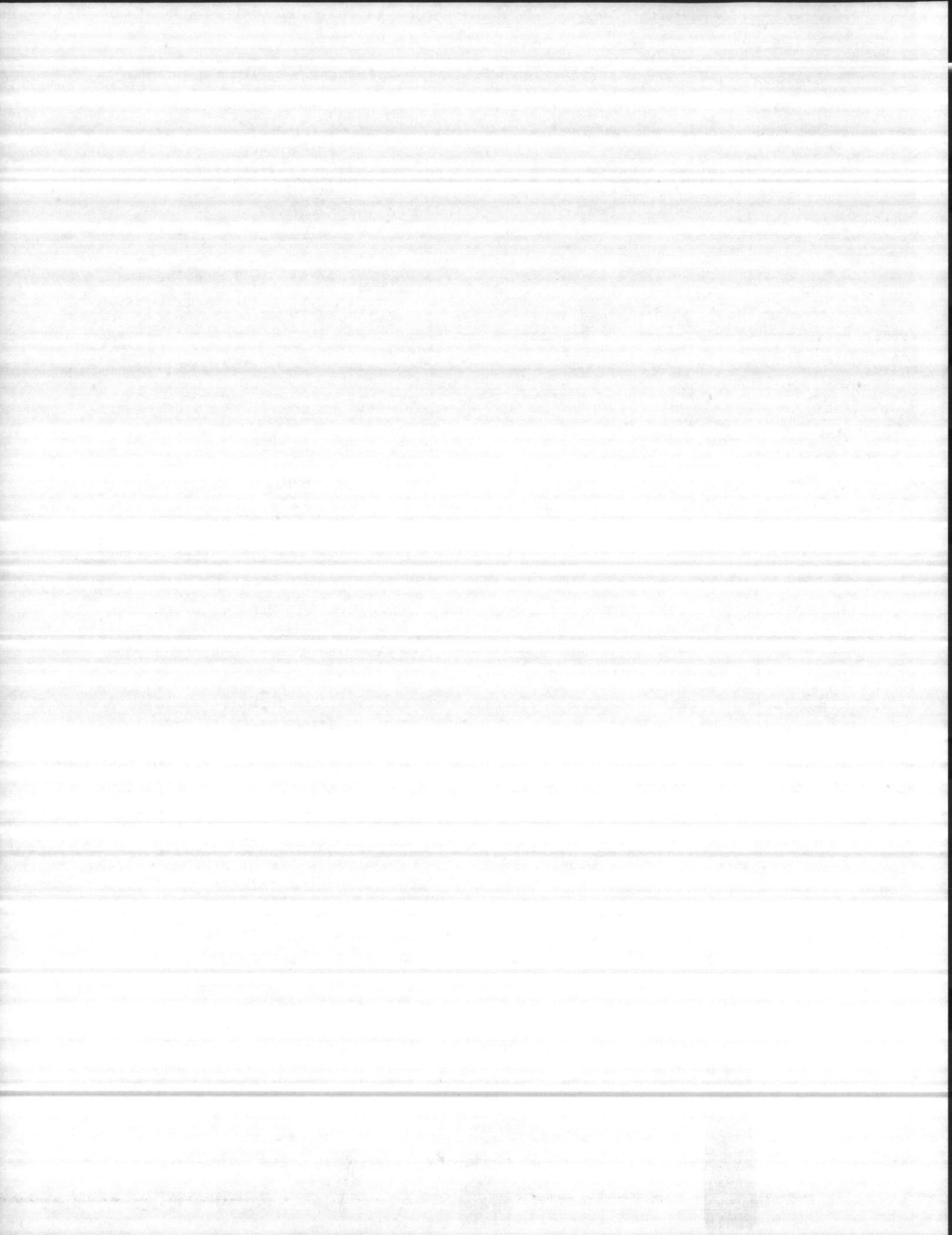
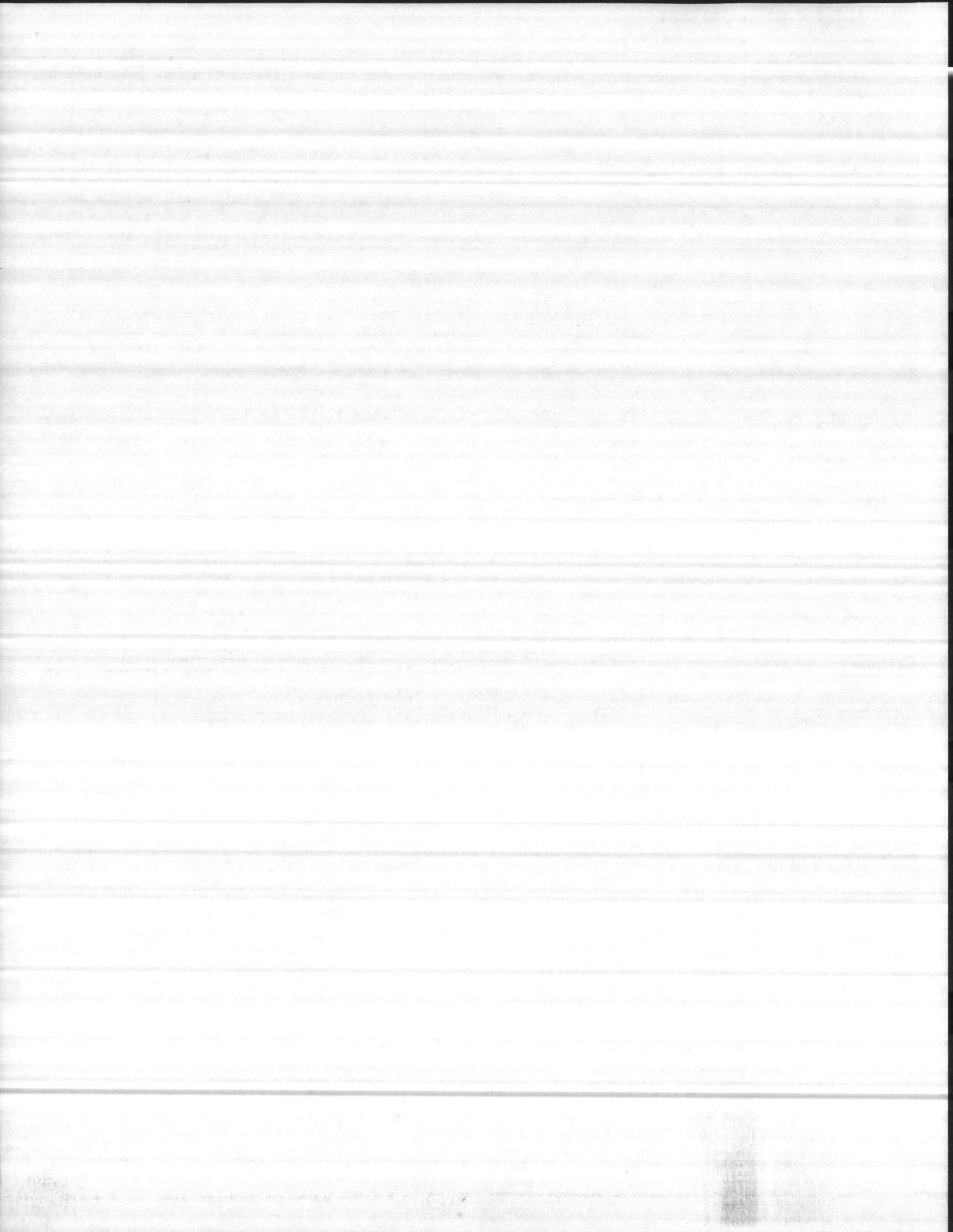


HAZARDOUS MATERIAL INFO LIST

ITEM/NAME	HEALTH HAZARD	EMERGENCY TREATMENT	MSDS NO.
AMMONIA, ANHYDROUS	EYE IRRITANT/ UPPER AND LOWER RESPIRATORY TRACT IRRITANT SKIN IRRITANT	EYE-FLUSH W/WATER 15 MIN. INHALATION-MOVE TO FRESH AIR IF REQUIRED O2 SKIN-FLUSH W/WATER 15 MIN REMOVE CONTAMINATED CLOTHING	1.
GLASS CLEANER DISPOSE IN TRASH	EYE IRRITANT INGESTION- MAY BE HARMFUL/ MAY CAUSE GASTROINTESTINAL DISCOMFORT	EYE- FLUSH WITH WATER 15 MIN INGESTION- GIVE WATER OR MILK CALL DR.	2.
ETHANOL, DENATURED (ALCOHOL) DISPOSAL- ENVIRONMENTAL HAZARD	HEADACHES, DIZZINESS, NAUSEA, DRYING TO SKIN, MILDLY TO SEVERELY IRRITATING TO RESPIRATORY TRACT	INHALATION- REMOVE TO FRESH AIR AND IF REQUIRED O2 EYES- FLUSH W/WATER 15 MIN. GET MEDICAL ATTENTION SKIN- SOAP AND WATER INGESTION- 2 GLASSES OF WATER AND INDUCE VOMITING AND GET MEDICAL ATTENT.	3.
OCE DIAZO A6 DEVELOPING POWDER DISPOSAL- WASH AWAY WITH WATER	SKIN IRRITANT INGESTION- RELATIVELY HARMLESS NON IRRITATING TO EYES	INGESTION- RINSE MOUTH WITH WATER INHALATION- CLEAN NOSE, MOUTH AND THROAT. COUGH UP. FRESH AIR REQ SKIN- WASH WITH WATER 5 MIN. EYES- RINSE W/ WATER 5 MIN.	4.
XEROX PHOTORECEPTOR	NON IRRITATING TO SKIN AND SLIGHTLY IRRITATING TO EYES	EYES- FLUSH W/WATER 15 MIN. SKIN- WASH W/WATER AND SOAP	5.
XEROX BLACK TONER DISPOSAL- NO SPECIAL TECHNIQUES	NON IRRITATING TO SKIN AND EYES PRACTICALLY NON TOXIC IF INHALED	EYES- FLUSH W/ WATER 15 MIN. SKIN- WASH W/ SOAP AND WATER INHALATION- REMOVE FROM EXPOSURE INGESTION- DILUTE STOMACH CONTENTS W/ SEVERAL GLASSES OF WATER	6.
3M BRAND FIXER CAN BE DISPOSED IN WASTEWATER TREAT. SYSTEM	EYE/ SKIN CONTACT---N/A INHALATION---N/A INGESTION- COULD CAUSE DIARRHEA	EYES/SKIN--- N/A INHALATION ---N/A INGESTION---DRINK 2 GLASSES OF MILK OR WATER AND CONTACT DR. OR POISON CONTROL CENTER	7.



ITEM/NAME	HEALTH HAZARD	EMERGENCY TREATMENT	MSDS NO.
ANTI- STATIC FLUID DISPOSAL- WASH TO WASTE	NON IRRITATING TO SKIN AND EYES	EYES- FLUSH WITH WATER 15 MIN. SKIN- WASH WITH SOAP AND WATER INHALATION- REMOVE FROM EXPOSURE INGESTION- DILUTE W/ SEVERAL GLASSES OF WATER	8.
XEROX 2510 BLACK DEVELOPER DISPOSAL- NO SPECIAL TECHNIQUES	NON IRRITATING TO SKIN AND EYES	EYES- FLUSH W/ WATER 15 MIN. SKIN- WASH W/ SOAP AND WATER INHALATION- REMOVE FROM EXPOSURE INSESTION- DILUTE W/ SEVERAL GLASSES OF WATER	9.
3M BRAND TONER TYPE 748F DISPOSE WITH REGULAR TRASH	NON IRRITATING TO SKIN AND EYES NO HAZARD IF INHALED OR INGESTED	EYES- FLUSH W/ WATER AND CALL DR. SKIN- WASH WITH SOAP AND WATER INHALATION- REMOVE PERSON TO FRESH AIR INGESTION- DO NOT INDUCE VOMITING AND CALL DR.	10.
3M BRAND 852 DEVELOPER PREMIX DISPOSE W/REG. TRASH	EYES- MINIMALLY IRRITATING UPON CONTACT NON IRRITATING TO SKIN NON HAZARDOUS IF INGESTED INHALATION- SLIGHT UPPER RESPIRATORY IRRITATION IF INHALED IN LARGE QUANTITIES	EYES- FLUSH GENTLY W/WATER AND CALL DR. SKIN- WASH W/ SOAP AND WATER INHALATION- REMOVE PERSON TO FRESH AIR INGESTION- DO NOT INDUCE VOMITING- CALL DR.	11.
3M BRAND QUANTIMATIC TONER TYPE 748F DISPOSE W/REG. TRASH	NO ADVERSE HEALTH EFFECTS TO EYES AND SKIN INHALATION- DUST MAY CAUSE SLIGHT UPPER RESPIRATORY SYSTEM IRRITATION NO HEALTH EFFECTS IF INGESTED	INHALATION- MOVE TO FRESH AIR INGESTION- CONTACT DR. OR POISON CONTROL CENTER SKIN AND EYES--N/A	12.
3M BRAND CD-5 DEVELOPER CAN BE DISPOSED IN A WASTEWATER TREATMENT SYSTEM	SEVERE EYE IRRITATION AND MODERATE SKIN IRRITATION INHALATION- ALLERGIC RESPIRATORY REACTION AND UPPER RESPIRATORY IRRITATION INGESTION- LOW BLOOD PRESSURE/ DAMAGE TO GASTROINTESTINAL TISSUES AND INCREASED HEART RATE	AVOID EYE CONTACT AND SKIN CONTACT (WEAR GLOVES) FLUSH EYES W/WATER 15 MIN. WASH SKIN W/ SOAP AND WATER AND DISPOSE CONTAMINATED CLOTHING INHALATION- REMOVE PERSON TO FRESH AIR INGESTION- DRINK 2 GLASSES OF WATER CALL DR.	13.



MATERIAL SAFETY DATA SHEET

ANHYDROUS AMMONIA



DISTRIBUTORS:
NATIONAL AMMONIA COMPANY
BOWER AMMONIA & CHEMICAL COMPANY
NORTHEASTERN AMMONIA COMPANY, INC.

AL WELLS, INC.

TACONY & VANKIRK STS., PHILADELPHIA, PA 19135

Distributed by
Suffolk Chemical Company
201 Suburban Drive
Suffolk, Va. 23434
(804) 539-7401

CORPORATE EMERGENCY TELEPHONE NUMBER:

215-535-7530

CHEMTREC (CMA)

800-424-9300

DESCRIPTION

CHEMICAL NAME: Ammonia, anhydrous

CAS REGISTRY NO.: 7664-41-7

SYNONYMS: Ammonia, liquefied

CHEMICAL FAMILY: Ammonia

FORMULA: NH₃

MOL. WT.: 17.03

COMPOSITION: 99+% ammonia

STATEMENT OF HEALTH HAZARD

HAZARD DESCRIPTION: Strong irritant for eye, upper and lower respiratory tract; may cause lung or permanent eye injuries. Corrosive in contact with skin; a primary skin irritant and sensitizer.

Not listed in the National Toxicology Program annual report.

Not listed as a carcinogen by the International Agency for Research on Cancer.

EXPOSURE LIMITS: 50 ppm, 35 mg/m³ (8 hr. TWA) (OSHA: 29 CFR 1910.1000).

EMERGENCY TREATMENT

EFFECTS OF OVEREXPOSURE: Eye: lachrymation, edema, blindness. Moist skin: irritation, corrosive burns, blister formation. Contact of liquid with skin freezes the tissue, then produces a caustic burn. Inhalation: heavy; acute exposure may result in severe irritation of the respiratory tract, glottal edema, bronchospasm, pulmonary edema, respiratory arrest. Chronic effects: bronchitis. Extreme exposure (5000 ppm) can cause immediate death from spasm, inflammation or edema of larynx.

EMERGENCY AID: Eye: Flush with copious amount of water for 15 min. Eyelids should be held open and away from eyeball to ensure thorough rinsing. **SPEED AND THOROUGHNESS IN RINSING THE EYE IS MOST IMPORTANT IN PREVENTING LATENT PERMANENT INJURIES.** Inhalation: move to fresh air. Administer oxygen or artificial respiration if necessary. Skin: flush affected area with copious amount of water for 15 min. Remove contaminated clothing while flushing. Do not rub affected area. Do not apply ointments to skin burns. **IF SYMPTOMS PERSIST OR EXPOSURE IS SEVERE, SEEK PROMPT MEDICAL HELP.**

NOTE TO PHYSICIAN: Eye injury may appear as delayed phenomenon. Pulmonary edema may follow chemical bronchitis. Supportive treatment with necessary ventilatory actions, including oxygen, may warrant consideration.

PHYSICAL DATA

BOILING PT.: -33°C (-28°F)

VAPOR PRESSURE: @ 25.7°C: 10 atm

SPECIFIC GRAVITY: 0.618

FREEZING PT.: -78°C (-108°F)

VAPOR DENSITY (Air=1): 0.6

SOLUBILITY IN WATER: 0°C: 89.9g/100cc;

100°C: 7.4g/100cc

EVAPORATION RATE (Water=1): faster than water if in liquid form

PERCENT VOLATILE: 100%

APPEARANCE AND ODOR: Colorless gas, pungent odor.

