

## Section 1: Identification

**Product Name:** Fire Storm Colour Flame Solution

**Recommended use:** Liquid. Produces colored flame

Professional Use only by a qualified Pyrotechnician in a Theatrical Entertainment Application or in Professional Training Applications.

**Manufacturer and Distributor's Name and Address:** Ultratec Special Effects, Inc.  
148 Moon drive  
Owens Cross Roads, AL 35763  
United States  
Telephone Number: (256) 725-4224  
[www.ultratecfx.com](http://www.ultratecfx.com)

**Emergency Telephone Number:** 800-255-3924 - ChemTel

## Section 2: Hazard Identification

**Classification of substance or mixture:**

Chemicals have been withheld for trade secret and proprietary information purposes.

## Section 3: Composition/Information on Ingredients

### WARNING



NOTES TO PHYSICIAN: ACUTE EXPOSURE TO METHANOL, EITHER THOROUGH INGESTION OR BREATHING HIGH AIRBORNE CONCENTRATIONS CAN RESULT IN SYMPTOMS APPEARING BETWEEN 40 MINUTES AND 72 HOURS AFTER EXPOSURE. SYMPTOMS AND SIGNS ARE USUALLY LIMITED TO CNS, EYES AND GASTROINTESTINAL TRACT. BECAUSE OF THE INITIAL CNS'S EFFECTS OF

HEADACHE, VERTIGO, LETHARGY AND CONFUSION, THERE MAY BE AN IMPRESSION OF ETHANOL INTOXICATION. BLURRED VISION, DECREASED ACUITY AND PHOTOPHOBIA ARE COMMON COMPLAINTS. TREATMENT WITH IPECAC OR LAVAGE IS INDICATED IN ANY PATIENT PRESENTING WITHIN TWO HOURS OF INGESTION. A PROFOUND METABOLIC ACIDOSIS OCCURS IN SEVERE POISONING AND SERUM BICARBONATE LEVELS ARE A MORE ACCURATE MEASURE OF SEVERITY THAN SERUM METHANOL LEVELS. TREATMENT PROTOCOLS ARE AVAILABLE FROM MOST MAJOR HOSPITALS AND EARLY COLLABORATION WITH APPROPRIATE HOSPITALS IS RECOMMENDED.

ROUTE OF ENTRY:

SKIN CONTACT: IRRITANT.

SKIN ABSORPTION: MAY BE ABSORBED THROUGH THE SKIN IN TOXIC OR LETHAL AMOUNTS.

EYE CONTACT: MODERATE IRRITANT. HIGH CONCENTRATION OR LIQUID CONTACT WITH EYES CAUSES IRRITATION, TEARING AND BURNING.

INHALATION: INHALATION OF HIGH AIRBORNE CONCENTRATIONS CAN ALSO IRRITATE MUCOUS MEMBRANES, CAUSE HEADACHES, SLEEPINESS, NAUSEA, CONFUSION, LOSS OF CONSCIOUSNESS, DIGESTIVE AND VISUAL DISTURBANCES AND DEATH.

NOTE: THE ODOUR THRESHOLD OF METHANOL IS SEVERAL TIMES HIGHER THAN THE TLV-TWA.

INGESTION: SWALLOWING EVEN SMALL AMOUNTS OF METHANOL MAY CAUSE BLINDNESS OR DEATH. EFFECTS OF SUB LETHAL DOSES MAY BE NAUSEA, HEADACHE, ABDOMINAL PAIN, VOMITING AND VISUAL DISTURBANCES RANGING FROM BLURRED VISION TO LIGHT SENSITIVITY.

EFFECTS OF ACUTE EXPOSURE: REFER TO ROUTE OF ENTRY.

EFFECTS OF CHRONIC EXPOSURE: REPEATED EXPOSURE TO METHANOL BY INHALATION OR ABSORPTION MAY CAUSE SYSTEMIC POISONING, BRAIN DISORDERS, IMPAIRED VISION AND BLINDNESS. INHALATION MAY WORSEN CONDITIONS SUCH AS EMPHYSEMA OR BRONCHITIS. REPEATED SKIN CONTACT MAY CAUSE DERMAL IRRITATION, DRYNESS AND CRACKING.

