

Appendix E

Material Safety Data Sheets (MSDS)

Material Safety Data Sheets

MSDS:00013

Date Created:04/16/00

Worldwide Beauty Care

(Clairol, Inc.; Matrix Essentials, Inc.; Duart Labs; Redmond Products, Inc.)

Bristol-Myers Squibb Company

One Blachley Road

Stamford, CT 06922

Emergency Telephone Number:

(203) 357-5678

Transportation Emergency:

Call Chemtrec 1-800-424-9300

This sheet has been prepared in accordance with the Requirements of the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Section I - Categorization

Product Name: Permanent Wave Waving Lotions

Pertinent Text: Non-flammable water-like liquids containing ammonium thioglycolate with conditioners, preservatives and fragrance.

Product Names: Gentle Motion Waving Lotion, Opticolor Wave Waving Formula, Opticurl Waving Lotion, Perfecto Normal and Tinted Hair Waving Lotions, Synerfusion Waving Lotion, Systeme Biolage Acid Wave Waving Lotion, Therna-Vantage Controlled Exothermic Waving Lotions for Tinted and Normal Hair, VaVoom Volumizing Soft Wave Phase I

Section II - Ingredients Identity/Exposure Limits

Permanent Wave Waving Lotions generally contain the following hazardous ingredients (1% concentration or greater; 0.1% for carcinogens):

CTFA NAME

AMMONIUM HYDROXIDE

EXPOSURE LIMIT: 25 PPM TLV, 35 PPM STEL, 50 PPM PEL, AS AMMONIA GLYCERIN

EXPOSURE LIMIT: AS A MIST 10 MG/M³TLV, 15 MG/M³TOTAL; 5 MG/M³RESPIRABLE OSHA PEL

ETHANOLAMINE

EXPOSURE LIMIT: 3 PPM TLV, PEL, 6 PPM STEL AMMONIUM THIOLYCOLATE

CYSTEINE HCL

DIAMMONIUM DITHIODIGLYCOLATE

UREA57136

CAS#

1336216

56815

141435

5421465

52891

68223938

Section III - Physical/Chemical CharacteristicsSpecific Gravity (H₂O = 1): 1.01-1.02

pH: 8.5-9.0

Solubility in Water: Highly soluble.

Appearance and Odor: Yellowish water-like liquids.
Slight ammoniacal and
characteristic mercaptan thio odor.

Section IV - Fire and Explosion**Hazard Data**

Flashpoint: N/A

Unit: N/A

Type: Not applicable.

Method: Not applicable.

Fire Fighting Procedures:

Extinguish fires with water ABC all-purpose or CO₂ extinguisher. The type of extinguisher used should be in conformance with local fire regulations.

Unusual Fire and Explosion Hazards:

On thermal decomposition can release hydrogen sulfide sulfur oxides and ammonia.

Figure E-1 An example of a Material Safety Data Sheet (MSDS) for World Wide Beauty Care permanent waving solution (page 1).

Physical Hazards

None.

Section V—Reactivity Data

Stability:

Stable.

Conditions to Avoid:

Metallic bowls or stirrers.

Incompatibility (Materials to Avoid): Heavy metals; oxidizing materials and acids.

Hazardous Decomposition or ByProducts: Can release hydrogen sulfide; sulfur oxides and ammonia.

Section VI—Health Hazards and Hazard Data

The TLV of the mixture has not been established.

1. Effects of Acute Accidental Exposure

Potential eye irritant.

Skin Contact: Potential skin irritant.

Skin Sensitizer: May induce hypersensitivity and elicit reactions in sensitized people.

Inhalation: Respiratory tract irritant due to ammonia and mercaptan (thio) vapors.

Ingestion: Moderately toxic.

2. Effects of Chronic Exposure For purposes of chronic exposure under the OSHA Hazard Communication Standard this is an untested mixture. These products have been used extensively by consumers. Worldwide Beauty Care is not aware of any significant adverse reaction provided good work practices are observed (wash off skin, remove contaminated clothing, use good ventilation). Release of ammonia vapors may result in irritation of the mucous membranes of the respiratory tract. Published data indicate low level skin sensitization as a result of repeated heavy exposure principally in beauticians.

3. Carcinogen Status: OSHA: No NTP: No IARC: No

4. Route of Entry: Inhalation: Yes Ingestion: Yes Skin: Yes

5. Pre-existing dermatitis would likely be made worse by exposure to these products.

6. Emergency and First Aid Procedures

Eye Contact: Remove contact lenses if used. Flush immediately with plenty of water for 15 minutes. Get medical attention IMMEDIATELY.

Skin Contact: If spilled wash skin immediately with soap and water (do not use solvents). Change into clean clothing. If allergic reaction develops contact dermatologist.

Inhalation: Remove person to fresh air. Increase ventilation.

Ingestion: Rinse out mouth with water and administer large amounts of milk. Contact Employee Health Services immediately.

Section VII—Precautions for Safe Handling and Use**Steps to be taken in Case Material is released or Spilled:**

Contain spill and promptly clean up. Flush with water and wipe with towel or rinse to drain. Floor can be slippery when wet.

Waste Disposal Method:

Disposal should be in accordance with all applicable local state and federal regulations.

Precautions to be Taken in Handling and Storage:

Store products in even normal temperatures. Keep containers tightly closed. Keep out of reach of children.

Section VIII—Control Measures

Ventilation: Should be adequate to avoid concentration of irritating vapors.

Hand Protection: Use impervious gloves to avoid possible skin irritation or sensitization.

Eye Protection: Avoid contact with eyes. Use protective eyewear if splashing is possible.

Other Types of Protection: None.

Respiratory Protection: Avoid inhalation.

Work Hygienic Practices: Always follow good hygienic work practices. Avoid all skin, eye, and clothing contact with products. In case of contact rinse thoroughly with water. Promptly clean up all spills.

Section IX—Transportation**Information**

DOT Class: Not regulated.

IMDG: Not regulated.

IATA/ICAO: Not regulated.

Figure E-2 An example of a Material Safety Data Sheet (MSDS) for World Wide Beauty care permanent waving solution (page 2).

Material Safety Data Sheet

MSDS: 00020
Date Approved: 11/1/2000

Worldwide Beauty Care
 (Clairol, Inc.; Duart Labs; Redmond Products, Inc.)
 Bristol-Myers Squibb Company
 One Blachley Road
 Stamford, CT 06922

Emergency Telephone Number:
 (203) 357-5678

Transportation Emergency:
 Call Chemtrec 1-800-424-9300

This sheet has been prepared in accordance with the Requirements of the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Section I - Categorization

Category: Relaxers.
 Alkali metal hydroxides.
Product Names: Textures and Tones

Section II - Ingredients/Identity Exposure Limits

Relaxers generally contain the following hazardous ingredients (1% concentration or greater; 0.1% for carcinogens):

| CTFA NAME | CAS# |
|---|-----------|
| PROPYLENE GLYCOL | 57556 |
| PETROLATUM | 8027325 |
| CETYL ALCOHOL | 36653824 |
| MINERAL OIL | 8012951 |
| EXPOSURE LIMIT: 5 mg/m ³ TLV, PEL as an Oil Mist | |
| POLYSORBATE 60 | 9005678 |
| SODIUM HYDROXIDE | 1310732 |
| EXPOSURE LIMIT: C 2 mg/m ³ , PEL | |
| CETEARYL ALCOHOL | 67762270 |
| CALCIUM HYDROXIDE | 1305620 |
| FRAGRANCE | 999999999 |
| POLYQUATERNIUM-28 | 98000022 |
| GUANIDINE CARBONATE | 593851 |

Section III - Physical/Chemical Characteristics

Specific Gravity (H₂O=1): Approximately 0.9

pH: N/A

Solubility in Water: Partly miscible.

Appearance and Odor: Thick, white cremes with fragranced odor.

TRADE
MSDS #20

Page 1 of 3

Figure E-3 An example of a Material Safety Data Sheet (MSDS) for alkali metal hydroxide hair relaxers (page 1).

Section IV - Fire and Explosion Hazard Data**Flashpoint:** N/A**Unit:** N/A**Type:** Not applicable.**Method:** Not applicable.**Fire Fighting Procedures:**

Extinguish fires with ABC all-purpose extinguisher. The type of extinguisher used should be in conformance with local fire regulations. Fire fighters should use self contained breathing apparatus in enclosed areas.

Unusual Fire and Explosion Hazards:

None.

Physical Hazards:

None.

Section V - Reactivity Data**Stability:**

Stable.

Conditions to Avoid:

Heat and sunlight.

Incompatibility (Materials to Avoid):

Acids; metal containers.

Hazardous Decomposition or By Products:

None.

Section VI - Health Hazards and Hazard Data

The TLV of the mixture has not been established.

1. Effects of Acute Accidental Exposure**Eye Contact:**

Severe eye irritant. CORROSIVE.

Skin Contact:

CORROSIVE.

Inhalation:

Not likely to be inhaled.

Ingestion:

Will result in severe irritation to mouth, esophagus and gastrointestinal tract.

2. Effects of Chronic Exposure

For purposes of chronic exposure under the OSHA Hazard Communication Standard, this is an untested mixture. No chronic adverse effects are expected. Target Organs: These products contain an ingredient which have been shown to affect tissues or organs under high levels of exposure in animal studies not encountered in normal use. Propylene Glycol: Kidney.

3. Carcinogen Status:

OSHA: No

NTP: No

IARC: No

4. Route of Entry:

Inhalation: No

Ingestion: Yes

Skin: Yes

5. Pre-existing dermatitis would likely be made worse by exposure to these products.**TRADE****MSDS #20****Page 2 of 3**

Figure E-4 An example of a Material Safety Data Sheet (MSDS) for alkali metal hydroxide hair relaxers (page 2).

6. Emergency and First Aid Procedures**Eye Contact:**

Remove contact lenses, if used. Flush immediately with plenty of water for 15 minutes. Get medical attention IMMEDIATELY.

Skin Contact:

If spilled, wash skin immediately with soap and water (do not use solvents). Change into clean clothing. If skin reaction develops, contact dermatologist.

Inhalation:

Remove person to fresh air. Increase ventilation.

Ingestion:

Rinse out mouth with water and administer large amounts of milk. Contact Poison Control Center.

Section VII - Precautions for Safe Handling and Use**Steps to be taken in Case Material is released or Spilled:**

Contain spill and promptly clean up. Flush with water and wipe with towel or rinse to drain. Floor can be slippery when wet.