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: None

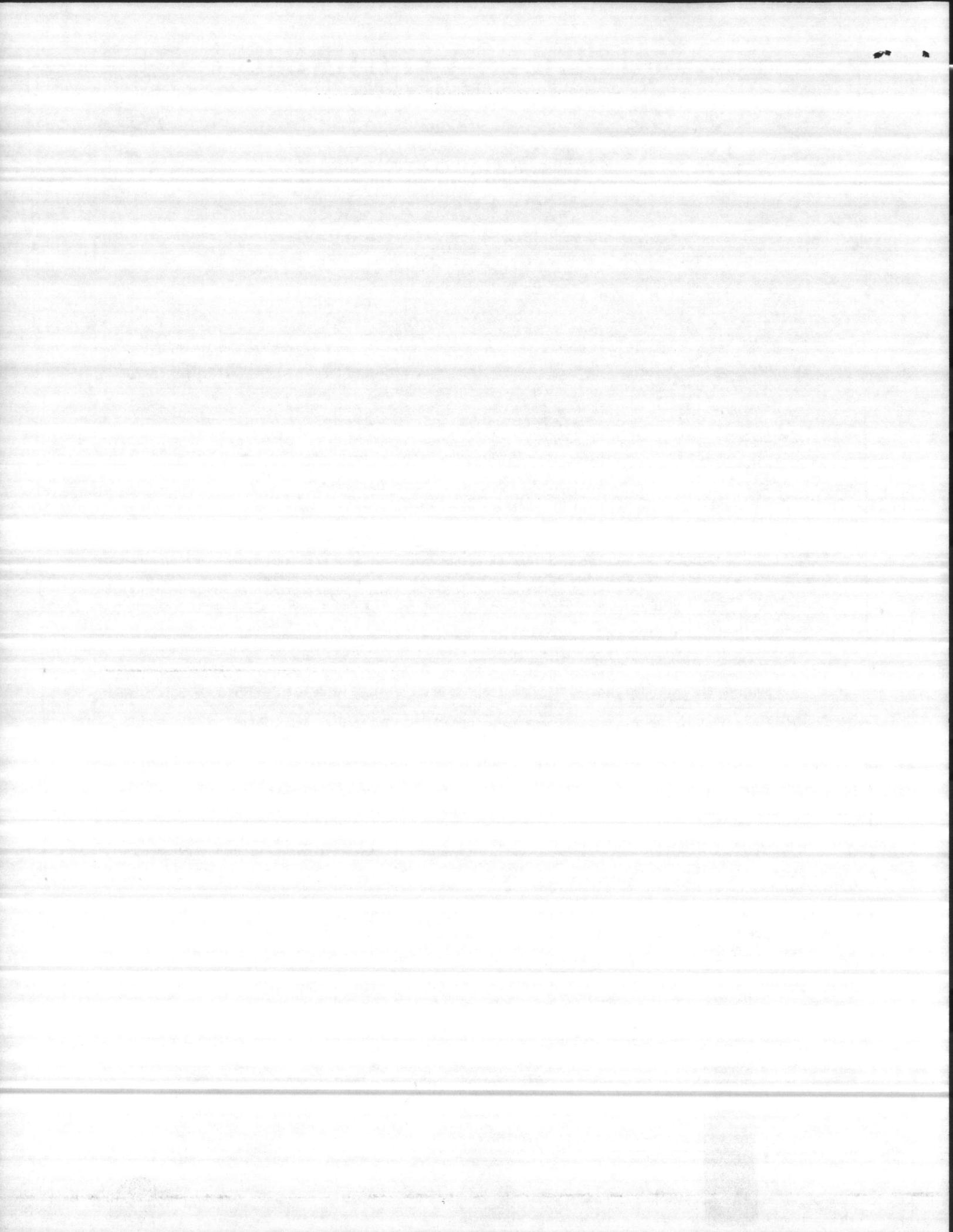
AUTOIGNITION TEMP.: 651°C (1204°F) catalyzed by iron;
850°C (1562°F) uncatalyzed

FLAMMABLE RANGE IN AIR: 16% to 25% by Volume

EXTINGUISHING MEDIA: Water spray or fog

SPECIAL FIRE-FIGHTING PROCEDURES: Must wear protective clothing and respiratory protection. See **PROTECTIVE EQUIPMENT.** Stop source if possible. Cool fire-exposed containers with water spray. Stay upwind and use water spray to knock down vapor and dilute. Let fire burn.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Not generally a fire hazard. If relief valves are inoperative, heat-exposed storage containers may become explosion hazards. Contact of ammonia with chemicals such as mercury, chlorine, iodine, bromine, silver oxide, or hypochlorites can form explosive compounds. Special hazard with chlorine to form chloramine gas, also a primary skin irritant and sensitizer. Combustion may form toxic nitrogen oxides.



MATERIAL SAFETY DATA SHEET

ANHYDROUS AMMONIA (Continued)

CHEMICAL REACTIVITY

STABILITY: Stable at room temperature. Exothermic reaction with acids.

CONDITIONS TO AVOID: Avoid mixing with chlorine bleach, sulfuric or other strong mineral acids; contact with galvanized steel, copper, brass, bronze, gold, mercury, silver, strong oxidizers, hypochlorites and halogens.
See EXPLOSION HAZARDS.

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen and nitrogen gases above 450°C.

SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN: Wear respiratory protection and protective clothing; see PROTECTIVE EQUIPMENT. Shut off source if possible. Stay upwind from spills or leaks. Contain spill by diking and use water spray to absorb ammonia gas and dilute. Caution: Adding water to large spills may increase volatilization of ammonia, thus may increase possibility for exposure.

WASTE DISPOSAL: Listed as hazardous substance under CWA (40 CFR 116.4, 40 CFR 117.3 Reportable Quantity, 100#/45.4kg.). Classed as a hazardous waste under RCRA (40 CFR 261.32 Corrosive, No. D002). Comply with all regulations. Spill will evaporate. Contaminated water may be used on agricultural land as fertilizer. Keep spill from entering streams or lakes.

SPECIAL PROTECTION AND PROCEDURES

RESPIRATORY PROTECTION: MSHA/NIOSH approved air-purifying type with full facepiece for work purposes; self-contained breathing apparatus for entry and escape in emergencies. Refer to 29 CFR 1910.134 and ANSI: Z88.2-1969 for requirements and selection.

VENTILATION: Engineering control to 50 ppm or less. Respiratory protection for higher vapor concentration. Refer to 29 CFR 1910.134 and ANSI: Z9.2-1960 for requirements and selection.

PROTECTIVE EQUIPMENT: Gas-tight chemical goggles, respiratory protection, impervious outer clothing, gloves, overshoes as needed. Cotton work clothes recommended. Refer to 29 CFR 1910.132 to 1910.136 for requirements.

SPECIAL PRECAUTIONS

HANDLING AND STORING: Store in cool, well-ventilated area with containers tightly closed. OSHA 29 CFR 1910.111 prescribes handling and storage requirements for anhydrous ammonia as a hazardous material.

WORKPLACE: PROTECTIVE EQUIPMENT as discussed above should be near, but outside of ammonia area. Eyewash and safety shower in immediate vicinity. See 29 CFR 1910.141 for workplace requirements.

DISPOSAL: Anhydrous ammonia is listed under RCRA and FWPCA. See WASTE DISPOSAL. Suitably diluted, ammonia may be disposed of on agricultural land as a fertilizer.

PERSONAL: Check availability of emergency equipment. Follow proper procedures. Wear needed protective equipment. Do not wear contact lenses without gas-tight chemical goggles.

LABELING AND SHIPPING

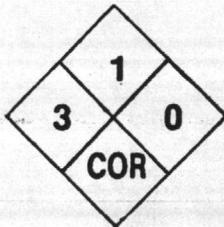
HAZARD CLASS: Nonflammable gas

PROPER SHIPPING NAME: Anhydrous Ammonia—Nonflammable Gas UN 1005 (RQ)

PLACARD: Nonflammable Gas

Label: Nonflammable Gas UN 1005
IDENTIFICATION NO.: UN 1005

**National Fire
Protection Assoc.
Hazard Rating:**



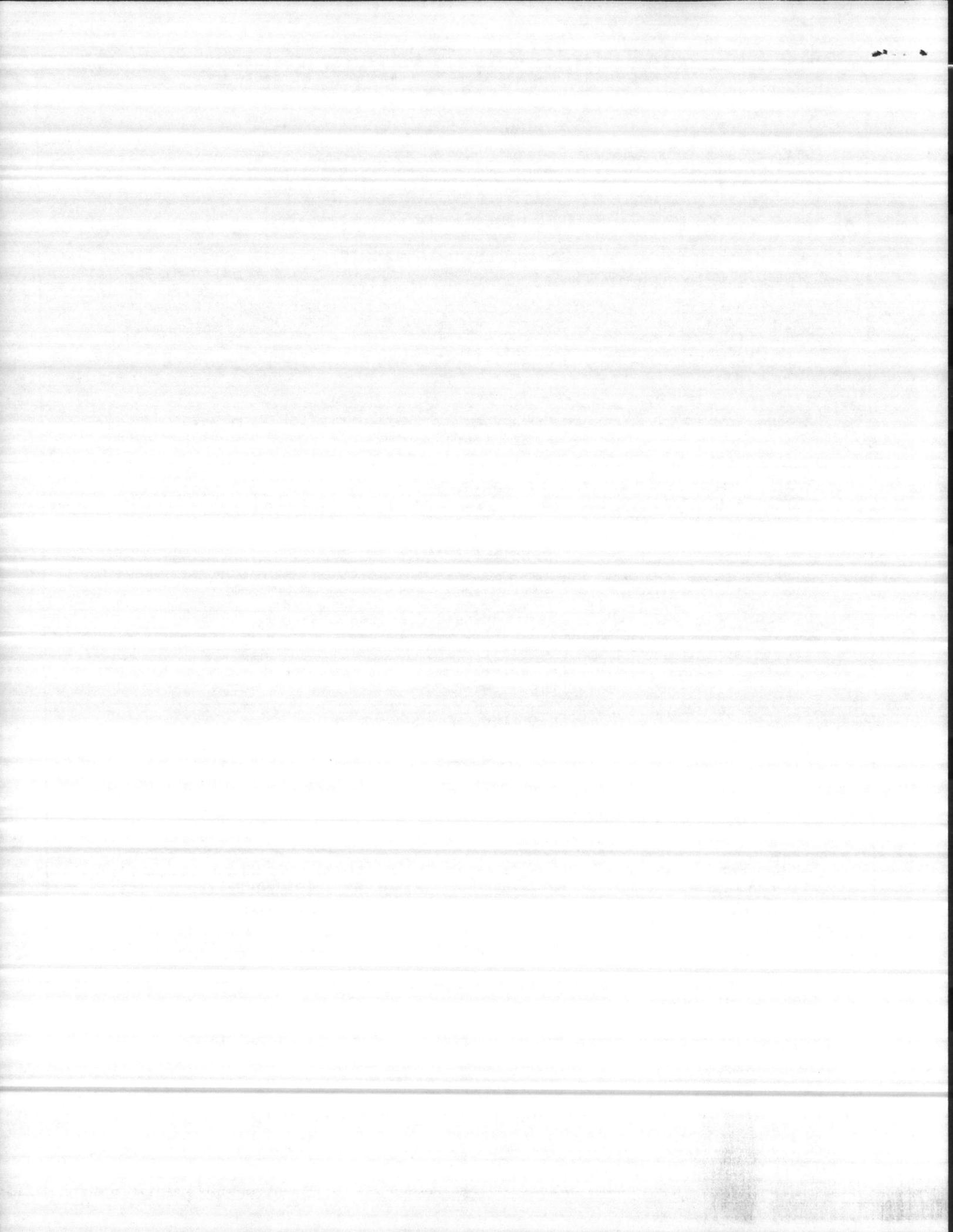
**Hazardous Materials
Identification System
Label:**

ANHYDROUS AMMONIA	
HEALTH	3
FLAMMABILITY	1
REACTIVITY	0
PERSONAL PROTECTION	H

OTHER REGULATORY REQUIREMENTS

Under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 any accidental environmental release of this chemical equal to or over the reportable quantity of 100 lbs. must be reported promptly to the National Response Center, Washington, D.C. (1-800-424-8802). Any consumer product containing 5% or more ammonia requires a POISON label under FHSA (16 CFR 1500.129(1)).

The information, data, and recommendations in this material safety data sheet relate only to the specific material designated herein and do not relate to use in combination with any other material or in any process. The information, data, and recommendations set forth herein are believed by us to be accurate. We make no warranties, either expressed or implied, with respect thereto and assume no liability in connection with any use of such information, data, and recommendations.



Material Safety Data Sheet
 May be used to comply with
 OSHA's Hazard Communication Standard,
 29 CFR 1910.1200. Standard must be
 consulted for specific requirements.

U.S. Department of Labor
 Occupational Safety and Health Administration
 (Non-Mandatory Form)
 Form Approved
 OMB No. 1218-0072

81620

IDENTITY (As Used on Label and List)
 GSA GLASS CLEANER (LIQUID) TYPE 1 CLASS 1

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I NSN# 7930-00-184-9423 CID A-A-40A GS-10F-48557

Manufacturer's Name Hysan Corporation	Emergency Telephone Number 312/523-1010
Address (Number, Street, City, State, and ZIP Code) 4309 S. Morgan St.	Telephone Number for Information 312/376-8981
Chicago, IL 60609	Date Prepared 10/27/86
	Signature of Preparer (optional) <i>M. Logg</i>

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
2-Propanol C.A.S. No. 67-63-0	400 ppm	400 ppm	NE	1-5

Section III — Physical/Chemical Characteristics

Boiling Point	212°F	Specific Gravity (H₂O = 1)	0.995
Vapor Pressure (mm Hg.)	18	Melting Point	> 32°F
Vapor Density (AIR = 1)	< 1	Evaporation Rate (Butyl Acetate = 1)	< 1.0
Solubility in Water	Complete		
Appearance and Odor	Clear thin liquid having a mild odor.		

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used)	> 200°F T.C.C.	Flammable Limits	N.A.	LEL	UEL
Extinguishing Media	Water				
Special Fire Fighting Procedures	None Required				
Unusual Fire and Explosion Hazards	None				

Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid None
	Stable	X	

Incompatibility (*Materials to Avoid*) None

Hazardous Decomposition or Byproducts Oxides of carbon formed upon combustion.

Hazardous Polymerization	May Occur		Conditions to Avoid None
	Will Not Occur	X	

Section VI — Health Hazard Data

Route(s) of Entry: Inhalation? No Skin? Yes Ingestion? Yes

Health Hazards (*Acute and Chronic*)
Eyes - May cause pain or irritation. Ingestion - May be harmful if swallowed.
May cause gastrointestinal discomfort.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

Signs and Symptoms of Exposure Pain or irritation.

Medical Conditions Generally Aggravated by Exposure Unknown

Emergency and First Aid Procedures
Eyes - Flush with water. Call physician if irritation persists. Ingestion - Give water or milk. Call physician.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled Wipe up spills.

Waste Disposal Method Replace cap and discard container in trash.

Precautions to Be Taken in Handling and Storing Store in a dry, cool area. Keep out of reach of children.

Other Precautions Read entire label before using.

Section VIII — Control Measures

Respiratory Protection (*Specify Type*) None Required

Ventilation	Local Exhaust	None Required	Special	N.A.
	Mechanical (<i>General</i>)	Maintain Adequate Ventilation.	Other	N.A.

Protective Gloves None Required Eye Protection Safety Glasses

Other Protective Clothing or Equipment None Required

Work/Hygienic Practices N.A.

Material Safety Data Sheet

QUIDENTIFIER (In Plant Common Name)

SD3A ALCOHOL- O-E-760C Ty III

Supplier's

Name OCTAGON PROCESS INC. Emergency Telephone No. 201-945-9400
Address 596 RIVER ROAD Other Information Calls Same
EDGEWATER NJ 07020
Signature of Person Responsible for Preparation (Optional) Date Prepared Updated 2-17-87

SECTION 1 - IDENTITY

Common Name: (used on label) O-E-760C AM. 1 TYPE III Cas No. Mixture
(Trade Name & Synonyms) ETHANOL, DENATURED
Chemical Name SD-3A Chemical Family Denatured Alcohols
Formula Ethanol/Methyl Alcohol

SECTION 2 - HAZARDOUS INGREDIENTS

Principal Hazardous Component(s) (chemical & common name(s))	%	Threshold Limit Value (units)
ETHYL ALCOHOL (Ethanol) (64-17-5)	95	ACGIH-TWA OSHA-PEL 1000 ppm
METHYL ALCOHOL (Methanol) (67-56-1)	5	OSHA-PEL 200 ppm ACGIH-TWA 200 ppm (Skin) ACGIH-STEL 250 ppm (Skin)

SECTION 3 - PHYSICAL & CHEMICAL CHARACTERISTICS (Fire & Explosion Data)

Boiling Point 165-173 Specific Gravity (H₂O=1) 0.81 Vapor Pressure (mm Hg) 48 @ 68°F
Percent Volatile by Volume (%) 100 Vapor Density (Air = 1) 1.4 Evaporation Rate (Bacet = 1) 1.4
Solubility in Water Complete Reactivity in Water No
Appearance and Odor Colorless, clear liquid, alcohol odor.

Flash Point 55°F Flammable Limits in Air % by Volume Lower 3.3 Upper 19 Extinguisher CO₂, dry chem. Media 'alcohol' foam Auto-Ignition Temperature 690°F
Special Fire Fighting Procedures Do not enter confined area with full bunker gear, including a positive pressure NIOSH approved self-contained breathing apparatus. Material is flammable. Clear fire area of unprotected personnel. Shut off ignition sources. Cool fire exposed containers with water.

Unusual Fire and Explosion Hazards Containers exposed to intense heat from fires should be cooled with water spray to prevent vapor pressure buildup which could result in container rupture. Container areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure.

SECTION 4 - PHYSICAL HAZARDS

Stability Unstable Conditions
Stable to Avoid

Heat, sparks, open flame and contact with strong oxidizers.

Incompatibility
(Materials to Avoid)

Hazardous
Decomposition Products None

Hazardous May Occur Conditions
Polymerization Will Not Occur to Avoid

SECTION 5 - HEALTH HAZARDS

Threshold
Limit Value Not established

Signs and Symptoms of Exposure 1. Acute Overexposure Giddiness, headache, dizziness, nausea, defatting and drying of skin, mildly to severely irritating to respiratory tract.

2. Chronic Overexposure Dermatitis. Possible kidney and liver damage. Optic nerve damage. CNS depression. May cause blindness if swallowed. May cause death if swallowed.

Medical Conditions Generally Aggravated by Exposure No data available.

Chemical Listed as Carcinogen or Potential Carcinogen

National Toxicology Program Yes
No

I.A.R.C. Monographs Yes
No

OSHA Yes
No

OSHA Permissible Exposure Limit N/A

ACGIH Threshold Limit Value N/A

Other Exposure Limit Used N/A

Emergency and First Aid Procedures

1. Inhalation Remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Get medical attention.

2. Eyes Flush with water for at least 15 minutes. Get medical attention.

3. Skin Wash with soap and water. If irritation persists, get medical attention.

4. Ingestion 2 glasses of water and induce vomiting by giving 2 tbls. Syrup of Ipecac; or 2 glasses of water and touch finger to back of victim's throat. Get medical attention.

SECTION 6 - SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type) Organic vapor respirator NIOSH-approved equipment only.

Ventilation Local Exhaust XX Mechanical (General) XX Special Other Explosion-proof motors

Protective Gloves Chemical resistant Eye Protection Chemical goggles

Other Protective Clothing or Equipment As needed to avoid skin and eye contact.

SECTION 7 - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

Precautions to be Taken in Handling and Storage Store in cool, dry place. Do not cut, drill, grind, weld or perform similar operations near drums or containers. Keep container closed when not in use. Keep liquid and vapor away from heat, sparks and flame.

Other Precautions Launder contaminated clothing before re-use. Ground all fixed equipment. Do not reuse container, may contain flammable vapors. Observe proper safety precautions as with any flammable liquid.

Steps to be Taken in Case Material is Released or Spilled Shut off ignition sources. Dike area. Handling equipment must be grounded. Wear appropriate respirator and protective clothing. Shut off source of leak is safe to do so. Remove with vacuum trucks or pump to storage vessel. Soak up residue with absorbent.

