



## Material Safety Data Sheet

MSDS Code: HO690034

# AIR BRUSH BROWN SPRAY 69-0034

Revision date: 04/12/2003

Date Printed: 04/12/2003

**NFPA Classification:**

Health: 3  
 Flammability: 3  
 Instability: 0  
 Special Hazards:

**HMIS Classification:**

Health: 3 \*  
 Flammability: 3  
 Reactivity: 0  
 Personal Protection: C

\* Indicates possible chronic health effects.

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Common Name:** Not Applicable.

**Chemical Name:** Chemical Mixture

**Formula:** Chemical Mixture

**Product Use:** Decorating ceramics and glass.

**Supplier:** ENGELHARD CORPORATION  
 PERFORMANCE SYSTEMS & MATERIALS  
 1 WEST CENTRAL AVENUE  
 EAST NEWARK, NJ 07029  
 1-973-268-7800

For Chemical Emergency Call CHEMTREC (24 hours):  
 1-800-424-9300 (US, Canada, Puerto Rico, Virgin Islands)  
 1-703-527-3887 (Outside Above Area)

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Ingredient</u>	<u>Weight in Product (%)</u>	<u>Notes</u>
Methyl Ethyl Ketone 78-93-3	55-65	None.

**Other Information:** NOTE: The percentage by weight values reported for this product represent approximate formulation values.

### 3. HAZARDS IDENTIFICATION

**Color:** Brown  
**Form:** Liquid  
**Odor:** Aromatic Odor  
**Flash Point, °C:** 4

**Most Important Hazards:** Chronic Overexposure Effects: Liver and kidney damage. Central nervous system damage. Cardiovascular effects. Prolonged or repeated exposure effects: May cause reproductive effects. May cause central nervous system depression. Symptoms include: nausea, drowsiness, dizziness, headache, weakness, tremors and loss of consciousness. Harmful if swallowed. May cause irritation of the mouth, throat and stomach. May cause pain, nausea, vomiting and diarrhea. Irritating to eyes, respiratory system and skin.

**Potential Health Effects:**

**Inhalation:** Causes respiratory tract irritation. May result in coughing, difficulty breathing and sore throat. Exposure to high concentrations may result in central nervous system depression. Symptoms include: nausea, drowsiness, dizziness, headache, weakness, tremors and loss of consciousness.

**Ingestion:** May cause irritation of the mouth, throat and stomach. May cause central nervous system depression. Symptoms include: nausea, drowsiness, dizziness, headache, weakness, tremors and loss of consciousness.

**Skin Contact:** Causes mild skin irritation. Prolonged contact may cause dermatitis.

**Eye Contact:** Causes eye irritation. May cause corneal injury.

**Other Effects:** NOTE: Ingestion of the product may result in vomiting. Aspiration (breathing) of the vomitus into the lungs must be avoided as even small quantities may result in aspiration pneumonitis. NOTE: The following information has been released concerning 2-BUTOXYETHANOL: In laboratory animals, inhalation exposure at greater than or equal to 100 ppm resulted in maternal toxicity and embryo/fetotoxicity. Lower exposure levels, 50 and 25 ppm, did not show these effects. No teratogenic effects (birth defects) were observed at the high or lower exposure levels.

**Carcinogenicity:**

<u>Ingredient</u>	<u>Weight in Product (%)</u>	<u>NTP (Y/N)</u>	<u>IARC (See Notes)</u>	<u>OSHA (Y/N)</u>	<u>ACGIH (See Notes)</u>
Methyl Ethyl Ketone 78-93-3	55-65	N	N	N	N

**Notes:**

IARC: Y1=Carcinogenic to humans; Y2A=Probably carcinogenic to humans; Y2B=Possibly carcinogenic to humans; N3=Not classifiable as to its carcinogenicity; N=Not studied or probably not carcinogenic.

