

Safety Data Sheet

Issue Date 03-Oct-2011

Revision Date: 07-Sep-2014

Version 1.0

1. IDENTIFICATION

Product Identifier

Product Name Med 1

Other Means of Identification

Product Code G00151

Recommended use of the Chemical and Restrictions on Use

Recommended Use Degreaser cleaner. For industrial use.

Details of the Supplier of the Safety Data Sheet

Dade Paper Company
9601 NW 112th Avenue
Miami, Florida 33178

Emergency Telephone Number

Company Phone Number Phone: 1-800-226-3233
Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Colorless

Physical State Liquid

Odor Characteristic

Classification

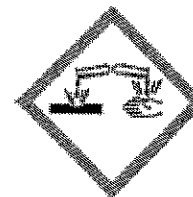
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1

Hazards Not Otherwise Classified (HNOC)

May be harmful if swallowed.

Signal Word

Danger



Hazard Statements

Causes severe skin burns and eye damage.

Precautionary Statements - Prevention

Do not breathe dust/fume/gas/mist/vapors/spray.
Wash face, hands and any exposed skin thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Water	7732-18-5	60-100
Ethylene Glycol n-Butyl Ether	111-76-2	3-7
Sodium Metasilicate	6834-92-0	3-7
Alcohols, C9-11 ethoxylated	68439-46-3	1-5
Sodium Xylene Sulfonate	1300-72-7	1-5

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove and discard contact lenses. Seek immediate medical attention/advice.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation persists, call a physician.
Inhalation	Remove to fresh air. Seek immediate medical attention/advice.
Ingestion	Rinse mouth. Drink plenty of water. Call a physician or poison control center immediately. Do not induce vomiting. Never give anything by mouth to an unconscious person.

Most Important Symptoms and Effects

Symptoms	Corrosive to eyes. Contact will cause irritation and redness to exposed areas. Prolonged contact may even cause severe skin irritation or mild burn. Chronic exposure may cause liver, kidney and/or blood disorders.
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Indication of any Immediate Medical Attention and Special Treatment Needed

Notes to Physician	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Water spray (fog). Carbon dioxide (CO₂). Dry chemical. Foam.

Unsuitable Extinguishing Media

Not determined.

Specific Hazards Arising from the Chemical

None known.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions	Use personal protective equipment as required.
Environmental Precautions	Avoid release to the environment.

Methods and Material for Containment and Cleaning Up

Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for Clean-Up	Collect spillage. Collect in a clean, dry waste container for disposal. Dilute remaining residue with water and neutralize with dilute acetic acid (vinegar).

7. HANDLING AND STORAGE**Precautions for Safe Handling**

Advice on Safe Handling	Wash thoroughly after handling. Use personal protection recommended in Section 8. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.
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Conditions for Safe Storage, Including any Incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep locked up and out of reach of children. Keep from freezing.
Incompatible Materials	Acids. Oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethylene Glycol n-Butyl Ether 111-76-2	TWA: 20 ppm	TWA: 50 ppm TWA: 240 mg/m ³ (vacated) TWA: 25 ppm (vacated) TWA: 120 mg/m ³ (vacated) S* S*	IDLH: 700 ppm TWA: 5 ppm TWA: 24 mg/m ³
Sodium Metasilicate 6834-92-0	2 mg/m ³	2 mg/m ³	-

Appropriate Engineering Controls

Engineering Controls	Ventilation systems. Eyewash stations. Showers.
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Individual Protection Measures, such as Personal Protective Equipment

Eye/Face Protection	Splash goggles or safety glasses.
Skin and Body Protection	Rubber, Nitrile, PVC, or other chemically resistant skin protection to prevent contact.
Respiratory Protection	Ensure adequate ventilation, especially in confined areas.
General Hygiene Considerations	Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on Basic Physical and Chemical Properties**