Keep away from heat, sparks and open flame, hot surfaces-  
NO SMOKING

Store in a cool dry approved area

Dispose of content/container in accordance with local/regional/national and international regulations

### **Section 3: Composition/Information on Ingredients**

#### **Hazardous Components**

Chemicals have been withheld for trade secret and proprietary information purposes.

### **Section 4: First-Aid Measures**

SKIN: REMOVE CONTAMINATED CLOTHING; WASH UNDER SHOWER WITH SOAP AND WATER FOR 15 MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION OCCURS. EYE: FLUSH IMMEDIATELY WITH GENTLY RUNNING WATER FOR A

MINIMUM OF 15 MINUTES, ENSURING ALL SURFACES AND CREVICES ARE FLUSHED BY LIFTING LOWER AND UPPER LIDS. OBTAIN MEDICAL ATTENTION. INHALATION: REMOVE TO FRESH AIR, RESTORE OR ASSIST BREATHING IF NECESSARY, OBTAIN MEDICAL ATTENTION IMMEDIATELY. INGESTION: SWALLOWING METHANOL IS LIFE THREATENING. ONSET OF SYMPTOMS MAY BE DELAYED FOR 18 TO 24 HOURS AFTER INGESTION. IF CONSCIOUS AND MEDICAL AID IS NOT IMMEDIATELY AVAILABLE, DO NOT INDUCE VOMITING. TRANSPORT TO MEDICAL ATTENTION.

## **Section 5: Fire-Fighting Measures**

SMALL FIRES: CARBON DIOXIDE. DRY CHEMICAL. WATER SPRAY. LARGE FIRES: WATER SPRAY, AQUEOUS FILM FORMING FOAM (ALCOHOL RESISTANT) (AFFF(R)) TYPE WITH EITHER A 3% OR 6% FOAM PROPORTIONING SYSTEM. SPECIAL PROCEDURES. METHANOL BURNS WITH A CLEAN CLEAR FLAME THAT IS ALMOST INVISIBLE IN DAYLIGHT. STAY UPWIND. ISOLATE AND RESTRICT AREA ACCESS. CONCENTRATIONS OF GREATER THAN 25% METHANOL IN WATER CAN BE IGNITED. USE FINE WATER SPRAY OR FOG TO CONTROL FIRE SPREAD AND COOL ADJACENT STRUCTURES OR CONTAINERS. CONTAIN FIRE CONTROL WATER FOR LATER DISPOSAL. FIRE FIGHTERS MUST WEAR FULL FACE, POSITIVE PRESSURE, SELF-CONTAINED BREATHING APPARATUS OR AIRLINE AND APPROPRIATE PROTECTIVE CLOTHING. PROTECTIVE FIRE FIGHTING STRUCTURAL CLOTHING IS NOT EFFECTIVE PROTECTION FROM METHANOL. DO NOT WALK THROUGH SPILLED PRODUCT.

## **Section 6: Accidental Release Measures**

FLAMMABLE LIQUID. RELEASE CAN CAUSE AN IMMEDIATE FIRE/EXPLOSION HAZARD. ELIMINATE ALL IGNITION SOURCES, STOP LEAK AND USE NON-COMBUSTIBLE ABSORBENT MATERIALS. IF NECESSARY, CONTAIN SPILL BY DIKING. FLUOROCARBON ALCOHOL RESISTANT FOAMS MAY BE APPLIED TO SPILL TO DIMINISH VAPOUR AND FIRE HAZARD. MAXIMIZE METHANOL RECOVERY FOR RECYCLING OR REUSE. COLLECT LIQUID WITH EXPLOSION PROOF PUMPS. FOR SMALL SPILLS, COLLECT WITH A NON-COMBUSTIBLE ABSORBENT MATERIAL. RECOVER METHANOL OR DILUTE WITH WATER TO REDUCE FIRE HAZARD. PREVENT SPILLED METHANOL FROM ENTERING SEWERS, CONFINED SPACES, DRAINS, OR WATERWAYS. RESTRICT ACCESS TO UNPROTECTED PERSONNEL. FULL-FACE, POSITIVE PRESSURE SELF-CONTAINED BREATHING APPARATUS OR AIRLINE AND PROTECTIVE CLOTHING MUST BE WORN. PROTECTIVE FIRE FIGHTING STRUCTURAL CLOTHING IS NOT EFFECTIVE PROTECTION FROM METHANOL. DO NOT WALK THROUGH SPILLED PRODUCT AS IT MAY BE ON FIRE AND NOT VISIBLE.

