Material Safety Data Sheet

229 Image Remover

Kodak Polychrome Graphics
A Subsidiary of Kodak

1. Chemical Product and Company Identification

Common Name : **229 Image Remover**

Synonym : Not available.

Catalog number : 1076702

Area of Application : Industrial applications. Graphic Arts Imaging.

MSDS#	**511**
Version	**2.62**
Validation Date	**2006-01-31**
Responsible Name	**Kodak Polychrome Graphics**

Supplier : Kodak Polychrome Graphics
401 Merrit 7
Norwalk, CT 06851
USA
Tel. (203) 845-7000

KPG# **70021**

Emergency telephone number : **In Case of Emergency (medical/roadside) (24hrs)** **CALL 1-800-451-8346**

For other EHS Information : Kodak Polychrome Graphics, Environmental, Health, & Safety Department;
11465 Johns Creek Parkway, #260, Duluth, GA 30097; USA
Phone: 1-877-574-7274, Additional phone: (770) 232-2133
E-mail: PEP@kpgraphics.com, Fax: (770) 232-2150

2. Composition, Information on Ingredients

Name	CAS #	% by Weight	Exposure Limits
1) Cyclohexanone	108-94-1	45-50	**ACGIH TLV (United States, 1/2005). Skin** STEL: 50 ppm 15 minute/minutes. TWA: 20 ppm 8 hour/hours. **NIOSH REL (United States, 1/2003). Skin** TWA: 100 mg/m^3 10 hour/hours. **OSHA PEL (United States, 6/1997).** TWA: 200 mg/m^3 8 hour/hours.
2) Water	7732-18-5	40-45	Not available.
3) Methyloxirane-oxirane copolymer	9003-11-6	1-5	Not available.
4) Ammonium hydrogen bifluoride	1341-49-7	4	**ACGIH TLV (United States, 1/2005).** TWA: 2.5 mg/m^3 8 hour/hours. Form: As F **NIOSH REL (United States, 1/2003).** TWA: 2.5 mg/m^3 10 hour/hours. Form: As F **OSHA PEL (United States, 8/1997).** TWA: 2.5 mg/m^3 8 hour/hours. Form: As F

3. Hazards Identification

Physical State and Appearance : Liquid.

Emergency Overview : CAUTION!

COMBUSTIBLE LIQUID AND VAPOR.
HIGH VAPOR CONCENTRATIONS MAY CAUSE DROWSINESS AND IRRITATION OF THE EYES OR RESPIRATORY TRACT.
HARMFUL IF SWALLOWED.
MAY CAUSE EYE IRRITATION.
CAN CAUSE CARDIAC EFFECTS.
THE TOXICOLOGICAL PROPERTIES OF A COMPONENT OF THIS MIXTURE HAVE NOT BEEN FULLY INVESTIGATED

Avoid breathing vapors, spray or mists. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Use with adequate ventilation. Wash thoroughly after handling.

Routes of Entry : Absorbed through skin. Dermal contact. Eye contact. Inhalation.

Potential Acute Health Effects

Eyes : Slightly hazardous in case of eye contact (irritant).

Skin : Low hazard for recommended handling

Inhalation : Hazardous in case of inhalation.

Ingestion : Harmful if swallowed.

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Potential Chronic Health Effects : **CARCINOGENIC EFFECTS**: Classified A4 (Not classifiable for humans or animals.) by ACGIH, 3 (Not classifiable for humans.) by IARC [Cyclohexanone]. Classified A4 (Not classifiable for humans or animals.) by ACGIH, 3 (Not classifiable for humans.) by IARC [Ammonium hydrogen bifluoride].
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.

Medical Conditions Aggravated by Overexposure: : Repeated or prolonged exposure is not known to aggravate any medical condition.

See Toxicological Information (section 11)

4. First Aid Measures

Eye Contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Seek medical attention.

Skin Contact : After contact with skin, wash immediately with plenty of water. Get medical attention if symptoms occur.

Inhalation : Allow the victim to rest in a well-ventilated area. If irritation persists, seek medical attention.

Ingestion : Do not induce vomiting. Have conscious person drink several glasses of water or milk. Seek immediate medical attention.