Waste Disposal Methods Under EPA-RCRA (40CFR261.33) if methyl alcohol becomes a waste material, hazardous waste number is U154. Refer to latest EPA or state regulations for proper disposal. Product is an environmental hazard.

IMPORTANT

Do not leave any blank spaces. If required information is unavailable, unknown, or does not apply, so indicate.

4



Material safety data sheet

MSDS No. U-072-a
Date May, 1986

Section I – Identification

Manufacturer's Name	Océ-Industries Inc. (Importer)	Emergency Tel. No.	312/338-1700 Contact Safety Coordinator
Address	6500 North Lincoln Avenue, Chicago, Illinois 60645		
Trade Name/Synonyms	Océ Diazo STA-BLAC type A6 developing powder	CAT. Nos.	2210015/2210040
Chemical Name	Not applicable (N.A.)		

Section II – Ingredients

	CAS No.	Contents, %	TLV
Citric acid, trisodium salt, dihydrate	6132-04-3	> 30	★
Benzoic acid, sodium salt	532-32-1	10-30	★
Formic acid, sodium salt	141-53-7	10-30	★
1, 3, 5-Benzenetriol	108-73-6	5-10	★
Wetting agent		< 1	★

Developing solution: 90 g powder per liter water.

★ No TLV issued by ACGIH.

Section III – Physical Data

Boiling Point	N.A.	Specific Gravity (water = 1)	> 1
Vapor Pressure	N.A.	Percent Volatile	N.A.
Vapor Density	N.A.	Evaporation Rate	N.A.
Melting Point	> 150 °C	pH	6.3 (solution 90 g/l)
Solubility in Water	approx. 350 g/l	Appearance/Odor	pale yellow powder/faint odor

Section IV – Fire and Explosion Hazard Data

Flash Point	N.A.	Non-flammable	Flammable Limits	N.A.
Extinguishing Media	N.A.			
Special Fire Fighting Procedures	N.A.			
Unusual Fire and Explosion Hazards	N.A.			

Section V – Reactivity Data

Stability	Unstable		Conditions to Avoid	None
	Stable	x		
Incompatibility (Materials to Avoid)	Contact with strong acid liberates formic acid vapor.			
Hazardous Decomposition Products	N.A.			
Hazardous Polymerization	May Occur		Conditions to Avoid	None
	Will Not Occur	x		

Trade Name Océ Diazo STA-BLAC type A6 developing powder

MSDS No. U-072-a

Section VI - Special Precautions

Precautions to be taken in Handling and Storing
Preferably keep cool and dry (in view of quality).

Other Precautions
None

Section VII - Health Hazard Data

Threshold Limit Value
Not established

Ingestion
LD50 (rat, oral, 90 g/l sol.) > 33 g/kg
Relatively harmless

Inhalation
Solution 90 g/l (rat, 4 hours inhalation of aerosol): No effect at 3.2 g/m³.
Powder is tickling to the nose.

Skin
Primary irritation index (rabbit): 0.6
In sporadic cases prolonged skin contact may cause minor irritation or sensitization.
Mildly irritating

Eye
Ocular lesion grade (rabbit): 0
Non-irritating

Mutagenicity
No mutagenicity detected in Ames test.

Other Information
During development of diazo materials small amounts of formic acid vapor (TLV: 9 mg/m³) are liberated.

Section VIII - Emergency and First Aid Procedures

Ingestion
Rinse mouth with water.

Inhalation
If powder inhaled: Clean nose, mouth, throat. Cough up. Fresh air.

Skin
Normal washing with water and soap after extensive contact with powder or solution.

Eyes
Rinse with plenty of water for 5 minutes.

Section IX - Special Protection Information

Respiratory Protection No. Avoid breathing dust.	Protective Gloves Recommended when dissolving the powder and filling or cleaning the plan printer.
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Eyes Protection No	Ventilation (Mechanical) See Safety Data Sheet for the plan printer.
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Local Exhaust No	Other Protective Equipment No
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Section X - Spill or Leak Procedures

Steps to be taken in case material is released or spilled
Spills can be removed with water or a vacuum cleaner.

Waste Disposal Method
The used ingredients do not appear in the RCRA list of environmentally dangerous substances and are readily biodegradable. With due observance of any applicable local, state and federal regulations small quantities of waste can be washed away with plenty of water.

This safety data sheet has been compiled to the best of our knowledge as a compact guide to safe handling of this product. We do not warrant the accuracy and therefore cannot accept liability for any inaccuracy that may occur in this information. It is the user's responsibility to determine the suitability of this information for the adoption of safety precautions as may be necessary. We reserve the right to revise safety data sheets as new information becomes available. It is the user's responsibility to contact the company to make sure that the sheet is the latest one issued.

Manufacturer: Xerox Corporation
Rochester, New York 14644

Emergency Tel. No. : (716) 422-2177
Information Tel. No.: (800) 828-6571

Section I - Product Identification

Trade Names/Synonyms: 1020/1035/1045/1040/1048/1050/
2510/2830 Photoreceptor

Part No. : 1R55, 1R67, 1R68, 1R81,
1R75 1R95, 1R111

Chemical Name: None

Ingredients

CAS No.

Substrate (>95%):
Aluminum Drum

7429-90-5

Coating (<5%):
Selenium (>98%)
Tellurium (<1%)
Arsenic (<1%)

7782-49-2
13494-80-9
7440-38-2

Section II - Emergency and First Aid

Eyes: Flush with water.
Skin: Wash with soap and water.
Inhalation: Not Applicable
Ingestion: Not Applicable
Primary Route of Entry: Skin
Symptoms of Overexposure: None

Additional Information: See Sections V and IX.
Further information on file in Poisindex.

Section III - Toxicology and Health Information

This material has been extensively tested and evaluated by Xerox Corporation. When used as intended, it does not represent any known health or safety hazard.

Oral LD₅₀: >5 g/kg (Rats) practically non-toxic.

TLV: 0.2 mg/m³ (Selenium)

Dermal LD₅₀: >2 g/kg (Rabbits) practically non-toxic.

0.1 mg/m³ (Tellurium)

Inhalation LC₅₀: N.A.

0.2 mg/m³ (Arsenic)

Eye Irritation: (Rabbits) slightly irritating

PEL: 0.2 mg/m³ (Selenium)

Skin Sensitization: (Guinea Pigs) non-sensitizing

0.1 mg/m³ (Tellurium)

Skin Irritation: (Rabbits) non-irritating

0.01 mg/m³ (Arsenic)

Human Patch: Non-irritating, non-sensitizing

Mutagenicity: N.A.

1XEL: 0.01 mg/m³ (Tellurium)

Aquatic LC₅₀: >500 mg/l (Fathead Minnows) non-toxic

0.01 mg/m³ (Arsenic)

Additional Information: This product contains less than 1% Arsenic which is classified as a carcinogen by NTP, IARC and OSHA.

1XEL - Xerox Exposure Limit

Section IV - Physical Data

Appearance/Odor: Solid/Odorless

Softening Range: N.A.

Boiling Point: N.A.

Melting Point: N.A.

Solubility in Water: insoluble

Specific Gravity (H₂O = 1): N.A.

Evaporation Rate: N.A.

Vapor Pressure (mm Hg): N.A.

Vapor Density (Air = 1): N.A.

pH = N.A.

Volatile N.A. % (Wgt.) N.A. % (Vol.)

Section V - Fire and Explosion Data

Flash Point (Method Used): N.A.

Flammable LEL: N.A.

Limits UEL: N.A.

Extinguishing Media: Water, Carbon dioxide, Foam

Special Fire Fighting Procedures: When in a machine, treat as an electrical fire.

Fire and Explosion Hazards: Exposure to high temperatures can result in melting and pyrolysis. Fumes may cause respiratory symptoms. Delayed effects may occur up to 72 hours.

Section VI - Reactivity Data

Stability:

Unstable

Stable

X

Hazardous

Polymerization:

May Occur

Will Not Occur

X

Hazardous Decomposition Products: Oxides of Selenium, Arsenic and Tellurium.

Incompatibility (Materials to Avoid): Strong Acids

Section VII - Special Protection Information

Respiratory Protection: None required when used as intended in Xerox equipment.

Eye Protection: None required when used as intended in Xerox equipment.

Protective Gloves: None required when used as intended in Xerox equipment.

Other: None required when used as intended in Xerox equipment.

Section VIII - Special Precautions

Handling and Storage: Use wet pumicing and polishing procedures.

Conditions to Avoid: Avoid exposure to high temperatures.

Section IX - Spill, Leak, and Disposal Procedures

For Spills or Leakage: Particles of coating detached through physical damage must be collected and disposed of as a chemical waste.

Waste Disposal Method: Used or damaged photoreceptors should be returned to supplier or Xerox. Do not incinerate or dispose of in a sanitary landfill. Insure conformity with federal, state and local regulations.

Section X - Transportation Information

DOT Proper Shipping Name: Not Regulated

Hazard Classification: N.A.

ID Number: N.A.

Manufacturer: Xerox Corporation
 Rochester, New York 14644
Emergency Tel. No. : (716) 422-2177
Information Tel. No.: (800) 828-6571

Section I - Product Identification

Trade Names/Synonyms: 1025/1038/2510
 Black Toner
Part No. : 6R121, 6R122, 6R133, 6R234, 6R500

Chemical Name: Thermoplastic powder

<u>Ingredients</u>	<u>CAS No.</u>
Styrene/Acrylate Polymer (60-65%)	25213-39-2
Acrylic Resin (20-25%)	-----
Carbon Black (10-15%)	1333-86-4
Polyolefin (<10%)	9003-07-0
Amorphous Silica (<1%)	7631-86-9

Section II - Emergency and First Aid

Eyes: Flush with water.
Skin: Wash with soap and water.
Inhalation: Remove from exposure.
Ingestion: Dilute stomach contents with several glasses of water.
Primary Route of Entry: Inhalation
Symptoms of Overexposure: Minimal respiratory tract irritation may occur as with exposure to large amounts of any non-toxic dust.

Additional Information: See Sections V and VII.
 Further information on file in Poisindex.

Section III - Toxicology and Health Information

This material has been tested and evaluated by Xerox Corporation. When used as intended, it does not represent a health or safety hazard.

Oral LD₅₀: >5 g/kg (Rats) practically non-toxic.	TLV: 10 mg/m ³ (Total Dust)
Dermal LD₅₀: >2 g/kg (Rabbits) practically non-toxic.	5mg/m ³ (Respirable Dust)
Inhalation LC₅₀: >6.6 mg/1 (Rats) practically non-toxic.*	
Eye Irritation: (Rabbits) non-irritating	
Skin Sensitization: (Guinea Pigs) non-sensitizing	PEL: 15 mg/m ³ (Total Dust)
Skin Irritation: (Rabbits) non-irritating	5mg/m ³ (Respirable Dust)
Human Patch: non-sensitizing, non-irritating	
Mutagenicity: No mutagenicity detected in Ames, Pol A + /A-, WP ₂ and Micronucleus Assays.	
Carcinogens: None present	IXEL: 5 mg/m ³ (Total Dust)
Aquatic LC₅₀: >500 mg/l (Fathead Minnows) non-toxic	
Additional Information: *Not tested to the highest dose or concentration.	

IXEL - Xerox Exposure Limit

Section IV - Physical Data

Appearance/Odor: Black powder / faint odor

Boiling Point: N.A.

Solubility in Water: Negligible

Evaporation Rate: N.A.

Vapor Density (Air = 1): N.A.

Volatile N.A. % (Wgt.) N.A. % (Vol.)

Softening Range: 85°C to 100°C

Melting Point: N.A.

Specific Gravity (H₂O = 1): 1

Vapor Pressure (mm Hg): N.A.

pH = N.A.

Section V - Fire and Explosion Data

Flash Point (Method Used): N.A.

Flammable LEL: N.A.

Limits UEL: N.A.

Extinguishing Media: Water, Foam, Dry chemical

Special Fire Fighting Procedures: Avoid inhalation of smoke.

Fire and Explosion Hazards: Toner is a combustible powder. When dispersed in air, it forms explosive mixtures.

Section VI - Reactivity Data

Stability:

Unstable

Stable

X

Hazardous

Polymerization:

May Occur

Will Not Occur

X

Hazardous Decomposition Products: Products of combustion are toxic. Avoid breathing smoke.

Incompatibility (Materials to Avoid): None

Section VII - Special Protection Information

Respiratory Protection: None required when used as intended in Xerox equipment.

Eye Protection: None required when used as intended in Xerox equipment.

Protective Gloves: None required when used as intended in Xerox equipment.

Other: For use other than in normal customer - operating procedures (such as in bulk toner processing facilities), goggles and respirators may be required. For more information, contact Xerox.

Section VIII - Special Precautions

Handling and Storage: None

Conditions to Avoid: None

Section IX - Spill, Leak, and Disposal Procedures

For Spills or Leakage: Loose toner can be removed using a vacuum cleaner. Residue can be removed with soap and cold water. After removal of loose toner, garments may be washed or dry-cleaned.

Waste Disposal Method: Do not incinerate. No special techniques beyond normal practice. Insure conformity with federal, state or local regulations.

Section X - Transportation Information

DOT Proper Shipping Name: Not Regulated

Hazard Classification: N.A.

ID Number: N.A.

General Offices/3M

3M Center
St. Paul, Minnesota 55144-1000
(612) 733-1110

MF-018



MATERIAL SAFETY
DATA SHEET

DIVISION: Engineering Systems
TRADE NAME: 3M Brand Fixer
3M I.D. NUMBER: 78-9020-0160-7
ISSUED: SEPTEMBER 1, 1986
SUPERSEDES: AUGUST 1, 1986
DOCUMENT: 10-3582-3

1. INGREDIENTS	C.A.S. NO.	PERCENT	EXPOSURE LIMITS
Sodium Thiosulfate	77720-98-7	20.0- 30.0	N/D 5
Potassium Iodide	7681-11-0	0.0- 1.0	N/D 5
Water	7732-18-5	70.0- 80.0	N/D 5

SOURCE OF EXPOSURE LIMIT DATA

1. ACGIH THRESHOLD LIMIT VALUES
2. FEDERAL OSHA PERMISSIBLE EXPOSURE LIMIT
3. 3M EXPOSURE GUIDELINES
4. CHEMICAL MANUFACTURER RECOMMENDED GUIDELINES
5. NONE ESTABLISHED

ABBREVIATIONS

N/D - NOT DETERMINED
N/A - NOT APPLICABLE

2. PHYSICAL DATA

BOILING POINT:	App. 212 degrees F	SOLUBILITY IN WATER:	Soluble
VAPOR PRESSURE:	N/D	SP. GRAVITY (WATER=1):	1.17
VAPOR DENSITY (AIR=1):	N/D	PERCENT VOLATILE:	>75%
EVAPORATION RATE (=1):	N/D	VISCOSITY:	N/D
APPEARANCE AND ODOR:	Odorless water white liquid		pH: 7.5-8.5

3. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (): N/A
FLAMMABLE LIMITS - LEL: N/A UEL: N/A

EXTINGUISHING MEDIA:

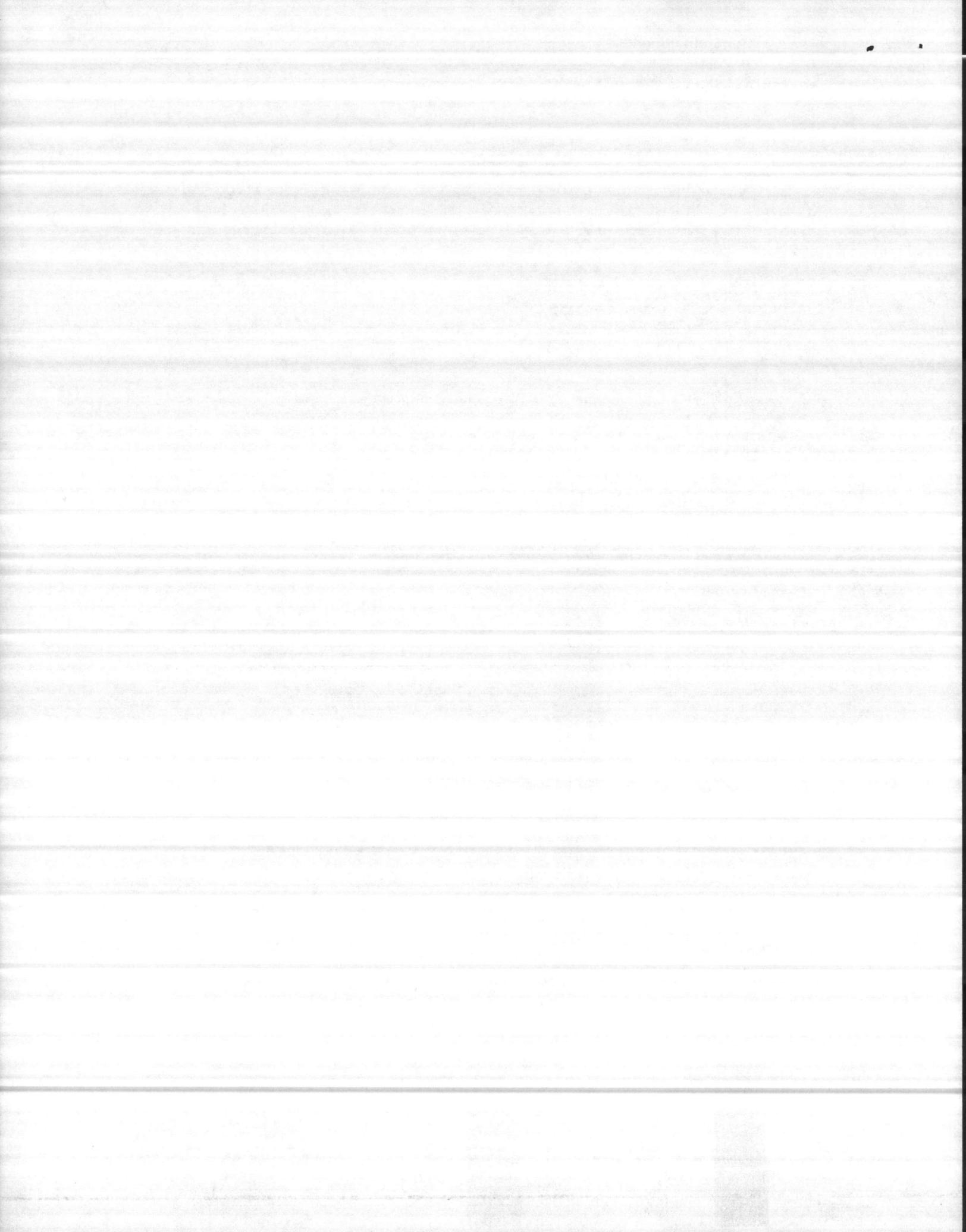
N/A

SPECIAL FIRE FIGHTING PROCEDURES:

None

UNUSUAL FIRE AND EXPLOSION HAZARDS:

None



General Offices/3M

3M Center
St. Paul, Minnesota 55144-1000
(612) 733-1110



**MATERIAL SAFETY
DATA SHEET**

MSDS: 3M Brand Fixer
SEPTEMBER 1, 1986

Page 2

=====
4. REACTIVITY DATA
=====

STABILITY: STABLE

INCOMPATIBILITY - MATERIALS TO AVOID:
Strong acids, sodium borohydrate
HAZARDOUS POLYMERIZATION: MAY NOT OCCUR

HAZARDOUS DECOMPOSITION PRODUCTS:
If heated to thermal decomposition, toxic SOx fumes may develop.