Physical State	Liquid	Odor	Characteristic
Appearance	Clear	Odor Threshold	Not determined
Color	Colorless		
Property	Values	Remarks • Method	
pH	12.5-13.0		
Melting Point/Freezing Point	~ 0 °C / ~32 °F		
Boiling Point/Boiling Range	~ 100 °C / ~212 °F		
Flash Point	Not applicable		
Evaporation Rate	Not determined		

Flammability (Solid, Gas)	n/a-liquid	
Upper Flammability Limits	Not determined	
Lower Flammability Limit	Not determined	
Vapor Pressure	Not determined	
Vapor Density	Not determined	
Specific Gravity	1.04	
Water Solubility	Completely soluble	@ 25 °C (77 °F)
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to Avoid

Keep out of reach of children. Keep from freezing.

Incompatible Materials

Acids. Oxidizing agents.

Hazardous Decomposition Products

When exposed to fire, produces normal products of combustion.

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Product Information

Eye Contact	Causes severe eye damage.
Skin Contact	Causes severe skin burns.
Inhalation	Avoid breathing vapors or mists.
Ingestion	May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Ethylene Glycol n-Butyl Ether 111-76-2	= 470 mg/kg (Rat)	= 2270 mg/kg (Rat) = 220 mg/kg (Rabbit)	= 2.21 mg/L (Rat) 4 h = 450 ppm (Rat) 4 h
Sodium Metasilicate 6834-92-0	= 600 mg/kg (Rat)	-	-
Alcohols, C9-11 ethoxylated 68439-46-3	= 1378 mg/kg (Rat)	> 2 g/kg (Rabbit)	-
Sodium Xylene Sulfonate 1300-72-7	= 7200 mg/kg (Rat)	-	-

Information on Physical, Chemical and Toxicological Effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-Term Exposure

Carcinogenicity Not classifiable as a human carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Ethylene Glycol n-Butyl Ether 111-76-2	A3	Group 3		

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 3 IARC components are "not classifiable as human carcinogens"

Numerical Measures of Toxicity

Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Ethylene Glycol n-Butyl Ether 111-76-2	-	1490: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static 2950: 96 h <i>Lepomis macrochirus</i> mg/L LC50	-	1698 - 1940: 24 h <i>Daphnia magna</i> mg/L EC50 1000: 48 h <i>Daphnia magna</i> mg/L EC50
Sodium Metasilicate 6834-92-0	-	210: 96 h <i>Brachydanio rerio</i> mg/L LC50 semi-static 210: 96 h <i>Brachydanio rerio</i> mg/L LC50	-	216: 96 h <i>Daphnia magna</i> mg/L EC50

Persistence/Degradability

Not determined

Bioaccumulation

Not determined

Mobility

Chemical Name	Partition Coefficient
Ethylene Glycol n-Butyl Ether 111-76-2	0.81

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

- Disposal of Wastes** Disposal should be in accordance with applicable regional, national and local laws and regulations.
- Contaminated Packaging** Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

DOT

Gallon Container or Larger: UN 3266, Corrosive Liquid, Basic, inorganic, NOS(Containing Potassium Hydroxide), 8, PG II
Quart Container or Smaller: Consumer Commodity ORM-D or Limited Quantity

IATA

IMDG

15. REGULATORY INFORMATION

NOT FOR SALE IN CALIFORNIA

International Inventories

Not determined

US Federal Regulations

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Reactive Hazard	Yes

SARA 313

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Ethylene Glycol n-Butyl Ether	111-76-2	3-7	1.0

US State Regulations

U.S. State Right-to-Know Regulations

Chemical Name	State List
Ethylene Glycol n-Butyl Ether 111-76-2	MA, NJ, PA

- | | |
|---|---|
| AZ – Arizona Ambient Air Quality Guidelines | IL – Illinois Toxic Air Contaminant- Carcinogenic |
| CT – Connecticut Hazardous Air Pollutants | MA – Massachusetts Right to Know List |
| CA – California Director’s List of Hazardous Substances | MN – Minnesota Hazardous Substances List |
| CAP65 – California Prop 65 | NJ – New Jersey Right to Know List |
| FL – Florida Substances List | PA – Pennsylvania Right to Know List |
| ID – Idaho Non-Carcinogen Toxic Air Pollutants | RI – Rhode Island Hazardous Substances List |