5. Fire Fighting Measures

Flammability of the Product : COMBUSTIBLE.

Auto-Ignition Temperature : The lowest known value is 420°C (788°F) (Cyclohexanone).

Flash Points : CLOSED CUP: 53°C (127.4°F).

Flammable Limits : The greatest known range is LOWER: 1.3% Upper: 9.4% (Cyclohexanone)

Hazardous thermal (de)composition products : These products are carbon oxides (CO, CO_2). Ammonia. halogenated compounds

Fire Hazards in Presence of Various Substances : Not available.

Explosion Hazards in Presence of Various Substances : Not available.

Fire Fighting Media and Instructions : Use dry chemical, CO_2, water spray (fog) or foam.

Protective Clothing (Fire) : Be sure to use an approved/certified respirator or equivalent.

Special Remarks on Fire Hazards : May emit toxic fumes under fire conditions.

6. Accidental Release Measures

Small Spill and Leak : Absorb with an inert material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill and Leak : Absorb with an inert material and place in an appropriate waste disposal container. Neutralize with a dilute sodium carbonate solution. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

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7. Handling and Storage

Handling : Do not ingest. Avoid breathing vapors, spray or mists. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Use with adequate ventilation. Wash thoroughly after handling.

Storage : Combustible materials should be stored away from extreme heat and away from strong oxidizing agents. Keep container tightly closed.

8. Exposure Controls, Personal Protection

Engineering Controls : Use good general ventilation(>10 air changes/hour) and engineering controls (local exhaust, filters, process enclosures if necessary) to maintain airborne levels below ACGIH Threshold Limit Values (TLV) and OSHA Permissible Exposure Limits(PEL). Ensure that eyewash station and safety shower is proximal to the work-station location.

Personal Protection

Eyes : Safety glasses.

Body : Not applicable.

Respiratory : Vapor respirator.

Hands : Impervious gloves.

Feet : Not applicable.

Protective Clothing (Pictograms) :

Personal Protection in Case of a Large Spill : Splash goggles. Lab coat. Impervious gloves. Vapor respirator.

Product Name	**Exposure Limits**
1) Cyclohexanone	**ACGIH TLV (United States, 1/2005). Skin** STEL: 50 ppm 15 minute/minutes. TWA: 20 ppm 8 hour/hours. **NIOSH REL (United States, 1/2003). Skin** TWA: 100 mg/m^3 10 hour/hours. **OSHA PEL (United States, 6/1997).** TWA: 200 mg/m^3 8 hour/hours.
2) Water	Not available.
3) Methyloxirane-oxirane copolymer	Not available.
4) Ammonium hydrogen bifluoride	**ACGIH TLV (United States, 1/2005).** TWA: 2.5 mg/m^3 8 hour/hours. Form: As F **NIOSH REL (United States, 1/2003).** TWA: 2.5 mg/m^3 10 hour/hours. Form: As F **OSHA PEL (United States, 8/1997).** TWA: 2.5 mg/m^3 8 hour/hours. Form: As F

Consult local authorities for acceptable exposure limits.

9. Physical and Chemical Properties

Physical State and Appearance : Liquid.

Odor : Sweet.

Color : White.

pH : 5.2 [Acidic.]

Boiling/Condensation Point : >100°C (212°F)

Melting/Freezing Point : <0°C (32°F)

Specific Gravity : 0.994 (Water = 1)

Vapor Pressure : The highest known value is 0.3 kPa (2 mm Hg) (at 20°C) (Cyclohexanone).

Vapor Density : The highest known value is 3.4 (Air = 1) (Cyclohexanone).

Evaporation Rate : >1 compared to Butyl acetate.

VOC Calculated : 479.37 g/l (4 lbs/Gal.).

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Dispersion Properties : See solubility in water.

Solubility : Easily soluble in cold water.

10. Stability and Reactivity

Stability and Reactivity : The product is stable.

Conditions of Instability : Not available.

Incompatibility with Various Substances : Incompatible with some alkalis. Incompatible with some strong acids. Incompatible with strong oxidizing agents.

