

Material Safety Data Sheet

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

Product name: P-17

Product code: 10083885

Supplier: Carestream Health, Inc., 150 Verona Street, Rochester, New York 14608; Carestream Health Canada Company, 6 Monogram Place, Suite 200, Toronto, Ontario, M9R 0A1

For Emergency Health Information call, (800) 424-9300

For other information contact 800-328-2910.

Synonyms: None.

Product Use: Film or paper manufacturing chemical
For industrial use only.

2. Hazards identification

CONTAINS: Tetrapotassium hexakis(cyano-C)ruthenate (15002-31-0)

WARNING!

**POWDERED MATERIAL MAY FORM EXPLOSIVE DUST-AIR MIXTURES
MAY CAUSE ALLERGIC SKIN REACTION**

NFPA Hazard Ratings: Health - 4, Flammability - 1, Instability - 0

NOTE: NFPA 704 (2007) hazard indexes involves data review and interpretation that may vary among companies. It is 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 %	Components (CAS-No.)
100	Tetrapotassium hexakis(cyano-C)ruthenate (15002-31-0)

4. First aid measures

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

Eyes: Any material that contacts the eye should be washed out immediately with water. Get medical attention if symptoms occur.

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. Wash contaminated clothing before re-use. Destroy or thoroughly clean contaminated shoes.

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

5. Fire-fighting measures

Extinguishing Media: Water spray, Carbon dioxide (CO₂), 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, nitrogen oxides (NO_x), (see also Hazardous Decomposition Products section).

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

6. Accidental release measures

Methods for cleaning up: 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.

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. 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: Not established

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: If engineering controls do not maintain airborne concentrations to an acceptable level, an approved respirator must be worn. Respirator type: 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).

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

Recommended Decontamination Facilities: Safety shower, eye wash, washing facilities as appropriate to condition of use.

9. Physical and Chemical Properties

Physical form: solid

Colour: white

Odour: No data available

Specific gravity: not applicable

Vapour pressure: not applicable

Vapour density: No data available

Volatile fraction by weight: not applicable

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.

No exotherm to 400 °C by DSC

Incompatibility: Strong oxidizing agents, Strong bases, Strong acids.

Hazardous decomposition products: hydrogen cyanide.

Hazardous Polymerization: Hazardous polymerization does not occur.

11. Toxicological information

Effects of Exposure

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

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

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Skin: May cause allergic skin reaction based on structural similarity to known human or animal sensitizers.

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

Acute Toxicity Data:

- Oral LD50 (rat): > 2,000 mg/kg
- Dermal LD50: > 2,000 mg/kg
- Skin irritation: none
- Skin Sensitization: none
- Eye irritation (unwashed eyes): slight
- Eye irritation (washed eyes): slight

12. Ecological information

Environmental data are not available.

13. Disposal considerations

Discharge, treatment, or disposal is subject to national, state, provincial, or municipal 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: <http://ship.carestreamhealth.com>.

15. Regulatory information

Notification status

Regulatory List	Notification status	Other information	Not listed
INV (CN)	y (positive listing)	-	
EINECS	y (positive listing)	-	
ENCS (JP)	n (Negative listing)	-	Tetrapotassium hexakis(cyano-C)ruthenate
KECI (KR)	n (Negative listing)	-	Tetrapotassium hexakis(cyano-C)ruthenate
AICS	n (Negative listing)	-	Tetrapotassium hexakis(cyano-C)ruthenate
PICCS (PH)	n (Negative listing)	-	Tetrapotassium hexakis(cyano-C)ruthenate
TSCA	n (Negative listing)	Not On TSCA Inventory	Tetrapotassium hexakis(cyano-C)ruthenate
DSL	n (Negative listing)	This product contains the following components that are	Tetrapotassium hexakis(cyano-C)ruthenate

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not on the Canadian DSL nor
NDSL lists.

A N (Negative listing) indicates one or more component is either not on the Inventory or is subject to exemption requirements. If additional information is needed contact Kodak.

Other regulations

American Conference of Governmental Industrial Hygienists (ACGIH):	none
International Agency for Research on Cancer (IARC):	none
U.S. National Toxicology Program (NTP):	none
U.S. Occupational Safety and Health Administration (OSHA):	none
U.S. California Prop. 65:	none
US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323):	Tetrapotassium hexakis(cyano-C)ruthenate
US. Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000):	No components are subject to Massachusetts Right To Know Act.
US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5):	Tetrapotassium hexakis(cyano-C)ruthenate

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:

CONTAINS: Tetrapotassium hexakis(cyano-C)ruthenate (15002-31-0)

WARNING!

**POWDERED MATERIAL MAY FORM EXPLOSIVE DUST-AIR MIXTURES
MAY CAUSE ALLERGIC SKIN REACTION**

Minimize dust generation and accumulation.
Avoid breathing dust.
Avoid contact with eyes, skin, and clothing.
Use only with adequate ventilation.
Wash thoroughly after handling.

FIRST AID: If symptomatic, move to fresh air. Get medical attention if symptoms occur. Any material that contacts the eye should be washed out immediately with water. Get medical attention if symptoms occur. 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. Wash contaminated clothing before re-use. Destroy or thoroughly clean contaminated shoes. If swallowed, DO NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Keep out of reach of children.

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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 Water spray, Carbon dioxide (CO₂), Dry chemical.

IN CASE OF SPILL: Shovel into suitable container for disposal. Avoid dust formation. Clean surface thoroughly to remove residual contamination.

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