16. OTHER INFORMATION

NFPA	Health Hazards	Flammability	Instability	Special Hazards
	Not determined	Not determined	Not determined	Not determined
HMIS	Health Hazards	Flammability	Physical Hazards	Personal Protection
	3	0	0	Not determined

Issue Date	03-Oct-2011
Revision Date:	07-Sep-2014
Revision Note	New format Version 1.0

Disclaimer

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Keep Out of Reach of Children. For Industrial and Institutional Use Only.

*Denotes changes from last version.

End of Safety Data Sheet

Safety Data Sheet

Issue Date 03-Oct-2011

Revision Date: 07-Sep-2014

Version 1.0

1. IDENTIFICATION

Product Identifier

Product Name Grease 2

Other Means of Identification

Product Code G00152

Recommended Use of the Chemical and Restrictions on Use

Recommended Use Laundry stain remover. For industrial use.

Details of the Supplier of the Safety Data Sheet

Dade Paper Company
9601 NW 112th Avenue
Miami, Florida 33178

Emergency Telephone Number

Company Phone Number Phone: 1-800-226-3233
Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Yellow

Physical State Liquid

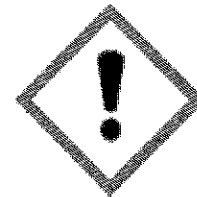
Odor Lemon

Classification

Skin corrosion/irritation.	Category 2
Serious eye damage/eye irritation.	Category 2A

Signal Word

Warning



Hazard Statements

Causes skin irritation.
Causes serious eye irritation.

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing and wash before reuse.
If skin irritation occurs: Get medical advice/attention.
SPECIFIC TREATMENT: Remove from exposure and treat symptoms.

Precautionary Statements - Storage

No other specific measures identified.

Precautionary Statements - Disposal

No other specific measures identified.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Water	7732-18-5	60-100
Alcohols, C9-11 ethoxylated	68439-46-3	1-5

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek medical attention/advice if irritation persists.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing. Wash contaminated clothing before reuse.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Ingestion	Rinse mouth. Drink plenty of water. Do not induce vomiting. If any discomfort persists, obtain medical attention.

Most Important Symptoms and Effects

Symptoms	May cause painful stinging or burning of eyes and lids, watering of eyes. Prolonged contact may cause skin irritation.
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Indication of any Immediate Medical Attention and Special Treatment Needed

Notes to Physician	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Water spray (fog). Carbon dioxide (CO2). Dry chemical. Foam.

Unsuitable Extinguishing Media

Not determined.

Specific Hazards Arising from the Chemical

None known.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions	Use personal protective equipment as required.
Environmental Precautions	Avoid release to the environment.

Methods and Material for Containment and Cleaning Up

Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for Clean-Up	Collect spillage. Collect in a clean, dry waste container for disposal. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Advice on Safe Handling

Wash thoroughly after handling. Use personal protection recommended in Section 8. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes. Observe good industrial hygiene practices.

Conditions for Safe Storage, Including Any Incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep locked up and out of reach of children. Keep from freezing.

Incompatible Materials

Strong acids. Oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
None Listed			

Appropriate Engineering Controls

Engineering Controls

Ventilation systems.

Individual Protection Measures, such as Personal Protective Equipment

Eye/Face Protection

Eye protection should be used when splashing may occur.

Skin and Body Protection

Wear protective gloves when handling this product.

