

MATERIAL SAFETY DATA SHEET

AGFA 

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USA

TRANSPORTATION EMERGENCY
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INTERNATIONAL: 703-527-3887

NON-TRANSPORTATION
HEALTH EMERGENCY PHONE...: (303) 623-5716
AGFA INFORMATION PHONE...: (201) 440-2500

1. Product and Company Identification

Product Name: CR Phosphor Plate Cleaner
Chemical Family: Storage Phosphor Screen Cleaner
Product Code: EQP6D000 EOWNN000
Business Group: Technical Imaging - Europe
Agfa MSDS Number: 896t.002

2. Hazards Identification

Emergency Overview

WARNING! Color: Colorless **Form:** Liquid **Odor:** Alcohol.
Flammable. May cause eye, skin, and respiratory tract irritation. Also harmful by inhalation and if swallowed. Vapors may travel to areas away from work site before igniting/flashing back to vapor source. Vapors or mist may be a fire and explosion hazard when exposed to high temperature or ignition. Closed container may forcibly rupture under extreme heat. Use cold water spray to cool fire-exposed containers to minimize the risk of rupture. Toxic gases/fumes may be given off during burning or thermal decomposition. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling solvents may be harmful or fatal. May affect nervous system.

Potential Health Effects

Primary Routes of Entry: Skin Contact, Eye Contact, Ingestion, Inhalation

Medical Conditions Aggravated by Exposure: Skin disorders, Respiratory disorders, Eye disorders

HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE

Inhalation

Acute Inhalation

For Product: CR Phosphor Plate Cleaner

May cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose. Inhalation of the solvents may cause central nervous system depression with symptoms of nausea, lightheadedness, drowsiness, dizziness and loss of coordination.

For Component: Ethanol

May cause nervous system effects which can include symptoms of dizziness, incoordination, headache, numbness, and/or confusion.

For Component: Methyl Ethyl Ketone

May cause nervous system effects which can include symptoms of dizziness, incoordination, headache, numbness, and/or confusion.

Chronic Inhalation

For Product: CR Phosphor Plate Cleaner

Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling solvents may be harmful or fatal.

For Component: Ethanol

Chronic exposure to organic solvents has been associated with various neurotoxic effects including permanent brain and nervous system damage.

Skin

Acute Skin

For Component: Ethanol

May cause slight irritation.

For Component: Methyl Ethyl Ketone

May cause irritation with symptoms of reddening and itching. If sufficient amounts are absorbed, systemic toxicity may occur with symptoms similar to those described in acute inhalation.

Chronic Skin

For Component: Methyl Ethyl Ketone

May cause defatting of the skin with symptoms of dryness and cracking. Prolonged or repeated skin contact may cause dermatitis with symptoms of red, itchy, dry skin.

Eye

Acute Eye

For Component: Ethanol

Causes irritation with symptoms of reddening, tearing, stinging, and swelling.

For Component: Methyl Ethyl Ketone

Causes irritation with symptoms of reddening, tearing, stinging, and swelling. May cause corneal injury.

Ingestion

Acute Ingestion

For Product: CR Phosphor Plate Cleaner

Ingestion and/or vomiting may cause aspiration into the lungs resulting in chemical pneumonitis (inflammation of the lungs).

For Component: Ethanol

May cause nervous system effects which can include symptoms of dizziness, incoordination, headache, numbness, and/or confusion.

For Component: Methyl Ethyl Ketone

Ingestion and/or vomiting may cause aspiration into the lungs resulting in chemical pneumonitis (inflammation of the lungs). Symptoms of ingestion may include abdominal pain, nausea, vomiting, and diarrhea. May cause nervous system effects which can include symptoms of dizziness, incoordination, headache, numbness, and/or confusion.

Chronic Ingestion

For Product: CR Phosphor Plate Cleaner

Chronic exposure to organic solvents has been associated with various neurotoxic effects including permanent brain and nervous system damage.

For Component: Ethanol

Chronic exposure to organic solvents has been associated with various neurotoxic effects including permanent brain and nervous system damage.

Carcinogenicity: Carcinogenicity

No Carcinogenic substances as defined by IARC, NTP and/or OSHA

3. Composition/Information on Ingredients

Hazardous Components

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
60 - 100%	Ethanol	64-17-5
3 - 7%	Methyl Ethyl Ketone	78-93-3

4. First Aid Measures

Eye Contact

In case of contact, flush eyes with plenty of lukewarm water. Use fingers to ensure that eyelids are separated and that the eye is being irrigated. Get medical attention.