ACGIH: A1=Confirmed human carcinogen; A2=Suspected human carcinogen; A3=Confirmed animal carcinogen; A4=Not classifiable as a human carcinogen; A5=Not suspected as a human carcinogen; N=Not studied.

**Chronic Health Hazards:** May cause liver and kidney damage. May affect the blood and blood system. May

cause central nervous system effects. May cause vomiting. May cause female reproductive effects. May cause fetal effects.

**Aggravated Medical Conditions:** Eye ailments. Dermal ailments. Respiratory. Blood disorders. Kidney disorders. Liver disorders.

#### 4. FIRST AID MEASURES

**Inhalation:** Move person to fresh air. Aid in breathing, if necessary, and get immediate medical attention.

**Ingestion:** Get medical attention! If vomiting occurs, keep head lower than hips to prevent aspiration.

**Skin Contact:** Flush area with water while removing contaminated clothing and shoes. Wash with soap and water. Clean contaminated clothing and shoes before reuse. Get medical attention if irritation persists.

**Eye Contact:** In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.

#### 5. FIRE FIGHTING MEASURES

**Flash Point, °C:** 4

**Autoignition Temperature, °C:** Not Determined

**Lower Explosive Limit, %:** Not Determined

**Upper Explosive Limit, %:** Not Determined

**Extinguishing Media:** Water mist. Carbon dioxide. Dry chemical. Foam.

**Fire Fighting Procedures:** Positive pressure, self-contained breathing apparatus. Wear full protective clothing.

**Unusual Fire and Explosion Hazards:** Flammable liquid. Toxic and corrosive gasses will be emitted in a fire.

#### 6. ACCIDENTAL RELEASE MEASURES

**Spill Procedures:** Contain spillage. Soak up spill using an absorbent. Scoop into a suitable container.

#### 7. HANDLING AND STORAGE

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Avoid contact with heat, sparks, open flame and static discharge.  
Keep container closed.  
Store in a cool, dry location away from incompatible materials.  
Do not eat, drink or smoke when using.  
Use only with adequate ventilation.  
Do not inhale vapors.  
Do not breathe mist.  
Wash thoroughly after handling.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

<u>Ingredient</u>	<u>Weight in Product (%)</u>	<u>OSHA PEL:</u>	<u>ACGIH TLV:</u>
Methyl Ethyl Ketone 78-93-3	55-65	200 ppm 300 ppm STEL	200 ppm 300 ppm STEL

Unless otherwise noted, all values are reported as 8-hour Time-Weighted Averages (TWAs) and total dust (particulates only). All ACGIH TLVs refer to the 2002 standards. Unless otherwise noted, all OSHA PELs refer to 29 CFR Part 1910 Air Contaminants: Final Rule, June 30, 1993.

**Personal Protective Equipment:**

Safety glasses with side shields. Wear suitable gloves.  
Wear clean, body-covering clothing.

**Respiratory Protection:**

Use approved respiratory protection if exposure limits are exceeded, or overexposure is likely.

**Ventilation:**

General ventilation. Local exhaust ventilation is recommended to control exposures to within applicable limits.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Form:** Liquid  
**Color:** Brown  
**Odor:** Aromatic Odor  
  
**Solubility (in water):** Insoluble

**10. STABILITY AND REACTIVITY**

**Stability Data:**

Stable

**Conditions/Hazards to Avoid:**

Avoid contact with heat, sparks, open flame, and static discharge.

**Incompatibility (Materials to Avoid):**

Strong acids or alkalies. Strong oxidizing agents.

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Hazardous Decomposition Products: Oxides of carbon.

Polymerization: None anticipated.

Polymerization - Avoid: None anticipated.

**11. TOXICOLOGICAL INFORMATION**

**Information on Product:**

No data available.