Respiratory Protection

No protection is ordinarily required under normal conditions of use and with adequate ventilation.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	Liquid	Odor	Lemon
Appearance	Clear	Odor Threshold	Not determined
Color	Yellow		
Property	Values	Remarks • Method	
pH	12.0-12.5		
Melting Point/Freezing Point	~ 0 °C / ~32 °F		
Boiling Point/Boiling Range	~ 100 °C / ~212 °F		
Flash Point	Not applicable		Tag Open Cup
Evaporation Rate	Not determined		
Flammability (Solid, Gas)	n/a-liquid		
Upper Flammability Limits	Not determined		
Lower Flammability Limit	Not determined		
Vapor Pressure	Not determined		
Vapor Density	Not determined		
Specific Gravity	1.02		
Water Solubility	Completely soluble		@ 25 °C (77 °F)
Solubility in other solvents	Not determined		
Partition Coefficient	Not determined		
Auto-ignition Temperature	Not determined		
Decomposition Temperature	Not determined		
Kinematic Viscosity	Not determined		

Dynamic Viscosity	Not determined
Explosive Properties	Not determined
Oxidizing Properties	Not determined

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to Avoid

Keep out of reach of children. Keep from freezing.

Incompatible Materials

Strong acids. Oxidizers.

Hazardous Decomposition Products

When exposed to fire, produces normal products of combustion.

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Product Information

Eye Contact	Avoid contact with eyes.
Skin Contact	Avoid contact with skin.
Inhalation	Avoid breathing vapors or mists.
Ingestion	Do not taste or swallow.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Alcohols, C9-11 ethoxylated 68439-46-3	= 1378 mg/kg (Rat)	> 2 g/kg (Rabbit)	-

Information on Physical, Chemical and Toxicological Effects

Symptoms	Please see section 4 of this SDS for symptoms.
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Delayed and Immediate Effects as well as Chronic Effects from Short and Long-Term Exposure

Carcinogenicity	Not classifiable as a human carcinogen.
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Numerical Measures of Toxicity

Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea

Alcohols, C9-11 ethoxylated 68439-46-3	-	8.5mg/L (96HR) Pimephales promelas	-	5.3 mg/L (48hr) Daphnia
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Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Not determined.

Other Adverse Effects

Not determined.

13. DISPOSAL CONSIDERATIONS**Waste Treatment Methods****Disposal of Wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION**DOT**

Not regulated

IATA

Not regulated

IMDG

Not regulated

15. REGULATORY INFORMATION**International Inventories**

Not determined

US Federal Regulations**CERCLA**

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Potassium Hydroxide 1310-58-3	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

SARA 311/312 Hazard Categories

Acute Health Hazard

Yes

SARA 313

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Ethylene Glycol n-Butyl Ether	111-76-2	0.1-1	1.0

CWA (Clean Water Act)

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Potassium Hydroxide 1310-58-3	1000 lb			X

US State Regulations

U.S. State Right-to-Know Regulations

Chemical Name	State List
Potassium Hydroxide 1310-58-3	MA, NJ, PA
Ethylene Glycol n-Butyl Ether 111-76-2	MA, NJ, PA

AZ- Arizona Ambient Air Quality Guidelines

CT- Connecticut Hazardous Air Pollutants

CA- California Director's List of Hazardous Substances

CAP65- California Prop65

FL- Florida Substances List

ID- Idaho Non-Carcinogen Toxic Air Pollutants

IL – Illinois Toxic Air Contaminant- Carcinogenic

MA – Massachusetts Right to Know List

MN – Minnesota Hazardous Substances List

NJ – New Jersey Right to Know List

PA – Pennsylvania Right to Know List

RI – Rhode Island Hazardous Substances List

16. OTHER INFORMATION**NFPA****Health Hazards****Flammability****Instability****Special Hazards****HMIS**

Not determined

Not determined

Not determined

Not determined

Health Hazards**Flammability****Physical Hazards****Personal Protection**

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0

Not determined

Issue Date

03-Oct-2011

Revision Date:

07-Sep-2014

Revision Note

New format Version 1.0

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*Denotes changes from last version.

End of Safety Data Sheet

Safety Data Sheet

Issue Date 03-Oct-2011

Revision Date: 07-Sep-2014

Version 1.0

1. IDENTIFICATION

Product Identifier

Product Name Protein 3

Other Means of Identification

Product Code G00153

Recommended Use of the Chemical and Restrictions on Use

Recommended Use Laundry stain remover. For industrial use.

