MATERIAL SAFETY DATA SHEET

PRODUCT CODE: 1A STOVEBRIGHT
PRODUCT NAME: STOVEBRIGHT AEROSOL SERIES MASTER MSDS

HMIS CODES: H F R P
2*3 0 J

SECTION I - MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: FORREST PAINT CO.
ADDRESS: 1011 MCKINLEY ST.
EUGENE, OR 97402

INFORMATION PHONE: 1(541)342-1821
NAME OF PREPARER: T. BOLLENBAUGH

EMERGENCY PHONE: 1(800)424-9300
DATE PRINTED: 07/27/01

SECTION II - REPORTABLE COMPONENTS

REPORTABLE COMPONENTS	CAS NUMBER	VAPOR PRESSURE mm Hg @ TEMP		WEIGHT PERCENT
ACETONE	67-64-1	186	68	20 - 40
PEL-TWA: 750 ppm, PEL-STEL: 1000 ppm, ACGIH-TLV: 750 ppm				
PROPANE	74-98-6	205	100	10 - 15
ACGIH-TLV: 1000 ppm				
BUTANE	106-97-8	1520	66	10 - 15
ACGIH-TLV: 800 ppm				
TOLUENE	108-88-3	25	68	1 - 30
PEL-TWA: 100 ppm, PEL-STEL: 150 ppm, ACGIH-TLV: 50 ppm - skin				
XYLENE	1330-20-7	5.1	68	1 - 25
PEL-TWA: 100 ppm, PEL-STEL: 150 ppm, ACGIH-TLV: 100 ppm				
n-BUTYL ALCOHOL	71-36-3	7	68	1 - 10
PEL-TWA: 100 ppm, ACGIH-TLV: 50ppm ceiling				
TITANIUM DIOXIDE	13463-67-7			0 - 10
PEL-TWA: 10 mg/m3, ACGIH-TLV: 10 mg/m3				
ALUMINUM	7429-90-5			0 - 10
ACGIH-TLV: 5 mg/m3				
CHROMIUM (III) OXIDE	1308-38-9			0 - 5
PEL-TWA: 0.5 mg/m3; ACGIH-TLV: 0.5 mg/m3				
MINERAL SPIRITS	8052-41-3	5	68	0 - 5
PEL-TWA: 100 ppm, ACGIH-TLV: 100 ppm				
SOLVENT NAPHTHA	64742-89-8	60	68	0 – 5
PEL-TWA: 400 ppm, ACGIH-TLV: 400 ppm				
ETHYL ETHER CELLULOSE	9004-57-3			0 - 5
PEL-TWA: 10 mg/m3				
IRON OXIDE	1309-37-1			0 - 5
PEL-TWA/ACGIH-TLV: 10 mg/m3 total dust, 5 mg/m3 (fume)				
MICA	12001-26-2			0 – 5
PEL-TWA: 10 mg/m3, ACGIH-TLV: 10 mg/m3				
ISOPROPANOL	12001-26-2	33	68	0 – 5
PEL-TWA: 400 ppm, PEL-STEL: 500 ppm, ACGIH-TLV: 400 ppm				
CLAY	1332-58-7			0 - 5
PEL-TWA: 10 mg/m3 total dust, 5 mg/m3 respirable; ACGIH-TLV: 10 mg/m3 total				
AMORPHOUS FUMED SILICA	112945-52-5			0 - 5
PEL-TWA: 6 mg/m3, ACGIH-TLV: 6 mg/m3				
2-BUTOXYETHANOL	111-76-2	.6	68	0 - 5
PEL-TWA/ACGIH-TLV: 25 ppm (skin)				
RED IRON OXIDE	1332-37-2			0 - 5
PEL-TWA: 10 mg/m3 Total dust, 5 mg/m3 Respirable dust; ACGIH-TLV: 10 mg/m3 Total dust				
ZINC PHOSPHATE	7779-90-0			0 – 5
PEL-TWA/ACGIH-TLV: 10 mg/m3 Total dust, 5 mg/m3 Respirable dust;				