=====
5. ENVIRONMENTAL INFORMATION
=====

SPILL RESPONSE:

Wash to sewer with water.

RECOMMENDED DISPOSAL:

Waste generally can be discharged to a waste water treatment system.
Since regulations vary, consult applicable regulations or authorities
before disposal.

ENVIRONMENTAL DATA:

Spent processing solutions from the microfilm processor may be
sewered under certain conditions set by local authorities relating to
high pH and silver containing wastes. In many cases, the untreated
solution can be mixed with other facility wastes and sewerred.
Regulations may require that the solution first be desilvered and/or
neutralized with acid (sodium bisulfate or vinegar) before sewerred.
Consult local authorities or regulations to determine which methods
are acceptable.

=====
6. SUGGESTED FIRST AID
=====

EYE CONTACT:

N/A

SKIN CONTACT:

N/A

INHALATION:

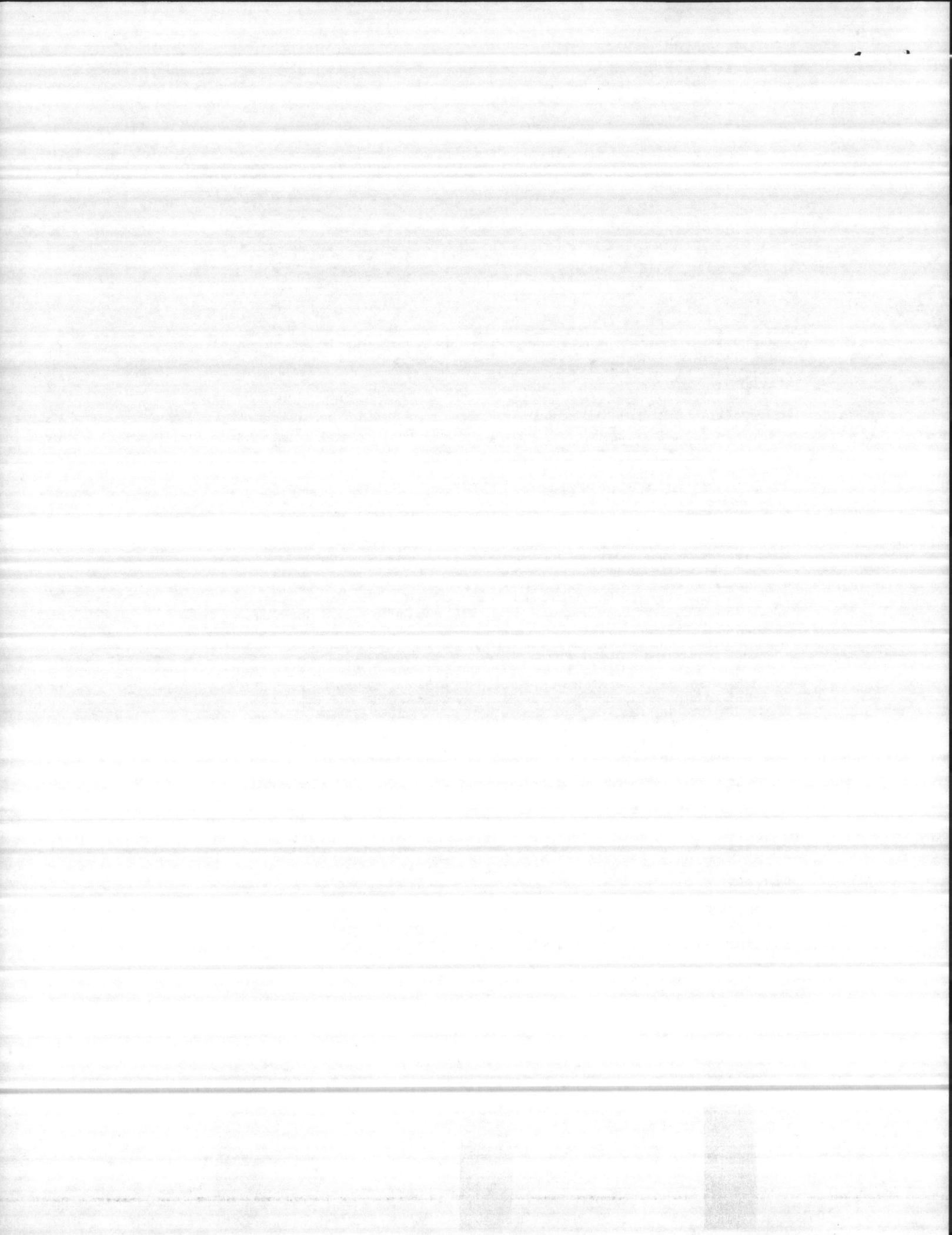
N/A

IF SWALLOWED:

If swallowed, drink two glasses of milk or water and contact a
physician or poison control center.

=====
7. PRECAUTIONARY INFORMATION
=====

Do not take internally. Keep out of reach of children.



General Offices/3M

3M Center
St. Paul, Minnesota 55144-1000
(612) 733-1110



**MATERIAL SAFETY
DATA SHEET**

MSDS: 3M Brand Fixer
SEPTEMBER 1, 1986

Page 3

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8. HEALTH HAZARD DATA
=====

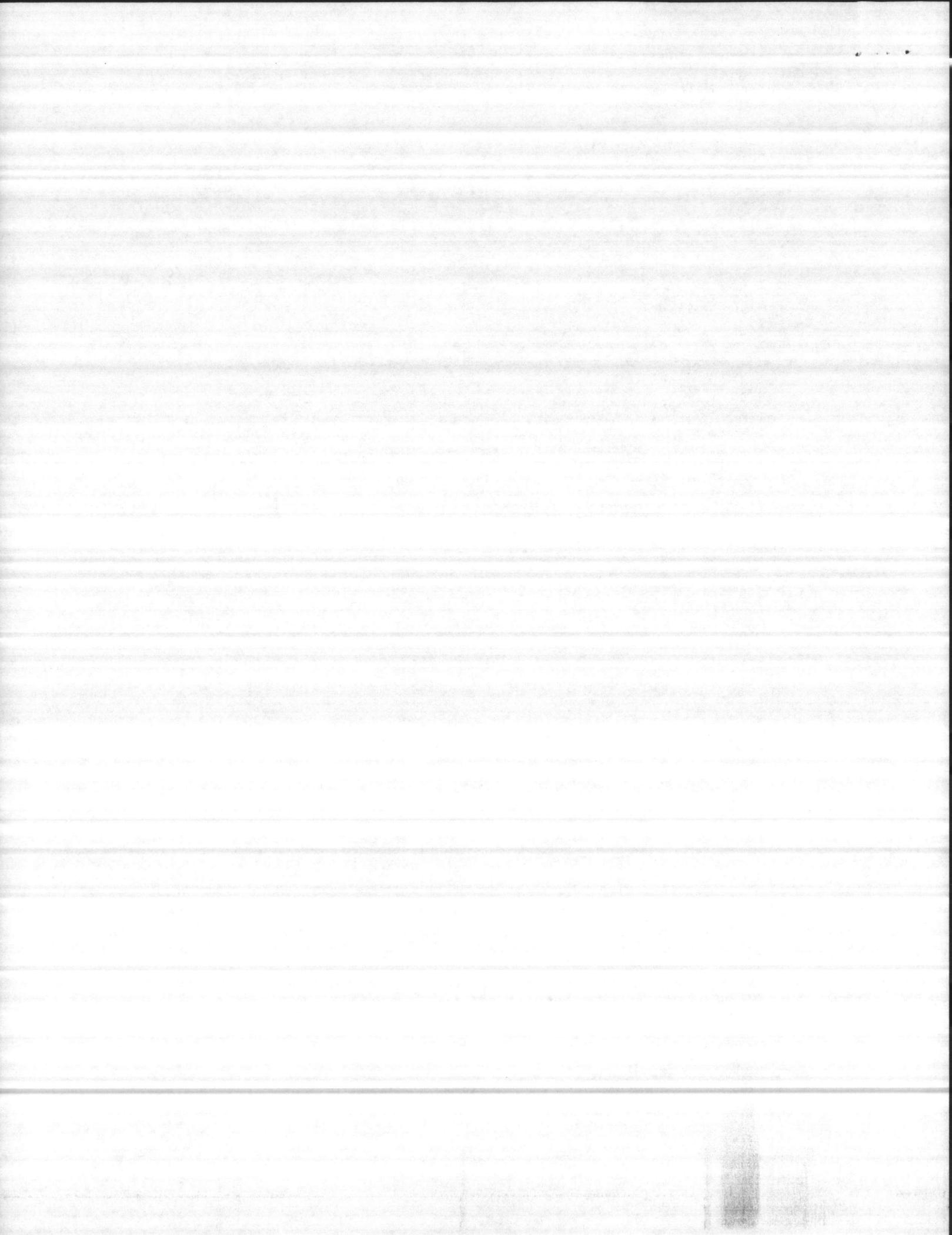
EYE CONTACT: No adverse health effects are expected.

SKIN CONTACT: No adverse health effects are expected.

INHALATION: No adverse health effects are expected.

INGESTION: No adverse health effects are expected.
(Sodium Thiosulfate can cause diarrhea.)

=====
The information on this Data Sheet represents our current data and best opinion as to the proper use in handling of this product under normal conditions. Any use of the product which is not in conformance with this Data Sheet or which involves using the product in combination with any other product or any other process is the responsibility of the user.
=====
This Data Sheet represents our current data and best opinion as to the proper use in handling of this product under normal conditions. Any use of the product which is not in conformance with this Data Sheet or which involves using the product in combination with any other product or any other process is the responsibility of the user.



Manufacturer: Xerox Corporation
 Rochester, N.Y. 14644

Emergency Tel. No. : (716) 422-2177
Information Tel. No.: (800) 828-6571

Section I - Product Identification

Trade Names/Synonyms: Anti-Static Fluid

Part No. : 8R90273, 8R2946, 43E30

Chemical Name: None

Ingredients

CAS No.

Water (>99%)
 Silicone Oil (<1%)
 Surfactant (<0.1%)
 Additives (<0.1%)

7732-18-5
 63148-62-9

Section II - Emergency and First Aid

Eyes: Flush with water.

Skin: Wash with soap and water.

Inhalation: Remove from exposure.

Ingestion: Dilute stomach contents with several glasses of water.

Primary Route of Entry: Inhalation

Symptoms of Overexposure: Very minimal gastrointestinal irritation may occur.

Medical Conditions Generally Aggravated by Exposure: None when used as described by product literature.

Additional Information: Further information on file in Poisindex.

Section III - Toxicology and Health Information

This material has been tested and evaluated by Xerox Corporation. When used as intended, it does not represent a health or safety hazard.

Oral LD₅₀: N.A.

TLV: N.A.

Dermal LD₅₀: N.A.

Inhalation LC₅₀: N.A.

PEL: N.A.

Eye Irritation: Not an irritant

Skin Sensitization: Not a sensitizer

XEL: N.A.

Skin Irritation: Not an irritant

Human Patch: Non-irritating, non-sensitizing*

Mutagenicity: No mutagenicity detected in Ames Assay.

Carcinogens: None present

Aquatic LC₅₀: N.A.

Additional Information: *Based on toxicity data and relative percentages of constituents.

XEL - Xerox Exposure Limit

Section IV - Physical Data

Appearance/Odor: White liquid / odorless
 Boiling Point: 101^oC
 Solubility in Water: Completely
 Evaporation Rate: ~5.1, n-Butylacetate = 1
 Vapor Density (Air = 1): N.A.
 Volatile 99.9% (Wgt.) - % (Vol.)

Softening Range: N.A.
 Melting Point: N.A.
 Specific Gravity (H₂O = 1): ~1
 Vapor Pressure (mm Hg): 22 @ 20^o C
 pH = 7.2

Section V - Fire and Explosion Data

Flash Point (Method Used): N.A.

Flammable Limits LEL: N.A.
 UEL: N.A.

Extinguishing Media: N.A.

Special Fire Fighting Procedures: None

Fire and Explosion Hazards: None

Section VI - Reactivity Data

Stability:	Unstable		Hazardous Polymerization:	May Occur	
	Stable	X		Will Not Occur	X

Hazardous Decomposition Products: None

Incompatibility (Materials to Avoid): None

Section VII - Special Protection Information

Respiratory Protection: None required when used as intended on Xerox equipment.
 Eye Protection: None required when used as intended on Xerox equipment.
 Protective Gloves: None required when used as intended on Xerox equipment.
 Other: None required when used as intended on Xerox equipment.

Section VIII - Special Precautions

Handling and Storage: Keep in container supplied. Do not store below freezing.

Conditions to Avoid: None

Section IX - Spill, Leak, and Disposal Procedures

For Spills or Leakage: Mop up or wash to waste.

Waste Disposal Method: Wash to waste.

Section X - Transportation Information

DOT Proper Shipping Name: Not Regulated

Hazard Classification: N.A.

ID Number: N.A.

Manufacturer: Xerox Corporation
 Rochester, New York 14644

Emergency Tel. No. : (716) 422-2177
Information Tel. No.: (800) 828-6571

Section I - Product Identification

Trade Names/Synonyms: 2510 Black Developer

Part No. : 5R152

Chemical Name: None

Ingredients

CAS No.

Carrier (>95%):
Iron Powder (>95%)

9011-14-7

Toner (<5%):
 Styrene/Acrylate Polymer (60-65%)
 Acrylic Resin (20-25%)
 Carbon Black (10-15%)
 Polyolefin (<10%)
 Amorphous Silica (<1%)

25213-39-2

 1333-86-4
 9003-07-0
 7631-86-9

Section II - Emergency and First Aid

Eyes: Flush with water.

Skin: Wash with soap and water.

Inhalation: Remove from exposure.

Ingestion: Dilute stomach contents with several glasses of water.

Primary Route of Entry: Inhalation

Symptoms of Overexposure: Minimal respiratory tract irritation may occur as with exposure to large amounts of any non-toxic dust.

Additional Information: See Sections V and VII. Further information on file in Poisindex.

Section III - Toxicology and Health Information

This material has been tested and evaluated by Xerox Corporation. When used as intended, it does not represent a health or safety hazard.

Oral LD₅₀: >5g/kg (Rats) practically non-toxic.

TLV: 10 mg/m³ (Total Dust)

Dermal LD₅₀: >2g/kg (Rabbits) practically non-toxic.

5 mg/m³ (Respirable Dust)

Inhalation LC₅₀: >6.6 mg/l (Rats) practically non-toxic.*

Eye Irritation: (Rabbits) non-irritating

PEL: 15 mg/m³ (Total Dust)

Skin Sensitization: (Guinea Pigs) non-sensitizing

5mg/m³ (Respirable Dust)

Skin Irritation: (Rabbits) non-irritating

Human Patch: non-irritating, non-sensitizing

¹XEL: 5mg/m³ (Total Dust)

Mutagenicity: No mutagenicity detected in Ames, Pol A + /A, WP2 and Micronucleus Assays.

Carcinogens: None present

Aquatic LC₅₀: >500 mg/l (Fathead Minnows) non-toxic

Additional Information: The information above is toxicity data for toner.

* Not tested to the highest dose or concentration.

¹XEL - Xerox Exposure Limit

Section IV - Physical Data

Appearance/Odor: Black Granular / faint odor
 Boiling Point: N.A.
 Solubility in Water: N.A.
 Evaporation Rate: N.A.
 Vapor Density (Air = 1): N.A.
 Volatile N.A. % (Wgt.) N.A. % (Vol.)

Softening Range: N.A.
 Melting Point: N.A.
 Specific Gravity (H₂O = 1): N.A.
 Vapor Pressure (mm Hg): N.A.
 pH = N.A.

Section V - Fire and Explosion Data

Flash Point (Method Used): N.A.

Flammable LEL: N.A.
 Limits UEL: N.A.

Extinguishing Media: Water, Foam, Dry chemical

Special Fire Fighting Procedures: Avoid inhalation of smoke.

Fire and Explosion Hazards: Toner is a combustible powder. When dispersed in air, it forms explosive mixtures.

Section VI - Reactivity Data

Stability:

Unstable
Stable

X

Hazardous

Polymerization:

May Occur

Will Not Occur

X

Hazardous Decomposition Products: Products of combustion are toxic. Avoid breathing smoke.

Incompatibility (Materials to Avoid): None

Section VII - Special Protection Information

Respiratory Protection: None required when used as intended in Xerox equipment.

Eye Protection: None required when used as intended in Xerox equipment.

Protective Gloves: None required when used as intended in Xerox equipment.

Other: For use other than normal customer - operating procedures (such as in bulk toner processing facilities), goggles and respirators may be required. For more information, contact Xerox.

Section VIII - Special Precautions

Handling and Storage: None

Conditions to Avoid: None

Section IX - Spill, Leak, and Disposal Procedures

For Spills or Leakage: If spilled, sweep up or vacuum.

Waste Disposal Method: No special disposal procedures. Insure conformity with federal, state or local regulations.

Section X - Transportation Information

DOT Proper Shipping Name: Not Regulated

Hazard Classification: N.A.

ID Number: N.A.

**Material Safety
Data Sheet**

Form 15593-E-PWO

3M
3M Center
St. Paul, Minnesota 55144
612/733 1110

Duns No.: 00-617-3082

Chemical Family Polystyrene Based Dry Toner	Trade Name 3M Brand Quantimatic Toner Type 748F
--	--

3M I.D. Number 78-6969-5092-8	Engineering Systems Division
----------------------------------	------------------------------

1. Ingredients	CAS #	%	TLV® (unit)
Styrene Polymer		85-95	
Carbon Black	007440440	5-15	3.5 mg/m ³
Dye		.5-3	
Particle Size: 5-20u			
3M standard for toner emissions			0.4 mg/m ³

2. Physical Data

Boiling Point	N/A	Solubility in Water	1 soluble
Vapor Pressure	N/A	Specific Gravity (H ₂ O = 1)	N/A
Vapor Density (Air = 1)	N/A	Percent Volatile	0
Evaporation Rate (= 1)	N/A	pH	N/A

Appearance and Odor Fine black powder

3. Fire and Explosion Hazard Data

Flash Point (Test Method) (Complete) N/A	Flammable Limits: LEL =	UEL =
Extinguishing Media CO ₂ foam dry chemical		
Special Fire Fighting Procedures		

Unusual Fire and Explosion Hazards	Due to fine particle size, possibly explosive if dispersed in air in high concentration.
------------------------------------	--

4. Environmental Information**Spill Response**

Observe precautionary information from other sections. Vacuum or sweep up spilled material being careful not to make the powder airborne. Be cautious walking on the powder.

