

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, call (800) 242-2424.

2. Hazards identification

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

Hazard class	Hazard category	Route of exposure
Serious eye damage	Category 1	--
Acute aquatic toxicity	Category 2	--
Chronic aquatic toxicity	Category 2	--

GHS-Labeling

Contains:

Ethylene glycol (107-21-1), p-tert-octylphenoxy polyethoxyethyl alcohol (9002-93-1)

Symbol(s):



Signal word: Danger

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Hazard statements: Causes serious eye damage. Toxic to aquatic life with long lasting effects.

Precautionary statements:

Prevention: Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wash thoroughly after handling. Avoid release to the environment. Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response: 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 III Hazard Ratings: Health - 3*, Flammability - 1, Physical Hazard - 0

NFPA Hazard Ratings: Health - 3, Flammability - 1, Instability - 0

NOTE: HMIS III 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	p-tert-octylphenoxy polyethoxyethyl alcohol (9002-93-1)

4. First aid measures

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

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. 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.

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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: No information available.

Indication of any immediate medical attention and special treatment needed:

Treatment: Due to rapid absorption of material, evacuation of the stomach is effective only if performed immediately after ingestion. Whenever possible, stomach evacuation should be accomplished by gastric lavage with appropriate airway control to prevent aspiration.

5. Firefighting measures

Extinguishing Media: Water spray, Carbon dioxide (CO₂), Dry chemical, 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. Prevent runoff from entering drains, sewers, or streams.

Environmental precautions: No information available.

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.

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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	Ceiling Limit Value	100 mg/m3 <i>Form of exposure: aerosol only</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.

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: colourless

Odour: odourless

Specific gravity: 1.0690

Vapour pressure (at 20.0 °C (68.0 °F)): 24 mbar (18.0 mm Hg)

Vapour density: 0.6

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

Water solubility: complete

pH: 8.0

Flash point: > 93.33 °C (> 200.0 °F) (estimated)

Evaporation rate: No data available

Flammability (Solid; gas): No data available

Upper explosion limit: No data available

Lower explosion limit: No data available

Partition coefficient: n-octanol/water: No data available

Auto-ignition temperature: No data available

Decomposition temperature: No data available

Viscosity: No data available

Explosive properties: No data available

Oxidizing properties: No data available

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: Carbon oxides

11. Toxicological information

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Effects of Exposure

General advice:

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

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

Eyes: Causes serious eye damage.

Skin: Causes mild skin irritation.

Ingestion: May be harmful if swallowed. May cause kidney damage based on animal data.

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

Data for p-tert-octylphenoxy polyethoxyethyl alcohol (CAS 9002-93-1):

Acute Toxicity Data:

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

- Skin irritation: Mild skin irritation
- Eye irritation: Risk of serious damage to eyes.

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

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U.S. National Toxicology Program (NTP):	carcinogen by IARC. 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): 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.

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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
	Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (p-tert-octylphenoxy polyethoxyethyl alcohol)
	Class:	9
	Packaging group:	III
IMDG:	UN number:	UN3082
	Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (p-tert-octylphenoxy polyethoxyethyl alcohol)
	Class:	9
	Packaging group:	III
	Marine Pollutant(s):	p-tert-octylphenoxy polyethoxyethyl alcohol
US DOT:	UN number:	UN3082
	Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (p-tert-octylphenoxy polyethoxyethyl alcohol)
	Class:	9
	Packaging group:	III
	Marine Pollutant(s):	p-tert-octylphenoxy polyethoxyethyl alcohol

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

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ELINCS	None listed
NLP	None listed
AICS	All listed
IECS	All listed
ENCS	Not all listed
ECI	All listed
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,	Ethylene glycol

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Subpart 5. List of Hazardous Substances):

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): Ethylene glycol , Water , p-tert-octylphenoxy polyethoxyethyl alcohol

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:

KODAK PHOTO-FLO 600 Solution

Contains:

Ethylene glycol (107-21-1), p-tert-octylphenoxy polyethoxyethyl alcohol (9002-93-1)

Symbol(s):



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Hazard statements: Causes serious eye damage. Toxic to aquatic life with long lasting effects.

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Prevention: Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wash thoroughly after handling. Avoid release to the environment. Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response: 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.

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The information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and the protection of the environment. The information relating to the working solution is for guidance purposes only, and is based on correct mixing and use of the product according to instructions.

R-1, S-2, F-1, C-0