CHROMIUM (III) CMPDS	NOT ESTAB.	0 - 5
PEL-TWA: 0.5 mg/m3, ACGIH-TLV: 0.5 mg/m3		
COPPER CMPDS		0 - 5
PEL-TWA: 1.0 mg/m3, ACGIH-TLV: 1.0 mg/m3		
C.I. PIGMENT BLACK	68186-94-7	0 – 5
PEL-TWA/ACGIH-TLV: 10 mg/m3 Total dust, 5 mg/m3 Respirable dust;		
COBALT	7440-48-4	0 - .7
PEL-TWA: .05 mg/m3, ACGIH-TLV: .05 mg/m3		
CHROMIUM	7440-47-3	0 - .5
PEL-TWA: .05 mg/m3, ACGIH-TLV: 0.5 mg/m3		

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING RANGE: -13 deg F - 367 deg F
DENSITY : 6.15 - 7.10 lb/gal
SPECIFIC GRAVITY (H20=1): .74 - .85
VAPOR DENSITY : Heavier than air.
EVAPORATION RATE: Slower than ether.
SOLUBILITY IN WATER: Insoluble.
APPEARANCE AND ODOR: Aerosol mist with solvent odor.

VOC AS SUPPLIED: 3.35 - 4.8 lb/gal 400 - 570 g/L

VOC EXCLUDING EPA EXEMPT SOLVENTS/WATER: 4.8 - 5.9 lb/gal 575 - 710 g/L

NOTE: Check with your state/local Air Quality regulatory agency to determine which VOC calculation you should use.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: -134 deg F
METHOD USED: T.C.C.
FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: 1
UPPER: 13

EXTINGUISHING MEDIA: Foam, Alcohol foam, CO2, Dry chemical, Water fog.

SPECIAL FIREFIGHTING PROCEDURES: Hazardous decomposition products may form from incomplete combustion. Wear full protection gear with self-contained positive pressure breathing apparatus. Contains aluminum which may react with water creating hydrogen gas. Dry chemical and CO2 are preferred over foam and water fog.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Aluminum pigment can react with water creating hydrogen gas. Dry chemical and Carbon dioxide are preferred over water in case of fire.
EXTREMELY FLAMMABLE LIQUID AND VAPORS!! Closed container can build pressure from heat and rupture violently. Volatile vapors can burn in the open or explode if confined. Vapor is heavier than air and can travel long distances to source of ignition.

SECTION V - REACTIVITY DATA

STABILITY: Stable.
HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: High temperatures, sources of ignition. Do not use in areas with poor ventilation.

INCOMPATIBILITY (MATERIALS TO AVOID): Strong acids, oxidizing agents, water.
COPPER: Minerals acids and other copper/zinc reactive agents.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Carbon monoxide, carbon dioxide, hydrogen gas.

SECTION VI - HEALTH HAZARD DATA

Note: This product is a blend of materials which has not been tested as a mixture. The health effect data is based on the individual components.

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE:
ALUMINUM METAL DUST: Generally the metallic dust is considered a nuisance dust. However, fine powder can cause scarring of the lungs (pulmonary fibrous) with symptoms of cough and shortness of breath.

AMORPHOUS SILICA: Dust or in aerosol mist(inhalation): Considered to be less toxic than quartz or crystalline silica. Potential effects - scarring of the lungs (pulmonary fibrosis) and silicotic nodules - scar tissue (silicosis).
2-BUTOXYETHANOL: High exposures can cause you to become dizzy, lightheaded and to pass out. Breathing the vapor can irritate the lungs and cause a build up of fluid (pulmonary edema). This can cause death.
n-, sec- BUTYL ALCOHOLS: Irritation of the nose and throat may occur. Higher levels may cause you to become dizzy and pass out.
CHROMIUM (III)-DUST: These compounds can cause serious pulmonary disease.
ISOPROPANOL: Exposure can cause irritation of the eyes, nose, mouth and throat. IPA is of low toxicity by any route and the TLV is set on the basis of eye, nose and throat irritation.
TOLUENE/VM&P NAPHTHA/PETROLEUM NAPHTHA: Vapors or aerosol mists are central nervous system (CNS) depressant and a mild irritant of the eyes and upper respiratory tract. Narcotic in high concentration. High concentrations can cause unconsciousness which may go to coma, difficult breathing, tremors and nausea, excitation and hyperactivity, impairment of coordination and reaction time.
XYLENE/ETHYL BENZENE: Vapors are irritating to the eyes, mucous membranes and skin; at high concentrations it causes narcosis or unconsciousness. Giddiness, anorexia, vomiting, headache, vertigo (dizziness), gastric (stomach) discomfort, dryness of the throat and signs of slight drunkenness.
ACETONE: Vapors are irritating and may cause a stinging and itching sensation in the eyes, nose and throat, coughing, excessive blinking, tear production, nausea and possibly vomiting. High vapor concentrations may result in dryness of mouth and throat, headache, dizziness, incoordination and eventually unconsciousness or, in extreme cases, coma.

EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE:
ALUMINUM METAL DUST: Exposure to powder can irritate the eyes. Contact with particles can scratch the eyes.
AMORPHOUS SILICA: Dust or in aerosol mist (inhalation): Exposure can cause eye irritation.
2-BUTOXYETHANOL: Contact causes pain, eye membrane irritation and temporary corneal injury. Prolonged contact can burn the eyes.
n-, sec-, ISO-BUTYL ALCOHOLS: Exposure can cause eye irritation and headaches. n-Butyl causes severe eye symptoms including burning sensation, blurring of vision, tearing and light phobia.
ISOPROPANOL: Contact can cause eye irritation.
TOLUENE/VM&P NAPHTHA/PETROLEUM NAPHTHA: Toluene is a strong irritant to the eyes.
XYLENE/ETHYL BENZENE: Eye contact with liquid is irritating and may cause conjunctivitis, redness, tearing and blurred vision.
ACETONE: Causes severe irritation, seen as marked excess redness and swelling of the membrane lining the eye and the inside of the eyelid, and immediate pain. Injury to the cornea may occur if the eye is not flushed with water immediately.

SKIN CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE:
ISOPROPANOL: Can irritate the skin on contact, causing a rash or burning feeling.
TOLUENE/VM&P NAPHTHA/PETROLEUM NAPHTHA: Minor skin contact causes some irritation. Prolonged contact will cause drying of the skin and cracking.
XYLENE/ETHYL BENZENE: Skin contact may result in immediate irritation characterized by redness (erythema and hyperemia) and will remove fat from the skin resulting in dermatitis. Painful burning sensation and blisters formed on exposed areas.
2-BUTOXYETHANOL: Prolonged or repeated exposure may cause skin irritation.
ACETONE: Causes skin irritation. Prolonged or repeated contact may cause defatting, drying and cracking of the skin.
COPPER: Dust may cause acute dermatitis.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE:
2-BUTOXYETHANOL: This material can pass through the skin. High or repeated exposure can break down red blood cells, and cause anemia. It can also damage the liver and kidneys.
n-, sec- BUTYL ALCOHOLS: n-Butyl has skin notation rapid entry through the skin, the other alcohols are a lesser extent. May damage the liver, kidneys, hearing and the sense of balance.
CHROMIUM (III)-DUST: This compound does not appear to cause other effects associated with the hexavalent chromium.

ISOPROPANOL: Can absorbed through the skin.
TOLUENE/VM&P NAPHTHA/PETROLEUM NAPHTHA: Can be absorbed and cause systemic poisoning.
XYLENE/ETHYL BENZENE: Can be slowly absorbed through the skin and cause systemic poisoning.
ACETONE: Skin absorption can occur, however, inhalation is the primary route of exposure.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE:
If vomiting occurs do not allow vomitus to be breathed into the lungs. Even small quantities may cause chemical pneumonia and fluid in the lungs (pulmonary edema) which may result in hemorrhage (bleeding) and may be fatal.
2-BUTOXYETHANOL: May be orally toxic but there is insufficient data to assess human toxicity.
n-, sec- BUTYL ALCOHOLS: Can be absorbed orally showing signs of general solvent toxicity.
ISOPROPANOL: Ingestion gives rise to symptoms of alcoholic intoxication. Other symptoms may include vomiting, depression, headache, coma and shock.
TOLUENE/VM&P NAPHTHA/PETROLEUM NAPHTHA: Ingestion produces similar effects to vapor inhalation. The liquid causes damage to stomach and intestinal linings.
XYLENE/ETHYL BENZENE: Ingestion produces similar effects to vapor inhalation. The liquid causes damage to stomach and intestinal linings.
ACETONE: Toxic by ingestion. Causes nausea, vomiting, headache, dizziness, unconsciousness, coma, kidney damage and metabolic changes.
COPPER: May produce acute gastroenteric symptoms resulting in vomiting and/or inflammation. May cause acute metal fume fever.