Recommended Disposal

Dispose with regular trash. Disposal may be by burial in a sanitary landfill or incineration. Disposal should comply to all state and local regulations.

Environmental Data

Trade Name: 3M Brand Quantimatic Toner Type 748F

5. Health Hazard Data

Eye Contact

Animal studies indicate 748F is practically non-irritating when directly instilled into the eye. The FHSA score is 0.3/110.0.

Skin Contact

748F was found to be non-irritating dermally when tested according to FHSA procedures. The primary skin irritation score is 0.0/8.0.

Inhalation

No hazard at levels below 0.4 mg/m³, at higher levels (.4 mg/l) the toner can elicit slight upper respiratory irritation.

Ingestion

The acute oral toxicity of 748F has not been determined. It is thought to be practically non-toxic.

Suggested First Aid

Eyes: Flush with water. Call a physician.
Skin: Wash affected area with soap and water.
Inhalation: Remove person to fresh air.
Ingestion: Do not induce vomiting. Call a physician.

6. Reactivity Data

Stability

Unstable
 Stable

Conditions to Avoid

Incompatibility

Materials to Avoid

Hazardous Polymerization

May Occur
 May Not Occur

Conditions to Avoid

Hazardous Decomposition Products

Styrene monomer, CO, CO₂

7. Special Protection Information

Eye Protection

None required

Skin Protection

None required

Ventilation

General ventilation is adequate

Respiratory and Special Protection

Other Protection

8. Precautionary Information

Store toner in a cool, dry place. Keep away from children.

9. Department of Transportation

DOT Proper Shipping Name

Not regulated

DOT Hazard Class

Not regulated

Issue Date

9/83

Supersedes

9/1/82

**Material Safety
Data Sheet**3M
3M Center
St. Paul, Minnesota 55144
612/733 1110

Form 15593-E-PWO

Duns No.: 00-617-3082

Chemical Family Toner/Carrier Mixture	Trade Name 3M Brand 852 Developer Premix
3M I.D. Number 78-6969-5173-6	
Engineering Systems Division	

1. Ingredients	CAS #	%	TLV® (unit)
Iron Particles		75	
Styrene Polymer	9003-53-6	10-20	
Carbon Black	1333-86-4	0.5-2	3.5 mg/m ³

2. Physical Data			
Boiling Point	N/A	Solubility in Water	Not soluble
Vapor Pressure	N/A	Specific Gravity (H ₂ O = 1)	
Vapor Density (Air = 1)	N/A	Percent Volatile	None
Evaporation Rate (= 1)	N/A	pH	N/A
Appearance and Odor Black Fine Granular Powder			

3. Fire and Explosion Hazard Data			
Flash Point (Test Method)	None	Flammable Limits: LEL =	UEL =
Extinguishing Media	Water, CO ₂ , Foam		
Special Fire Fighting Procedures	None		
Unusual Fire and Explosion Hazards	None		

4. Environmental Information
Spill Response
Observe precautionary information from other sections. Vacuum or sweep up spilled material.

Recommended Disposal

Dispose as dry scrap in accordance with state and local regulations.

Environmental Data

Trade Name: 852 Developer Premix

5. Health Hazard Data

Eye Contact

852 Developer Premix is considered to be minimally irritating upon contact. Physical irritation may occur if eyes are rubbed.

Skin Contact

852 Developer Premix is thought to be non-irritating dermally.

Inhalation

Inhalation of Developer Premix may elicit slight upper respiratory irritation if inhaled in large quantities.

Ingestion

852 is not considered hazardous upon ingestion.

Suggested First Aid

Eyes: Flush gently with water. Call a physician.
Skin: Wash affected area with soap and water.
Inhalation: Remove person to fresh air.
Ingestion: Do not induce vomiting. Call a physician.

6. Reactivity Data

Stability	<input type="checkbox"/> Unstable <input checked="" type="checkbox"/> Stable	Conditions to Avoid
Incompatibility		Materials to Avoid
Hazardous Polymerization	<input type="checkbox"/> May Occur <input checked="" type="checkbox"/> May Not Occur	Conditions to Avoid

Hazardous Decomposition Products

Styrene monomer, CO, CO₂

7. Special Protection Information

Eye Protection	None required	Skin Protection	Plastic gloves if necessary
Ventilation	General ventilation is adequate		
Respiratory and Special Protection			
Other Protection			

8. Precautionary Information

Store in a cool, dry place.

9. Department of Transportation

DOT Proper Shipping Name	N/A	DOT Hazard Class	N/A	Issue Date	OCTOBER, 1983	Supersedes	None
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The information on this Data Sheet represents our current data and best opinion as to the proper use and handling of this product under normal conditions. Any use of this product which is not in conformance with this Data Sheet or which involves using the product in combination with any other product or any process is not recommended.

3M General Offices
3M Center
St. Paul, Minnesota 55144-1000
612/733-1110
Duns No.: 00-617-3082

00-21
143

MATERIAL SAFETY
DATA SHEET



MSDS: 3M BRAND TYPE 852 DEVELOPER PREMIX
AUGUST 28, 1991

PAGE: 2 of 4

4. REACTIVITY DATA

STABILITY: Stable
INCOMPATIBILITY - MATERIALS TO AVOID:
None.
HAZARDOUS POLYMERIZATION: Will Not Occur
HAZARDOUS DECOMPOSITION PRODUCTS:
Styrene Monomer, CO, CO2

5. ENVIRONMENTAL INFORMATION

SPILL RESPONSE:
Observe precautionary information from other sections. Vacuum or sweep up spilled material.

RECOMMENDED DISPOSAL:
Dispose of as dry scrap in accordance with state and local regulations.

ENVIRONMENTAL DATA:
Not determined.

SARA HAZARD CLASS:
FIRE HAZARD: No **PRESSURE:** No **REACTIVITY:** No **ACUTE:** Yes **CHRONIC:** No

6. SUGGESTED FIRST AID

EYE CONTACT:
In case of eye contact, flush eyes with plenty of water and contact a physician.

SKIN CONTACT:
N/A

INHALATION:
If respiratory irritation or other symptoms occur, move to fresh air.

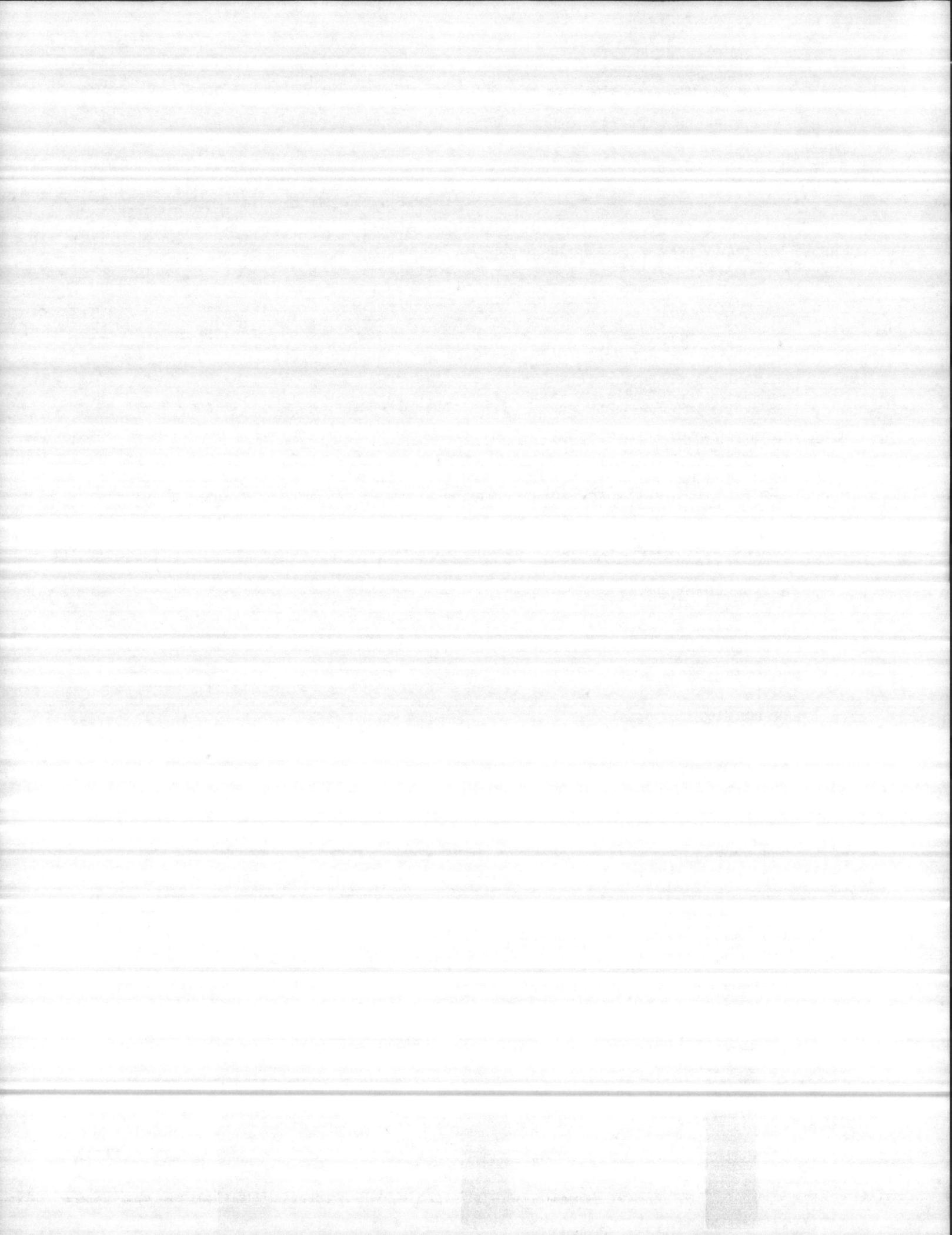
IF SWALLOWED:
N/A

7. PRECAUTIONARY INFORMATION

OTHER PRECAUTIONARY INFORMATION:
Avoid eye contact and prolonged or repeated breathing of dust.
Keep out of reach of children.
Store in a cool, dry place.

INGREDIENTS	EXPOSURE LIMITS		EXPOSURE LIMITS	
	VALUE	UNIT	TYPE AUTH	SKIN*
IRON	NONE	NONE	NONE NONE	

Abbreviations: N/D - Not Determined N/A - Not Applicable



MATERIAL SAFETY
 DATA SHEET



MSDS: 3M BRAND TYPE 852 DEVELOPER PREMIX
 AUGUST 28, 1991

PAGE: 3 of 4

7. PRECAUTIONARY INFORMATION (continued)

INGREDIENTS	EXPOSURE LIMITS		TYPE AUTH	SKIN*
	VALUE	UNIT		
IRON OXIDE (MIXTURE WITH CAS #7439-89-6)	NONE	NONE	NONE NONE	
POLYSTYRENE	NONE	NONE	NONE NONE	
CARBON BLACK	3.5	mg/m3	TWA ACGIH	
CARBON BLACK	3.5	mg/m3	TWA OSHA	
C.I. SOLVENT BLACK 7	NONE	NONE	NONE NONE	
C.I. SOLVENT BLUE 5	NONE	NONE	NONE NONE	
FUMARATED ROSIN (MIXTURE WITH CAS #1325-86-6)	NONE	NONE	NONE NONE	
MONODODECYL ESTER OF SULFURIC ACID (MIXTURE WITH CAS #1325-86-6)	NONE	NONE	NONE NONE	

* SKIN NOTATION: Listed substances indicated with "Y" under SKIN refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

SOURCE OF EXPOSURE LIMIT DATA:

- ACGIH: American Conference of Governmental Industrial Hygienists
- OSHA: Occupational Safety and Health Administration
- NONE: None Established

8. HEALTH HAZARD DATA

EYE CONTACT:

Dust may cause slight eye irritation.

SKIN CONTACT:

No adverse health effects are expected.

INHALATION:

Dust may cause slight upper respiratory system irritation.

IF SWALLOWED:

No adverse health effects are expected.

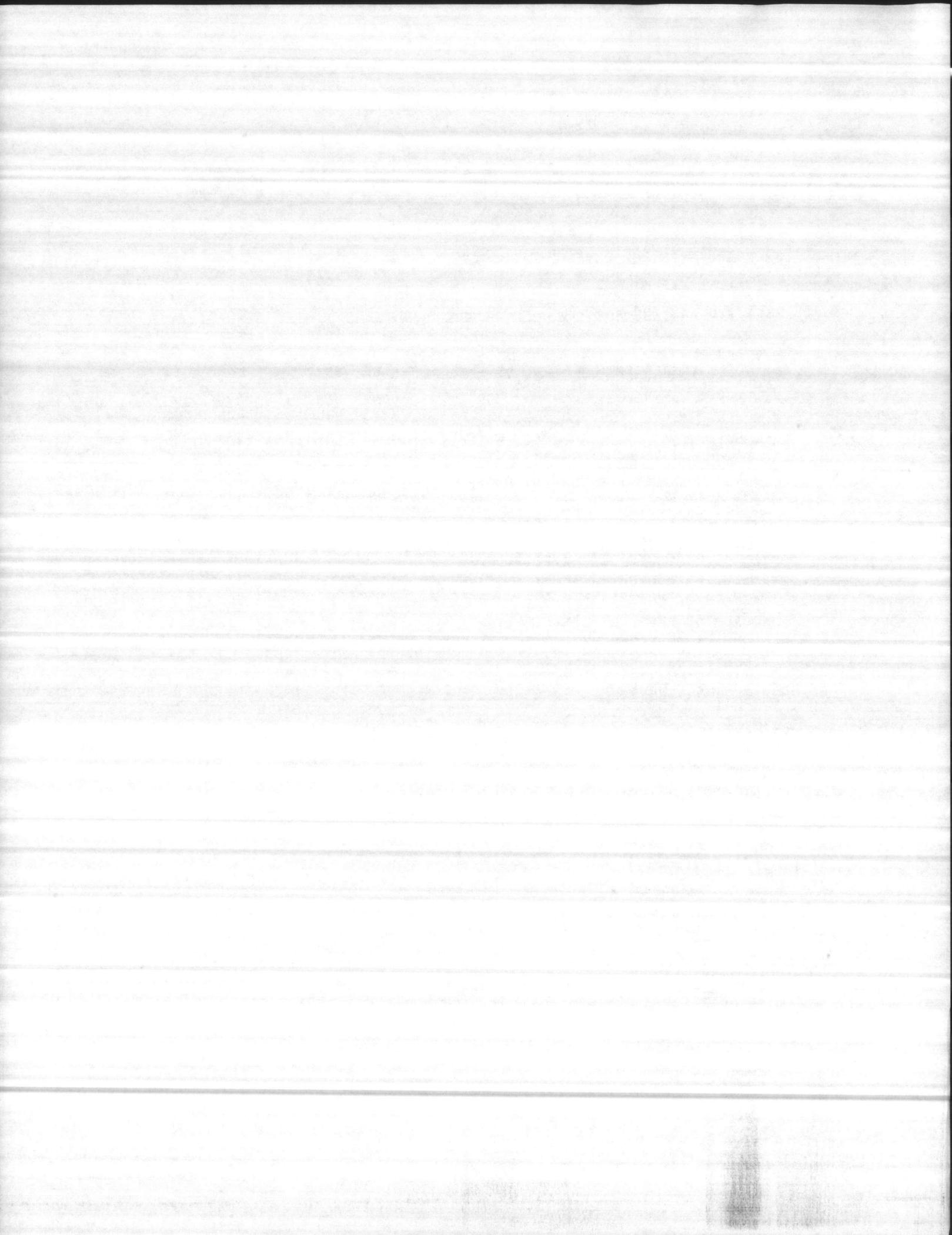
OTHER HEALTH HAZARD INFORMATION:

ADDITIONAL EXPOSURE LIMITS: Carbon Black 3.5 mg/m3 TWA (OSHA)

SECTION CHANGE DATES

INGREDIENTS SECTION CHANGED SINCE JUNE 10, 1991 ISSUE

PRECAUT. INFO. SECTION CHANGED SINCE JUNE 10, 1991 ISSUE



3M General Offices
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 612/733-1110
 Duns No.: 00-617-3082

MATERIAL SAFETY
 DATA SHEET



DIVISION: ENGINEERING DOCUMENT SYSTEMS DIVISION
TRADE NAME:
 3M BRAND TYPE 852 DEVELOPER PREMIX
3M I.D. NUMBER: GB-2000-4173-8 78-6969-5173-6