Details of the Supplier of the Safety Data Sheet

Dade Paper Company
9601 NW 112th Avenue
Miami, Florida 33178

Emergency Telephone Number

Company Phone Number Phone: 1-800-226-3233
Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Blue

Physical State Liquid

Odor None

Classification

Serious Eye Damage/Eye Irritation

Category 2 Sub-category B

Signal Word

Warning

Hazard Statements

Causes eye irritation.

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling.

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Precautionary Statements - Storage

No other specific measures identified.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant.

Other Hazards

None known.

Unknown Acute Toxicity

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Water	7732-18-5	60-100
Diethylene Glycol Monomethyl Ether	111-77-3	1-5
Poly(Oxyethylene/Oxypropylene) Glycol Copolymer (Polyoxyalkylene Glycol Polyether Polyol)	9003-11-6	1-5

Sodium Thiosulfate	10102-17-7	1-5
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If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If irritation develops or persists seek medical attention.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes.
Inhalation	Remove to fresh air.
Ingestion	Clean mouth with water and drink afterwards plenty of water. If any discomfort persists, obtain medical attention.

Most Important Symptoms and Effects

Symptoms Contact with eyes may cause irritation and redness.

Indication of Any Immediate Medical Attention and Special Treatment Needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Water spray (fog). Carbon dioxide (CO2). Water. Foam.

Unsuitable Extinguishing Media

Not determined.

Specific Hazards Arising from the Chemical

None known.

Hazardous Combustion Products

Normal products of combustion.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions	Wear protective clothing as described in Section 8 of this safety data sheet.
Environmental Precautions	Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13, Disposal Considerations, for additional information. See Section 12 for additional Ecological Information.

Methods and Material for Containment and Cleaning Up

Methods for Containment	Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.
Methods for Clean-Up	Contain and collect with an inert absorbent and place into an appropriate container for disposal. Rinse area with clean water and dry before permitting traffic.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Advice on Safe Handling

Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. For industrial and commercial use only. Avoid contact with skin, eyes or clothing.

Conditions for Safe Storage, Including Any Incompatibilities

Storage Conditions

Keep container tightly closed and store in a cool, dry and well-ventilated place. Protect from freezing. Keep out of the reach of children.

Incompatible Materials

None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
None known			

Appropriate Engineering Controls

Engineering Controls

Ensure adequate ventilation, especially in confined areas. Good general room ventilation (equivalent to outdoors) should be adequate under normal conditions. Eyewash stations. Showers.

Individual Protection Measures, such as Personal Protective Equipment

Eye/Face Protection

Eye protection should be used when splashing may occur.

Skin and Body Protection

Wear protective gloves when handling this product.

Respiratory Protection

Under normal conditions, respirator is not normally required.

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	Liquid	Odor	No added fragrance
Appearance	Clear	Odor Threshold	Not determined
Color	Blue		

<u>Property</u>	<u>Values</u>	<u>Remarks - Method</u>
pH (concentrate)	9.4-9.9	
Melting Point/Freezing Point	Approximately 32°F	
Boiling Point/Boiling Range	Approximately 212°F	
Flash Point	Not applicable	
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	Liquid-not applicable	
Upper Flammability Limits	Not applicable	
Lower Flammability Limit	Not applicable	
Vapor Pressure	Not determined	
Vapor Density	Not determined	
Specific Gravity	1.01	
Water Solubility	Completely soluble	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not an explosive	

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to Avoid

Keep out of reach of children. Avoid excessive heat, sparks, or open flames. Keep from freezing.

Incompatible Materials

Strong oxidizing agents, acids, and alkalis.

Hazardous Decomposition Products

Thermal decomposition may produce oxides of carbon, sodium, and hydrogen sulfide.