Waste Disposal Method:

Products covered by this MSDS, in their original form, are considered non-hazardous waste according to RCRA. Additionally, disposal should be in accordance with all applicable Local, State and Federal Regulations.

Precautions to be Taken in Handling and Storage:

Store products in even, normal temperatures. Keep containers tightly closed.

Section VIII - Control Measures**Ventilation:**

Exhaust system ventilation should be adequate to avoid buildup of vapors.

Hand Protection:

CORROSIVE. Use impervious gloves to avoid possible skin irritation or sensitization.

Eye Protection:

Severely irritating/corrosive. Avoid contact with eyes.

Other Types of Protection:

Not applicable.

Respiratory Protection:

Avoid inhalation.

Work Hygienic Practices:

Always follow good hygienic work practices. Avoid eye, clothing, and prolonged skin contact with products. In case of contact, rinse thoroughly with water. Promptly clean up all spills.

Section IX - Transportation Information

DOT Class: Consumer Commodity ORMD up to 2-1/1 lbs., Over 2-1/2 lbs: Corrosive solid, basic, organic, N.O.S., 8, UN3263, PGII, (Contains Sodium Hydroxide).

IMDG: Corrosive Solid Basic Organic N.O.S., (Contains Sodium Hydroxide), 8, UN 3263, PGII

IATA/ICAO: Corrosive Solid, Basic, Organic, n.o.s. (contains sodium hydroxide) 8, UN3263, Packing Instruction: Passenger Aircraft 814 II Cargo Aircraft 816 II

Figure E-5 An example of a Material Safety Data Sheet (MSDS) for alkali metal hydroxide hair relaxers (page 3).

Kenra, LLC 6501 Julian Ave., Indianapolis, IN 46219
Product Name QP BLACK INDIGO COLOR
Product Description Color

MSDS Number: 560804

Revision Date: 17-Jul-00



Section 2 - Hazardous Ingredients / Identity Information

| Hazardous Components | CAS Number | TLV or PEL | Other Limits | Percentage |
|----------------------|------------|------------|--------------|------------|
| None | N/A | N/A | N/A | N/A |

Section 3 - Physical/Chemical Characteristics

| | | | |
|--------------------------------|-------------------------------------|--|-------|
| Boiling Point | N/A | Specific Gravity H20 = 1 | 1.005 |
| Vapor Pressure (mm Hg.) | N/A | Melting Point | N/A |
| Vapor Density (AIR = 1) | N/A | Evaporation Point (Butyl Acetate = 1) | N/A |
| Solubility in Water | Semi | | |
| Appearance and Odor | Bluish black opaque / neutral odor. | | |

Section 4 - Fire and Explosion Hazard

| | | | |
|---|-------------------------|------------|------------|
| Flash Point (Method Used) | Flammable Limits | LEL | UEL |
| N/A | N/A | N/A | N/A |
| Extinguishing Media | | | |
| All purpose extinguisher. | | | |
| Special Fire Fighting Procedures | | | |
| N/A | | | |
| Unusual Fire and Explosion Hazards | | | |
| N/A | | | |

Section 5 - Reactivity Data

| | | |
|--|---|----------------------------|
| Stability | Unstable <input type="checkbox"/> Stable <input checked="" type="checkbox"/> | Conditions to Avoid |
| | | N/A |
| Incompatibility (Materials to Avoid) | | |
| N/A | | |
| Hazardous Decomposition or Byproducts | | |
| N/A | | |
| Hazardous Polymerization | May Occur <input type="checkbox"/> May Not Occur <input checked="" type="checkbox"/> | Conditions to Avoid |
| | | N/A |

Figure E-6 An example of a Material Safety Data Sheet (MSDS) for semi-permanent haircolor.
 (Reprinted with permission of Kenra LLC.)

Material Safety Data Sheet-PPD

MSDS:0001C

Date Approved:

Worldwide Beauty Care
(Clairol, Inc.; Duart Labs; Redmond Products, Inc.)
Bristol-Myers Squibb Company
One Blachley Road
Stamford, CT 06922

Emergency Telephone Number:

(203) 357-5678

Transportation Emergency:

Call Chemtrec 1-800-424-9300

This sheet has been prepared in accordance with the Requirements of the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Section I - Categorization

Product Category: Ammoniacal Oxidation (Permanent) Hair Colors, Flammable

Pertinent Text: Oxidation Hair Colors contain low concentrations of dye intermediates in an aqueous base. They are mixed with the developer (hydrogen peroxide) before use. A separate MSDS exists for hydrogen peroxide.

Product Names: Miss Clairol, Summer Blonde Lightener, Complements Gel Color Permanent, Creme Toner

Section II - Ingredients Identity/Exposure Limits

Ammoniacal Oxidation (Permanent) Hair Colors, Flammable generally contain the following hazardous ingredients (1% concentration or greater; 0.1% for carcinogens):

| CTFA Name | CAS Number |
|--|------------|
| M-AMINOPHENOL | 591275 |
| N,N-BIS(2-HYDROXYETHYL)-P-PHENYLENEDIAMINE SULFATE | 58262445 |
| RESORCINOL | 108463 |
| EXPOSURE LIMIT:10 ppm TLV, 20 ppm STEL | |
| P-PHENYLENEDIAMINE | 106503 |
| EXPOSURE LIMIT:0.1 mg/m3 TLV, PEL, SKIN, OSHA | |
| PROPYLENE GLYCOL | 57556 |
| AMMONIUM HYDROXIDE | 1336216 |
| EXPOSURE LIMIT:25 ppm TLV, 35 ppm STEL, 50 ppm PEL, as AMMONIA | |
| ETHOXYDIGLYCOL | 111900 |
| ETHANOLAMINE | 141435 |
| EXPOSURE LIMIT:3 ppm TLV, PEL, 6 ppm STEL | |
| NONOXYNOL-4 | 7311275 |
| OLEALKONIUM CHLORIDE | 37139994 |
| HEXYLENE GLYCOL | 107415 |
| EXPOSURE LIMIT:25 ppm CEILING ACGIH | |
| OLEIC ACID | 112801 |
| STEARYL ALCOHOL | 112925 |
| SOYTRIMONIUM CHLORIDE | 61790418 |
| ISOPROPYL ALCOHOL | 67630 |
| EXPOSURE LIMIT:400 ppm TLV, PEL, 500 ppm STEL | |
| NONOXYNOL-2 | 27176938 |
| LAURYL ALCOHOL | 112538 |
| 4-AMINO-2-HYDROXYTOLUENE | 2835952 |
| STEARETH-21 | 977080811 |
| PEG-15 COCOPOLYAMINE | 977159208 |
| COCAMIDE MEA | 68140001 |

Figure E-7 An example of a Material Safety Data Sheet (MSDS) for permanent oxidation haircolors with ammonia (page 1).

(Reprinted with permission of Clairol Inc.)

| | |
|--|-----------|
| PEG-3 DIOLEOYLAMIDOETHYLMONIUM METHOSULFATE | 98000176 |
| FRAGRANCE | 999999999 |
| STEARETH-21 | 977080811 |
| PROPYLENE GLYCOL | 57556 |
| SOYTRIMONIUM CHLORIDE | 61790418 |
| OLEAMIDE MIPA | 111057 |
| POLYQUATERNIUM-22 | 53694170 |
| CYCLOMETHICONE | 69430246 |
| DIHYDROXYETHYL TALLOW GLYCINATE | 61791455 |
| GLYCERIN | 56815 |
| EXPOSURE LIMIT: AS A MIST 10 mg/m ³ TLV, 15 mg/m ³ TOTAL: 5 mg/m ³ RESPIRABLE OSHA PEL | |
| OCTOXYNOL-1 | 2315675 |



Section III - Physical/Chemical Characteristics

Specific Gravity (H₂O = 1): 0.995 - 1.009

Solubility in Water: Partly soluble.

pH:

9.5 - 10.8

Appearance and Odor:

Fragranced liquids.
Ammoniacal odor.



Section IV - Fire and Explosion

Hazard Data

Flashpoint: <100°

Unit:

Fahrenheit

Type: For products
containing
alcohol.

Method:

closed cup

Fire Fighting Procedures:

Extinguish fires with ABC all-purpose extinguisher. The type of extinguisher used should be in conformance with local fire regulations. Fire fighters should use self contained breathing apparatus in enclosed areas.

Unusual Fire and Explosion Hazards:

Not applicable.

Physical Hazards

According to OSHA, these products are considered to be flammable.



Section V - Reactivity Data

Stability:

Stable.

Conditions to Avoid:

Heat and sunlight.

Incompatibility (Materials to Avoid):

Acids.

Hazardous Decomposition or

May form toxic materials (carbon dioxide, carbon monoxide and ammonia).

ByProducts:



Section VI - Health Hazards and Hazard Data

The TLV of the mixture has not been established.

1. Effects of Acute Accidental Exposure

Eye Contact:

CAUTION. Unmixed oxidation haircolors are eye irritants. When oxidation haircolors are mixed with developers (hydrogen peroxide), the mixture may cause severe irritation and possible permanent eye injury.

Skin Contact:

May cause skin irritation or sensitization in sensitized individuals.

Inhalation:

Inhalation of ammonia vapors may result in respiratory irritation.

Ingestion:

Moderately toxic.

2. Effects of Chronic Exposure

A composite mixture of oxidation dyes has been tested in prolonged topical exposure studies of laboratory animals. No adverse effects on growth, reproduction or general health were observed. In topical studies no target

Figure E-8 An example of a Material Safety Data Sheet (MSDS) for permanent oxidation haircolors with ammonia (page 2).

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organ toxicity was observed other than limited effect on treated skin.

3. Carcinogen Status:

OSHA: No NTP: No IARC: No

4. Route of Entry:

Inhalation: Yes Ingestion: Yes Skin: Yes

5. Pre-existing dermatitis would likely be made worse by exposure to these products.

6. Emergency and First Aid Procedures

Eye Contact:

Remove contact lenses. Flush immediately with plenty of water for 15 minutes. Get medical attention IMMEDIATELY.

Skin Contact:

If spilled, wash skin immediately with soap and water (do not use solvents). Change into clean clothing. If skin irritation or sensitization develops, contact dermatologist.

Inhalation:

Remove person to fresh air. Increase ventilation.

Ingestion:

Rinse out mouth with water and administer large amounts of milk. Contact Poison Control Center.

