

# Material Safety Data Sheet



Revision Date: 04/26/2012  
000000012802/Version: 1.4  
Print Date: 06/14/2012  
Page: 1/7

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

**Product name:** KODAK XTOL Developer, Working solution

**Product code:** 8751752 - Working solution

**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:** None.

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

## 2. Hazards identification

**CONTAINS:** Sodium bisulphite (7631-90-5), Sodium sulphite (7757-83-7)

**WARNING!**  
**MAY BE HARMFUL IF SWALLOWED**

**HMIS III Hazard Ratings:** Health - 1, Flammability - 0, Physical Hazard - 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	Sodium sulphite (7757-83-7)
0.1 - < 1	Sodium bisulphite (7631-90-5)
0.1 - < 1	Pentetic acid, pentasodium salt (140-01-2)
0.1 - < 1	Sodium metaborate (7775-19-1)

## 4. First aid measures

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

**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 occur.

# Material Safety Data Sheet



Revision Date: 04/26/2012  
000000012802/Version: 1.4  
Print Date: 06/14/2012  
Page: 2/7

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

**Ingestion:** If swallowed, only induce vomiting as directed by medical personnel. 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:** 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 prolonged or repeated breathing of mist or vapour. 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
Sulphur dioxide	ACGIH	Short term exposure limit time weighted average	0.25 ppm
	OSHA		5 ppm 13 mg/m <sup>3</sup>

**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 under normal conditions of use. If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. A respirator should be worn if hazardous decomposition products are likely to be or have

## Material Safety Data Sheet



Revision Date: 04/26/2012  
000000012802/Version: 1.4  
Print Date: 06/14/2012  
Page: 3/7

---

been released. 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:** yellow

**Odour:** odourless

**Specific gravity:** 1.08

**Vapour pressure:** 24 mbar (18.0 mm Hg)

**Vapour density:** 0.6

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

**Water solubility:** complete

**pH:** 8.2

**Flash point:** does not flash

### 10. Stability and reactivity

**Stability:** Stable under normal conditions.

**Incompatibility:** Acids. Contact with strong acids liberates sulphur dioxide.

**Hazardous decomposition products:** Sulphur oxides

**Hazardous Polymerization:** Hazardous polymerisation does not occur.

### 11. Toxicological information

#### Effects of Exposure

**Inhalation:** Expected to be a low hazard for recommended handling. Some asthmatics or hypersensitive individuals may experience difficulty breathing if exposed to aerosols or decomposition products that are not anticipated during normal use.

**Eyes:** No specific hazard known. May cause transient irritation.

## Material Safety Data Sheet



Revision Date: 04/26/2012  
000000012802/Version: 1.4  
Print Date: 06/14/2012  
Page: 4/7

---

**Skin:** This material has a low potential to cause allergic skin reactions; however, cases of human skin sensitization have been reported.

**Ingestion:** May be harmful if swallowed. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

### Data for Sodium sulphite (CAS 7757-83-7):

#### Acute Toxicity Data:

Oral LD50 (rat): 820 mg/kg

- Inhalation LC50 (rat): > 22 mg/l / 1 hr
- Inhalation LC50 (rat): > 5.5 mg/l / 4 hr
- Skin irritation: none
- Eye irritation: slight; washing palliative

### Data for Sodium bisulphite (CAS 7631-90-5):

#### Acute Toxicity Data:

Oral LD50 (rat): > 1,600 mg/kg

- Eye irritation (May irritate eyes.): mild

### Data for Pentetic acid, pentasodium salt (CAS 140-01-2):

#### Acute Toxicity Data:

Oral LD50 (male rat): 3,200 mg/kg

- Oral LD50 (female rat): 2,263 mg/kg
- Skin irritation: irritating
- Skin Sensitization: none
- Eye irritation: Corrosive

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:

- Oral (11 days, male rat): NOEL; 100 mg/kg/day

### Data for Sodium metaborate (CAS 7775-19-1):

#### Acute Toxicity Data:

Oral LD50 (male rat): 1,600 - 3,200 mg/kg

- Dermal LD50 (guinea pig): >20 cc/kg cc/kg
- Skin irritation: slight
- Eye irritation (unwashed eyes): none

## 12. Ecological information

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

#### Potential Toxicity:

# Material Safety Data Sheet



Revision Date: 04/26/2012  
000000012802/Version: 1.4  
Print Date: 06/14/2012  
Page: 5/7

Toxicity to fish (LC50): > 100 mg/l

Toxicity to daphnia (EC50): Daphnia: > 100 mg/l

**Persistence and degradability:** Readily biodegradable.

## 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](http://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
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

American Conference of Governmental Industrial Hygienists No component of this product present

## Material Safety Data Sheet

Revision Date: 04/26/2012  
000000012802/Version: 1.4  
Print Date: 06/14/2012  
Page: 6/7



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(ACGIH):	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	WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
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):	No components regulated under the Massachusetts Hazardous Substances Disclosure by

## Material Safety Data Sheet

Revision Date: 04/26/2012  
000000012802/Version: 1.4  
Print Date: 06/14/2012  
Page: 7/7



U.S. - Minnesota Employee Right-to-Know (5206.0400, Subpart 5. List of Hazardous Substances):	Employers Law. No components found on the Minnesota Employee Right-to-Know List of Hazardous Substances.
U.S. - New Jersey - Worker and Community Right to Know Act (N.J.S.A. 34:5A-1):	No components regulated under the New Jersey Worker and Community Right-to-Know Act.
U.S. - Pennsylvania - Part XIII. Worker and Community Right-to-Know Act (Chapter 323 Hazardous Substance List, Appendix A):	Water, Sodium sulphite, Sodium bisulphite

### 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 XTOL Developer, Working solution**

**CONTAINS: Sodium bisulphite (7631-90-5), Sodium sulphite (7757-83-7).**

##### **WARNING! MAY BE HARMFUL IF SWALLOWED.**

Avoid prolonged or repeated breathing of mist or vapour. 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. 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 occur. Wash off with soap and water. Get medical attention if symptoms occur. If swallowed, only induce vomiting as directed by medical personnel. 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), Pentetic acid, pentasodium salt (140-01-2), Sodium metaborate (7775-19-1).

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-1, F-0, C-0

# Material Safety Data Sheet



Revision Date: 03/22/2012  
000000012673/Version: 1.6  
Print Date: 06/14/2012  
Page: 1/8

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

**Product name:** KODAK XTOL Developer, Part A

**Product code:** 8751752 - 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 6311

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

## 2. Hazards identification

**CONTAINS:** Sodium sulphite (7757-83-7), Sodium metaborate, tetrahydrate (10555-76-7), Pentetic acid, pentasodium salt (140-01-2), 4-hydroxymethyl-4-methyl-1-phenyl-3-pyrazolidinone (13047-13-7)

### WARNING!

**MAY LIBERATE SULFUR DIOXIDE**

**MAY BE HARMFUL IF INHALED, ABSORBED THROUGH SKIN, OR SWALLOWED**

**DUST IRRITATING TO RESPIRATORY TRACT**

**MAY CAUSE EYE IRRITATION**

**MAY CAUSE ALLERGIC SKIN REACTION**

**HMIS III Hazard Ratings:** Health - 2, Flammability - 0, Physical Hazard - 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.)
90 - 95	Sodium sulphite (7757-83-7)
5 - 10	Sodium metaborate, tetrahydrate (10555-76-7)
1 - 5	Pentetic acid, pentasodium salt (140-01-2)
0.1 - < 1	4-hydroxymethyl-4-methyl-1-phenyl-3-pyrazolidinone (13047-13-7)

## 4. First aid measures



# Material Safety Data Sheet



Revision Date: 03/22/2012  
000000012673/Version: 1.6  
Print Date: 06/14/2012  
Page: 2/8

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

**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 skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Destroy or thoroughly clean contaminated shoes. Wash contaminated clothing before re-use.