Hazardous Decomposition Products : These products are carbon oxides (CO, CO_2). Ammonia. halogenated compounds

Hazardous Polymerization : Will not occur.

11. Toxicological Information

Toxicity to Animals :

Cyclohexanone:
ORAL (LD50): Acute: 1535 mg/kg [Rat].
DERMAL (LD50): Acute: 948 mg/kg [Rabbit].
VAPOR (LC50): Acute: 32.16 mg/l 4 hour/hours [Rat].

Water:
ORAL (LD50): Acute: >90000 mg/kg [Rat].

Methyloxirane-oxirane copolymer:
ORAL (LD50): Acute: >5000 mg/kg [Rat].

Ammonium hydrogen bifluoride:
ORAL (LD50): Acute: 130 mg/kg [Rat].

Chronic Effects on Humans : Not available.

Other Toxic Effects on Humans : Slightly hazardous in case of eye contact, of inhalation (irritant).
Hazardous in case of ingestion.

12. Ecological Information

Organics Readily Degradable (70%) : Not available.

Ecotoxicity : Ecotoxicity in water (LC50): 536 mg/l, 96 hours [Fish]. (Cyclohexanone). 820 mg/l, 48 hours [Daphnia]. (Cyclohexanone). 203 mg/l, 96 hours [Fish (Trout)]. (Methyloxirane-oxirane copolymer). >100 mg/l, 96 hours [Fish]. (Ammonium hydrogen difluoride).

Toxicity of the Products of Biodegradation : The products of degradation are less toxic than the product itself.

13. Disposal Considerations

Waste Information : Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Consult your local or regional authorities.

14. Transport Information

DOT Classification : Exempt as a combustible liquid.

TDG Classification : CLASS 3: Flammable liquid.

ADR/RID Classification : ADR Class: Flammable liquid with a flash point between 21°C (70°F) and 100°C (212°F).

IMDG Class 3: Flammable liquid.

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IMO/IMDG Classification :

Proper Shipping Name : FLAMMABLE LIQUID, N.O.S. (Cyclohexanone)

UN number : UN1993

Packing group : III

ICAO/IATA Classification : IATA Class 3: Flammable liquid.

Proper Shipping Name : FLAMMABLE LIQUID, N.O.S. (Cyclohexanone)

UN number : UN1993

Packing group : III

15. Regulatory Information

HCS Classification : Combustible liquid

U.S. Federal Regulations : TSCA 8(b) inventory: All the ingredients are on the TSCA list.
SARA 302 extremely hazardous substances: No products were found.
SARA 304 emergency planning and notification: No products were found.
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Cyclohexanone: Fire hazard, Immediate (acute) health hazard; Ammonium hydrogen bifluoride: Immediate (acute) health hazard, Delayed (chronic) health hazard

SARA 313 :

Reporting Requirements No products were found.

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: No products were found.

Clean Air Act (CAA) 112(r) accidental release prevention: No products were found.

International Regulations

WHMIS (Canada) : CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F).
CLASS D-2B: Material causing other toxic effects (TOXIC).

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

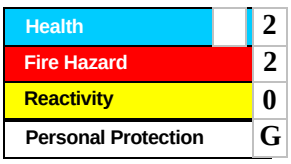
CEPA DSL/NDSL : CEPA DSL: All the ingredients are on the DSL list.

DSCL (EEC) : R10- Flammable.
R20/22- Harmful by inhalation and if swallowed.
R34- Causes burns.

State Regulations : Pennsylvania RTK: Cyclohexanone; Ammonium hydrogen bifluoride
Florida: Cyclohexanone
Massachusetts RTK: Cyclohexanone; Ammonium hydrogen bifluoride
New Jersey: Cyclohexanone; Ammonium hydrogen bifluoride
California prop. 65: No products were found.

16. Other Information

Hazardous Material Information System (U.S.A.) :



National Fire Protection Association (U.S.A.)

References : Not available.

Other Special Considerations : Not available.

Validated by Kodak Polychrome Graphics on 2006-01-31. **Verified by Kodak Polychrome Graphics.**
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In Case of Emergency CALL 1-800-451-8346

Notice to Reader

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