Re

Section VII - Precautions for Safe Handling and Use

Steps to be taken in Case Material is released or Spilled:

Contain spill and promptly clean up. Flush with water and wipe with towel or rinse to drain. Floor can be slippery when wet.

Waste Disposal Method:

Products covered by this MSDS, in their original form, are considered non-hazardous waste according to RCRA (40 CFR 261.21(1)). Additionally, disposal should be in accordance with all applicable Local, State and Federal regulations.

Precautions to be Taken in Handling and Storage:

Follow flammable liquid handling and storage requirements. Do not store any haircolor after it has been mixed with developer. Decomposition of hydrogen peroxide may occur with increase in pressure and possible container rupture. Keep away from heat and other ignition sources.

3#

Section VIII - Control Measures

Ventilation:

Exhaust system ventilation should be adequate to avoid buildup of vapors.

Hand Protection:

Use impervious gloves to avoid possible skin irritation/sensitization.

Eye Protection:

Avoid contact with eyes. Use protective eyewear, if splashing is possible.

Other Types of Protection:

Not applicable.

Respiratory Protection:

Avoid inhalation.

Work Hygienic Practices:

Always follow good hygienic work practices. Avoid all skin, eye, and clothing contact with products. In case of contact, rinse thoroughly with water. Promptly clean up all spills.

Inc

Section IX - Transportation

Information

DOT Class: Consumer
Commodity
ORM-D

IMDG: Ethanol Solutions
(Limited Quantity)
3.3 UN1170, PGIII
(Flash Point)

IATA/ICAO: Consumer
Commodity
Class: 9, ID 8000
Packing
Instruction 910

Figure E-9 An example of a Material Safety Data Sheet (MSDS) for permanent oxidation haircolors with ammonia (page 3).

(Reprinted with permission of Clairol Inc.)

Material Safety Data Sheet-PPD

MSDS:0001F-1**Date Approved:**

Worldwide Beauty Care
(Clairol, Inc.; Duart Labs; Redmond Products, Inc.)
Bristol-Myers Squibb Company
One Blachley Road
Stamford, CT 06922

Emergency Telephone Number:

(203) 357-5678

Transportation Emergency:

Call Chemtrec 1-800-424-9300

This sheet has been prepared in accordance with the Requirements of the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Section I - Categorization**Product Category:** Oxidation (Permanent) Hair Colors - Non-Ammonia-Non -Flammable**Pertinent Text:****Product Names:** Radiance Color Gloss**Section II - Ingredients Identity/Exposure Limits**

Oxidation (Permanent) Hair Colors - Non-Ammonia-Non -Flammable generally contain the following hazardous ingredients (1% concentration or greater; 0.1% for carcinogens):

| <u>CTFA Name</u> | <u>CAS Number</u> |
|--|-------------------|
| M-AMINOPHENOL | 591275 |
| N,N-BIS(2-HYDROXYETHYL)-P-PHENYLENEDIAMINE SULFATE | 58262445 |
| 2-NITRO-P-PHENYLENEDIAMINE | 5307142 |
| RESORCINOL | 108463 |
| EXPOSURE LIMIT:10 ppm TLV, 20 ppm STEL | |
| P-PHENYLENEDIAMINE | 106503 |
| EXPOSURE LIMIT:0.1 mg/m3 TLV, PEL, SKIN, OSHA | |
| ETHOXYDIGLYCOL | 111900 |
| LAURETH-23 | 9002920 |
| POLYSORBATE 20 | 9005645 |
| NONYL NONOXYNOL-49 | 9014931A |
| OLEIC ACID | 112801 |
| AMINOMETHYL PROPANOL | 124685 |
| 2-METHYLRESORCINOL | 608253 |
| DIHYDROXYPROPYL PEG-5 LINOLEAMMONIUM CHLORIDE | 98000070 |
| AMODIMETHICONE | 977091647 |

Section III - Physical/Chemical Characteristics**Specific Gravity (H₂O = 1):** 0.995-1.009**pH:** 9.5-10.5**Solubility in Water:** Partly soluble.**Appearance and Odor:** Fragranced liquids.**Section IV - Fire and Explosion****Hazard Data****Flashpoint:** Not applicable.**Unit:**

N/A

Method:

Not applicable.

Type:Not applicable.**Fire Fighting Procedures:**

Extinguish fires with water,ABC all-purpose or CO2 extinguisher. The type of extinguisher used should be in conformance with local fire regulations.

Figure E-10 An example of a Material Safety Data Sheet (MSDS) for permanent oxidation haircolors without ammonia (page 1).

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Unusual Fire and Explosion Hazards:

Not applicable.

Physical Hazards

None.

**Section V - Reactivity Data****Stability:**

Stable.

Conditions to Avoid:

Heat and sunlight.

Incompatibility (Materials not to Avoid):

Acids.

Hazardous Decomposition or ByProducts:

None.

**Section VI- Health Hazards and Hazard Data**

The TLV of the mixture has not been established.

1. Effects of Acute Accidental Exposure

Eye Contact: CAUTION. Unmixed oxidation haircolors are eye irritants. When oxidation haircolors are mixed with developers (hydrogen peroxide), the mixture may cause severe irritation and possible permanent eye injury.

Skin Contact: May cause skin irritation or sensitization in sensitized individuals.

Inhalation: Inhalation of vapors may result in respiratory irritation.

Ingestion: Moderately toxic.

2. Effects of Chronic Exposure

These products contain 2-nitro-p-phenylenediamine, which fed at extremely high doses, were found to cause benign liver tumors in female mice (NTP). These effects were not observed in feeding studies in male mice or male and female rats. Independent pathologists and oncologists have concluded that the results are not relevant to human health. In topical studies no target organ toxicity was observed other than limited effects on treated skin.

3. Carcinogen Status:

OSHA: No NTP: Yes (2 Nitro PPD) IARC: 2 Nitro PPD is not Classifiable (Group 3)

4. Route of Entry:

Inhalation: No Ingestion: Yes Skin: Yes

5. Pre-existing dermatitis would likely be made worse by exposure to these products. Bronchitis may be aggravated by irritant vapors.

6. Emergency and First Aid Procedures

Eye Contact: Remove contact lenses, if used. Flush immediately with plenty of water for 15 minutes. Get medical attention IMMEDIATELY.

Skin Contact: If spilled, wash skin immediately with soap and water (do not use solvents). Change into clean clothing. If skin irritation or sensitization develops, contact dermatologist.

Inhalation: Remove person to fresh air. Increase ventilation.

Ingestion: Rinse out mouth with water and administer large amounts of milk. Contact Poison Control Center.

**Section VII - Precautions for Safe Handling and Use****Steps to be taken in Case Material is released or Spilled:**

Contain spill and promptly clean up. Flush with water and wipe with towel or rinse to drain. Floor can be slippery when wet.

Waste Disposal Method:

Products covered by this MSDS, in their original form, are considered non-hazardous waste according to RCRA. Additionally, disposal should be in accordance with all applicable Local, State and Federal regulations.

Precautions to be Taken in Handling and Storage:

Do not expose to sunlight. Keep away from radiators and heat. Do not store any haircolor after it has been mixed with developer. Decomposition of hydrogen peroxide may occur with increase in pressure and possible container rupture.

**Section VIII - Control Measures****Ventilation:**

Exhaust system ventilation should be adequate to avoid buildup of vapors.

Hand Protection:

Use impervious gloves to avoid possible skin irritation/sensitization.

Eye Protection:

Figure E-11 An example of a Material Safety Data Sheet (MSDS) for permanent oxidation haircolors without ammonia (page 2).

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Avoid contact with eyes. Use protective eyewear, if splashing is possible.

Other Types of Protection:

Not applicable.

Respiratory Protection:

Avoid inhalation.

Work Hygienic Practices:

Always follow good hygienic work practices. Avoid all skin, eye, and clothing contact with products. In case of contact, rinse thoroughly with water. Promptly clean up all spills.



Section IX - Transportation Information

DOT Class: Not regulated.

IMDG: Not regulated.

IATA/ICAO: Not regulated.

Figure E-12 An example of a Material Safety Data Sheet (MSDS) for permanent oxidation haircolors without ammonia (page 3).

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Material Safety Data Sheet

MSDS: 00002-1
Date Approved: 11/1/2000

Worldwide Beauty Care
(Clairol, Inc.; Duart Labs; Redmond Products, Inc.)
Bristol-Myers Squibb Company
One Blachley Road
Stamford, CT 06922

Emergency Telephone Number:
(203) 357-5678

Transportation Emergency:
Call Chemtrec 1-800-424-9300

This sheet has been prepared in accordance with the Requirements of the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Section I - Categorization

Category: Semipermanent Hair Colors.
Non-ammoniacal hair dye formulations used without peroxide.
Product Names: Silk & Silver Shades

Section II - Ingredients/Identity Exposure Limits

Semipermanent Hair Colors generally contain the following hazardous ingredients (1% concentration or greater; 0.1% for carcinogens):

| CTFA NAME | CAS# |
|------------------------------|-----------|
| ETHOXYDIGLYCOL | 111900 |
| HYDROXYETHYLCELLULOSE | 9004620 |
| OLEIC ACID | 112801 |
| PEG-50 TALLOW AMIDE | 8051636 |
| AMINOMETHYL PROPANOL | 124685 |
| HC BLUE NO. 2 | 33229344 |
| TRIMETHYLSILYLAMODIMETHICONE | 977088826 |
| LAURAMIDE DEA | 120401 |

Section III - Physical/Chemical Characteristics

Specific Gravity (H₂O=1): 0.992 -1.997

pH: 8.3-9.3

Solubility in Water: Miscible.

Appearance and Odor: Clear fragranced amber liquid.

Figure E-13 An example of a Material Safety Data Sheet (MSDS) for semi-permanent non-oxidation haircolors, without peroxide or ammonia (page 1).

(Reprinted with permission of Clairol Inc.)

Section IV - Fire and Explosion Hazard Data**Flashpoint:** > 200°**Type:** Not applicable.**Unit:** Fahrenheit**Method:** closed cup**Fire Fighting Procedures:**

Extinguish fires with ABC all-purpose extinguisher. The type of extinguisher used should be in conformance with local fire regulations. Fire fighters should use self-contained breathing apparatus in enclosed areas.

Unusual Fire and Explosion Hazards:

None.

Physical Hazards:

None.

Section V - Reactivity Data**Stability:**

Stable.

Conditions to Avoid:

Heat and sunlight.