CHRONIC HEALTH RISKS:
ALUMINUM METAL DUST: Inhalation of finely divided powder has been reported as a cause of pulmonary fibrosis.
AMORPHOUS SILICA: May cause lung scarring (silicosis).
2-BUTOXYETHANOL: Long term exposure can cause the breakdown of red blood cells, resulting in anemia. It may also damage the liver and kidneys.
n-, sec- BUTYL ALCOHOLS: Repeated contact may cause drying and cracking of the skin. n-Butyl alcohol can damage the hearing and sense of balance. Exposure may damage the liver and kidneys.
CHROMIUM (III)-DUST: These compounds can cause serious lung (pulmonary) disease.
ISOPROPANOL: Skin exposure can cause itching, redness and rashes in some people. Repeated or prolonged exposure can cause dryness and cracking of skin. This chemical has not been adequately evaluated to determine whether brain or nerve damage could occur with repeated exposure. However, many solvents and other petroleum based chemicals have been shown to cause such damage.
TOLUENE/VM&P NAPHTHA/PETROLEUM NAPHTHA: Prolonged contact will cause drying of the skin and cracking. Muscular weakness syndromes, gastrointestinal syndromes or neuropsychiatric syndromes are common symptoms in toluene sniffers.
Encephalophathy (toxic brain disease), progressive memory loss, fatigue, impaired concentration, irritability, persistent headaches and brain dysfunction has been reported.
XYLENE/ETHYL BENZENE: Can interfere with motor functions in exposed workers, loss of appetite, nausea, headache, dizziness, sleeplessness, indigestion, nose bleeds, liver and kidney damage, toxic brain disease (encephalopathy), dementia (loss of memory), and other neurological disorders.
Experimental animals experienced teratogenic and reproductive effects. Temporary blood disorders and kidney damage has been observed in male rats.
Prolonged or repeated exposure to solvents may cause permanent brain and nervous system damage, including memory loss and impairment of coordination and reaction time. May cause toxic brain disease (encephalopathy), associated with brain tissue death. May cause liver and kidney damage. Inhaling concentrated vapors is harmful and may be fatal.
ACETONE: In industry, the primary reported effects have been skin irritation resulting from its defatting action and headaches from prolonged inhalation. Chronic overexposure may lead to kidney or eye damage.
COPPER: Chronic exposure to copper powder may cause liver, kidney and/or spleen injury. Anemia may develop. Chronic toxicity is confined to those persons suffering from pre-existing Wilson's disease.

CARCINOGENICITY:
NTP CARCINOGEN: No IARC MONOGRAPHS: Yes OSHA REGULATED: No
CHROMIUM (III)-DUST: IARC-Cancer review-Animal studies inadequate evidence. There is no evidence indicating carcinogenicity of trivalent chromium compounds in humans and animals.

COBALT AND COBALT COMPOUNDS: Classified by IARC as possibly carcinogenic to humans (Group 2B, Monograph #52).

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:
Exposure for employees with a history of certain medical conditions such as skin, liver, kidney, eye, chronic respiratory, central and peripheral nervous system disease may have an increased risk from exposure to this material.
ACETONE: May enhance the toxicity on the kidneys of other solvents in mixed solvent systems.
COPPER: May aggravate persons afflicted with chronic respiratory disease or impaired pulmonary functions, especially those with obstructive airway diseases. Also people with pre-existing liver, kidney, skin or blood disorders and persons with Wilson's disease.

EMERGENCY AND FIRST AID PROCEDURES:
EYES: Flush with large quantities for water for 15 minutes lifting eyelids occasionally. Get medical attention if irritation persists.
SKIN: Wash thoroughly with soap and water. Remove contaminated clothing. Wash clothing before reuse.
INGESTION: If conscious drink a quart of water and get medical attention. Do not induce vomiting!! Call a physician or poison control center immediately 1(800)452-7165.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
Use absorbent material to collect spill. Scoop into a container and dispose of according to local regulations. In the event of a large transportation related spill or emergency call CHEMTREC at 1(800)424-9300.