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

## 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

Shovel into suitable container for disposal. Clean surface thoroughly to remove residual contamination.

## 7. Handling and storage

**Personal precautions:** Avoid breathing dust at concentrations greater than the exposure limits. Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation. Wash thoroughly after handling. Keep container tightly closed. 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
Sodium metaborate, tetrahydrate	ACGIH	time weighted average	2 mg/m3
		Short term exposure limit	6 mg/m3
			<i>Form of exposure: inhalable fraction</i>
			<i>Form of exposure: inhalable fraction</i>

## Material Safety Data Sheet

Revision Date: 03/22/2012  
000000012673/Version: 1.6  
Print Date: 06/14/2012  
Page: 3/8



Sulphur dioxide	OSHA	Short term exposure limit time weighted average	0.25 ppm 5 ppm 13 mg/m3
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**Ventilation:** 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.

**Respiratory protection:** If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: N95 Particulate Filter. A respirator should be worn if hazardous decomposition products are likely to be or have been released. 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:** Wear impervious gloves and protective clothing appropriate for the risk of exposure.

### 9. Physical and chemical properties

**Physical form:** solid (powder)

**Colour:** off-white

**Odour:** odourless

**Specific gravity:** no data available

**Vapour pressure:** negligible

**Vapour density:** no data available

**Melting point/range:** no data available

**Water solubility:** complete

**pH:** not applicable

**Flash point:** not applicable

### 10. Stability and reactivity

**Stability:** Stable under normal conditions.

**Incompatibility:** Acids. Contact with strong acids liberates sulphur dioxide.

**Hazardous decomposition products:** Sulphur oxides

**Hazardous Polymerization:** Hazardous polymerisation does not occur.

### 11. Toxicological information

## Material Safety Data Sheet



Revision Date: 03/22/2012  
000000012673/Version: 1.6  
Print Date: 06/14/2012  
Page: 4/8

---

### Effects of Exposure

#### General advice:

Contains: Sodium metaborate, tetrahydrate. Based on repeated-dose ingestion studies in animals, may cause adverse reproductive and developmental effects. However, the doses administered were many times those to which humans would normally be exposed.

Contains: 4-hydroxymethyl-4-methyl-1-phenyl-3-pyrazolidinone. May cause adverse reproductive effects such as infertility based on animal data. Based on repeated-dose ingestion studies in animals, this chemical may cause blood, testicular, and adverse reproductive effects.

**Inhalation:** May be harmful if inhaled. Airborne dust irritating. In contact with strong acids or if heated, sulphites may liberate sulphur dioxide gas. Sulphur dioxide gas is irritating to the respiratory tract. Some asthmatics or hypersensitive individuals may experience difficult breathing.

**Eyes:** May cause eye irritation.

**Skin:** May be harmful if absorbed through skin. May be absorbed in toxic amounts through damaged or abraded skin. May cause allergic skin reaction based on human experience.

**Ingestion:** May be harmful if swallowed. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

#### Data for Sodium sulphite (CAS 7757-83-7):

##### Acute Toxicity Data:

Oral LD50 (rat): 820 mg/kg

- Inhalation LC50 (rat): > 22 mg/l / 1 hr
- Inhalation LC50 (rat): > 5.5 mg/l / 4 hr
- Skin irritation: none
- Eye irritation: slight; washing palliative

#### Data for Pentetic acid, pentasodium salt (CAS 140-01-2):

##### Acute Toxicity Data:

Oral LD50 (male rat): 3,200 mg/kg

- Oral LD50 (female rat): 2,263 mg/kg
- Skin irritation: irritating
- Skin Sensitization: none
- Eye irritation: Corrosive

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:

- Oral (11 days, male rat): NOEL; 100 mg/kg/day

#### Data for 4-hydroxymethyl-4-methyl-1-phenyl-3-pyrazolidinone (CAS 13047-13-7):

# Material Safety Data Sheet



Revision Date: 03/22/2012  
000000012673/Version: 1.6  
Print Date: 06/14/2012  
Page: 5/8

## Acute Toxicity Data:

Oral LD50 (rat): 566 mg/kg

- Dermal LD50: > 1,000 mg/kg
- Skin irritation: slight
- Skin irritation: slight exacerbation (repeated skin application)
- Skin Sensitization: slight
- Eye irritation (unwashed eyes): strong
- Eye irritation (washed eyes): slight to moderate

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:

- Oral (12-day, rat): NOEL; 88 mg/kg/day
- Oral (12-day, rat): Lowest observable effect level; 440 mg/kg/day (target organ effects: blood, target organ effects: testes)
- Oral (28-day, rat): NOEL; 10 mg/kg/day
- Oral (28-day, rat): Lowest observable effect level; 40 mg/kg/day (target organ effects: blood, target organ effects: testes)

## 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

**Persistence and degradability:** Not readily biodegradable.

## 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](http://www.kodak.com/go/ship).

## 15. Regulatory information

**Notification status**

## Material Safety Data Sheet

Revision Date: 03/22/2012  
000000012673/Version: 1.6  
Print Date: 06/14/2012  
Page: 6/8



<b>Regulatory List</b>	<b>Notification status</b>
TSCA	Not all listed
DSL	Not all listed
NDSL	None listed
EINECS	Not all listed
ELINCS	None listed
NLP	None listed
AICS	All listed
IECS	All listed
ENCS	All listed
ECI	Not 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	WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
U.S. - CERCLA/SARA (40 CFR § 302.4 Designation of hazardous substances):	No components of this product are subject to the SARA Section 302

## Material Safety Data Sheet



Revision Date: 03/22/2012  
000000012673/Version: 1.6  
Print Date: 06/14/2012  
Page: 7/8

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	(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):	No components regulated under the Massachusetts Hazardous Substances Disclosure by Employers Law.
U.S. - Minnesota Employee Right-to-Know (5206.0400, Subpart 5. List of Hazardous Substances):	No components found on the Minnesota Employee Right-to-Know List of Hazardous Substances.
U.S. - New Jersey - Worker and Community Right to Know Act (N.J.S.A. 34:5A-1):	No components regulated under the New Jersey Worker and Community Right-to-Know Act.
U.S. - Pennsylvania - Part XIII. Worker and Community Right-to-Know Act (Chapter 323 Hazardous Substance List, Appendix A):	Sodium sulphite, Sodium metaborate, tetrahydrate, Pentetic acid, pentasodium salt

### 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 XTOL Developer, Part A

**CONTAINS: Sodium sulphite (7757-83-7), Sodium metaborate, tetrahydrate (10555-76-7), Pentetic acid, pentasodium salt (140-01-2), 4-hydroxymethyl-4-methyl-1-phenyl-3-pyrazolidinone (13047-13-7).**

## Material Safety Data Sheet

Revision Date: 03/22/2012  
000000012673/Version: 1.6  
Print Date: 06/14/2012  
Page: 8/8

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**WARNING! MAY LIBERATE SULFUR DIOXIDE. MAY BE HARMFUL IF INHALED, ABSORBED THROUGH SKIN, OR SWALLOWED. DUST IRRITATING TO RESPIRATORY TRACT. MAY CAUSE EYE IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION.**

Avoid breathing dust at concentrations greater than the exposure limits. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Use only with adequate ventilation. Wash thoroughly after handling. **FIRST AID:** If inhaled, remove to fresh air. Get medical attention. 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 skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Destroy or thoroughly clean contaminated shoes. Wash contaminated clothing before re-use. If swallowed, DO NOT induce vomiting. Call a physician or poison control centre immediately. Never give anything by mouth to an unconscious person. 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:** Shovel into suitable container for disposal. Clean surface thoroughly to remove residual contamination.