**Information on Components:**

<u>Ingredient</u>	<u>Weight in Product (%)</u>	<u>Acute Toxicity - Oral</u>	<u>Acute Toxicity - Inhalation</u>	<u>Acute Toxicity - Dermal</u>	<u>Acute Toxicity - Other</u>
Methyl Ethyl Ketone 78-93-3	55-65	2,737 mg/kg (rat)	40,000 mg/m <sup>3</sup> /2 hr (mouse)	Not Available	Not Available

**12. ECOLOGICAL INFORMATION**

**Information on Product:**

Environmental Fate: No data available.

Ecotoxicological Information: No data available.

**13. DISPOSAL CONSIDERATIONS**

US EPA Waste Number: D001 D035

Disposal of Waste Method: Local disposal laws and regulations will determine the proper waste disposal/recycling/reclamation procedure. Disposal requirements are dependent on the hazard classification and will vary by location and the type of disposal selected. All waste materials should be reviewed to determine the applicable hazards (testing may be necessary).

**14. TRANSPORT INFORMATION**

**International Transport Regulations:**

UN/PIN Number: UN1993

**US Transportation Regulations:**

DOT Classification: 3 Flammable liquid

DOT Proper Shipping Name: Flammable liquids, n.o.s. (Contains Methyl Ethyl Ketone)

Packing Group/Exceptions: II

**Canadian Transportation of Dangerous Goods (TDG):**

TDG Classification: 3 Flammable liquid

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**15. REGULATORY INFORMATION**

**International Inventories:**

**United States:** This product or its ingredients are listed on or compliant with the TSCA Inventory.  
**Canada:** This product or its ingredients are listed on or compliant with the DSL.  
**Europe:** This product or its ingredients are listed on or compliant with EINECS.  
**Japan:** This product or its ingredients are listed on or compliant with MITI.  
**Australia:** This product or its ingredients are listed on or compliant with AICS.  
**Korea:** Not Determined

**US Federal Regulations:**

<u>Ingredient</u>	<u>Weight in Product (%)</u>	<u>Subject to SARA 313 Reporting</u>
Methyl Ethyl Ketone 78-93-3	55-65	Yes

**SARA 311/ 312 Hazard Categories:**

Acute Health Hazard      Chronic Health Hazard      Fire Hazard

**CAA 602 Ozone Depleting Substances (ODS):**

This product neither contains nor is manufactured with an ozone depleting substance subject to the labeling requirements of the Clean Air Act Amendments 1990 and 40 CFR Part 82.

**US State Regulations:**

**California Proposition 65 - Carcinogen:**

WARNING: This product contains chemicals known to the State of California to cause cancer.

**California Proposition 65 - Reproductive:**

WARNING: This product contains chemicals known to the State of California to cause birth defects or other reproductive harm.

**VOC Content (CARB):** Not Determined

**Canadian Regulations:**

**WHMIS Classification:**

Class B Division 2  
Class D Division 2 Subdivision A  
Class D Division 2 Subdivision B

**16. OTHER INFORMATION**

**Revision number:** 1

**Section(s) Revised in this Version:** None

**Prepared By:** Engelhard Corporate Environmental Health & Safety Group

The information in this Material Safety Data Sheet should be provided to all who will use, handle, store, transport, or otherwise be exposed to this product. This information has been prepared for the guidance of plant engineering, operations, management and for persons working with or handling this product. The information presented in the MSDS is premised upon proper handling and anticipated uses, and is for the material without chemical additions/alterations. We believe this information to be reliable and up-to-date as of the date of publication, but make no warranty that it is. Additionally, if this Material Safety Data Sheet is more than three years old, please contact the supplier at the phone number listed in Section 1 to make certain that this sheet is current. Copyright Engelhard Corporation. License granted to make unlimited copies for internal use only. End of MSDS.....



## Material Safety Data Sheet

**AIR BRUSH YELLOW SPRAY 60-1043**

MSDS Code: HO601043

Revision date: 04/12/2003

Date Printed:

04/12/2003

**NFPA Classification:**

Health: 3  
Flammability: 3  
Instability: 0  
Special Hazards:

**HMIS Classification:**

Health: 3 \*  
Flammability: 3  
Reactivity: 0  
Personal Protection: C

\* Indicates possible chronic health effects.