Skin Contact

In case of skin contact, wash affected areas with soap and water. Immediately remove contaminated clothing and shoes. Get medical attention if irritation develops and persists. Thoroughly clean shoes before reuse. Wash clothing before reuse.

Inhalation

If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.

Ingestion

If ingested, do not induce vomiting unless directed to do so by medical personnel. Get medical attention.

5. Fire-Fighting Measures

Conditions of Flammability Not Available
Suitable Extinguishing Media: All extinguishing media are suitable.

Special Fire Fighting Procedures

Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes. Use cold water spray to cool fire-exposed containers to minimize risk of rupture.

Unusual Fire/Explosion Hazards

Flammable Liquid. Vapors may spread long distances and ignite. Vapors or mist may be a fire and explosion hazard when exposed to high temperature or ignition. Toxic and irritating gases/fumes may be given off during burning or thermal decomposition.

Flash Point: 14 °C (57.2 °F)
Lower Flammable Limit: 3.3 %(V)
Upper Flammable Limit: 19.0 %(V)
Autoignition Temperature: 370 °C (698 °F)

Hazardous Combustion Products
None known.

Sensitivity to Mechanical Impact Not Available
Sensitivity to Static Discharge Not Available

6. Accidental release measures

Spill and Leak Procedures

Cleanup personnel must use appropriate personal protective equipment. Remove all sources of ignition, including flames, heat, and sparks. Dike or dam spilled material and control further spillage, if possible. Do not allow spilled material or wash water to enter sewers, surface waters, or groundwater systems. Cover spill with inert material (e. g., dry sand or earth) and collect for proper disposal. Wash spill area with soap and water.

7. Handling and Storage

Handling/Storage Precautions

Keep away from heat, sparks and open flames. Ground and bond containers and equipment before transferring to avoid static sparks. Do not breathe vapours or spray mist. Avoid contact with eyes. Avoid contact with skin or clothing. Use only with adequate ventilation/personal protection. Wash thoroughly after handling. Keep container closed when not in use.

Further Info on Storage Conditions

Keep out of the reach of children.

8. Exposure Controls / Personal Protection

Ethanol (64-17-5)

- US. ACGIH Threshold Limit Values
Time Weighted Average (TWA): 1,000 ppm
- US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
PEL: 1,000 ppm, 1,900 mg/m³
- US. ACGIH Threshold Limit Values
Hazard Designation: Group A4 Not classifiable as a human carcinogen.

Methyl Ethyl Ketone (78-93-3)

- US. ACGIH Threshold Limit Values
Time Weighted Average (TWA): 200 ppm
- US. ACGIH Threshold Limit Values
Short Term Exposure Limit (STEL): 300 ppm
- US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
PEL: 200 ppm, 590 mg/m³

Industrial Hygiene/Ventilation Measures

General dilution and local exhaust as necessary to control airborne vapors, mists, dusts and thermal decomposition products below appropriate airborne concentration standards/guidelines. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination. Curing ovens must be ventilated to prevent the build up of explosive atmospheres and to prevent off gases from entering the work place.

Respiratory Protection

The use of a positive pressure supplied air respirator is mandatory when: airborne concentrations are not known; airborne solvent levels are 10 times the appropriate TLV; spraying is performed in a confined space or area with limited ventilation.

Hand Protection

Permeation resistant gloves., Butyl rubber gloves., Nitrile rubber gloves., Neoprene gloves

Eye Protection

Chemical resistant goggles must be worn., Chemical safety goggles in combination with a full face shield if a splash hazard exists.

Skin and body protection

Permeation resistant clothing, Gloves, long sleeved shirts and pants.

Additional Protective Measures

Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Emergency showers and eye wash stations should be available.

9. Physical and chemical properties

Form:	Liquid
Appearance	Not Available
Color:	Colorless
Odor:	Alcohol
Odor Threshold:	Not Available
pH:	Not Available

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Freezing Point Not Available
Boiling Point/Range: Begins at > 73 °C (> 163.4 °F)
Evaporation Rate Not Available
Vapor Pressure: 58.5 hPa @ 20 °C (68 °F)
Vapor Density: Not Available
Specific Gravity: 0.788 @ 20 °C (68 °F)
Miscibility with Water: Miscible with water at all ratios
Partition Coefficient (n-octanol/water): logPow: -0.300

10. Stability and Reactivity

Hazardous Reactions

Hazardous polymerization does not occur.

