Potential Toxicity:

Toxicity to fish (LC50): 1 - 10 mg/l estimated

Toxicity to daphnia (EC50): 1 - 10 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

The information below is provided to assist in documentation. It represents the dangerous goods classification before any regulatory exceptions are taken (e.g. "limited quantity") and therefore may not represent the final classification. The final classification as it pertains to the product packaging configuration (including labeling, marking, and exceptions) may be obtained via the Dangerous Goods Worksheet which can be found at www.kodak.com/go/ship.

IATA: UN number: UN3082

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Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
LIQUID, N.O.S. (Octylphenoxyethoxyethanol)
Class: 9
Packaging group: III
Marine Pollutant status: Marine pollutant

IMDG: UN number: UN3082

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
LIQUID, N.O.S. (Octylphenoxyethoxyethanol)
Class: 9
Packaging group: III
Marine Pollutant status: Marine pollutant
Marine Pollutant(s): Octylphenoxyethoxyethanol

US DOT: UN number: UN3082

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
LIQUID, N.O.S. (Octylphenoxyethoxyethanol)
Class: 9
Packaging group: III
Marine Pollutant status: Marine pollutant
Marine Pollutant(s): Octylphenoxyethoxyethanol

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

15. Regulatory information

Notification status

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

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NZIoC	All listed
PICCS	All listed
TCSI	All 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):	Ethylene glycol
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):	Ethylene glycol
U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances:	Ethylene glycol
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):	Ethylene glycol
U.S. - Minnesota Employee Right-to-Know (5206.0400, Subpart 5. List of Hazardous Substances):	Ethylene glycol
U.S. - New Jersey - Worker and Community Right to Know Act (N.J.S.A. 34:5A-1):	Ethylene glycol
U.S. - Pennsylvania - Part XIII. Worker and Community Right-to-Know Act (Chapter 323 Hazardous Substance List, Appendix A):	Water , Ethylene glycol , Octylphenoxypolyethoxyethanol

16. Other information

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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:

KODAK PHOTO-FLO 600 Solution

Contains:

Ethylene glycol (107-21-1), Octylphenoxypolyethoxyethanol (9036-19-5)

Symbol(s):



Signal word: Danger

Hazard statements: Harmful if swallowed. Causes serious eye damage. May cause damage to organs through prolonged or repeated exposure if swallowed. (Kidney.) Toxic to aquatic life with long lasting effects.

Precautionary statements:

Prevention: Do not breathe dust or mist. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/ protective clothing/ eye protection/ face protection. Avoid release to the environment.

Response: IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. Get medical advice/ attention if you feel unwell. Collect spillage.

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.

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