Incompatibility (Materials to Avoid):

Not applicable.

Hazardous Decomposition or By Products:

None.

Section VI - Health Hazards and Hazard Data

The TLV of the mixture has not been established.

1. Effects of Acute Accidental Exposure**Eye Contact:**

CAUTION. Eye irritant.

Skin Contact:

May cause skin irritation or sensitization in sensitized individuals.

Inhalation:

Not likely to be irritating.

Ingestion:

Moderately toxic.

2. Effects of Chronic Exposure

National Toxicology Program studies on diethanolamine (DEA), itself and fatty acid condensates containing free diethanolamine (lauramide and cocamide diethanolamines), indicated an increased incidence of kidney and/or liver tumors in mice dermally exposed for their lifetime. The significance of these findings and their potential relevance to humans are not clear and further studies are in progress. Diethanolamine or its condensates did not induce tumors in rats. In the interim, the U.S. CIR, which had previously considered these materials as "safe as used", has expressed reservation over NTP's conclusions and saw no need to revise its conclusions until several outstanding questions on the NTP methodology are answered.

The semipermanent dye products have been tested in lifetime skin painting studies on laboratory animals. No adverse effects on growth, reproduction or general health were observed. In topical studies, other than limited effect on treated skin, no target organ toxicity was observed to any organ.

3. Carcinogen Status:

OSHA: No

NTP: Yes (DEAs)

IARC: DEA is not Classifiable (Group 3)

4. Route of Entry:

Inhalation: No

Ingestion: Yes

Skin: Yes

5. Pre-existing dermatitis would likely be made worse by exposure to these products.

Figure E-14 An example of a Material Safety Data Sheet (MSDS) for semi-permanent non-oxidation haircolors, without peroxide or ammonia (page 1).

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Section VI – Health Hazards and Hazard Data (Continued)**6. Emergency and First Aid Procedures****Eye Contact:**

Remove contact lenses, if used. Flush immediately with plenty of water for 15 minutes. Get medical attention IMMEDIATELY.

Skin Contact:

If spilled, wash skin immediately with soap and water (do not use solvents). Change into clean clothing. If skin irritation or sensitization develops, contact dermatologist.

Inhalation:

Remove person to fresh air. Increase ventilation.

Ingestion:

Rinse out mouth with water and administer large amounts of milk. Contact Poison Control Center.

Section VII - Precautions for Safe Handling and Use**Steps to be taken In Case Material is released or Spilled:**

Contain spill and promptly clean up. Flush with water and wipe with towel or rinse to drain. Floor can be slippery when wet.

Waste Disposal Method:

Products covered by this MSDS, in their original form, are considered non-hazardous waste according to RCRA. Additionally, disposal should be in accordance with Local, State and Federal Regulations.

Precautions to be Taken In Handling and Storage:

Do not expose to sunlight. Keep away from radiators and heat.

Section VIII - Control Measures**Ventilation:**

Exhaust system ventilation should be adequate to avoid buildup of vapors.

Hand Protection:

Use impervious gloves to avoid possible skin irritation/sensitization.

Eye Protection:

Avoid contact with eyes. Use protective eyewear, if splashing is possible.

Other Types of Protection:

Not applicable.

Respiratory Protection:

Avoid inhalation.

Work Hygienic Practices:

Always follow good hygienic work practices. Avoid all skin, eye, and clothing contact with products. In case of contact, rinse thoroughly with water. Promptly clean up all spills.

Section IX - Transportation Information

DOT Class: Not regulated.

IMDG: Not regulated.

IATA/CAO: Not regulated.

Figure E-15 An example of a Material Safety Data Sheet (MSDS) for semi-permanent non-oxidation haircolors, without peroxide or ammonia (page 2).

(Reprinted with permission of Clairol Inc.)

Material Safety Data Sheet-PPD

MSDS:00006**Date Approved:**

Worldwide Beauty Care
 (Clairol, Inc.; Duart Labs; Redmond Products, Inc.)
 Bristol-Myers Squibb Company
 One Blachley Road
 Stamford, CT 06922

Emergency Telephone Number:

(203) 357-5678

Transportation Emergency:

Call Chemtrec 1-800-424-9300

This sheet has been prepared in accordance with the Requirements of the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Section I - Categorization**Product Category:** Lightener Lotions

Pertinent Text: Hair lighteners are composed of lightener lotions that are mixed with hydrogen peroxide (developers). A third component is often added to accelerate the lightening. These are called either protinators or accelerators and they are found under the category of Bleach Powders. This MSDS covers Lightener Lotions. Consult separate MSDS's for bleach powder and hydrogen peroxide (developers).

Product Names: Born Blonde Liquid Lightener, 7th Stage Liquid Lightener, Complements Lightening Gel, Instant Whip Liquid Lightener, Maxi Blonde Lightener, Ultra Blue Creme Lightener, Ultra Blue Lady Clairol Lightener, Xtreme FX Bleach-Out Lotion Lightener, Frost & Tip Highlightening Powder, BW Violet Creme Lightener

Section II - Ingredients Identity/Exposure Limits

Lightener Lotions generally contain the following hazardous ingredients (1% concentration or greater; 0.1% for carcinogens):

| <u>CTFA Name</u> | <u>CAS Number</u> |
|---|-------------------|
| PROPYLENE GLYCOL | 57556 |
| AMMONIUM HYDROXIDE | 1336216 |
| EXPOSURE LIMIT: 25 ppm TLV, 35 ppm STEL, 50 ppm PEL, as AMMONIA | |
| ISOPROPYL ALCOHOL | 67630 |
| EXPOSURE LIMIT: 400 ppm TLV, PEL, 500 ppm STEL | |
| ETHOXYDIGLYCOL | 111900 |
| GLYCERIN | 56815 |
| EXPOSURE LIMIT: AS A MIST 10 mg/m ³ TLV, 15 mg/m ³ TOTAL; 5 mg/m ³ RESPIRABLE OSHA PEL | |
| PHOSPHORIC ACID | 7664382 |
| EXPOSURE LIMIT: 1 mg/m ³ TLV, PEL, 3 mg/m ³ STEL | |
| TRIDECETH-6 | 24938918 |
| NONYL NONOXYNOL-10 | 9014931G |
| ETHANOLAMINE | 141435 |
| EXPOSURE LIMIT: 3 ppm TLV, PEL, 6 ppm STEL | |
| OCTOXYNOL-1 | 2315675 |
| NONOXYNOL-4 | 7311275 |
| PEG-5 SOYAMINE | 61791240G |
| SULFATED CASTOR OIL | 8002333 |
| PEG-8 HYDROGENATED TALLOW AMINE | 61791262G |
| HEXYLENE GLYCOL | 107415 |
| EXPOSURE LIMIT: 25 ppm CEILING ACGIH | |
| OLETH-20 | 9004982 |
| NONYL NONOXYNOL-49 | 9014931A |
| CETYL ALCOHOL | 36653824 |
| ALCOHOL DENAT. | 64175 |

Figure E-16 An example of a Material Safety Data Sheet (MSDS) hair lightener lotions (page 1).

(Reprinted with permission of Clairol Inc.)

EXPOSURE LIMIT: 1000 ppm TLV, PEL (ETHYL ALCOHOL)

| | |
|-------------------------------------|-----------|
| OLEIC ACID | 112801 |
| SODIUM LAURYL SULFATE | 151213 |
| ETHYL HYDROXYMETHYL OLEYL OXAZOLINE | 68140987 |
| PPG-50 CETYL ETHER | 9035852 |
| COCETH-7 CARBOXYLIC ACID | 977159424 |
| STEARETH-21 | 977080811 |
| OLETH-20 | 9004982 |
| PEG-15 COCOPOLYAMINE | 977159208 |
| DIMETHICONE COPOLYOL | 64365237 |
| SODIUM LAURETH-13 CARBOXYLATE | 33939649G |
| SODIUM LAURETH-11 CARBOXYLATE | 33939649 |
| DILINOLEIC ACID | 6144281 |
| C12-15 PARETH-3 | 98000085 |

**Section III - Physical/Chemical Characteristics**Specific Gravity ($H_2O = 1$): 0.9-1.1

pH:

N/A

Solubility in Water: Fairly miscible (thickens with water).

Appearance and Odor:

Fragranced, pourable emulsions. Ammoniacal odor.

**Section IV - Fire and Explosion****Hazard Data**

Flashpoint: 75 - 104

Unit:

Fahrenheit

Type: For products containing alcohol.

Method:

closed cup

Fire Fighting Procedures:

Extinguish fires with water, ABC all-purpose or CO2 extinguisher. The type of extinguisher used should be in conformance with local fire regulations. Fire fighters should use self contained breathing apparatus in enclosed areas.

Unusual Fire and Explosion Hazards:

None.

Physical Hazards

Products containing alcohol are usually flammable or combustible liquids.

**Section V - Reactivity Data****Stability:**

Stable.

Conditions to Avoid:

Heat and sunlight.

Incompatibility (Materials to Avoid):

Do not use metallic bowls or stirrers.

Hazardous Decomposition or

None.

ByProducts:**Section VI - Health Hazards and Hazard Data**

The TLV of the mixture has not been established.

1. Effects of Acute Accidental Exposure**Eye Contact:**

CAUTION. Eye irritants. When the lightener lotion is mixed with hydrogen peroxide, the mixture may cause severe irritation and possible permanent eye injury.

Skin Contact:

Irritant. May induce a skin reaction in certain individuals.

Inhalation:

Ammonia vapor may cause respiratory tract irritation.

Ingestion:

Moderately toxic.

Figure E-17 An example of a Material Safety Data Sheet (MSDS) hair lightener lotions (page 2).

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2. Effects of Chronic Exposure

For purposes of chronic exposure under the OSHA Hazard Communication Standard, this is an untested mixture. These products have been used extensively by consumers and Worldwide Beauty Care is not aware of any significant adverse effects. Release of ammonia vapors may result in irritation of the mucous membranes of the respiratory tract. Target Organs: These products contain ingredients which have been shown to affect tissues or organs when fed at high levels to animals. Exposure from professional uses of these products is well below the exposure levels used in animal studies. Target organs identified in animal studies are as follows: Glycerin: Kidney Liver; Isopropyl Alcohol: CNS; SD Alcohol 40: Liver, Eye, CNS, Reproductive; Propylene Glycol: CNS

3. Carcinogen Status:

OSHA: No NTP: No IARC: No

4. Route of Entry:

Inhalation: No Ingestion: Yes Skin: Yes

5. Pre-existing dermatitis would likely be made worse by exposure to these products.

6. Emergency and First Aid Procedures**Eye Contact:**

Remove contact lenses, if used. Flush immediately with plenty of water for 15 minutes. Get medical attention IMMEDIATELY.

