Material Safety Data Sheet

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: KODAK Optical Cement, HES-1

Catalog Number(s): 178 7720 - To Make 100 gram(s)
813 2698 - To Make 250 gram(s)

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.

Synonym(s): CIN 10050883, KAN 249771, PCD 50883, W-0010.030

Molecular Formula: Mixture

Molecular Weight: Not available

2. COMPOSITION/INFORMATION ON INGREDIENTS

Weight % - Component - (CAS Registry No.)

50-55	N-butyl methacrylate (000097-88-1)
25-30	Elvacite 2044 (not available)
20-25	Stabelite resin 10 (not available)
1	Benzoyl peroxide (000094-36-0)

3. HAZARDS IDENTIFICATION

WARNING!
CONTAINS: N-butyl methacrylate (000097-88-1); Benzoyl peroxide (000094-36-0); Elvacite 2044 (not available); Stabelite resin 10 (not available)
MAY POLYMERIZE VIOLENTLY AND RESULT IN FIRE AND EXPLOSION
HEAT SENSITIVE - CAN DECOMPOSE IF HEATED
COMBUSTIBLE LIQUID AND VAPOR
POTENTIAL PEROXIDE FORMER
CAUSES SKIN AND EYE IRRITATION
MAY CAUSE ALLERGIC SKIN REACTION
HIGH VAPOR CONCENTRATIONS MAY CAUSE DROWSINESS AND IRRITATION OF THE EYES OR RESPIRATORY TRACT
THE TOXICOLOGICAL PROPERTIES OF A COMPONENT OF THIS MIXTURE HAVE NOT BEEN INVESTIGATED

Eastman Kodak Hazard Ratings: R-1, S-2, F-2, C-1HZTE
HMIS Hazard Ratings:
Health - 2, Flammability - 2, Reactivity - 1, Personal Protection - B

NFPA Hazard Ratings:
Health - 2, Flammability - 2, Reactivity (Stability) - 1

NOTE: HMIS and NFPA 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. The personal protection index is only intended for general guidance on personal protection equipment (PPE) that is suitable for the potential hazards of the material. PPE (e.g., respirators) may not be needed if engineering controls (e.g., local ventilation) are adequate. An asterisk (*), in the HMIS health field, designates potential chronic or target organ hazards. To adequately address safe handling, ALL information in this MSDS must be considered.

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4. FIRST-AID MEASURES

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

Eyes: Immediately flush with plenty of water for at least 15 minutes. Get medical attention.

Skin: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Ingestion: Drink 1-2 glasses of water. Seek medical attention. Never give anything by mouth to an unconscious person.

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5. FIRE FIGHTING MEASURES

Extinguishing Media: Water spray, carbon dioxide (CO_2), dry chemical, alcohol foam.

Special Fire-Fighting Procedures: Wear self-contained breathing apparatus and protective clothing. Use water spray to keep fire-exposed containers cool. Fight fire from a protected location.

Hazardous Combustion Products: Carbon dioxide, carbon monoxide.

Unusual Fire and Explosion Hazards: Classified as combustible. Material contains a combustible solvent that may accumulate in the container headspace. Fire or excessive heat may result in rupture of container due to bulk polymerization. Elevated temperature can cause decomposition. May form peroxides of unknown stability.

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6. ACCIDENTAL RELEASE MEASURES

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

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7. HANDLING AND STORAGE

Personal Precautionary Measures: Avoid breathing vapor. Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Wash thoroughly after handling.

Prevention of Fire and Explosion: Keep away from heat and flame. Keep from contact with oxidizing materials. Minimize exposure to air. If peroxide

formation is suspected, do not open or move container. Use with adequate ventilation.

Storage: Keep container tightly closed. Store in a cool place. Store away from heat and light.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:

ACGIH Threshold Limit Value (TLV):

Benzoyl peroxide: 5 mg/m3 TWA

OSHA (USA) Permissible Exposure Limit (PEL - 1971 Table Z-1 Values):

Benzoyl peroxide: 5 mg/m3 TWA

Ventilation: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

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: Organic vapor. If respirators are used, a program should be instituted to assure compliance with OSHA Standard 29 CFR 1910.134.

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

Skin Protection: Wear impervious gloves.