**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**Common Name:** Not Applicable.

**Chemical Name:** Chemical Mixture

**Formula:** Chemical Mixture

**Product Use:** Decorating ceramics and glass.

**Supplier:** ENGELHARD CORPORATION  
PERFORMANCE SYSTEMS & MATERIALS  
1 WEST CENTRAL AVENUE  
EAST NEWARK, NJ 07029  
1-973-268-7800

For Chemical Emergency Call CHEMTREC (24 hours):  
1-800-424-9300 (US, Canada, Puerto Rico, Virgin Islands)  
1-703-527-3887 (Outside Above Area)

**2. COMPOSITION / INFORMATION ON INGREDIENTS**

<u>Ingredient</u>	<u>Weight in Product (%)</u>	<u>Notes</u>
Methyl Ethyl Ketone 78-93-3	55-65	None.
2-Butoxyethanol 111-76-2	1-10	None.

**Other Information:** NOTE: The percentage by weight values reported for this product represent approximate formulation values.



### 3. HAZARDS IDENTIFICATION

**Color:** Yellow  
**Form:** Liquid  
**Odor:** Aromatic Odor  
**Flash Point, °C:** 4

**Most Important Hazards:** Chronic Overexposure Effects: Liver and kidney damage. Central nervous system damage. Cardiovascular effects. Prolonged or repeated exposure effects: May cause reproductive effects. May cause central nervous system depression. Symptoms include: nausea, drowsiness, dizziness, headache, weakness, tremors and loss of consciousness. Harmful if swallowed. May cause irritation of the mouth, throat and stomach. May cause pain, nausea, vomiting and diarrhea. Irritating to eyes, respiratory system and skin.

**Potential Health Effects:**

**Inhalation:** Causes respiratory tract irritation. May result in coughing, difficulty breathing and sore throat. Exposure to high concentrations may result in central nervous system depression. Symptoms include: nausea, drowsiness, dizziness, headache, weakness, tremors and loss of consciousness.

**Ingestion:** May cause irritation of the mouth, throat and stomach. May cause central nervous system depression. Symptoms include: nausea, drowsiness, dizziness, headache, weakness, tremors and loss of consciousness.

**Skin Contact:** Causes mild skin irritation. Prolonged contact may cause dermatitis.

**Eye Contact:** Causes eye irritation. May cause corneal injury.

**Other Effects:** NOTE: Ingestion of the product may result in vomiting. Aspiration (breathing) of the vomitus into the lungs must be avoided as even small quantities may result in aspiration pneumonitis. NOTE: The following information has been released concerning 2-BUTOXYETHANOL: In laboratory animals, inhalation exposure at greater than or equal to 100 ppm resulted in maternal toxicity and embryo/fetotoxicity. Lower exposure levels, 50 and 25 ppm, did not show these effects. No teratogenic effects (birth defects) were observed at the high or lower exposure levels.

**Carcinogenicity:**

<u>Ingredient</u>	<u>Weight in Product (%)</u>	<u>NTP (Y/N)</u>	<u>IARC (See Notes)</u>	<u>OSHA (Y/N)</u>	<u>ACGIH (See Notes)</u>
Methyl Ethyl Ketone 78-93-3	55-65	N	N	N	N
2-Butoxyethanol 111-76-2	1-10	N	N	N	N

**Notes:**

IARC: Y1=Carcinogenic to humans; Y2A=Probably carcinogenic to humans; Y2B=Possibly carcinogenic to humans; N3=Not classifiable as to its carcinogenicity; N=Not studied or probably not carcinogenic.

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04/12/2003

ACGIH: A1=Confirmed human carcinogen; A2=Suspected human carcinogen; A3=Confirmed animal carcinogen; A4=Not classifiable as a human carcinogen; A5=Not suspected as a human carcinogen; N=Not studied.

