Material Safety Data Sheet

Kodak

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

Product name: KODAK Developer System Cleaner, Part A, Part A

Product code: 10080942 - Part A

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

For Emergency Health, Safety & Environmental Information, call (585) 722-5151 (USA)

For further information about this product, call (800) 242-2424.

Synonyms: PCD 5747

Product Use: photographic processing chemical (developer/activator), For industrial use only.

2. Hazards identification

CONTAINS: Potassium permanganate (7722-64-7)

WARNING!
CONTAINS AN OXIDIZING MATERIAL.
CAUSES EYE IRRITATION
MAY BE HARMFUL IF SWALLOWED

HMIS III Hazard Ratings: Health - 2, Flammability - 0, Physical Hazard - 0

NFPA Hazard Ratings: Health - 2, Flammability - 0, 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.)
1 - 5	Potassium permanganate (7722-64-7)

4. First aid measures

Inhalation: If inhaled, remove to fresh air. Get medical attention if symptoms occur.

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lens, if worn. Get medical attention.

Skin: Wash off with soap and water. Get medical attention if symptoms occur.

Ingestion: If swallowed, DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control centre immediately.

5. Fire-fighting measures

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

Special Fire-Fighting Procedures: None (noncombustible)

Hazardous Combustion Products: None (noncombustible)

Unusual Fire and Explosion Hazards: Mixture contains an oxidizing material and may increase the burning rate of combustible materials. Dried product residue can act as an oxidizer.

6. Accidental release measures

Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination.

7. Handling and storage

Personal precautions: Avoid breathing mist or vapour at concentrations greater than the exposure limits. Avoid contact with eyes, skin, and clothing. 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 away from combustible material. Remove and wash contaminated clothing promptly.

Storage: Keep container tightly closed to prevent the loss of water. Keep away from incompatible substances (see Incompatibility section.)

8. Exposure controls/personal protection

Occupational exposure controls

Chemical Name	Regulatory	Value Type	Value

	List		
Potassium permanganate	ACGIH		
Potassium permanganate			
		time weighted average	0.1 mg/m3 *Expressed as Mn*
		time weighted average	0.02 mg/m3 *Expressed as Mn*
	OSHA	Ceiling Limit Value	5 mg/m3 *Expressed as Mn*

Ventilation: Good general ventilation should be used. Ventilation should be sufficient so that applicable occupational exposure limits are not exceeded. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory protection may be needed in special circumstances.

Respiratory protection: None should be needed. If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: acid gas If respirators are used, a program should be instituted to assure compliance with applicable federal, state, commonwealth, provincial, or local laws and regulations.

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

Hand protection: For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn.

9. Physical and chemical properties

Physical form: liquid

Colour: purple

Odour: odourless

Specific gravity: 1.01

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

Vapour density: 0.6

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

Water solubility: complete

pH: 7

Flash point: does not flash

10. Stability and reactivity

Stability: Stable under normal conditions.

Incompatibility: Combustible material, strong reducing agents. Material can react violently with combustible materials or strong reducing agents.

Hazardous decomposition products: None under normal conditions of use.

Hazardous Polymerization: Hazardous polymerisation does not occur.

11. Toxicological information

Effects of Exposure

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

Eyes: Causes eye irritation.

Skin: Expected to be a low hazard for recommended handling. May stain skin brown.

Ingestion: May be harmful if swallowed.

Data for Potassium permanganate (CAS 7722-64-7):

Acute Toxicity Data:
Oral LD50 (rat): 400 - 1,600 mg/kg

- Skin irritation: irritating
- Eye irritation: Corrosive

12. Ecological information

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

Potential Toxicity:

Toxicity to fish (LC50):	> 100 mg/l
Toxicity to daphnia (EC50):	10 - 100 mg/l
Toxicity to algae (IC50):	10 - 100 mg/l

Toxicity to other organisms (EC50):	sludge: 10 - 100 mg/l
Persistence and degradability:	Not applicable
Chemical Oxygen Demand (COD):	ca. 0 g/l
Biochemical Oxygen Demand (BOD):	ca. 0 g/l

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	All listed
DSL	All listed
NDSL	None listed
EINECS	All listed
ELINCS	None listed
NLP	None listed
AICS	All listed
IECS	All listed
ENCS	All listed
ECI	All listed
NZIoC	All listed
PICCS	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