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Product Information

Eye Contact	Avoid contact with eyes.
Skin Contact	Avoid contact with skin.
Inhalation	Avoid breathing vapors or mists.
Ingestion	Do not taste or swallow.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Diethylene Glycol Monomethyl Ether 111-77-3	5500mg/kg (Rat)	650mg/kg (Rabbit)	-
Poly(Oxyethylene/Oxypropylene) Glycol Copolymer (Polyoxyalkylene Glycol Polyether Polyol) 9003-11-6	>2000mg/kg (Rat)	-	-
Sodium Thiosulfate 10102-17-7	2700 mg/kg (Mouse)	-	-

Information on Physical, Chemical and Toxicological Effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-Term Exposure

Carcinogenicity This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Numerical Measures of Toxicity

Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity

Protein 3

Revision Date: 07-Sep-2014

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Diethylene Glycol Monomethyl Ether 111-77-3	-	-	-	-
Poly(Oxyethylene/Oxypropylene) Glycol Copolymer (Polyoxyalkylene Glycol Polyether Polyol) 9003-11-6	>100mg/L (72hr)	>100mg/L (96hr)	-	>100mg/L (48hr)
Sodium Thiosulfate 10102-17-7	-	-	-	-

Persistence/Degradability

Not expected to persist.

Bioaccumulation

Not expected to bioaccumulate.

Mobility

Not determined

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS**Waste Treatment Methods****Disposal of Wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION**Note**

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

Not regulated. (NOI Non-Hazardous)

IATA

Not regulated.

IMDG

Not regulated.

15. REGULATORY INFORMATION**International Inventories**

Not determined

Legend:*TSCA - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**ENCS - Japan Existing and New Chemical Substances**IECSC - China Inventory of Existing Chemical Substances**KECL - Korean Existing and Evaluated Chemical Substances**PICCS - Philippines Inventory of Chemicals and Chemical Substances*

CERCLA
None Listed

SARA 311/312 Hazard Categories
Immediate (Acute) Health.

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains the following chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:
Diethylene Glycol Monomethyl Ether: 2%

CWA (Clean Water Act)
None known.

US State Regulations
None known

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations
The following ingredients appear on various state right to know lists and/or California's Proposition 65 List:

Chemical Name	State List
Diethylene Glycol Monomethyl Ether 111-77-3	MA, PA
Ethylene Oxide 75-21-8	CAP65

- AZ- Arizona Ambient Air Quality Guidelines
- CT- Connecticut Hazardous Air Pollutants
- CA- California Director's List of Hazardous Substances
- CAP65- California Prop65
- FL- Florida Substances List
- ID- Idaho Non-Carcinogen Toxic Air Pollutants
- IL- Illinois Toxic Air Contaminant- Carcinogenic
- MA- Massachusetts Right to Know List
- MN- Minnesota Hazardous Substances List
- NJ- New Jersey Right to Know List
- PA- Pennsylvania Right to Know List
- RI- Rhode Island Hazardous Substances List

16. OTHER INFORMATION

<u>NFPA</u>	Health Hazards	Flammability	Instability	Special Hazards
	Not determined	Not determined	Not determined	Not determined
<u>HMIS</u>	Health Hazards	Flammability	Physical Hazards	Personal Protection
	1	0	0	Not determined

Issue Date: 03-Oct-2011
Revision Date: 07-Sep-2014
Revision Note: Update format Version 1.0

Disclaimer
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Keep Out of Reach of Children. For Industrial and Institutional Use Only.

*Denotes changes from last version.

End of Safety Data Sheet

Safety Data Sheet

Issue Date 03-Oct-2011

Revision Date: 06-Oct-2014

Version 1.0

1. IDENTIFICATION

Product Identifier

Product Name Iron 4

Other Means of Identification

Product Code G00154

Recommended use of the Chemical and Restrictions on Use

Recommended Use Rust and mineral stain remover. For industrial use.