Skin Contact:

If spilled, wash skin immediately with soap and water (do not use solvents). Change into clean clothing. If skin reaction develops, contact dermatologist.

Inhalation:

Remove person to fresh air. Increase ventilation.

Ingestion:

Rinse out mouth with water and administer large amounts of milk. Contact Poison Control Center.

**Section VII - Precautions for Safe Handling and Use****Steps to be taken in Case Material is released or Spilled:**

Contain spill and promptly clean up. Flush with water and wipe with towel or rinse to drain. Floor can be slippery when wet.

Waste Disposal Method:

Products covered by this MSDS, in their original form, are considered non-hazardous waste according to RCRA (4 CFR 261.21(1)). Additionally, disposal should be in accordance with all applicable Local, State and Federal regulations.

Precautions to be Taken in Handling and Storage:

Do not store any lightener lotion after it has been mixed with developer and bleach powder. Decomposition of hydrogen peroxide may occur with increase in pressure and possible container rupture.

**Section VIII - Control Measures****Ventilation:**

Exhaust system ventilation should be adequate to avoid buildup of vapors.

Hand Protection:

Use impervious gloves to avoid possible skin irritation or sensitization.

Eye Protection:

Avoid contact with eyes. Use protective eyewear, if splashing is possible.

Other Types of Protection:

Not applicable.

Respiratory Protection:

Avoid inhalation.

Work Hygienic Practices:

Always follow good hygienic work practices. Avoid all skin, eye, and clothing contact with products. In case of contact, rinse thoroughly with water. Promptly clean up all spills.

**Section IX - Transportation****Information**

DOT Class: Consumer
Commodity
ORM-D

IMDG: Ethanol Solutions
3.3 UN1170, PGIII
(75-104F) Limited
Quantity

IATA/ICAO: Consumer
Commodity
Class: 9, ID 800
Packing
Instructions 910

Figure E-18 An example of a Material Safety Data Sheet (MSDS) hair lightener lotions (page 3).

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Material Safety Data Sheet-PPD

MSDS:00007-1**Date Approved:**

Worldwide Beauty Care
(Clairol, Inc.; Duart Labs; Redmond Products, Inc.)
Bristol-Myers Squibb Company
One Blachley Road
Stamford, CT 06922

Emergency Telephone Number:
(203) 357-5678

Transportation Emergency:

Call Chemtrec 1-800-424-9300

This sheet has been prepared in accordance with the Requirements of the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Section I - Categorization

Product Category: Shampoos

Pertinent Text: Viscous colored liquids or emulsions containing surfactants to cleanse the hair.

Product Names: Texture & Tones Moisturizing Shampoo, Complements Maintenance Shampoo, Condition 3-In-1 Shampoos, Daily Defense Shampoos, Shimmer Lights Shampoo

Section II - Ingredients Identity/Exposure Limits

Shampoos generally contain the following hazardous ingredients (1% concentration or greater; 0.1% for carcinogens):

| <u>CTFA Name</u> | <u>CAS Number</u> |
|---|-------------------|
| GLYCERIN | 56815 |
| EXPOSURE LIMIT: AS A MIST 10 mg/m ³ TLV, 15 mg/m ³ TOTAL: 5 mg/m ³ | |
| RESPIRABLE OSHA PEL | |
| SALICYLIC ACID | 69727 |
| SODIUM CHLORIDE | 7647145 |
| COCAMIDE DEA | 61791319 |
| LAURAMIDE DEA | 120401 |
| SODIUM CITRATE | 68042 |
| ALCOHOL DENAT. | 64175 |
| EXPOSURE LIMIT: 1000 PPM TLV, PEL (ETHYL ALCOHOL) | |
| DISODIUM COCOAMPHODIACETATE | 68650395 |
| SODIUM LAURYL SULFATE | 151213 |
| AMMONIUM LAURYL SULFATE | 2235543 |
| DISODIUM COCAMIDO MIPA-SULFOSUCCINATE | 68515651 |
| DISODIUM COCOAMPHODIACETATE | 68650395 |
| GLYCOL STEARATE | 111604 |
| SODIUM LAUROYL SARCOSINATE | 137166 |
| COCAMIDOPROPYL BETAINE | 61789400 |
| SODIUM C14-16 OLEFIN SULFONATE | 68439576 |
| LAURAMIDE DEA | 120401 |
| SODIUM LAURETH SULFATE | 1335724 |
| PEG-120 METHYL GLUCOSE DIOLEATE | 86893198 |
| TEA-LAURYL SULFATE | 139968 |
| PEG-15 COCOPOLYAMINE | 977159208 |
| COCAMIDE MEA | 68140001 |
| SODIUM LAURYL SULFATE | 151213 |
| FRAGRANCE | 999999999 |
| PROPYLENE GLYCOL | 57556 |
| LINOLEAMIDOPROPYL PG-DIMONIUM CHLORIDE PHOSPHATE | 977162530 |
| FRAGRANCE | 999999999 |
| SODIUM LAURETH SULFATE | 1335724 |
| SODIUM LAURYL SULFATE | 151213 |

Figure E-19 An example of a Material Safety Data Sheet (MSDS) for shampoos (page 1).

(Reprinted with permission of Clairol Inc.)



| | |
|------------------------------|-----------|
| SODIUM LAURYL SULFATE | 151213 |
| COCAMIDOPROPYL BETAINE | 61789400 |
| SODIUM LAURETH SULFATE | 1335724 |
| SODIUM LAURYL SULFATE | 151213 |
| COCAMIDOPROPYL BETAINE | 61789400 |
| FRAGRANCE | 999999999 |
| SODIUM LAURETH SULFATE | 1335724 |
| DISODIUM LAUROAMPHODIACETATE | 14350971 |
| SODIUM TRIDECETH SULFATE | 25446780 |
| COCAMIDOPROPYL BETAINE | 61789400 |
| PEG-80 SORBITAN LAURATE | 977090199 |
| SODIUM LAURETH SULFATE | 1335724 |
| FRAGRANCE | 999999999 |
| COCAMIDOPROPYL BETAINE | 61789400 |
| SODIUM LAURETH SULFATE | 1335724 |
| SODIUM LAURYL SULFATE | 151213 |
| FRAGRANCE | 999999999 |
| SODIUM LAUROYL SARCOSINATE | 137166 |
| FRAGRANCE | 999999999 |

**Section III - Physical/Chemical Characteristics**Specific Gravity ($H_2O = 1$): 0.9-1.2

Solubility in Water: Highly miscible.

pH:

4 - 7

Appearance and Odor:

Fragranced liquids or pourable emulsions.

**Section IV - Fire and Explosion****Hazard Data**

Flashpoint: >200°

Unit:

Fahrenheit

Type: Not applicable.

Method:

closed cup

Fire Fighting Procedures:

Extinguish fires with ABC all-purpose extinguisher. The type of extinguisher used should be in conformance with local fire regulations. Fire fighters should use self contained breathing apparatus in enclosed areas.

Unusual Fire and Explosion Hazards:

None.

Physical Hazards

None.

**Section V - Reactivity Data****Stability:**

Stable.

Conditions to Avoid:

None.

Incompatibility (Materials to Avoid):

Not applicable.

Hazardous Decomposition or

None.

By Products:**Section VI - Health Hazards and Hazard Data**

The TLV of the mixture has not been established.

1. Effects of Acute Accidental Exposure**Eye Contact:**

Eye irritant.

Skin Contact:

Potential skin irritant.

Inhalation:

Not applicable.

Ingestion:

Slightly toxic.

Figure E-20 An example of a Material Safety Data Sheet (MSDS) for shampoos (page 2).

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2. Effects of Chronic Exposure

National Toxicology Program studies on diethanolamine itself and fatty acid condensates containing free diethanolamine (DEA) (lauramide and cocamide diethanolamines) indicated an increased incidence of kidney and/or liver tumors in mice dermally exposed for their lifetime. The significance of these findings and their potential relevance to humans are not clear and further studies are in progress. Diethanolamine or its condensates did not induce tumor in rats. In the interim, the US CIR, which had previously considered these materials as "safe as used", has expressed reservation over NTP's conclusions and saw no need to revise its conclusion until several outstanding questions on the NTP methodology are answered. For purposes of chronic exposure under the OSHA Hazard Communication Standard, this is an untested mixture. These products have been used extensively by consumers and Worldwide Beauty Care is not aware of any significant adverse effects. Target Organs: These products contain ingredients which have been shown to affect tissues or organs when fed at high levels of exposure in animal studies not encountered in normal use. Target Organs Identified in animal studies are as follows: Alcohol Denat.: Liver, eye, CNS, reproductive. Glycerin: Kidney, liver. Propylene Glycol: CNS.

3. Carcinogen Status:

OSHA: No NTP: No IARC: No

4. Route of Entry:

Inhalation: No Ingestion: Yes Skin: Yes

5. Pre-existing dermatitis would likely be made worse by exposure to these products.

6. Emergency and First Aid Procedures

Eye Contact: Remove contact lenses, if used. Flush immediately with plenty of water for 15 minutes. Get medical attention IMMEDIATELY.

Skin Contact: If spilled, wash skin immediately with soap and water (do not use solvents). Change into clean clothing. If skin reaction develops, contact dermatologist.

Inhalation: Remove person to fresh air. Increase ventilation.

Ingestion: Rinse out mouth with water and administer large amounts of milk. Contact Poison Control Center.

**Section VII - Precautions for Safe Handling and Use****Steps to be taken in Case Material is released or Spilled:**

Contain spill and promptly clean up. Flush with water and wipe with towel or rinse to drain. Floor can be slippery when wet.

Waste Disposal Method:

Products covered by this MSDS are considered non-hazardous waste according to RCRA. Disposable should be in accordance with all applicable Local, State and Federal Regulations.

Precautions to be Taken in Handling and Storage:

Store products in even, normal temperatures. Keep containers tightly closed.

**Section VIII - Control Measures****Ventilation:**

Exhaust system ventilation should be adequate to avoid buildup of vapors.

Hand Protection:

Use impervious gloves to avoid possible skin reaction.

Eye Protection:

Avoid contact with eyes. Use protective eyewear, if splashing is possible.