WASTE DISPOSAL METHOD:
Dispose of waste according to Federal, State, and local regulations. Do not put used container into incinerator, wood stove, or home trash compactor.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:
EXTREMELY FLAMMABLE LIQUID AND VAPORS! Keep clear of all sources of ignition. Do not store at temperature greater than 120 deg. F.
Contents under pressure. Exposure to sunlight may cause bursting. Do not puncture or incinerate. Avoid prolonged exposure to sunlight.

OTHER PRECAUTIONS:
Contents under pressure. Exposure to heat may cause bursting. Do not puncture or incinerate (burn). Avoid prolonged exposure to sunlight.

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION:
If ventilation is not adequate to reduce vapors below Threshold Limit Value (TLV) levels, use a self-contained (air supplied) positive pressure breathing apparatus, or a NIOSH approved air purifying respirator (APR) equipped with organic vapor cartridges (black striped cartridge). Failure to use proper respiratory protection may be harmful or fatal. User must be properly trained and fitted to assure effective protection. Follow all manufacturers recommendations for use of filter.
WARNING: Do not use an APR if oxygen level is below 19.5% by volume.

VENTILATION:
Good general ventilation should be sufficient for most conditions. Use local exhaust if necessary to control mist or vapor.

PROTECTIVE GLOVES:
Use gloves impervious to liquid.

EYE PROTECTION:
Goggles or approved safety glasses should be worn. DO NOT wear contact lenses when working with chemicals. Contact lenses can trap chemical next to eye which may increase eye damage.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:
None known.

WORK/HYGIENIC PRACTICES:
In handling any chemicals, personal hygiene is extremely important. Always wash your hands and face before eating or when done handling or using this product. Keep food and drink out of work areas. Some items such as cigarettes or gum readily absorb solvent vapors and may increase your overall exposure to this product.

SECTION IX - REGULATORY INFORMATION

SARA 313 / 40 CFR 372	CAS No.	% / WT:
TOLUENE	108-88-3	10 -15
XYLENE	1330-20-7	10 -15
n-BUTYL ALCOHOL	71-36-3	1 - 10
CHROMIUM (III) OXIDE	1308-38-9	0 - 5
2-BUTOXYETHANOL	111-76-2	0 - 5
ZINC PHOSPHATE	7779-90-0	0 - 5
CHROMIUM (III) CMPDS	NOT ESTAB.	0 - 5
COPPER CMPDS		0 - 5
COBALT	7440-48-4	0 - .7
CHROMIUM	7440-47-3	0 - .5

CLEAN AIR ACT AMENDMENT SECTION 112 (HAPS):	CAS No.	% / WT:
+ TOLUENE	108-88-3	10 -15
+ XYLENE	1330-20-7	10 -15
x CHROMIUM (III) OXIDE	1308-38-9	0 - 5
+ 2-BUTOXYETHANOL	111-76-2	0 - 5
x CHROMIUM (III) CMPDS	NOT ESTAB.	0 - 5
x COBALT	7440-48-4	0 - .7
x CHROMIUM	7440-47-3	0 - .5

+ Indicates volatile Hazardous Air Pollutant chemicals at or above the reporting requirements of the Clean Air Act Amendments Section 112.
x Indicates non-volatile Hazardous Air Pollutant chemicals at or above the reporting requirements of the Clean Air Act Amendments Section 112.

DOT SHIPPING INFORMATION: Does not apply.

DOT SHIPPING INFORMATION (LIMITED QUANTITIES): Consumer Commodity, ORM-D.

IATA SHIPPING DESCRIPTION: Consumer commodity, Class 9, ID 8000.

IMDG SHIPPING DESCRIPTION: Aerosols, Class 2,UN1950, Limited Quantity.

OSHA CLASSIFICATION: Flammable Liquid - Class IA.

CLEAN AIR ACT - OZONE DEPLETING CHEMICALS: Not known to contain or be manufactured with Class 1 or Class 2 Ozone Depleting Chemicals (ODC's).

SECTION X - DISCLAIMER

The above information is based on current information available to Forrest Paint Co. and is believed to be accurate but is not warranted.