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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.

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

# Material Safety Data Sheet



Revision Date: 04/09/2012  
000000012674/Version: 2.0  
Print Date: 06/14/2012  
Page: 1/7

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

**Product name:** KODAK XTOL Developer, Part B

**Product code:** 8751752 - 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 6327

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

## 2. Hazards identification

**CONTAINS:** Sodium sulphite (7757-83-7), Sodium erythroate (6381-77-7), Sodium metabisulphite (7681-57-4)

### WARNING!

**POWDERED MATERIAL MAY FORM EXPLOSIVE DUST-AIR MIXTURES  
MAY LIBERATE SULFUR DIOXIDE  
MAY BE HARMFUL IF INHALED OR SWALLOWED  
MAY CAUSE EYE IRRITATION**

**HMIS III Hazard Ratings:** Health - 1, 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.)
75 - 80	Sodium sulphite (7757-83-7)
15 - 20	Sodium erythroate (6381-77-7)
1 - 5	Sodium metabisulphite (7681-57-4)

## 4. First aid measures

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



# Material Safety Data Sheet



Revision Date: 04/09/2012  
000000012674/Version: 2.0  
Print Date: 06/14/2012  
Page: 2/7

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

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

**Ingestion:** If swallowed, only induce vomiting as directed by medical personnel. Never give anything by mouth to an unconscious person. Call a physician or poison control centre immediately.

## 5. Fire-fighting measures

**Extinguishing Media:** Water spray, Carbon dioxide (CO<sub>2</sub>), Dry chemical.

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

**Hazardous Combustion Products:** Carbon oxides, Sulphur oxides, (see also Hazardous Decomposition Products sections.)

**Unusual Fire and Explosion Hazards:** Dust may form explosive mixture in air.

## 6. Accidental release measures

Shovel into suitable container for disposal. Avoid dust formation. Clean surface thoroughly to remove residual contamination.

## 7. Handling and storage

**Personal precautions:** Avoid breathing dust. 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:** Dust may form explosive mixture in air. Minimize dust generation and accumulation. Use only with adequate ventilation. Keep away from sources of ignition - No smoking. Refer to NFPA 654, "Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids." Keep from contact with oxidizing materials.

**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
Sodium metabisulphite	ACGIH	time weighted average	5 mg/m <sup>3</sup>
Sulphur dioxide	OSHA	Short term exposure limit time weighted average	0.25 ppm 5 ppm 13 mg/m <sup>3</sup>

**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.

## Material Safety Data Sheet

Revision Date: 04/09/2012  
000000012674/Version: 2.0  
Print Date: 06/14/2012  
Page: 3/7



Supplementary local exhaust ventilation, closed systems, or respiratory protection may be needed in special circumstances.

**Respiratory protection:** If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: N95 Particulate Filter. A respirator should be worn if hazardous decomposition products are likely to be or have been released. Respirator type: acid gas See Stability and Reactivity Section. 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:** solid (powder)

**Colour:** off-white

**Odour:** odourless

**Specific gravity:** no data available

**Vapour pressure:** negligible

**Vapour density:** no data available

**Melting point/range:** no data available

**Water solubility:** complete

**pH:** not applicable

**Flash point:** not applicable

### 10. Stability and reactivity

**Stability:** Stable under normal conditions.

**Incompatibility:** Acids, Strong oxidizing agents. Contact with strong acids liberates sulphur dioxide.

**Hazardous decomposition products:** Sulphur oxides

**Hazardous Polymerization:** Hazardous polymerisation does not occur.

### 11. Toxicological information

#### Effects of Exposure

## Material Safety Data Sheet



Revision Date: 04/09/2012  
000000012674/Version: 2.0  
Print Date: 06/14/2012  
Page: 4/7

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### General advice:

Contains: Sodium metabisulphite. In contact with strong acids or if heated, sulphites may liberate sulphur dioxide gas. Sulphur dioxide gas is irritating to the respiratory tract. Some asthmatics or hypersensitive individuals may experience difficult breathing.