Other Types of Protection:

Not applicable.

Respiratory Protection:

Avoid inhalation.

Work Hygienic Practices:

Always follow good hygienic work practices. Avoid eye, clothing, and prolonged skin contact with products. In case of contact, rinse thoroughly with water. Promptly clean up all spills.

**Section IX - Transportation Information**

DOT Class: Not regulated.

IMDG: Not regulated.

IATA/ICAO: Not regulated.

Figure E-21 An example of a Material Safety Data Sheet (MSDS) for shampoos (page 3).

(Reprinted with permission of Clairol Inc.)

Material Safety Data Sheet-PPD

MSDS:00008
Date Approved:

Worldwide Beauty Care
(Clairol, Inc.; Duart Labs; Redmond Products, Inc.)
Bristol-Myers Squibb Company
One Blachley Road
Stamford, CT 06922

Emergency Telephone Number:
(203) 357-5678

Transportation Emergency:
Call Chemtrec 1-800-424-9300

This sheet has been prepared in accordance with the Requirements of the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Section I - Categorization
Product Category: Conditioners

Pertinent Text: Fragranced emulsions designed to enhance the appearance and feel of hair, increase hair body or suppleness, facilitate styling, improve gloss or sheen and improve the texture of hair.

Product Names: Aussie Conditioners, Color Hold Conditioner, Condition 3-In-1 Detangler & Beauty Pack, Daily Defense Conditioners, Frizz Control Taming Conditioner, Herbal Essences Conditioners, Jazzing Hair Color Shade 10, L'Image Conditioner, Loving Care Conditioner, Herbal Essences Hair Color After-Treatment, Miss Clairol Revitalizing Treatment, Motif Conditioner, Natural Instincts Treatment & Conditioner, Nice 'N Easy Conditioner, Revitalique Conditioner, Shimmer Lights Conditioner, Silk & Silver After Rinse Conditioner, Summer Blonde After Sun Conditioner, Textures & Tones 1 Minute Reconstructive Conditioner, Ultress & Ultimate Blonde Conditioner, Vitapointe Hair Treatment, Herbal Essence Conditioners, Renewal Conditioners, Aussie 3 Minute Miracle, Color ProTec Conditioner, Infusium 23 Pro-Vitamin Hair Treatment

Section II - Ingredients Identity/Exposure Limits

Conditioners generally contain the following hazardous ingredients (1% concentration or greater; 0.1% for carcinogens):

| <u>CTFA Name</u> | <u>CAS Number</u> |
|--|-------------------|
| PROPYLENE GLYCOL | 57556 |
| ISOPROPYL ALCOHOL | 67630 |
| EXPOSURE LIMIT:400 ppm TLV, PEL, 500 ppm STEL | |
| ETHOXYDIGLYCOL | 111900 |
| GLYCERIN | 56815 |
| EXPOSURE LIMIT:AS A MIST 10 mg/m3 TLV, 15 mg/m3 TOTAL: 5 mg/m3 | |
| RESPIRABLE OSHA PEL | |
| STEARALKONIUM CHLORIDE | 122190 |
| HYDROLYZED COLLAGEN | 92113310 |
| PVP | 9003398 |
| CETEARYL ALCOHOL | 67762270 |
| ACETAMIDE MEA | 142267 |
| CETYL ALCOHOL | 36653824 |
| HYDROXYETHYLCELLULOSE | 9004620 |
| POLYSORBATE 20 | 9005645 |
| HEXYLENE GLYCOL | 107415 |
| EXPOSURE LIMIT:25 ppm CEILING ACGIH | |
| SORBITOL | 50704 |
| CETYL ALCOHOL | 36653824 |
| MINERAL OIL | 8012951 |
| EXPOSURE LIMIT:5 mg/m3 TLV, PEL AS AN OIL MIST | |
| CETYL ESTERS | 8002231 |
| CITRIC ACID | 77929 |

Figure E-22 An example of a Material Safety Data Sheet (MSDS) for conditioners (page 1).

(Reprinted with permission of Clairol Inc.)

| | |
|---|-----------|
| POLYQUATERNIUM-10 | 53568664 |
| STEARYL ALCOHOL | 112925 |
| DICETYLDIMONIUM CHLORIDE | 1812539 |
| PEG-150 DISTEARATE | 9005087 |
| EXPOSURE LIMIT:10 mg/m3 TLV | |
| PEG-100 STEARATE | 90044993G |
| GLYCERYL STEARATE | 31566311 |
| EXPOSURE LIMIT:10 mg/m3 TLV | |
| HYDROLYZED COLLAGEN | 92113310 |
| PEG-40 STEARATE | 9004993G |
| EXPOSURE LIMIT:10 mg/m3 TLV | |
| CETEARYL ALCOHOL | 67762270 |
| POLYQUATERNIUM-10 | 53568664 |
| GLYCOL STEARATE | 111604 |
| POLYQUATERNIUM-6 | 26062793 |
| HYDROLYZED COLLAGEN | 92113310 |
| AMODIMETHICONE | 977091647 |
| HYDROXYETHYLCELLULOSE | 9004620 |
| POLYQUATERNIUM-4 | 977086762 |
| CETRIMONIUM CHLORIDE | 112027 |
| C12-15 ALKYL BENZOATE | 68411278 |
| TRIBEHENIN | 18641571 |
| QUATERNIUM-18 | 61789808 |
| MYRISTYL MYRISTATE | 3234853 |
| CETEARYL ALCOHOL | 67762270 |
| BEHENTRIMONIUM METHOSULFATE | 81646131 |
| CETETH-2 | 5274613 |
| DIMETHICONE | 9006659 |
| HYDROLYZED COLLAGEN | 92113310 |
| CETEARYL ALCOHOL | 67762270 |
| DISODIUM WHEATGERMAMPHODIACETATE | 977169304 |
| 2,2,4-TRIMETHYL-1,3-PENTANEDIOL | 144194 |
| LINOLEAMIDOPROPYL DIMETHYLAMINE DIMER DILINOLEATE | 125804106 |
| PEG-20 ALMOND GLYCERIDES | 124046500 |
| CYCLOMETHICONE | 69430246 |
| QUATERNIUM-18 | 61789808 |
| TRIMETHYLSILYLAMODIMETHICONE | 977088826 |
| CYCLOPENTASILOXANE | 541026 |
| CYCLOMETHICONE | 69430246 |
| DIMETHICONE | 9006659 |
| DICETYLDIMONIUM CHLORIDE | 1812539 |
| BEHENTRIMONIUM CHLORIDE | 17301530 |
| PHENYL TRIMETHICONE | 2116849 |
| QUATERNIUM-84 | 977172261 |
| AMODIMETHICONE | 977091647 |
| PVP | 9003398 |
| KAOLIN | 1332587 |
| DIMETHICONE COPOLYOL MEADOWFOAMATE | 157479511 |
| PEG-12 DISTEARATE | 977055074 |
| SODIUM COCOAMPHOPROPIONATE | 68988636 |
| STEARETH-21 | 977080811 |
| CETEARETH-20 | 68439496 |

Figure E-23 An example of a Material Safety Data Sheet (MSDS) for conditioners (page 2).

(Reprinted with permission of Clairol Inc.)


Section III - Physical/Chemical Characteristics**Specific Gravity (H₂O = 1):** 0.8-1.15**pH:**

N/A

Solubility in Water:

Poor. Dispersible in water.

Appearance and Odor:Mild fragrancd
liquids, cremes, pourable
emulsions.

Section IV - Fire and Explosion**Hazard Data****Flashpoint:**

N/A

Unit:

N/A

Method:

Not applicable.

Type: Not applicable.**Fire Fighting Procedures:**

Extinguish fires with ABC all-purpose extinguisher. The type of extinguisher used should be in conformance with local fire regulations. Fire fighters should use self contained breathing apparatus in enclosed areas.

Unusual Fire and Explosion Hazards:

None.

Physical Hazards

None.

Section V - Reactivity Data**Stability:**

Stable.

Conditions to Avoid:

None.

Incompatibility (Materials to Avoid):

Not applicable.

Hazardous Decomposition or

None.

ByProducts:
Section VI- Health Hazards and Hazard Data

The TLV of the mixture has not been established.

1. Effects of Acute Accidental Exposure**Eye Contact:**

Potential eye irritant.

Skin Contact:

Non-irritating.

Inhalation:

Not applicable.

Ingestion:

Practically non toxic.

2. Effects of Chronic Exposure

For purposes of chronic exposure under the OSHA Hazard Communication Standard, this is an untested mixture.

These products have been used extensively by consumers and Worldwide Beauty Care is not aware of any significant adverse effects. Target Organs: These products contain ingredients which have been shown to affect

tissues or organs when fed at high levels of exposure in animal studies not encountered in normal use. Target

Organs identified in animal studies are as follows: Glycerin: Kidney, Liver;

Propylene Glycol: CNS; Isopropyl Alcohol: CNS.

3. Carcinogen Status:

OSHA: No NTP: No IARC: No

4. Route of Entry:

Inhalation: No Ingestion: Yes Skin: Yes

5. Pre-existing dermatitis would likely be made worse by exposure to these products.

6. Emergency and First Aid Procedures**Eye Contact:**

Remove contact lenses, if used. Flush immediately with plenty of water for 15 minutes. Get medical attention IMMEDIATELY.

Skin Contact:

If spilled, wash skin immediately with soap and water (do not use solvents). Change into clean clothing. If allergic reaction develops, contact dermatologist.

Inhalation:

Remove person to fresh air. Increase ventilation.

Ingestion:

Rinse out mouth with water and administer large amounts of milk. Contact Poison Control Center.

Figure E-24 An example of a Material Safety Data Sheet (MSDS) for conditioners (page 3).

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Section VII - Precautions for Safe Handling and Use

Steps to be taken in Case Material is released or Spilled:

Contain spill and promptly cleanup. Flush with copious amounts of water until floor is not slippery.

Waste Disposal Method:

Products covered by this MSDS, in their original form, are considered non-hazardous waste according to RCRA. Additionally, disposal should be in accordance with all applicable Local, State and Federal regulations.

Precautions to be Taken in Handling and Storage:

None.



Section VIII - Control Measures

Ventilation:

Exhaust system ventilation should be adequate to avoid buildup of vapors.

Hand Protection:

Use impervious gloves to avoid possible skin reaction.

Eye Protection:

Avoid contact with eyes. Use protective eyewear, if splashing is possible.