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.
U.S. - CERCLA/SARA (40 CFR § 302.4 Designation of hazardous substances):	Potassium permanganate
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):	Potassium permanganate
U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances:	Potassium permanganate
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):	Potassium permanganate
U.S. - Minnesota Employee Right-to-Know (5206.0400, Subpart 5. List of Hazardous Substances):	Potassium permanganate
U.S. - New Jersey - Worker and Community Right to Know Act (N.J.S.A. 34:5A-1):	Potassium permanganate
U.S. - Pennsylvania - Part XIII. Worker and Community Right-to-Know Act (Chapter 323 Hazardous Substance List, Appendix A):	Water , Potassium permanganate

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 Developer System Cleaner, Part A, Part A
CONTAINS: Potassium permanganate (7722-64-7) .
WARNING! CONTAINS AN OXIDIZING MATERIAL.. CAUSES EYE IRRITATION. MAY BE HARMFUL IF SWALLOWED.
Keep container tightly closed to prevent the loss of water. Keep away from combustible material. Keep from contact with clothing and other combustible materials. Remove and wash contaminated clothing promptly. Avoid breathing mist or vapour at concentrations greater than the exposure limits. Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation. Wash thoroughly after handling. **FIRST AID:** If inhaled, remove to fresh air. Get medical attention if symptoms occur. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lens, if worn. Get medical attention. Wash off with soap and water. Get medical attention if symptoms occur. If swallowed, DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control centre immediately. Keep out of reach of children. Do not handle or use until safety precautions in Material Safety Data Sheet (MSDS) have been read and understood. Since emptied containers retain product residue, follow label warnings even after container is emptied. **IN CASE OF FIRE:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. **IN CASE OF SPILL:** Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Additional Components Include: Water (7732-18-5) .

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-0, C-0

Material Safety Data Sheet

Kodak

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

Product name: KODAK Developer System Cleaner, Part B, Part B

Product code: 10081093 - Part B

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

For Emergency Health, Safety & Environmental Information, call (585) 722-5151 (USA)

For further information about this product, call (800) 242-2424.

Synonyms: PCD 5754

Product Use: Cleaning agent, For industrial use only.

2. Hazards identification

CONTAINS: Sulphuric acid (7664-93-9)

WARNING!
CAUSES EYE IRRITATION
PROLONGED OR REPEATED SKIN CONTACT MAY CAUSE IRRITATION

HMIS III Hazard Ratings: Health - 2, Flammability - 0, Reactivity (Stability) - 0

NFPA Hazard Ratings: Health - 3, Flammability - 0, 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.)
5 - < 10	Sulphuric acid (7664-93-9)

4. First aid measures

Inhalation: If inhaled, remove to fresh air. Get medical attention if symptoms occur.

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lens, if worn. Get medical attention.

Skin: In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash contaminated clothing before re-use. Destroy or thoroughly clean contaminated shoes.

Ingestion: Get medical attention if symptoms occur.

5. Fire-fighting measures

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

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

Hazardous Combustion Products: None (noncombustible), (see also Hazardous Decomposition Products sections.)

Unusual Fire and Explosion Hazards: None.

6. Accidental release measures

Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination.

7. Handling and storage

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

Prevention of Fire and Explosion: No special technical protective measures required.

Storage: Keep container tightly closed. Keep away from incompatible substances (see Incompatibility section.)

8. Exposure controls/personal protection

Occupational exposure controls

Chemical Name	Regulatory List	Value Type	Value
Sulphuric acid	ACGIH	time weighted average	0.2 mg/m3 *Form of exposure: thoracic fraction*
	OSHA	time weighted average	1 mg/m3

Ventilation: Good general ventilation should be used. Ventilation should be sufficient so that applicable occupational exposure limits are not exceeded. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory protection may be needed in special circumstances.

Respiratory protection: None should be needed. If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: full-face with N95 particulate filter. If respirators are used, a program should be instituted to assure compliance with applicable federal, state, commonwealth, provincial, or local laws and regulations.

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

Hand protection: Wear impervious gloves and protective clothing appropriate for the risk of exposure.

9. Physical and chemical properties

Physical form: liquid

Colour: colourless

Odour: odourless

Specific gravity: 1.04

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

Vapour density: 0.6

Volatile fraction by weight: 90 - 95 %

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

Water solubility: complete

pH: < 2

Flash point: does not flash

10. Stability and reactivity

Stability: Stable under normal conditions.

Incompatibility: Bases, Metals.

Hazardous decomposition products: Sulphur oxides

Hazardous Polymerization: Hazardous polymerisation does not occur.