Recommended Decontamination Facilities: Eye bath, washing facilities, safety shower

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9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Viscous liquid
Color: Not available
Odor: Not available
Specific Gravity (water = 1): Not available
Vapor Pressure: Not available
Vapor Density (Air = 1): Not available
Volatile Fraction by Weight: 50-60 %
Solubility in Water: Not available
pH: Not available
Flash Point (estimated): 38-61°C (100-141°F)

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10. STABILITY AND REACTIVITY

Stability: Stable. Safe handling temperatures are dependent on specific conditions of use and are typically substantially below the onset temperature. Consult your technical safety experts. On long term storage, materials containing similar functional groups form peroxides of unknown stability.

Exotherm onset temperature: 80°C by DSC

Incompatibility: Strong oxidizing agents, amines, strong acids, strong bases, strong reducing agents. Material can react with polymerization initiators.

Hazardous Polymerization: May polymerize and result in fire and/or explosion; avoid accelerators, contamination, heat, initiators.

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11. TOXICOLOGICAL INFORMATION

Effects of Exposure:

General:

Contains elvacite 2044. The toxicological properties of this material have not been fully investigated and its handling and use may present additional hazards.

Contains stabelite resin 10. The toxicological properties of this material have not been investigated and its handling and use may be hazardous.

Inhalation: High vapor concentrations may cause drowsiness and irritation.

Eyes: Causes irritation. High vapor concentrations may cause irritation.

Skin: Causes irritation. May cause allergic skin reaction. Because of the potential for cross-sensitization to other acrylates, individuals sensitized to this mixture should avoid contact with other acrylates.

Ingestion: Expected to be a low ingestion hazard.

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12. ECOLOGICAL INFORMATION

This product has not been tested for environmental effects.

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13. DISPOSAL CONSIDERATIONS

Discharge, treatment, or disposal is subject to national, state, or local laws. Since emptied containers retain product residue, follow label warnings even after container is emptied. Incinerate.

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14. TRANSPORT INFORMATION

For more transportation information, go to: http://ship.carestreamhealth.com.

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15. REGULATORY INFORMATION

- Material(s) known to the State of California to cause cancer: None
- Material(s) known to the State of California to cause adverse reproductive effects: None

Carcinogenicity Classification (components present at 0.1% or more):

- International Agency for Research on Cancer (IARC) (benzoyl peroxide): Group 3 - not classifiable
- American Conference of Governmental Industrial Hygienists (ACGIH) (benzoyl peroxide): A4 - not classifiable as a human carcinogen.

- National Toxicology Program (NTP): None
- Occupational Safety and Health Administration (OSHA): None

- Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372: Benzoyl peroxide.

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16. OTHER INFORMATION

US/Canadian Label Statements:

CONTAINS: N-butyl methacrylate (000097-88-1); Benzoyl peroxide (000094-36-0); Elvacite 2044 (not available); Stabelite resin 10 (not available)
WARNING!
MAY POLYMERIZE VIOLENTLY AND RESULT IN FIRE AND EXPLOSION
HEAT SENSITIVE - CAN DECOMPOSE IF HEATED
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COMBUSTIBLE LIQUID AND VAPOR
POTENTIAL PEROXIDE FORMER
HIGH VAPOR CONCENTRATIONS MAY CAUSE DROWSINESS AND IRRITATION OF THE EYES OR RESPIRATORY TRACT
THE TOXICOLOGICAL PROPERTIES OF A COMPONENT OF THIS MIXTURE HAVE NOT BEEN INVESTIGATED

Keep container tightly closed.
Store away from heat and light.
Keep material from heat, light, and flame.
Do not allow to evaporate to near dryness.
Store in a cool place.
Avoid heat or contamination.
Avoid breathing vapor.
Avoid contact with eyes, skin, and clothing.
Use with adequate ventilation.
Wash thoroughly after handling.

FIRST AID: If inhaled, move to fresh air. Treat symptomatically. In case of contact, immediately flush eyes and skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

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.

Additional hazard precautions for containers greater than 1 gallon of liquid or 5 pounds of solid:

IN CASE OF FIRE: Use water spray, carbon dioxide (CO2), dry chemical, alcohol foam. Use water spray to keep fire-exposed containers cool.

IN CASE OF SPILL: Eliminate all ignition sources.

Since emptied containers retain product residue, follow label warnings even after container is emptied.

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.

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