Other Types of Protection:

Not applicable.

Respiratory Protection:

Avoid inhalation.

Work Hygienic Practices:

Always follow good hygienic work practices. Avoid eye, clothing, and prolonged skin contact with products. In case of contact, rinse thoroughly with water. Promptly clean up all spills.



Section IX - Transportation

Information

DOT Class: Not regulated.

IMDG: Not regulated.

IATA/CAO: Not regulated.

Figure E-25 An example of a Material Safety Data Sheet (MSDS) for conditioners (page 4).

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Material Safety Data Sheet-PPD

MSDS:00010

Date Approved:

Worldwide Beauty Care
(Clairol, Inc.; Duart Labs; Redmond Products, Inc.)
Bristol-Myers Squibb Company
One Blachley Road
Stamford, CT 06922

Emergency Telephone Number:

(203) 357-5678

Transportation Emergency:

Call Chemtrec 1-800-424-9300

This sheet has been prepared in accordance with the Requirements of the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Section I - Categorization

Product Category: Flammable Aerosol Hair Sprays/Dry Shampoos

Pertinent Text: A concentrated liquid in an alcoholic/water base containing resins, conditioners and fragrance delivered in a propellant system.

Product Names: Condition 3-In-1 Hairsprays, Daily Defense Hairspray, PSSST, Sheer Mist Hairspray, Vitalis Hair Spray, Aussie Hairsprays, Color Protec Finishing Spray

Section II - Ingredients Identity/Exposure Limits

Flammable Aerosol Hair Sprays/Dry Shampoos generally contain the following hazardous ingredients (1% concentration or greater; 0.1% for carcinogens):

| <u>CTFA Name</u> | <u>CAS Number</u> |
|--|-------------------|
| ALCOHOL DENAT. EXPOSURE LIMIT:1000 ppm TLV, PEL (ETHYL ALCOHOL) | 64175 |
| ETHYL ESTER OF PVM/MA COPOLYMER | 67724930 |
| DIMETHYL ETHER | 115106 |
| PROPANE EXPOSURE LIMIT:1000 PPM PEL, ACGIH ASPHYXIAN | 74986 |
| ISOBUTANE | 75285 |
| PROPANE EXPOSURE LIMIT:1000 PPM PEL, ACGIH ASPHYXIAN | 74986 |
| ISOBUTANE | 75285 |
| HYDROFLUOROCARBON 152A | 75376 |
| ISOBUTANE | 75285 |
| OCTYLACRYLAMIDE/ACRYLATES COPOLYMER | 977131411 |
| DIMETHYL ETHER | 115106 |
| VA/CROTONATES/VINYL NEODECANOATE COPOLYMER | 55353214 |
| ALCOHOL DENAT. EXPOSURE LIMIT:1000 ppm TLV, PEL (ETHYL ALCOHOL) | 64175 |
| PHENYL TRIMETHICONE | 2116849 |
| ALUMINUM STARCH OCTENYLSUCCINATE | 9087610 |
| HYDROFLUOROCARBON 152A | 75376 |
| DIGLYCOL/CHDM/ISOPHTHALATES/SIP COPOLYMER | 999000483 |
| OCTYLACRYLAMIDE/ACRYLATES/BUTYLAMINOETHYL METHACRYLATE COPOLYMER | 708010879 |
| ACRYLATES COPOLYMER | 25085692 |

Section III - Physical/Chemical Characteristics

Specific Gravity (H₂O = 1): Concentrate: 0.79-0.83

pH:

N/A

Solubility in Water: Slightly soluble.

Appearance and Odor:

Fragranced spray.

Figure E-26 An example of a Material Safety Data Sheet (MSDS) for aerosol hair sprays (page 1).

(Reprinted with permission of Clairol Inc.)

**Section IV - Fire and Explosion****Hazard Data**

Flashpoint: Concentrate: 51-71 Unit: Fahrenheit **Type:** For products containing alcohol.

Method: closed cup

Fire Fighting Procedures:

Extinguish fires with ABC all-purpose extinguisher. The type of extinguisher used should be in conformance with local fire regulations. Fire fighters should use self contained breathing apparatus in enclosed areas.

Unusual Fire and Explosion Hazards:

Product will flash or sustain a flame if exposed to fire, heat or ignition source at or below room temperature.

Physical Hazards

Flammable aerosol. Contents under pressure. Concentrate: Flammable liquid.

**Section V - Reactivity Data****Stability:**

Stable.

Conditions to Avoid:

Open flames; heat and ignition sources.

Incompatibility (Materials to Avoid):

None.

Hazardous Decomposition or

May form toxic materials (carbon dioxide and carbon monoxide).

ByProducts:**Section VI- Health Hazards and Hazard Data**

The TLV of the mixture has not been established.

1. Effects of Acute Accidental Exposure**Eye Contact:**

Potential eye irritant.

Skin Contact:

Irritation unlikely. Contact with propellant may cause frostbite.

Inhalation:

Respiratory symptoms may occur due to inadequate ventilation. High concentration of propellants may induce anesthesia or anoxia.

Ingestion:

Not likely to occur. Ingestion of 2 or more ounces of product containing high level of alcohol may result in depression and alcohol intoxication.

2. Effects of Chronic Exposure

For purposes of chronic exposure under the OSHA Hazard Communication Standard, these are untested mixtures. Aerosol hair spray formulations using a variety of resins and solvent-propellant systems have been tested for safety by Worldwide Beauty Care and industry-sponsored animal studies. There is no evidence in these studies that ingredients used in these products are harmful to general health or cause adverse effects on the respiratory system. Target Organs: Alcohol Denat.: Liver, CNS, Eye and Reproductive.

3. Carcinogen Status:

OSHA: No NTP: No IARC: No

4. Route of Entry:

Inhalation: Yes Ingestion: Yes Skin: Yes

5. Pre-existing dermatitis would likely be made worse by exposure to these products. Bronchitis may be aggravated by irritant vapors.

6. Emergency and First Aid Procedures**Eye Contact:**

Remove contact lenses, if used. Flush immediately with plenty of water for 15 minutes. Get medical attention IMMEDIATELY.

Skin Contact:

If spilled, wash skin immediately with soap and water (do not use solvents). Change into clean clothing. If skin reaction develops, contact dermatologist.

Inhalation:

Remove person to fresh air. Increase ventilation.

Ingestion:

Rinse out mouth with water and administer large amounts of milk. Contact Poison Control Center.

**Section VII - Precautions for Safe Handling and Use****Steps to be taken in Case Material is released or Spilled:**

Avoid ignition sources. Material is flammable. Contain spill and promptly clean up. Flush with water. Floor can be

Figure E-27 An example of a Material Safety Data Sheet (MSDS) for aerosol hair sprays (page 2).

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slippery when wet.

Waste Disposal Method:

These products are considered hazardous according to RCRA. Disposal should be in accordance with all applicable Local, State and Federal Regulations.

Precautions to be Taken in Handling and Storage:

Products under pressure. Do not puncture or incinerate. Do not store at temperature above 120 F or use near fire or flame. Keep out of reach of children.

88

Section VIII - Control Measures**Ventilation:**

Exhaust system ventilation should be adequate to avoid buildup of vapors.

Hand Protection:

Use impervious gloves to avoid possible skin reaction.

Eye Protection:

Avoid contact with eyes. Use protective eyewear, if splashing is possible.

Other Types of Protection:

Not applicable.

Respiratory Protection:

Avoid inhalation.

Work Hygienic Practices:

Always follow good hygienic work practices. Avoid eye, clothing, and prolonged skin contact with products. In case of contact, rinse thoroughly with water. Promptly clean up all spills.

88

Section IX - Transportation Information

DOT Class: Consumer
Commodity
ORM-D

IMDG: Aerosols 2.1 UN
1950 Limited
Quantities

IATA/ICAO: Consumer
Commodity
Class: 9, ID 8000
Packing
Instructions 910

Figure E-28 An example of a Material Safety Data Sheet (MSDS) for aerosol hair sprays (page 3).

(Reprinted with permission of Clairol Inc.)

Material Safety Data Sheet-PPD

MSDS:00011

Date Approved:

Worldwide Beauty Care
(Clairol, Inc.; Duart Labs; Redmond Products, Inc.)
Bristol-Myers Squibb Company
One Blachley Road
Stamford, CT 06922

Emergency Telephone Number:

(203) 357-5678

Transportation Emergency:

Call Chemtrec 1-800-424-9300

This sheet has been prepared in accordance with the Requirements of the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Section I - Categorization

Product Category: Non-Aerosol (Pump) Hair Sprays

Pertinent Text: Flammable alcoholic fragranced liquids.

Product Names: Clairmist, Color Protec Spritz, Condition 3-In-1 Hairsprays, Condition 3-In-1 Sculpting Spritz, Herbal Essences Hairspray, Herbal Essences Spritz, Infusium Hairspray, Daily Defense Hairspray, Aussie Mega Styling Spray, Vitalis Non-Aerosol Hairspray, Final Net Hairspray, Aussie Sprunch Spray

Section II - Ingredients Identity/Exposure Limits

Non-Aerosol (Pump) Hair Sprays generally contain the following hazardous ingredients (1% concentration or greater; 0.1% for carcinogens):

| CTFA Name | CAS Number |
|--|------------|
| PROPYLENE GLYCOL | 57556 |
| ISOPROPYL ALCOHOL | 67630 |
| EXPOSURE LIMIT:400 PPM TLV, PEL 500 PPM STEL | |
| ALCOHOL DENAT. | 64175 |
| EXPOSURE LIMIT:1000 PPM TLV, PEL (ETHYL ALCOHOL) | |
| ETHYL ESTER OF PVM/MA COPOLYMER | 67724930 |
| AMINOMETHYL PROPANOL | 124685 |
| OCTYLACRYLAMIDE/ACRYLATES COPOLYMER | 977131411 |
| ACRYLATES/ACRYLAMIDE COPOLYMER | 26062566 |
| VA/CROTONATES/VINYL NEODECANOATE COPOLYMER | 55353214 |
| ALCOHOL DENAT. | 64175 |
| EXPOSURE LIMIT:1000 PPM TLV, PEL (ETHYL ALCOHOL) | |
| DIMETHICONE COPOLYOL | 64365237 |
| ALCOHOL DENAT. | 64175 |
| EXPOSURE LIMIT:1000 PPM TLV, PEL (ETHYL ALCOHOL) | |
| DIGLYCOL/CHDM/ISOPHTHALATES/SIP COPOLYMER | 999000483 |
| OCTYLACRYLAMIDE/ACRYLATES/BUTYLAMINOETHYL METHACRYLATE COPOLYMER | 70801079 |
| PVP/VA COPOLYMER | 25086899 |
| ALCOHOL DENAT. | 64175 |
| EXPOSURE LIMIT:1000 PPM TLV, PEL (ETHYL ALCOHOL) | |
| ACRYLATES COPOLYMER | 25085692 |

Section III - Physical/Chemical Characteristics

Specific Gravity (H₂O = 1): 0.80-0.84

Solubility in Water: Slightly soluble.

pH:

N/A

Appearance and Odor:

Clear alcoholic liquid. Mildly fragranced.