ISSUED: AUGUST 28, 1991
SUPERSEDES: JUNE 10, 1991
DOCUMENT: 10-3575-7

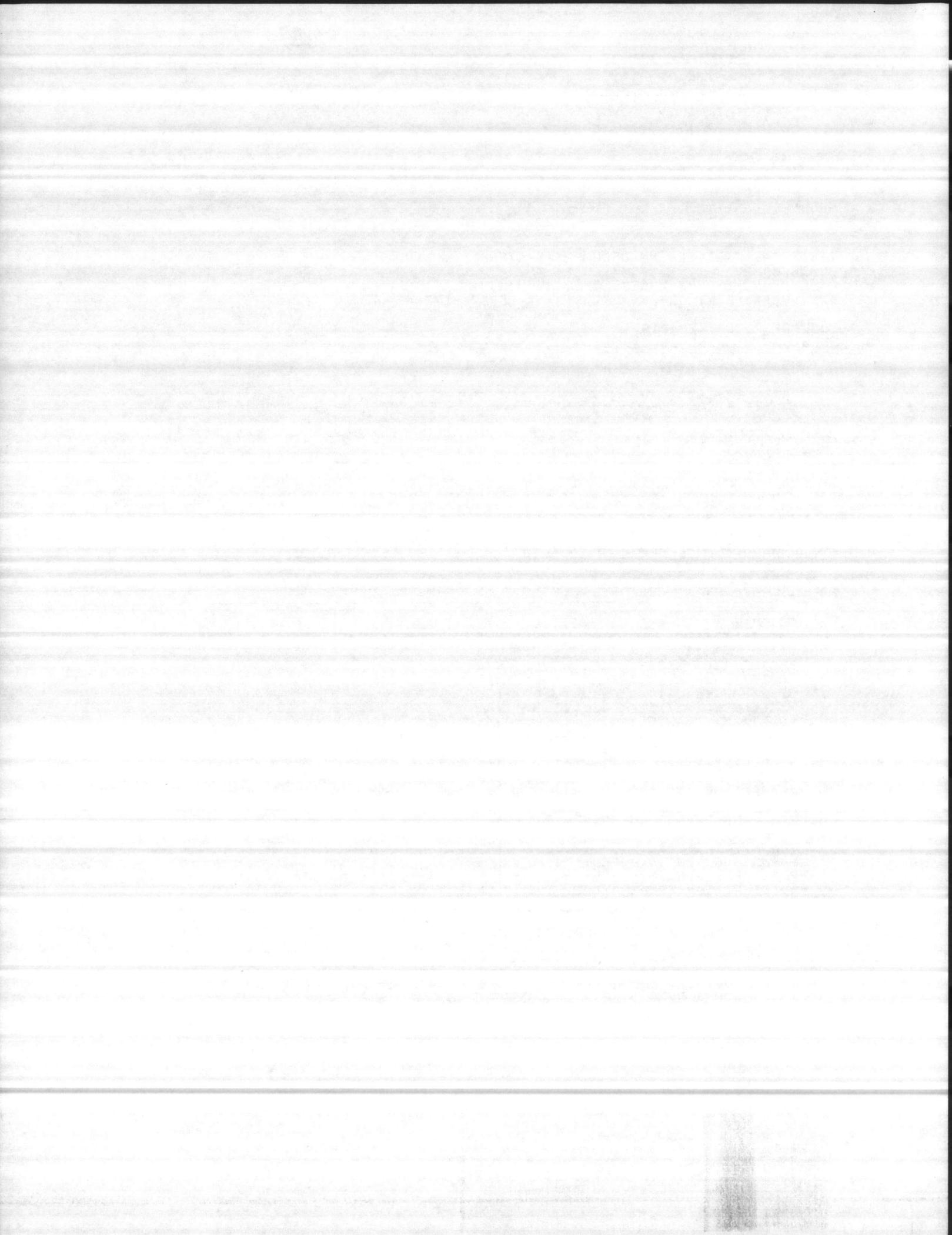
1. INGREDIENT	C.A.S. NO.	PERCENT		
IRON	7439-89-6	60.0	-	100.0
IRON OXIDE (MIXTURE WITH CAS #7439-89-6)	1317-61-9	60.0	-	100.0
POLYSTYRENE	9003-53-6	5.0	-	10.0
CARBON BLACK	1333-86-4		<	1.0
C.I. SOLVENT BLACK 7	8005-02-5		<	1.0
C.I. SOLVENT BLUE 5	1325-86-6		<	1.0
FUMARATED ROSIN (MIXTURE WITH CAS #1325-86-6)	65997-04-8		<	1.0
MONODODECYL ESTER OF SULFURIC ACID (MIXTURE WITH CAS #1325-86-6)	151-41-7		<	1.0

2. PHYSICAL DATA

BOILING POINT:..... N/A
 VAPOR PRESSURE:..... N/A
 VAPOR DENSITY:..... N/A
 EVAPORATION RATE:..... N/A
 SOLUBILITY IN WATER:..... nil
 SP. GRAVITY:..... ca. 7.000 Water = 1
 PERCENT VOLATILE:..... N/A
 VOLATILE ORGANICS:..... N/A
 VOC LESS H2O & EXEMPT SOLVENT N/D
 pH:..... N/A
 VISCOSITY:..... N/A
 MELTING POINT..... N/D
 APPEARANCE AND ODOR: granular powder., dark grey

3. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:..... N/A
 FLAMMABLE LIMITS - LEL:..... N/A
 FLAMMABLE LIMITS - UEL:..... N/A
 AUTOIGNITION TEMPERATURE: ... N/D
 EXTINGUISHING MEDIA:
 Water, CO2, Foam
 SPECIAL FIRE FIGHTING PROCEDURES:
 None.
 UNUSUAL FIRE AND EXPLOSION HAZARDS:
 None.
 NFPA-HAZARD-CODES: HEALTH 1 FIRE 1 REACTIVITY 0
 UNUSUAL REACTION HAZARD: none



3M General Offices
3M Center
St. Paul, Minnesota 55144-1000
612/733-1110
Duns No.: 00-617-3082

MATERIAL SAFETY
DATA SHEET



DIVISION: ENGINEERING DOCUMENT SYSTEMS DIVISION
TRADE NAME:
3M BRAND QUANTIMATIC TONER TYPE 748F
3M I.D. NUMBER: 78-6969-5092-8

ISSUED: AUGUST 28, 1991
SUPERSEDES: JUNE 10, 1991
DOCUMENT: 10-3574-0

1. INGREDIENT	C.A.S. NO.	PERCENT		
POLYSTYRENE POLYMER OR	9003-53-6	60.0	-	100.0
STYRENE ACRYLATE POLYMER	25767-47-9	60.0	-	100.0
CARBON BLACK	1333-86-4	5.0	-	10.0
C.I. SOLVENT BLACK 7	8005-02-5	1.0	-	5.0
C.I. SOLVENT BLUE 5	1325-86-6	<		1.0
FUMARATED ROSIN (MIXTURE WITH 1325-86-6)	65997-04-8	<		1.0
MONODODECYL ESTER OF SULFURIC ACID (MIXTURE WITH 1325-86-6)	151-41-7	<		1.0

2. PHYSICAL DATA

BOILING POINT:..... N/A
VAPOR PRESSURE:..... N/A
VAPOR DENSITY:..... N/A
EVAPORATION RATE:..... N/A
SOLUBILITY IN WATER:..... neglig.
SP. GRAVITY:..... ca. 1.100 Water = 1
PERCENT VOLATILE:..... N/A
VOLATILE ORGANICS:..... N/D
VOC LESS H2O & EXEMPT SOLVENT N/D
pH:..... N/A
VISCOSITY:..... N/A
MELTING POINT:..... N/D
APPEARANCE AND ODOR: Fine black powder.

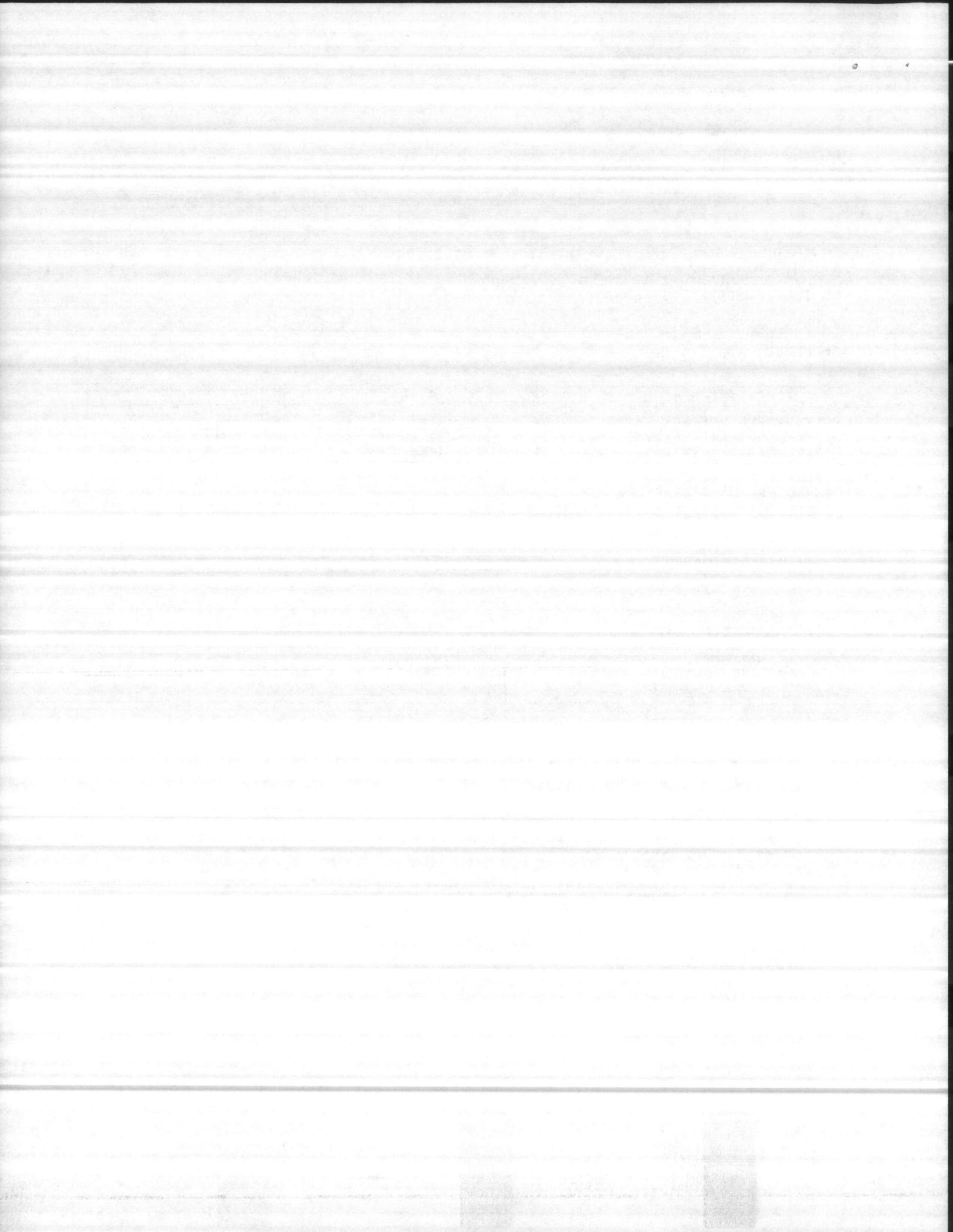
3. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:..... N/A
FLAMMABLE LIMITS - LEL:..... N/A
FLAMMABLE LIMITS - UEL:..... N/A
AUTOIGNITION TEMPERATURE:... N/D
EXTINGUISHING MEDIA:
 Foam, CO2, Dry Chemical
SPECIAL FIRE FIGHTING PROCEDURES:
 Not determined
UNUSUAL FIRE AND EXPLOSION HAZARDS:
 Due to fine particle size, possibly explosive if dispersed in air in high concentrations.
NFPA-HAZARD-CODES: HEALTH 1 FIRE 1 REACTIVITY 0
UNUSUAL REACTION HAZARD: none

4. REACTIVITY DATA

STABILITY: Stable
INCOMPATIBILITY - MATERIALS TO AVOID:
 Not determined.

Abbreviations: N/D - Not Determined N/A - Not Applicable



3M General Offices
3M Center
St. Paul, Minnesota 55144-1000
612/733-1110
Duns No.: 00-617-3082

00-21
147

MATERIAL SAFETY
DATA SHEET



MSDS: 3M BRAND QUANTIMATIC TONER TYPE 748F
AUGUST 28, 1991

PAGE: 2 of 4

4. REACTIVITY DATA (continued)

HAZARDOUS POLYMERIZATION: Will Not Occur
HAZARDOUS DECOMPOSITION PRODUCTS:
Styrene Monomer, CO₂, CO

5. ENVIRONMENTAL INFORMATION

SPILL RESPONSE:

Observe precautionary information from other sections. Vacuum or sweep up spilled material being careful not to make the powder airborne. Be cautious walking on the powder, slip hazard.

RECOMMENDED DISPOSAL:

Dispose with regular trash. Disposal may be by burial in a sanitary landfill or incineration. Disposal should comply to all state and local regulations.

ENVIRONMENTAL DATA:

Not determined.

SARA HAZARD CLASS:

FIRE HAZARD: No PRESSURE: No REACTIVITY: No ACUTE: Yes CHRONIC: No

6. SUGGESTED FIRST AID

EYE CONTACT:

N/A

SKIN CONTACT:

N/A

INHALATION:

If respiratory irritation or other symptoms occur, move to fresh air.

IF SWALLOWED:

If swallowed, contact a physician or poison control center.

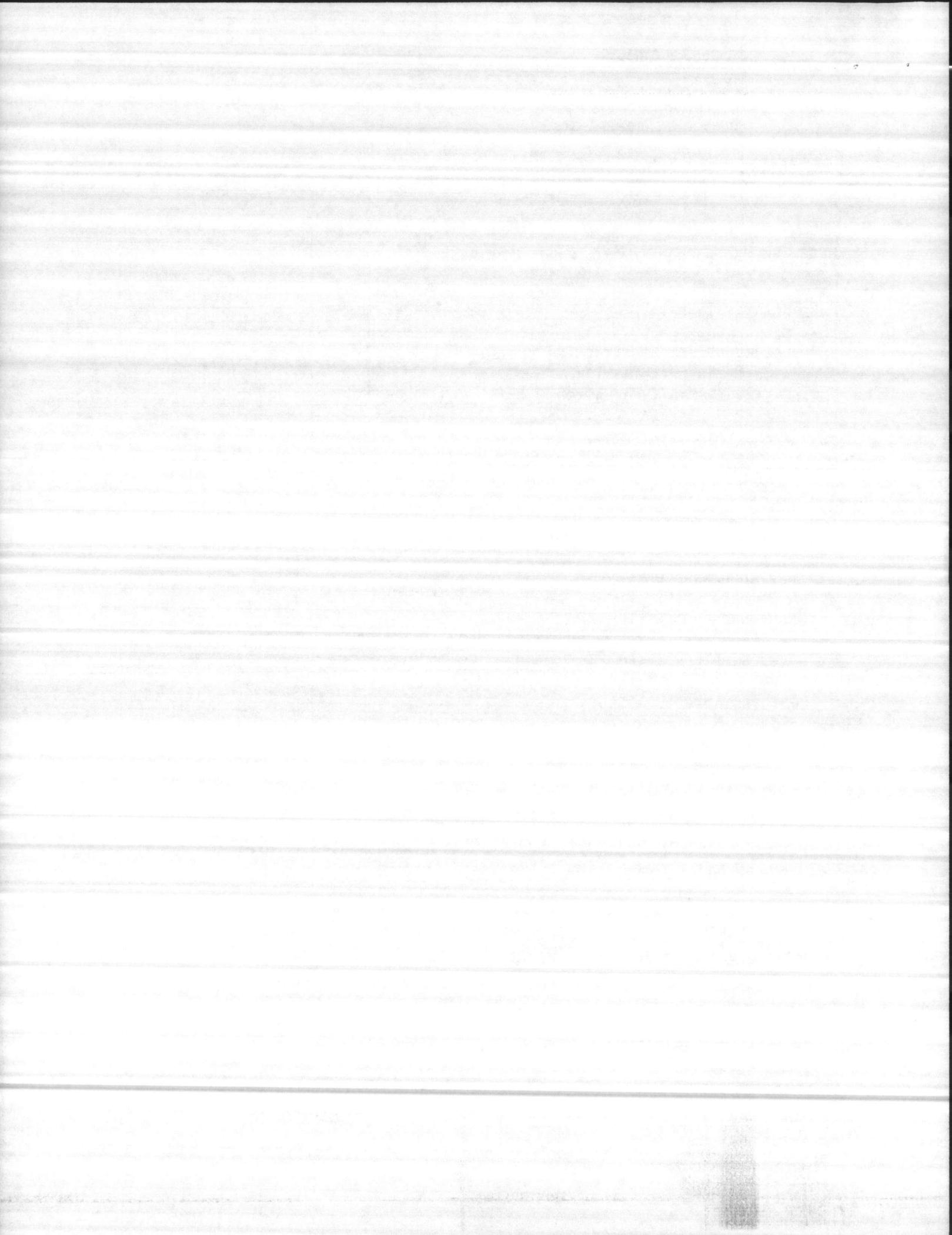
7. PRECAUTIONARY INFORMATION

OTHER PRECAUTIONARY INFORMATION:

Avoid prolonged or repeated breathing of dust.
Store in a cool, dry place.
Keep out of reach of children.

		EXPOSURE LIMITS				
INGREDIENTS		VALUE	UNIT	TYPE	AUTH	SKIN*
POLYSTYRENE POLYMER OR	.....	NONE	NONE	NONE	NONE	
STYRENE ACRYLATE POLYMER	.....	NONE	NONE	NONE	NONE	
CARBON BLACK	.....	3.5	mg/m ³	TWA	ACGIH	

Abbreviations: N/D - Not Determined N/A - Not Applicable



3M General Offices
 3M Center
 St. Paul, Minnesota 55144-1000
 612/733-1110
 Duns No.: 00-617-3082

00-21
 148

MATERIAL SAFETY
 DATA SHEET



MSDS: 3M BRAND QUANTIMATIC TONER TYPE 748F
 AUGUST 28, 1991

PAGE: 3 of 4

7. PRECAUTIONARY INFORMATION (continued)

INGREDIENTS	EXPOSURE LIMITS		TYPE	AJTH	SKIN*
	VALUE	UNIT			
CARBON BLACK	3.5	mg/m ³	TWA	OSHA	
C.I. SOLVENT BLACK 7	NONE	NONE	NONE	NONE	
C.I. SOLVENT BLUE 5	NONE	NONE	NONE	NONE	
FUMARATED ROSIN (MIXTURE WITH 1325-86-6)	NONE	NONE	NONE	NONE	
MONODODECYL ESTER OF SULFURIC ACID (MIXTURE WITH 1325-86-6)	NONE	NONE	NONE	NONE	

* SKIN NOTATION: Listed substances indicated with "Y" under SKIN refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

SOURCE OF EXPOSURE LIMIT DATA:

- ACGIH: American Conference of Governmental Industrial Hygienists
- OSHA: Occupational Safety and Health Administration
- NONE: None Established

8. HEALTH HAZARD DATA

EYE CONTACT:

No adverse health effects are expected. (A similar product was practically non-irritating when tested in laboratory animals.)

SKIN CONTACT:

No adverse health effects are expected. (A similar product was non-irritating when tested in laboratory animals.)

INHALATION:

Dust may cause slight upper respiratory system irritation. (A similar product caused no adverse effects in laboratory animals at levels below 0.4mg/m³.)