Stability

Stable

Materials to avoid

Strong oxidizing agents

Conditions to avoid

Heat, flames and sparks.

Hazardous decomposition products

None known.

11. Toxicological Information

Toxicity Data for Ethanol

Acute Oral Toxicity

LD50: > 5,000 mg/kg (Rat)

Acute Inhalation Toxicity

LC50: 5.9 mg/l, 6 hrs (Rat)

LC50: 124.7 mg/l, 4 hrs (Rat)

LC50: 20000 ppm, 10 h (Rat)

Skin Irritation

rabbit, Draize, Exposure Time: 24 hrs, Moderately irritating

rabbit, OECD Guideline for Testing of Chemicals, No. 404, Non-irritating

Eye Irritation

rabbit, Draize, Severely irritating

Sensitization

dermal: non-sensitizer (Guinea pig, Maximization Test)

Repeated Dose Toxicity

84 Days, oral: NOAEL: 10 g/kg, (Rat), There were no adverse effects seen at highest dose tested.

74 Days, inhalation: NOAEL: 3000 ppm, (Guinea pig), There were no adverse effects seen at highest dose tested.

Mutagenicity

Genetic Toxicity in Vitro: Ames: negative (Salmonella typhimurium, Metabolic Activation: with/without)

Genetic Toxicity in Vivo: Positive and negative results were seen in various in vitro and in vivo studies.

Carcinogenicity

Rat, Male/Female, oral, 2 Years, negative

Toxicity to Reproduction/Fertility

Reproductive effects have been observed in animal studies.

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Developmental Toxicity/Teratogenicity

Fetotoxicity has been observed in animal studies. Teratogenic effects have been observed in animal studies.

Toxicity Data for Methyl Ethyl Ketone

Acute Oral Toxicity

LD50: 2,737 mg/kg (Rat)

Acute Inhalation Toxicity

LC50: 40000 mg/m3, 2 hrs (Rat)

LC50: 23500 mg/m3, 8 hrs (Rat)

Acute dermal toxicity

LD50: 6,480 mg/kg (rabbit)

Skin Irritation

rabbit, Draize, Moderately irritating

Eye Irritation

rabbit, Draize, Irritating to eyes.

Sensitization

dermal: non-sensitizer (Guinea pig, Maximisation Test (GPMT))

Repeated Dose Toxicity

90 Days, inhalation: NOAEL: 2500 ppm, (Rat, Male/Female, daily)

Mutagenicity

Genetic Toxicity in Vitro: Ames: Negative results were reported in various in vitro studies. (Salmonella typhimurium,

Metabolic Activation: with/without)

Other assay: positive (Saccharomyces species)

Genetic Toxicity in Vivo: Micronucleus Assay: negative (hamster,)

Micronucleus Assay: negative (mouse, Male/Female, intraperitoneal)

Carcinogenicity

mouse, Male, dermal, 1 year, Did not show carcinogenic effects in animal experiments.

Toxicity to Reproduction/Fertility

No effects on Reproductive parameters observed at doses tested.

Developmental Toxicity/Teratogenicity

Rat, female, inhalation, gestation, NOAEL (teratogenicity): > 8865 mg/m3 (3000 ppm), NOAEL (maternal): 8865 mg/m3 (3000 ppm)

Fetotoxicity seen only with maternal toxicity.

mouse, Female, inhalation, gestation, NOAEL (teratogenicity): 8909 mg/m3 (3020 ppm), NOAEL (maternal): 2978 mg/m3 (1010 ppm)

No fetotoxicity observed at doses tested.

12. Ecological Information

Ecological Data for Ethanol

Biodegradation

Aerobic, 84 %, Exposure time: 20 Days

Readily biodegradable.

Chemical Oxygen Demand (COD)

1,700 mg/g

Acute and Prolonged Toxicity to Fish

LC50: 14,200 mg/l (Fathead minnow (Pimephales promelas), 96 hrs)

LC50: 8,140 mg/l (Golden orfe (Leuciscus idus), 48 hrs)

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Acute Toxicity to Aquatic Invertebrates

EC50: 10,800 mg/l (Water flea (Daphnia magna), 24 hrs)

Toxicity to Aquatic Plants

EC50: 9,310 mg/l, End Point: growth (Green algae (Chlorella pyrenoidosa))

Ecological Data for Methyl Ethyl Ketone

Biodegradation

Readily biodegradable.