Figure E-29 An example of a Material Safety Data Sheet (MSDS) for non-aerosol pump hair sprays (page 1).

(Reprinted with permission of Clairol Inc.)

**Section IV - Fire and Explosion****Hazard Data**

Flashpoint: 52-65 **Unit:** Fahrenheit **Type:** For products containing alcohol.

Method: closed cup

Fire Fighting Procedures:

Extinguish fires with ABC all-purpose extinguisher. The type of extinguisher used should be in conformance with local fire regulations. Fire fighters should use self contained breathing apparatus in enclosed areas.

Unusual Fire and Explosion Hazards:

Product will flash or sustain a flame if exposed to fire, heat or ignition source at or below room temperature.

Physical Hazards

Flammable liquids.

Re

Section V - Reactivity Data

Stability: Stable.

Conditions to Avoid: Open flames; heat and ignition sources.

Incompatibility (Materials not to be mixed): None.

Hazardous Decomposition or Byproducts: May form toxic materials (carbon dioxide and carbon monoxide).

No

Section VI - Health Hazards and Hazard Data

The TLV of the mixture has not been established.

1. Effects of Acute Accidental Exposure

Eye Contact: Eye irritant.

Skin Contact: Non-irritating.

Inhalation: Respiratory symptoms may occur due to inadequate ventilation.

Ingestion: Moderately toxic. May cause strong burning sensation. Ingestion of 2 or more ounces of product containing high level of alcohol may result in depression and alcohol intoxication.

2. Effects of Chronic Exposure

For purposes of chronic exposure under the OSHA Hazard Communication Standard, this is an untested mixture. These products have been used extensively by consumers and Worldwide Beauty Care is not aware of any significant adverse effects. Target Organs: These products contain an ingredient which has been shown to affect tissues or organs under high levels of exposure in animal studies not encountered in normal use. Alcohol: Liver, CNS, eye and reproductive.

3. Carcinogen Status:

OSHA: No NTP: No IARC: No

4. Route of Entry:

Inhalation: Yes Ingestion: Yes Skin: Yes

5. Pre-existing dermatitis would likely be made worse by exposure to these products. Bronchitis may be aggravated by irritant vapors.

6. Emergency and First Aid Procedures

Eye Contact: Remove contact lenses, if used. Flush immediately with plenty of water for 15 minutes. Get medical attention IMMEDIATELY.

Skin Contact: If spilled, wash skin immediately with soap and water (do not use solvents). Change into clean clothing. If skin reaction develops, contact dermatologist.

Inhalation: Remove person to fresh air. Increase ventilation.

Ingestion: Rinse out mouth with water and administer large amounts of milk. Contact Poison Control Center.

**Section VII - Precautions for Safe Handling and Use****Steps to be taken in Case Material is released or Spilled:**

Avoid ignition sources. Material is flammable. Contain spill and promptly clean up. Flush with water. Floor can be slippery when wet.

Figure E-30 An example of a Material Safety Data Sheet (MSDS) for non-aerosol pump hair sprays (page 2).

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Waste Disposal Method:

Products covered by this MSDS, in their original form, are considered non-hazardous waste according to RCRA (40 CFR 261.21(a)(1)). Additionally, disposal should be in accordance with all applicable Local, State and Federal regulations.

Precautions to be Taken in Handling and Storage:

FLAMMABLE! Keep away from fire and flames. Keep containers closed. Follow flammable liquid storage requirements. Keep away from radiators and heat. Store in a room with even, normal temperatures, away from heating elements.

On

Section VIII - Control Measures**Ventilation:**

Exhaust system ventilation should be adequate to avoid buildup of vapors.

Hand Protection:

Use impervious gloves to avoid possible skin reaction.

Eye Protection:

Avoid contact with eyes. Use protective eyewear, if splashing is possible.

Other Types of Protection:

Not applicable.

Respiratory Protection:

Avoid inhalation.

Work Hygienic Practices:

Always follow good hygienic work practices. Avoid eye, clothing, and prolonged skin contact with products. In case of contact, rinse thoroughly with water. Promptly clean up all spills.

By

Section IX - Transportation Information**DOT Class:** Over 16 oz.

containers: Ethyl
Alcohol Solutions
3, UN1170, PG II,
16 oz. containers
and under:
Consumer
Commodity
ORM-D

IMDG: Over 16 oz.

containers: Ethyl
Alcohol Solutions
3.2 UN1170, PGII,
Under 16 oz
containers: Ethyl
Alcohol Solutions,
3.2 UN1170, PGII,
Limited Quantities

IATA/ICAO: Over 16 oz.

containers: Ethyl
Alcohol Solutions,
3, UN1170, PGII,
Packing
Instructions 305,
Under 16 oz.
containers:
Consumer
Commodity,
Class 9, ID8000,
Packing
Instructions 910

Figure E-31 An example of a Material Safety Data Sheet (MSDS) for non-aerosol pump hair sprays (page 3).
(Reprinted with permission of Clairol Inc.)

Kenra, LLC 6501 Julian Ave., Indianapolis, IN 46219
Product Name VOLUME SPRAY (80% VOC)
Product Description Finishing Aid

KENRA
CLASSIC. QUALITY. HAIRCARE.

MSDS Number: 16100

Revision Date:

01-Nov-00

Section 2 - Hazardous Ingredients / Identity Information

| Hazardous Components | CAS Number | TLV or PEL | Other Limits | Percentage |
|-----------------------|------------|------------|--------------|------------|
| Ethanol | 64-17-5 | N/A | N/A | N/A |
| Aminomethyl Propanol | 124-68-5 | N/A | N/A | N/A |
| Isobutane | 68476-85-7 | N/A | N/A | N/A |
| Ethane, 1,1-Difluoro- | 75-37-6 | N/A | N/A | N/A |

Section 3 - Physical/Chemical Characteristics

Boiling Point @760mmHg 173-F Specific Gravity H2O = 1 @70-F = .806-820
Vapor Pressure (mm Hg.) N/A Melting Point N/A
Vapor Density (AIR = 1) >1 Evaporation Point(Butyl Acetate = 1) N/A
Solubility in Water Soluble
Appearance and Odor Clear light straw liquid / characteristic odor

Section 4 - Fire and Explosion Hazard

| Flash Point (Method Used) | Flammable Limits | LEL | UEL |
|---------------------------|------------------|-----|-----|
| -30 - F | N/A | N/A | N/A |

Extinguishing Media

Carbon Dioxide, Foam, Dry Chemical, Water

Special Fire Fighting Procedures

Keep temperature of containers below 120-F by spraying with water until the fire has been extinguish

Unusual Fire and Explosion Hazards

Containers may rupture and release flammable liquids and/or gases if exposed to heat or fire.

Section 5 - Reactivity Data

| | | |
|-----------|--|---|
| Stability | Unstable <input type="checkbox"/> | Conditions to Avoid Do not store containers in direct sunlight or where conditions will heat them above 120-F. |
| | Stable <input checked="" type="checkbox"/> | |

Incompatibility (Materials to Avoid)

Do not mix with strong oxidizers.

Hazardous Decomposition or Byproducts

Normal products of combustion.

| | | |
|--------------------------|---|----------------------------|
| Hazardous Polymerization | May Occur <input type="checkbox"/> | Conditions to Avoid N/A |
| | May Not Occur <input checked="" type="checkbox"/> | |

Figure E-32 An example of a Material Safety Data Sheet (MSDS) for non-aerosol pump hair sprays (page 1).
(Reprinted with permission of Kenra LLC.)

| Section 6 - Health Hazard Data | | | |
|---|--------------------------|--------------------------|-------------------------------------|
| Routes of Entry | Inhalation ? | Skin ? | Ingestion ? |
| | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Health Hazards (Acute and Chronic) | | | |
| Prolonged skin contact may cause dermatitis in sensitive individuals. | | | |
| Carcinogenicity | NTP | IARC | OSHA |
| | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Signs and Symptoms of Exposure | | | |
| Redness, stinging, or burning of the skin. | | | |
| Medical Conditions Generally Aggravated by Exposure | | | |
| N/A | | | |
| Emergency and First Aid Procedures | | | |
| Wash from skin or eyes with large amounts of water. If irritation occurs, consult a physician. | | | |
| Section 7 - Precautions for Safe Handling and Use | | | |
| Steps to be Taken in Case Material is Released or Spilled | | | |
| Leaking cans should be placed in open containers, outdoors, away from any source of ignition, until all pressure has been released. | | | |
| Waste Disposal Method | | | |
| Bury or incinerate in approved disposal facilities and accordance with Federal, State and Local reg. | | | |
| Precautions to be Taken in Handling and Storage | | | |
| N/A | | | |
| Other Precautions | | | |
| N/A | | | |
| Section 8 - Control Measures | | | |
| Respiratory Protection (Specify Type) | | | |
| NIOSH/MSHS - approved organic vapor respirator when vapors are generated above the permissible limit. | | | |
| Ventilation (Specify Type: Local Exhaust, Mechanical, Special, Other) | | | |
| Local exhaust to control to recommended P.E.L. | | | |
| Gloves (Specify Type) | | Eye | |
| PVC, Rubber, Plastic, Neoprene | | Chemical goggles | |
| Other Protective Clothing or Equipment | | | |
| Coveralls, aprons, boots, as necessary to prevent skin contact. | | | |
| Hygiene | | | |
| Wash hands after use. | | | |
| KENRA, LLC makes no warranty, express or implied, as to the accuracy, completeness or reliability of information contained here, except that such information is, to the best of our knowledge and belief, accurate as of the date indicated. We assume no responsibility for the application of this information or the consequences of its use. | | | |

Figure E-32 An example of a Material Safety Data Sheet (MSDS) for non-aerosol pump hair sprays (page 2).
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