IF SWALLOWED:

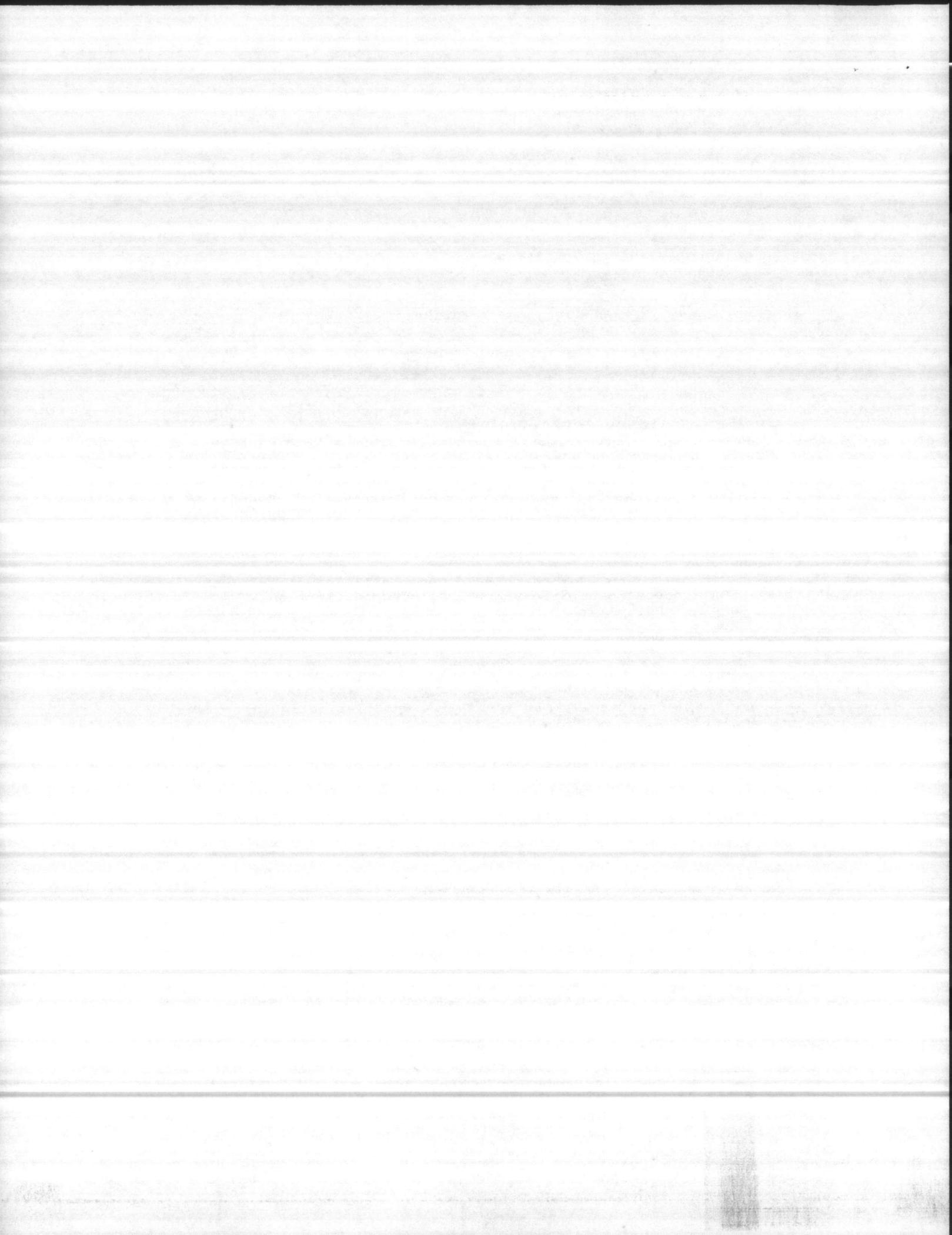
No adverse health effects are expected.

OTHER HEALTH HAZARD INFORMATION:

ADDITIONAL EXPOSURE LIMITS: Carbon Black 3.5mg/m³ TWA (OSHA).

SECTION CHANGE DATES

INGREDIENTS SECTION CHANGED SINCE JUNE 10, 1991 ISSUE
 PRECAUT. INFO. SECTION CHANGED SINCE JUNE 10, 1991 ISSUE



3M General Offices

3M Center
St. Paul, Minnesota 55144-1000
612/733-1110
Duns No.: 00-617-3082

00-21
149

**MATERIAL SAFETY
DATA SHEET**

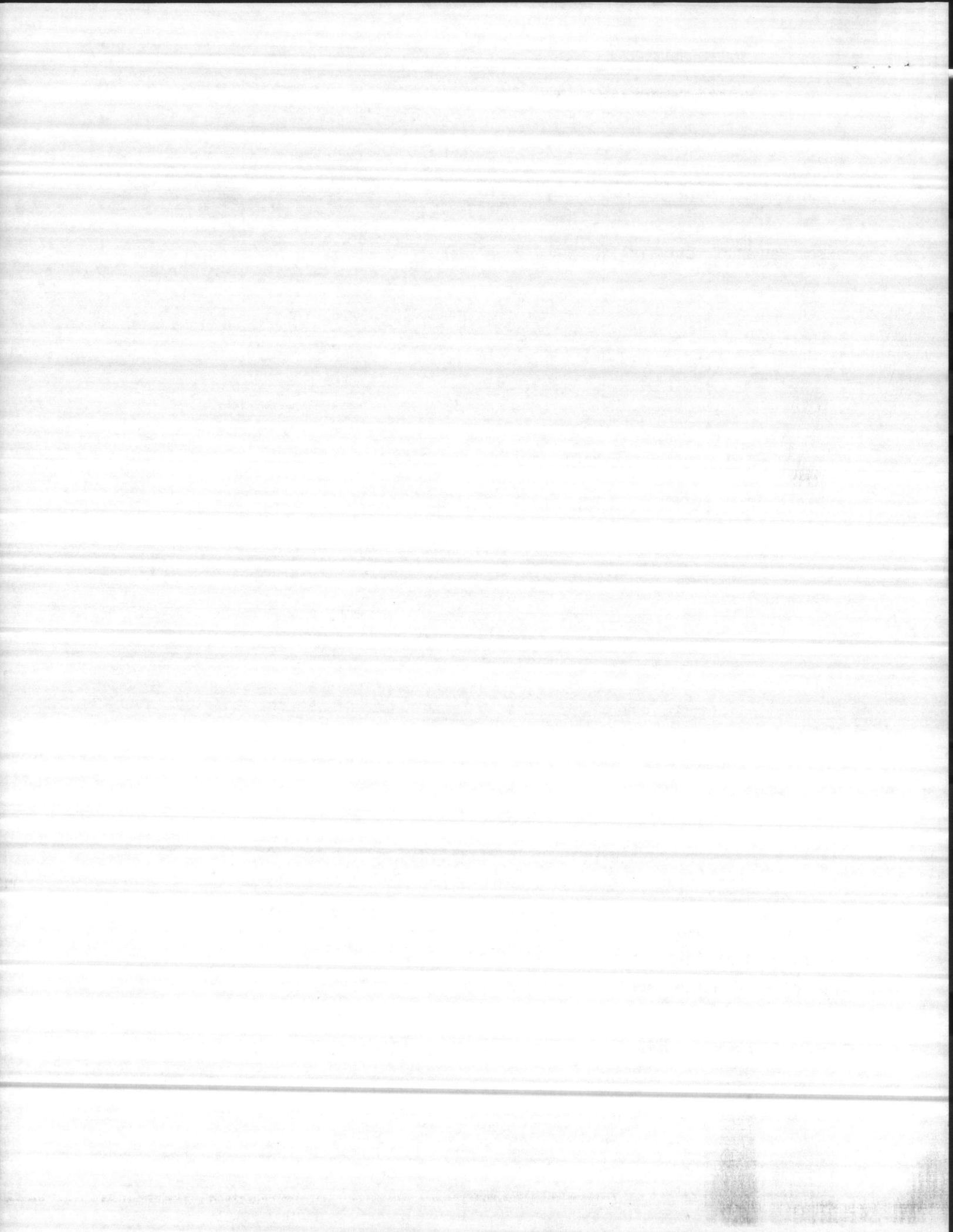
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**MSDS: 3M BRAND QUANTIMATIC TONER TYPE 748F
AUGUST 28, 1991**

PAGE: 4 of 4

Abbreviations: N/D - Not Determined N/A - Not Applicable

The information on this Data Sheet represents our current data and best opinion as to the proper use in handling of this material under normal conditions. Any use of the material which is not in conformance with this Data Sheet or which involves using the material in combination with any other material or any other process is the responsibility of the user.



3M General Offices
3M Center
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612/733-1110
Duns No.: 00-617-3082

13

01-09
9336

MATERIAL SAFETY
DATA SHEET



DIVISION: ENGINEERING DOCUMENT SYSTEMS DIVISION
TRADE NAME:
3M BRAND CD-5 DEVELOPER

3M I.D. NUMBER: 78-9020-1535-9

ISSUED: AUGUST 18, 1992
SUPERSEDES: JULY 24, 1992
DOCUMENT: 10-3584-9

1. INGREDIENT	C.A.S. NO.	PERCENT	
WATER	7732-18-5	80.0	- 90.0
SODIUM SULFITE	7757-83-7	5.0	- 10.0
SODIUM HYDROXIDE	1310-73-2	1.0	- 3.0
HYDROQUINONE	123-31-9	1.0	- 3.0
POTASSIUM BROMIDE	7758-02-3	0.1	- 1.0
1-PHENYL-3-PYRAZOLIDONE	92-43-3	<	0.1

THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICAL OR CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372:
HYDROQUINONE

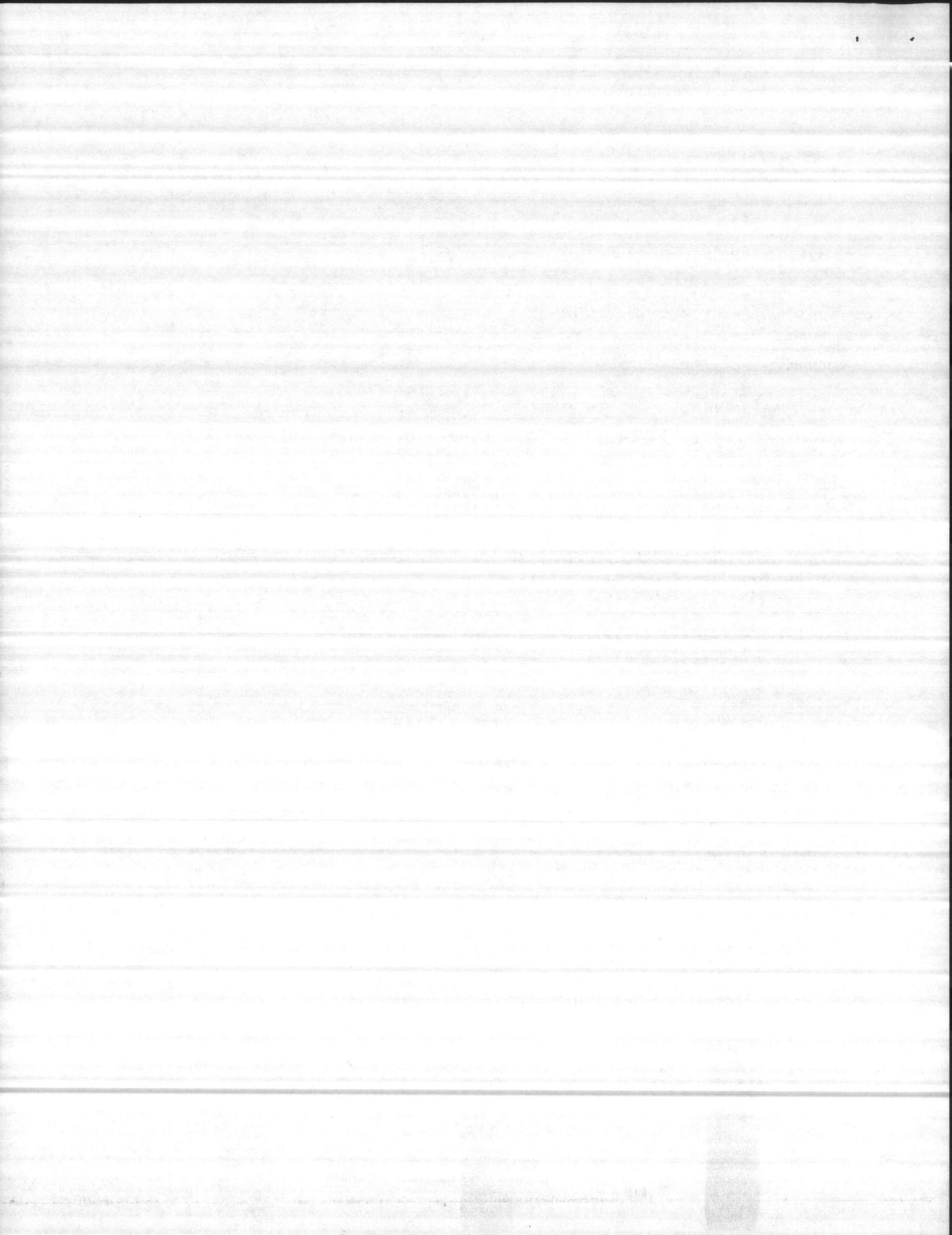
2. PHYSICAL DATA

BOILING POINT:..... > 212 F
VAPOR PRESSURE:..... N/D
VAPOR DENSITY:..... N/D
EVAPORATION RATE:..... N/D
SOLUBILITY IN WATER:..... complete
SP. GRAVITY:..... ca. 1 Water = 1
PERCENT VOLATILE:..... 80-90 % by wt
VOLATILE ORGANICS:..... 0 %
VOC LESS H2O & EXEMPT SOLVENT..... 0 %
pH:..... 11.8
VISCOSITY:..... N/D
MELTING POINT:..... N/D
APPEARANCE AND ODOR: Essentially colorless and odorless liquid.

3. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:..... N/A
FLAMMABLE LIMITS - LEL:..... N/A
FLAMMABLE LIMITS - UEL:..... N/A
AUTOIGNITION TEMPERATURE: ... N/D
EXTINGUISHING MEDIA:
N/A
SPECIAL FIRE FIGHTING PROCEDURES:
None.
UNUSUAL FIRE AND EXPLOSION HAZARDS:
None.
NFPA-HAZARD-CODES: HEALTH 2 FIRE 0 REACTIVITY 0
UNUSUAL REACTION HAZARD: none

Abbreviations: N/D - Not Determined N/A - Not Applicable



3M General Offices
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612/733-1110
Duns No.: 00-617-3082

01-09
9337

MATERIAL SAFETY
DATA SHEET

3M

MSDS: 3M BRAND CD-5 DEVELOPER
AUGUST 18, 1992

PAGE: 2 of 6

4. REACTIVITY DATA

STABILITY: Stable
INCOMPATIBILITY - MATERIALS TO AVOID:
Strong Acids
HAZARDOUS POLYMERIZATION: Will Not Occur
HAZARDOUS DECOMPOSITION PRODUCTS:
Not determined.

5. ENVIRONMENTAL INFORMATION

SPILL RESPONSE:

Observe precautions from other sections. Contain spill. Cover with absorbent material. Collect spilled material. Clean up residue with water. Place in a closed container. Dilute in a large excess of water. Carefully, and with stirring, add appropriate dilute acid such as sulfamic acid or vinegar. Confirm neutrality.

RECOMMENDED DISPOSAL:

Unused developer solution can generally be discharged to a wastewater treatment system. Since regulations vary, consult local sewer authorities prior to disposal.

Spent developer processing solutions are combined with fixer waste, and therefore are considered hazardous waste due to silver content and possibly also due to high pH. Federal exemptions or building effluent permits may permit disposal via the sewer, but check with local authorities or regulations to determine the proper disposal method.

Silver recovery: silver recovery/reclamation after neutralization is the preferred alternative to disposal of waste developer and fixer solutions.

Neutralization: neutralization of spent waste can be achieved by adding vinegar, sodium bisulfite, sulfamic acid, or other chemicals that form a weak acid in water. Wear appropriate eye and skin protection when neutralizing waste. Do not add strong acids to waste solution. Keep the final waste solution pH above 4.0.

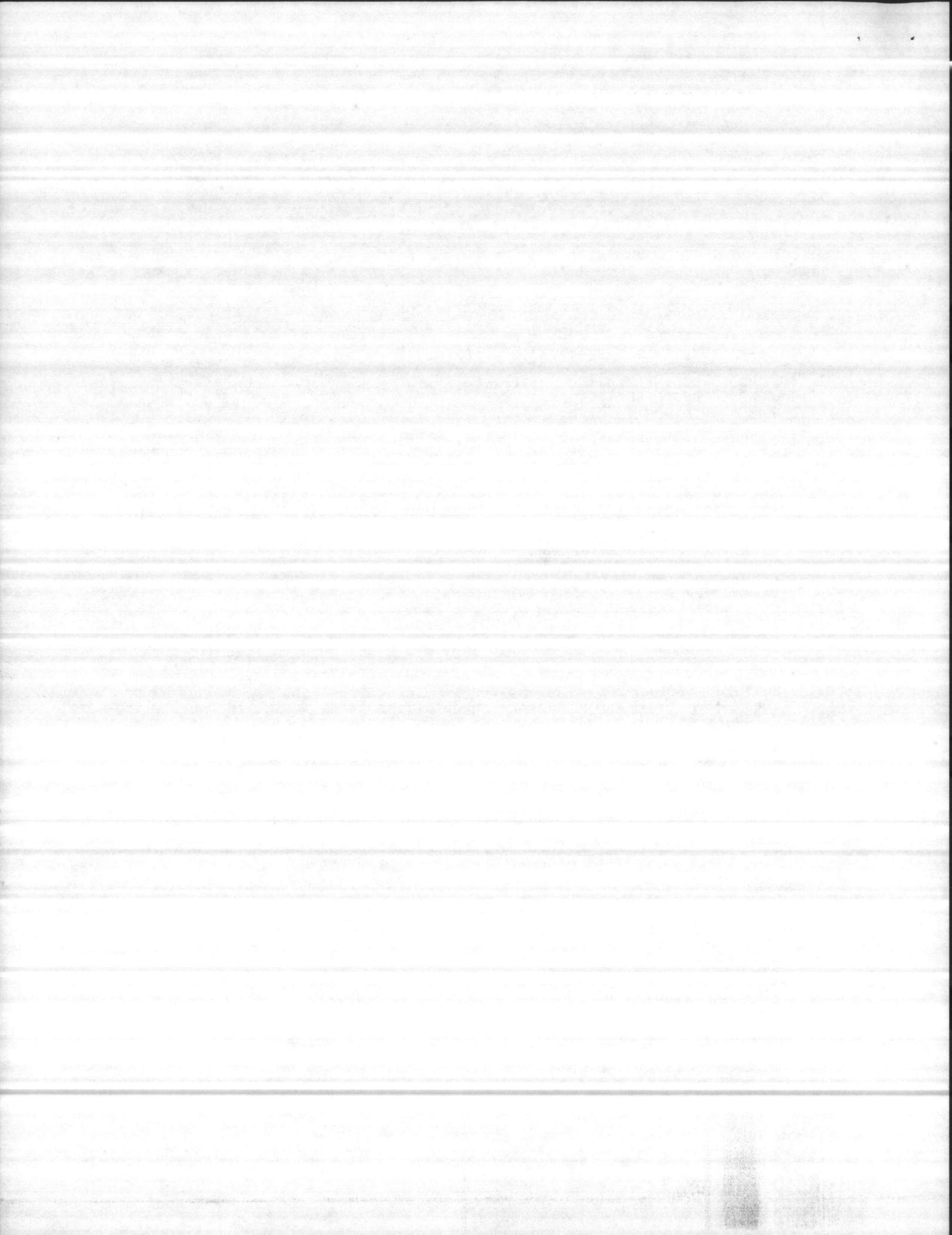
ENVIRONMENTAL DATA:

A 3M Product Environmental Data Sheet (PED) is available.