**Chronic Health Hazards:** May cause liver and kidney damage. May affect the blood and blood system. May cause central nervous system effects. May cause vomiting. May cause female reproductive effects. May cause fetal effects.

**Aggravated Medical Conditions:** Eye ailments. Dermal ailments. Respiratory. Blood disorders. Kidney disorders. Liver disorders.

**4. FIRST AID MEASURES**

**Inhalation:** Move person to fresh air. Aid in breathing, if necessary, and get immediate medical attention.

**Ingestion:** Get medical attention! If vomiting occurs, keep head lower than hips to prevent aspiration.

**Skin Contact:** Flush area with water while removing contaminated clothing and shoes. Wash with soap and water. Clean contaminated clothing and shoes before reuse. Get medical attention if irritation persists.

**Eye Contact:** In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.

**5. FIRE FIGHTING MEASURES**

**Flash Point, °C:** 4  
**Autoignition Temperature, °C:** Not Determined  
**Lower Explosive Limit, %:** Not Determined  
**Upper Explosive Limit, %:** Not Determined

**Extinguishing Media:** Water mist. Carbon dioxide. Dry chemical. Foam.

**Fire Fighting Procedures:** Positive pressure, self-contained breathing apparatus. Wear full protective clothing.

**Unusual Fire and Explosion Hazards:** Flammable liquid. Toxic and corrosive gasses will be emitted in a fire.

**6. ACCIDENTAL RELEASE MEASURES**

**Spill Procedures:** Contain spillage. Soak up spill using an absorbent. Scoop into a suitable container.

## 7. HANDLING AND STORAGE

Avoid contact with heat, sparks, open flame and static discharge.  
Keep container closed.  
Store in a cool, dry location away from incompatible materials.  
Do not eat, drink or smoke when using.  
Use only with adequate ventilation.  
Do not inhale vapors.  
Do not breathe mist.  
Wash thoroughly after handling.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<u>Ingredient</u>	<u>Weight in Product (%)</u>	<u>OSHA PEL:</u>	<u>ACGIH TLV:</u>
Methyl Ethyl Ketone 78-93-3	55-65	200 ppm 300 ppm STEL	200 ppm 300 ppm STEL
2-Butoxyethanol 111-76-2	1-10	25 ppm SKIN	20 ppm

Unless otherwise noted, all values are reported as 8-hour Time-Weighted Averages (TWAs) and total dust (particulates only). All ACGIH TLVs refer to the 2002 standards. Unless otherwise noted, all OSHA PELs refer to 29 CFR Part 1910 Air Contaminants: Final Rule, June 30, 1993.

**Personal Protective Equipment:** Safety glasses with side shields. Wear suitable gloves.  
Wear clean, body-covering clothing.

**Respiratory Protection:** Use approved respiratory protection if exposure limits are exceeded, or overexposure is likely.

**Ventilation:** General ventilation. Local exhaust ventilation is recommended to control exposures to within applicable limits.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Form:** Liquid  
**Color:** Yellow  
**Odor:** Aromatic Odor  
  
**Solubility (in water):** Insoluble

## 10. STABILITY AND REACTIVITY

**Stability Data:** Stable

**Conditions/Hazards to Avoid:** Avoid contact with heat, sparks, open flame, and static discharge.

**Incompatibility (Materials to Avoid):** Strong acids or alkalies. Strong oxidizing agents.

**Hazardous Decomposition Products:** Oxides of carbon.

**Polymerization:** None anticipated.

**Polymerization - Avoid:** None anticipated.

#### 11. TOXICOLOGICAL INFORMATION

**Information on Product:**

No data available.