**Inhalation:** May be harmful if inhaled. May cause irritation to the mucous membranes and upper respiratory tract. In contact with strong acids or if heated, sulphites may liberate sulphur dioxide gas. Sulphur dioxide gas is irritating to the respiratory tract. Some asthmatics or hypersensitive individuals may experience difficult breathing.

**Eyes:** May cause eye irritation.

**Skin:** This material has a low potential to cause allergic skin reactions; however, cases of human skin sensitization have been reported.

**Ingestion:** May be harmful if swallowed. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

### Data for Sodium sulphite (CAS 7757-83-7):

#### Acute Toxicity Data:

Oral LD50 (rat): 820 mg/kg

- Inhalation LC50 (rat): > 22 mg/l / 1 hr
- Inhalation LC50 (rat): > 5.5 mg/l / 4 hr
- Skin irritation: none
- Eye irritation: slight; washing palliative

### Data for Sodium metabisulphite (CAS 7681-57-4):

#### Acute Toxicity Data:

Oral LD50 (male rat): 1,900 mg/kg

- Oral LD50 (female rat): 1,130 mg/kg
- Dermal LD50: > 1,000 mg/kg
- Skin irritation: moderate (repeated skin application)
- Skin Sensitization: none
- Eye irritation: moderate to strong

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:

- Oral (14-day, rat): NOEL; > 1105 mg/kg/day

## 12. Ecological information

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

### Potential Toxicity:

# Material Safety Data Sheet



Revision Date: 04/09/2012  
000000012674/Version: 2.0  
Print Date: 06/14/2012  
Page: 5/7

Toxicity to fish (LC50): > 100 mg/l  
Toxicity to daphnia (EC50): Daphnia: 10 - 100 mg/l  
**Persistence and degradability:** Not readily biodegradable.

## 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](http://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
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

American Conference of Governmental Industrial Hygienists No component of this product present

## Material Safety Data Sheet



Revision Date: 04/09/2012  
000000012674/Version: 2.0  
Print Date: 06/14/2012  
Page: 6/7

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(ACGIH):	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	WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
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:	Sodium metabisulphite
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):	Sodium metabisulphite
U.S. - Minnesota Employee Right-to-Know (5206.0400,	Sodium metabisulphite

## Material Safety Data Sheet



Revision Date: 04/09/2012  
000000012674/Version: 2.0  
Print Date: 06/14/2012  
Page: 7/7

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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): Sodium metabisulphite

U.S. - Pennsylvania - Part XIII. Worker and Community Right-to-Know Act (Chapter 323 Hazardous Substance List, Appendix A): Sodium sulphite, Sodium erythrobrate, Sodium metabisulphite

### 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 XTOL Developer, Part B

**CONTAINS: Sodium sulphite (7757-83-7), Sodium erythrobrate (6381-77-7), Sodium metabisulphite (7681-57-4).**

**WARNING! POWDERED MATERIAL MAY FORM EXPLOSIVE DUST-AIR MIXTURES. MAY LIBERATE SULFUR DIOXIDE. MAY BE HARMFUL IF INHALED OR SWALLOWED. MAY CAUSE EYE IRRITATION.**

Avoid breathing dust. Keep container tightly closed. Minimize dust generation and accumulation. 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. Get medical attention if symptoms occur. If easy to do, remove contact lens, if worn. Wash off with soap and water. Get medical attention if symptoms occur. If swallowed, only induce vomiting as directed by medical personnel. 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:** Water spray, Carbon dioxide (CO<sub>2</sub>), Dry chemical. **IN CASE OF SPILL:** Shovel into suitable container for disposal. Avoid dust formation. Clean surface thoroughly to remove residual contamination.

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