REGULATORY INFORMATION:

Since regulations vary, consult applicable regulations or authorities before disposal.

Spent (used) developer solution, when combined with spent fix solution, is classified as hazardous waste under EPA-RCRA. Hazardous waste code = D011 (silver). Waste fix and developer may also be considered hazardous due to high pH (at or slightly above 12.5).



3M General Offices
3M Center
St. Paul, Minnesota 55144-1000
612/733-1110
Duns No.: 00-617-3082

01-09
9338

MATERIAL SAFETY
DATA SHEET



MSDS: 3M BRAND CD-5 DEVELOPER
AUGUST 18, 1992

PAGE: 3 of 6

5. ENVIRONMENTAL INFORMATION (continued)

SARA HAZARD CLASS:

FIRE HAZARD: No **PRESSURE:** No **REACTIVITY:** No **ACUTE:** Yes **CHRONIC:** Yes

6. SUGGESTED FIRST AID

EYE CONTACT:

Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.

SKIN CONTACT:

Immediately wash skin with soap and large amounts of water. Remove contaminated clothing. If signs/symptoms occur, call a physician. Wash contaminated clothing before reuse and dispose of contaminated shoes.

INHALATION:

If signs/symptoms occur, remove person to fresh air. If signs/symptoms continue, call a physician.

IF SWALLOWED:

Drink two glasses of water. Call a physician.

7. PRECAUTIONARY INFORMATION

EYE PROTECTION:

Avoid eye contact. Avoid eye contact with vapor, spray, or mist.

SKIN PROTECTION:

Avoid skin contact. Wear appropriate gloves when handling this material. Use one or more of the following personal protection items as necessary to prevent skin contact: apron, coveralls.

VENTILATION PROTECTION:

Use in a well-ventilated area.

RESPIRATORY PROTECTION:

Not required

PREVENTION OF ACCIDENTAL INGESTION:

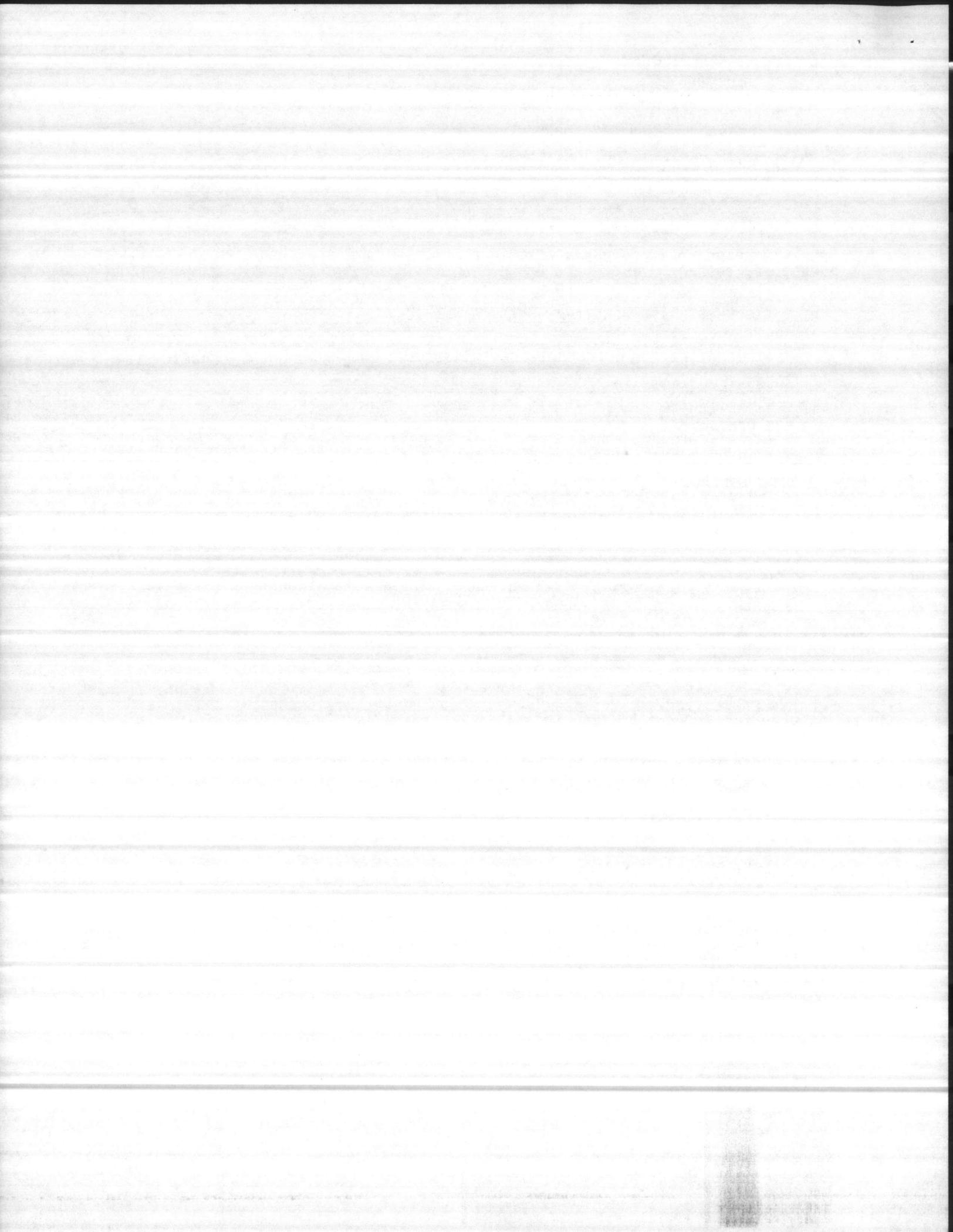
Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

RECOMMENDED STORAGE:

Store at room temperature. Keep container closed when not in use. Keep out of the reach of children.

FIRE AND EXPLOSION AVOIDANCE:

Not applicable.



MATERIAL SAFETY
 DATA SHEET



MSDS: 3M BRAND CD-5 DEVELOPER
 AUGUST 18, 1992

PAGE: 4 of 6

7. PRECAUTIONARY INFORMATION (CONTINUED)

INGREDIENTS	EXPOSURE LIMITS		TYPE AUTH	SKIN*
	VALUE	UNIT		
WATER	NONE	NONE	NONE NONE	
SODIUM SULFITE	NONE	NONE	NONE NONE	
SODIUM HYDROXIDE	2	mg/m ³	CEIL ACGIH	
SODIUM HYDROXIDE	2	mg/m ³	CEIL OSHA	
HYDROQUINONE	2	mg/m ³	TWA ACGIH	
HYDROQUINONE	2	mg/m ³	TWA OSHA	
POTASSIUM BROMIDE	NONE	NONE	NONE NONE	
1-PHENYL-3-PYRAZOLIDONE	NONE	NONE	NONE NONE	

* SKIN NOTATION: Listed substances indicated with "Y" under SKIN refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

SOURCE OF EXPOSURE LIMIT DATA:

- ACGIH: American Conference of Governmental Industrial Hygienists
- OSHA: Occupational Safety and Health Administration
- NONE: None Established

8. HEALTH HAZARD DATA

EYE CONTACT:

Severe Eye Irritation: signs/symptoms can include redness, swelling, pain, tearing, cloudy appearance of the cornea, impaired vision and possible permanently impaired vision.

SKIN CONTACT:

Moderate Skin Irritation: signs/symptoms can include redness, swelling, itching, and dryness.

Prolonged or repeated exposure may cause:

Allergic Skin Reaction: signs/symptoms can include redness, swelling, blistering, and itching.

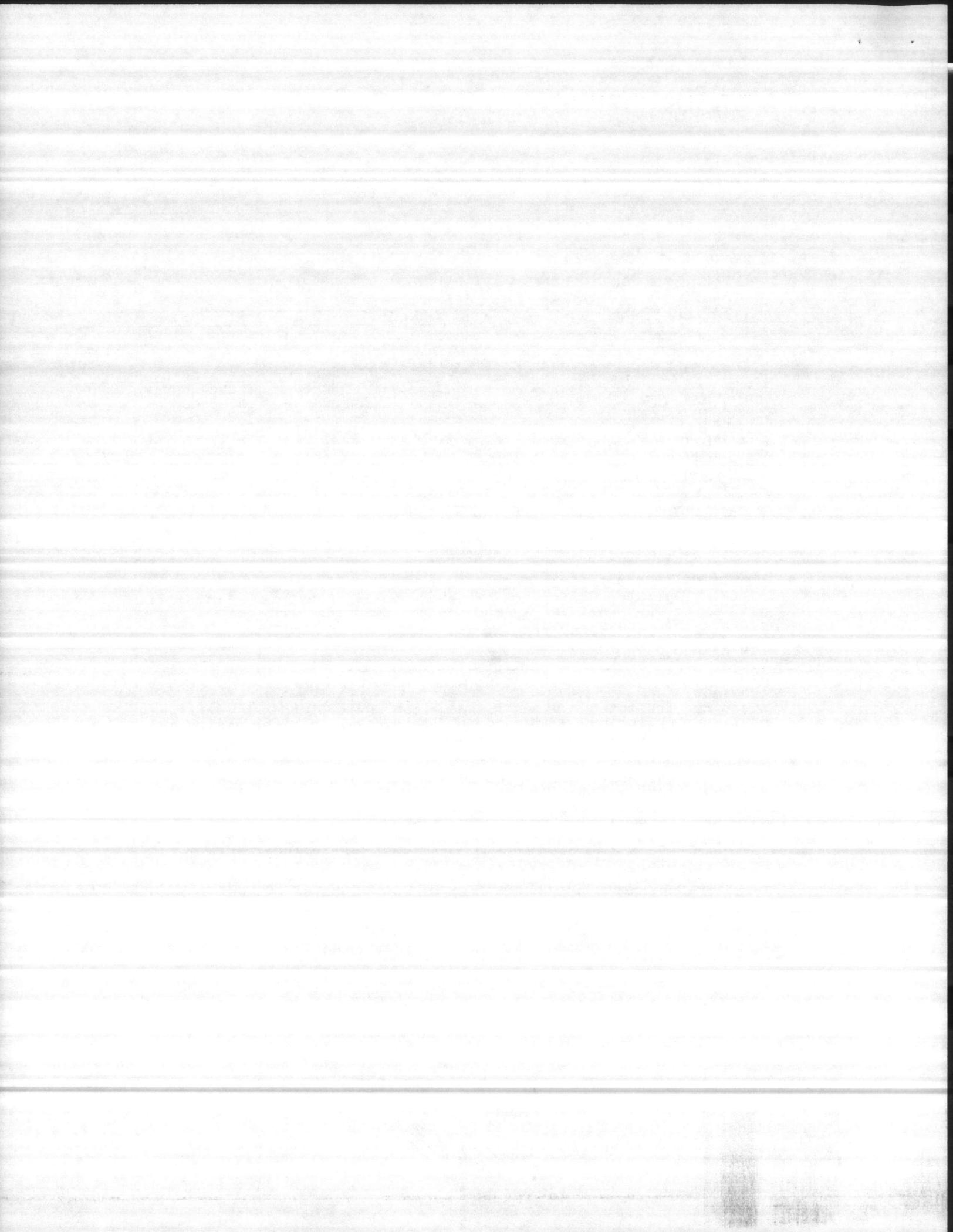
Skin Depigmentation: signs/symptoms are loss of pigment from the skin.

INHALATION:

Allergic Respiratory Reaction: signs/symptoms can include difficulty breathing, wheezing, tightness of chest, and respiratory failure.

Irritation (upper respiratory): signs/symptoms can include soreness of the nose and throat, coughing and sneezing.

WHILE THE FOLLOWING EFFECTS ARE ASSOCIATED WITH ONE OR MORE OF THE INDIVIDUAL INGREDIENTS IN THIS PRODUCT AND ARE REQUIRED TO BE INCLUDED ON THE MSDS BY THE U.S. OSHA HAZARD COMMUNICATION STANDARD, THEY ARE



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612/733-1110
Duns No.: 00-617-3082

01-09
9340

MATERIAL SAFETY
DATA SHEET

3M

MSDS: 3M BRAND CD-5 DEVELOPER
AUGUST 18, 1992

PAGE: 5 of 6

8. HEALTH HAZARD DATA (continued)

NOT EXPECTED EFFECTS DURING FORESEEABLE USE OF THIS PRODUCT.

Lung Damage: signs/symptoms can include coughing, difficulty breathing, wheezing, tightness in chest, congestion, and coughing up of blood.

IF SWALLOWED:

Low Blood Pressure: signs/symptoms can include dizziness and fainting.

Ringing in Ears.

Damage to Gastrointestinal Tissues: signs/symptoms can include pain, vomiting, nausea, abdominal tenderness, burns of mouth, difficulty swallowing, blood in vomitus, blood in feces, and ulceration.

Irritation of Gastrointestinal Tissues: signs/symptoms can include pain, vomiting, abdominal tenderness, nausea, blood in vomitus, and blood in feces.

Increased Heart Rate.

Nervous System Effects: signs/symptoms can include emotional changes, lack of coordination, tremors and sensory loss.

Repeated ingestion may cause:

Blood disorders: signs/symptoms can include prolonged weakness and fatigue.

Bone Marrow Depression: signs/symptoms can include prolonged weakness and fatigue.

Kidney Effects: signs/symptoms can include reduced urine volume, blood in urine and back pain.

Liver Effects: signs/symptoms can include yellow skin(jaundice) and tenderness of upper abdomen.

REPRODUCTIVE/DEVELOPMENTAL TOXINS:

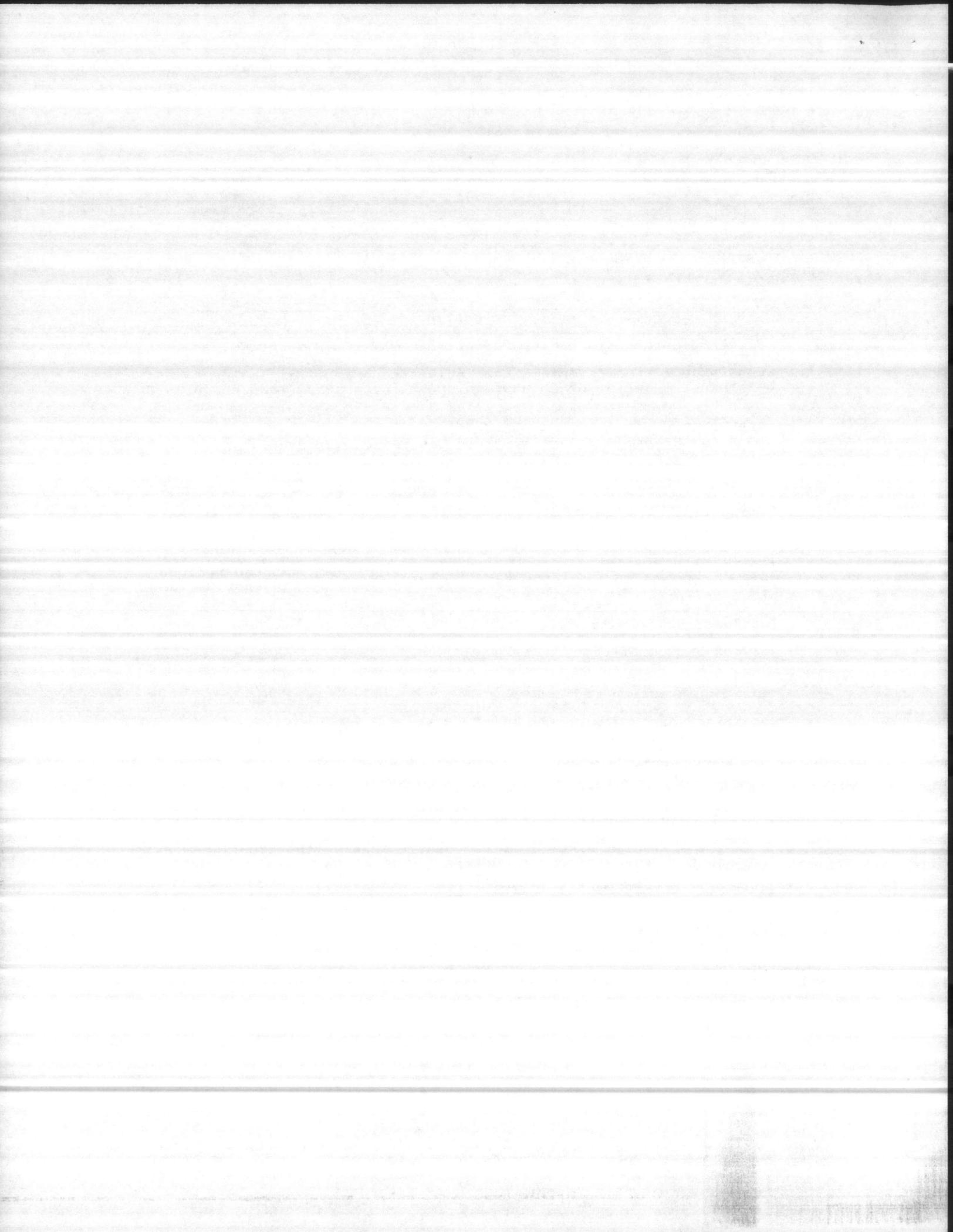
HYDROQUINONE (123-31-9) is a potential reproductive hazard causing reduced weight gain and spontaneous malformations in offspring of laboratory animals when ingested.

SECTION CHANGE DATES

FIRST AID SECTION CHANGED SINCE JULY 24, 1992 ISSUE

PRECAUT. INFO. SECTION CHANGED SINCE JUNE 5, 1992 ISSUE

HEALTH HAZD. DATA SECTION CHANGED SINCE JULY 24, 1992 ISSUE



3M General Offices

01-09
9341

3M Center
St. Paul, Minnesota 55144-1000
612/733-1110
Duns No.: 00-617-3082

MATERIAL SAFETY
DATA SHEET

3M

MSDS: 3M BRAND CD-5 DEVELOPER
AUGUST 18, 1992

PAGE: 6 of 6

Abbreviations: N/D - Not Determined N/A - Not Applicable

The information on this Data Sheet represents our current data and best opinion as to the proper use in handling of this material under normal conditions. Any use of the material which is not in conformance with this Data Sheet or which involves using the material in combination with any other material or any other process is the responsibility of the user.