Details of the Supplier of the Safety Data Sheet

Dade Paper Company
9601 NW 112th Avenue
Miami, Florida 33178

Emergency Telephone Number

Company Phone Number Phone: 1-800-226-3233
Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Colorless

Physical State Liquid

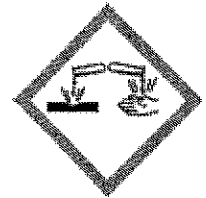
Odor None

Classification

Acute toxicity - Oral	Category 5
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Corrosive to Metals	Category 1

Signal Word

Danger



Hazard Statements

Maybe harmful if swallowed.
Causes severe skin burns and eye damage.
May be corrosive to metals.

Precautionary Statements - Prevention

Do not breathe dust/fume/gas/mist/vapors/spray.
Wash face, hands and any exposed skin thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
Keep only in original container.

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or doctor/physician.
Specific measures: Remove from exposure and apply calcium gluconate gel 2.5%.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.
IN CASE OF SPILL: Absorb spillage to prevent material damage.

Precautionary Statements - Storage

Store locked up.
Store in corrosive resistant container with a resistant inner liner.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant.

Other Hazards

None known.

Unknown Acute Toxicity

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Water	7732-18-5	60-100
Ammonium Bifluoride	1341-49-7	3-7
Oxalic Acid	6153-56-6	1-5

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret

4. FIRST-AID MEASURES**First Aid Measures**

General Advice	If exposed or concerned: Get medical advice/attention. When seeking medical attention, emphasize exposure to ammonium bifluoride.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove and discard contact lenses. Get immediate medical advice/attention.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing. Wash contaminated clothing before reuse. Get medical attention immediately.
Inhalation	Remove to fresh air. Get medical attention immediately.
Ingestion	Rinse mouth. Drink plenty of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Seek medical attention immediately.

Most Important Symptoms and Effects

Symptoms	Irritation and corrosive burns to mouth, throat, and stomach. Corrosive to eyes. Prolonged contact may even cause severe skin irritation or mild burn. May cause hypocalcemia. Can also cause bone and joint changes in humans (Fluorosis).
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Indication of any Immediate Medical Attention and Special Treatment Needed

Notes to Physician	This product contains ammonium bifluoride.
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5. FIRE-FIGHTING MEASURES**Suitable Extinguishing Media**

Water spray (fog). Carbon dioxide (CO2). Dry chemical. Foam.

Unsuitable Extinguishing Media

Not determined.

Specific Hazards Arising from the Chemical

Contents are corrosive and all personal contact must be avoided.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES**Personal Precautions, Protective Equipment and Emergency Procedures**

Personal Precautions Use personal protective equipment as required.

Environmental Precautions Avoid release to the environment.

Methods and Material for Containment and Cleaning Up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up Collect spillage. Collect in a clean, dry waste container for disposal. Dilute with water and clean up.

7. HANDLING AND STORAGE**Precautions for Safe Handling**

Advice on Safe Handling Wash thoroughly after handling. Use personal protection recommended in Section 8. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Use only in well-ventilated areas.

Conditions for Safe Storage, including any Incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep locked up and out of reach of children. Keep only in original container. Keep from freezing.

Incompatible Materials Acids. Bases. Oxidizing agents. Uncontrolled contact with water.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ammonium Bifluoride 71341-49-7	TWA: 2.5 mg/m ³	TWA: 2.5 mg/m ³	-
Oxalic Acid 6153-56-6	TWA: 1 mg/m ³	TWA: 1 mg/m ³ STEL: 2 mg/m ³	TWA: 1 mg/m ³ STEL: 2 mg/m ³

Appropriate Engineering Controls

Engineering Controls Ventilation systems. Eyewash stations. Showers.

Individual Protection Measures, such as Personal Protective Equipment

Eye/Face Protection Splash goggles or safety glasses.

Skin and Body Protection Rubber, Nitrile, PVC, or other chemically resistant skin protection to prevent contact.