**Information on Components:**

<u>Ingredient</u>	<u>Weight in Product (%)</u>	<u>Acute Toxicity - Oral</u>	<u>Acute Toxicity - Inhalation</u>	<u>Acute Toxicity - Dermal</u>	<u>Acute Toxicity - Other</u>
Methyl Ethyl Ketone 78-93-3	55-65	2,737 mg/kg (rat)	40,000 mg/m <sup>3</sup> /2 hr (mouse)	Not Available	Not Available
2-Butoxyethanol 111-76-2	1-10	470 mg/kg (rat)	Not Available	Not Available	Not Available

#### 12. ECOLOGICAL INFORMATION

**Information on Product:**

**Environmental Fate:**

No data available.

**Ecotoxicological Information:**

No data available.

#### 13. DISPOSAL CONSIDERATIONS

**US EPA Waste Number:** D001 D035

**Disposal of Waste Method:** Local disposal laws and regulations will determine the proper waste disposal/recycling/reclamation procedure. Disposal requirements are dependent on the hazard classification and will vary by location and the type of disposal selected. All waste materials should be reviewed to determine the applicable hazards (testing may be necessary).

#### 14. TRANSPORT INFORMATION

**International Transport Regulations:**

**UN/PIN Number:** UN1993

**US Transportation Regulations:**

**DOT Classification:** 3 Flammable liquid

**Engelhard**  
Material Safety Data Sheet

MSDS code: HO601043  
Revision date: 04/12/2003

**DOT Proper Shipping Name:** Flammable liquids, n.o.s. (Contains Methyl Ethyl Ketone)

**Packing Group/Exceptions:** II

**Canadian Transportation of Dangerous Goods (TDG):**

**TDG Classification:** 3 Flammable liquid

**15. REGULATORY INFORMATION**

**International Inventories:**

**United States:** This product or its ingredients are listed on or compliant with the TSCA Inventory.  
**Canada:** This product or its ingredients are listed on or compliant with the DSL.  
**Europe:** This product or its ingredients are listed on or compliant with EINECS.  
**Japan:** This product or its ingredients are listed on or compliant with MITI.  
**Australia:** This product or its ingredients are listed on or compliant with AICS.  
**Korea:** Not Determined

**US Federal Regulations:**

<u>Ingredient</u>	<u>Weight in Product (%)</u>	<u>Subject to SARA 313 Reporting</u>
Methyl Ethyl Ketone 78-93-3	55-65	Yes
2-Butoxyethanol 111-76-2	1-10	Yes

**SARA 311/ 312 Hazard Categories:**

Acute Health Hazard      Chronic Health Hazard      Fire Hazard

**CAA 602 Ozone Depleting Substances (ODS):**

This product neither contains nor is manufactured with an ozone depleting substance subject to the labeling requirements of the Clean Air Act Amendments 1990 and 40 CFR Part 82.

**US State Regulations:**

**California Proposition 65 - Carcinogen:**

WARNING: This product contains chemicals known to the State of California to cause cancer.

**California Proposition 65 - Reproductive:**

WARNING: This product contains chemicals known to the State of California to cause birth defects or other reproductive harm.

**VOC Content (CARB):** Not Determined

**Canadian Regulations:**

**WHMIS Classification:**

Class B Division 2

Class D Division 2 Subdivision A  
Class D Division 2 Subdivision B

**16. OTHER INFORMATION**

**Revision number:** 1

**Section(s) Revised  
in this Version:** None

**Prepared By:** Engelhard Corporate Environmental Health & Safety Group

The information in this Material Safety Data Sheet should be provided to all who will use, handle, store, transport, or otherwise be exposed to this product. This information has been prepared for the guidance of plant engineering, operations, management and for persons working with or handling this product. The information presented in the MSDS is premised upon proper handling and anticipated uses, and is for the material without chemical additions/alterations. We believe this information to be reliable and up-to-date as of the date of publication, but make no warranty that it is. Additionally, if this Material Safety Data Sheet is more than three years old, please contact the supplier at the phone number listed in Section 1 to make certain that this sheet is current. Copyright Engelhard Corporation. License granted to make unlimited copies for internal use only. End of MSDS.....