Biological Oxygen Demand (BOD)

5 Days, 67 %

Theoretical Biological Oxygen Demand (ThBOD)

2,440 mg/g

Bioaccumulation

approximately 1 BCF

Not expected to bio-accumulate.

Acute and Prolonged Toxicity to Fish

LC50: 3,220 mg/l (Fathead minnow (Pimephales promelas), 96 hrs)

> 400 mg/l (Sheepshead minnow (Cyprinodon variegatus), 96 hrs)

Acute Toxicity to Aquatic Invertebrates

EC50: 5,091 mg/l (Water flea (Daphnia magna), 48 hrs)

Toxicity to Aquatic Plants

EC50: > 500 mg/l, End Point: inhibition of photosynthesis (other: algae, 96 hrs)

Toxicity to Microorganisms

EC50: 3,373 mg/l, (Photobacterium phosphoreum, 30 min)

13. Disposal considerations

Waste Disposal Method

Waste disposal should be in accordance with existing federal, state and local environmental control laws.

Empty Container Precautions

Do not heat or cut container with electric or gas torch. Recondition or dispose of empty container in accordance with governmental regulations. Do not reuse empty container without proper cleaning. Label precautions also apply to this container when empty.

14. Transportation information

Land transport (TDG)

Proper Shipping Name:	ETHANOL SOLUTION
Hazard Class or Division:	3
UN/NA Number:	UN1170
Packaging Group:	II
Hazard Label(s):	Flammable Liquids

Land transport (DOT)

Proper Shipping Name:	Ethanol solutions
Hazard Class or Division:	3
UN/NA Number:	UN1170
Packaging Group:	II
Hazard Label(s):	Flammable Liquid

Sea transport (IMDG)

Proper Shipping Name: ETHANOL SOLUTION
Hazard Class or Division: 3
UN-No: UN1170
Packaging Group: II
Hazard Label(s): Flammable liquids

Air transport (ICAO/IATA)

Proper Shipping Name: Ethanol solution
Hazard Class or Division: 3
UN-No: UN1170
Packaging Group: II
Hazard Label(s): Flammable liquids

15. Regulatory Information

United States Federal Regulations

OSHA Hazcom Standard Rating: Hazardous

US. Toxic Substances Control Act: Listed on the TSCA Inventory.

US. EPA CERCLA Hazardous Substances (40 CFR 302):

Components

Methyl Ethyl Ketone Reportable quantity: 5,000 lbs

SARA Section 311/312 Hazard Categories:

Acute Health Hazard, Chronic Health Hazard, Fire Hazard

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A):

Components: None

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required:

Components

Methyl Ethyl Ketone

US. EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261):

When discarded in its purchased form, this product meets the criteria of ignitability, and should be managed as a hazardous waste (EPA Hazardous Waste Number D001). (40 CFR 261.20-24)

State Right-To-Know Information

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists:

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
60 - 100%	Ethanol	64-17-5
3 - 7%	Methyl Ethyl Ketone	78-93-3

New Jersey Environmental Hazardous Substances List and/or New Jersey RTK Special Hazardous Substances Lists:

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
60 - 100%	Ethanol	64-17-5
3 - 7%	Methyl Ethyl Ketone	78-93-3

California Prop. 65:

To the best of our knowledge, this product does not contain any of the listed chemicals, which the state of California has found to cause cancer, birth defects or other reproductive harm.

Canadian Regulations

WHMIS Classification:

B2, Flammable Liquid, D2B, Toxic Material Causing Other Toxic Effects

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

Foreign Chemical Inventory List(s):

Canada DSL Inventory List - All components of this product are listed

16. Other Information

NFPA 704M Rating

Health	2
Flammability	3
Reactivity	0
Other	

0=Insignificant 1=Slight 2=Moderate
3=High 4=Extreme

HMIS Rating

Health	2
Flammability	3
Physical Hazard	0

0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe
* = Chronic Health Hazard

AGFA Corporation's method of hazard communication is comprised of Product Labels and Material Safety Data Sheets. HMIS and NFPA ratings are provided by AGFA Corporation as a customer service.

Contact Person: Product Safety Department
 Telephone: (201) 440-2500
 MSDS Number: A01402
 Version Date: 06/14/2005
 Report Version: 3..0, Formula change. Sections 1,2, 3, 5, 8, 9, 11, 12, 15, 16

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