Respiratory Protection Ensure adequate ventilation, especially in confined areas.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	Liquid	Odor	None
Appearance	Clear	Odor Threshold	Not determined
Color	Colorless		
Property	Values	Remarks • Method	
pH	4.5-5.0		
Melting Point/Freezing Point	Not known		
Boiling Point/Boiling Range	100 °C / 212 °F		
Flash Point	Not applicable		
Evaporation Rate	Not determined		
Flammability (Solid, Gas)	n/a-liquid		
Upper Flammability Limits	Not determined		
Lower Flammability Limit	Not determined		
Vapor Pressure	Not determined		
Vapor Density	Not determined		
Specific Gravity	1.03		
Water Solubility	Completely soluble	@ 25 °C (77 °F)	
Solubility in other solvents	Not determined		
Partition Coefficient	Not determined		
Auto-ignition Temperature	Not determined		
Decomposition Temperature	Not determined		
Kinematic Viscosity	Not determined		
Dynamic Viscosity	Not determined		
Explosive Properties	Not determined		
Oxidizing Properties	Not determined		

10. STABILITY AND REACTIVITY**Reactivity**

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to Avoid

Keep out of reach of children. Keep from freezing.

Incompatible Materials

Acids. Bases. Oxidizing agents. Uncontrolled contact with water.

Hazardous Decomposition Products

Thermal decomposition may release toxic ammonia fumes. It may generate toxic fluorides and hydrogen fluorides. Decomposition by reaction with certain metals releases flammable and explosive hydrogen gas.

11. TOXICOLOGICAL INFORMATION**Information on Likely Routes of Exposure****Product Information**

Eye Contact	Causes severe eye damage.
Skin Contact	Causes severe skin burns.
Inhalation	Do not inhale.
Ingestion	May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Ammonium Bifluoride 1341-49-7	= 31 mg/kg (Rat) (Intraperitoneal)	-	= 1276 ppm (Rat) 1 h
Oxalic Acid 6153-56-6	= 7500 mg/kg (Rat)	-	-

Information on Physical, Chemical and Toxicological Effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-Term Exposure

Carcinogenicity Not a human carcinogen.

Numerical Measures of Toxicity

Not determined

Unknown Acute Toxicity None known.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life with long lasting effects.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Ammonium Bifluoride 1341-49-7	-	> 100 mg/L (96hr)	-	-
Oxalic Acid 6153-56-6	-	= 325 mg/L	-	-

Persistence/Degradability

Not determined

Bioaccumulation

Not determined

Mobility

Not determined.

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

Note

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DOT

UN3264, Corrosive Liquid, Acidic, Inorganic, NOS (Containing Ammonium Bifluoride and Oxalic Acid), 8, PG II

IATA

MDG

Marine Pollutant

This material may meet the definition of a marine pollutant

15. REGULATORY INFORMATION

International Inventories

Not determined

US Federal Regulations

CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Ammonium Bifluoride 1341-49-7	1000lb	100 lb	RQ 100 lb final RQ RQ 45.4 kg final RQ

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Reactive Hazard	Yes

SARA 313

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Ammonium Bifluoride	1341-49-7	3-7	1.0

CWA (Clean Water Act)

None listed.

US State Regulations

U.S. State Right-to-Know Regulations

Chemical Name	State List
Ammonium Bifluoride 1341-49-7	MA, NJ, PA

AZ – Arizona Ambient Air Quality Guidelines
 CT – Connecticut Hazardous Air Pollutants
 CA – California Director’s List of Hazardous Substances
 CAP65 – California Prop 65
 FL – Florida Substances List
 ID – Idaho Non-Carcinogen Toxic Air Pollutants

IL – Illinois Toxic Air Contaminate
 MA – Massachusetts Right to Know List
 MN – Minnesota Hazardous Substances List
 NJ – New Jersey Right to Know List
 PA – Pennsylvania Right to Know List
 RI – Rhode Island Hazardous Substances List

16. OTHER INFORMATION

<u>NFPA</u>	Health Hazards Not determined	Flammability Not determined	Instability Not determined	Special Hazards Not determined
<u>HMIS</u>	Health Hazards 3	Flammability 0	Physical Hazards 0	Personal Protection Not determined

Issue Date	03-Oct-2011
Revision Date:	06-Oct-2014
Revision Note	New format Version 1.0

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