11. Toxicological information

Effects of Exposure

General advice:

Contains: Sulphuric acid. International Agency for Research on Cancer (IARC) has determined that occupational exposure to strong inorganic mists or vapours containing sulfuric acid is carcinogenic to humans. Acute overexposure to extremely high airborne concentrations of respiratory irritants has been associated with development of an asthma-like reactive airways syndrome (RADS) in susceptible individuals. The following exposure effects are based on pH of the solution, concentration of the base, and a review of the literature.

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

Eyes: Causes eye irritation.

Skin: Prolonged or repeated skin contact may cause irritation.

Ingestion: May cause irritation of the gastrointestinal tract.

Data for Sulphuric acid (CAS 7664-93-9):

Acute Toxicity Data:
Oral LD50 (rat): 2,140 mg/kg

- Inhalation LC50 (mouse): 320 mg/m3 / 2 hr
- Inhalation LC50 (rat): 510 mg/m3 / 2 hr
- Inhalation LC50 (rat): 347 ppm / 1 hr
- Dermal LD50: > 36,600 mg/kg

12. Ecological information

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

Potential Toxicity:

Toxicity to fish (LC50):	> 100 mg/l
Toxicity to daphnia (EC50):	> 100 mg/l
Toxicity to algae (IC50):	> 100 mg/l
Toxicity to other organisms (EC50):	> 100 mg/l (sludge)
Persistence and degradability:	Not applicable
Chemical Oxygen Demand (COD):	ca. 0 g/l
Biochemical Oxygen Demand (BOD):	ca. 0 g/l

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 given below is provided to assist in documentation. It may supplement the information on the package. The package in your possession may carry a different version of the label depending on the date of manufacture. Depending on inner packaging quantities and packaging instructions, it may be subject to specific regulatory exceptions. Please consult the product packaging for further details.

IATA:	UN number:	UN3264
	Proper shipping name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Sulphuric acid)
	Class:	8
	Packaging group:	III
IMDG:	UN number:	UN3264
	Proper shipping name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Sulphuric acid)
	Class:	8
	Packaging group:	III
US DOT:	UN number:	UN3264
	Proper shipping name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Sulphuric acid)
	Class:	8
	Packaging group:	III

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	All listed
ELINCS	None listed
NLP	None listed
AICS	All listed
IECS	All listed
ENCS	All listed
ECI	All listed
NZIoC	All listed
PICCS	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

American Conference of Governmental Industrial Hygienists A2 - Suspected Human Carcinogen:

(ACGIH):	Sulphuric acid
International Agency for Research on Cancer (IARC):	Group 1 - Carcinogenic to Humans: Sulphuric acid
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):	OSHA Carcinogen or Potential Carcinogen: Sulphuric acid
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.
U.S. - CERCLA/SARA (40 CFR § 302.4 Designation of hazardous substances):	Sulphuric acid
U.S. - CERCLA/SARA - Section 302 (40 CFR § 355 Appendices A and B - The List of Extremely Hazardous Substances and Their Threshold Planning Quantities):	Sulphuric acid
U.S. - CERCLA/SARA - Section 313 (40 CFR § 372.65 Toxic Chemical Release Reporting):	Sulphuric acid
U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances:	Sulphuric acid
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):	Sulphuric acid
U.S. - Minnesota Employee Right-to-Know (5206.0400, Subpart 5. List of Hazardous Substances):	Sulphuric acid
U.S. - New Jersey - Worker and Community Right to Know Act (N.J.S.A. 34:5A-1):	Sulphuric acid
U.S. - Pennsylvania - Part XIII. Worker and Community Right-to-Know Act (Chapters 301-323):	Sulphuric acid, Water
U.S. - Rhode Island - Title 28 Labor and Labor Relations (Chapters 28-21 Hazardous Substance Right-to-Know Act):	Sulphuric acid

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 Developer System Cleaner, Part B, Part B
CONTAINS: Sulphuric acid (7664-93-9).
WARNING! CAUSES EYE IRRITATION. PROLONGED OR REPEATED SKIN CONTACT MAY CAUSE IRRITATION.
Avoid breathing mist or vapour at concentrations greater than the exposure limits. Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation. Wash thoroughly after handling. **FIRST AID:** If inhaled, remove to fresh air. Get medical attention if symptoms occur. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lens, if worn. Get medical attention. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash contaminated clothing before re-use. Destroy or thoroughly clean contaminated shoes. Get medical attention if symptoms occur. Keep out of reach of children. Do not handle or use until safety precautions in Material Safety Data Sheet (MSDS) have been read and understood. Since emptied containers retain product residue, follow label warnings even after container is emptied. **IN CASE OF FIRE:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. **IN CASE OF SPILL:** Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Additional Components Include: Water (7732-18-5).

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-0, C-0