## **Section 7: Handling and Storage**

HANDLING PROCEDURES: KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME. AVOID BREATHING EQUIPMENT VAPOURS. AVOID EYE AND SKIN CONTACT. DO NOT INGEST. WEAR PROTECTIVE EQUIPMENT DURING HANDLING. HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICES. NO SMOKING OR OPEN FLAME IN

STORAGE, USE OR HANDLING. USE EXPLOSION PROOF ELECTRICAL EQUIPMENT. ENSURE PROPER ELECTRICAL GROUNDING PROCEDURES ARE IN PLACE. EQUIPMENT MUST BE GROUNDED. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. EMPTY CONTAINERS ARE HAZARDOUS, MAY CONTAIN FLAMMABLE/EXPLOSIVE DUSTS, LIQUID RESIDUE OR VAPOURS. FOLLOW LABEL WARNINGS EVEN AFTER CONTAINER IS EMPTIED.  
SHIPPING INFORMATION:ALL SHIPMENTS OF METHANOL MUST BE PROPERLY CLASSIFIED, DESCRIBED, PACKAGED, MARKED AND LABELLED TO CONFORM WITH REGULATIONS SET BY TRANSPORT CANADA (TDG) AND/OR U.S. DEPARTMENT OF TRANSPORT (DOT).

STORAGE NEEDS: STORE IN TOTALLY ENCLOSED EQUIPMENT, DESIGNED TO AVOID IGNITION AND HUMAN CONTACT. TANKS MUST BE GROUNDED AND VENTED AND SHOULD HAVE VAPOUR EMISSION CONTROLS. TANKS MUST BE DIKED. AVOID STORAGE WITH INCOMPATIBLE MATERIALS. ANHYDROUS METHANOL IS NON-CORROSIVE TO MOST METALS AT AMBIENT TEMPERATURES EXCEPT LEAD AND MAGNESIUM. HOWEVER COATINGS OF COPPER (OR COPPER ALLOYS),ZINC(INCLUDING GALVANIZED STEEL) OR ALUMINIUM ARE UNSUITABLE FOR STORAGE AS THEY ARE ATTACKED SLOWLY. STORAGE TANKS OF WELDED CONSTRUCTION ARE NORMALLY SATISFACTORY. THEY SHOULD BE DESIGNED AND BUILT IN CONFORMANCE WITH GOOD ENGINEERING PRACTICE THE MATERIAL BEING USED. MILD STEEL IS THE RECOMMENDED CONSTRUCTION MATERIAL. TANKS BUILT WITH COPPER ALLOYS (INCLUDING COATINGS OF COPPER), ZINC (INCLUDING GALVANIZED STEEL), ALUMINUM ARE NOT SUITABLE FOR METHANOL-WATER SOLUTIONS. WHILE PLASTICS CAN BE USED FOR SHORT-TERM STORAGE, THEY ARE GENERALLY NOT RECOMMENDED FOR LONG-TERM STORAGE DUE TO DETERIORATION EFFECTS AND THE SUBSEQUENT RISK OF CONTAMINATION

## **Section 8: Exposure Controls/ Personal Protection**

GLOVES/ TYPE: BUTYL AND NITRILE RUBBERS ARE RECOMMENDED. CHECK WITH GLOVE MANUFACTURER.  
RESPIRATORY/TYPE: NIOSH APPROVED SUPPLIED AIR RESPIRATOR WHEN AIRBORNE CONCENTRATIONS EXCEED EXPOSURE LIMITS.  
EYE/TYPE: FACE SHIELD AND CHEMICAL SPLASH GOGGLES WHEN TRANSFERRING IS TAKING PLACE.  
FOOTWEAR/TYPE: CHEMICAL RESISTANT.  
CLOTHING/TYPE: WEAR CHEMICAL RESISTANT PANTS AND JACKETS, PREFERABLY BUTYL OR NITRILE RUBBER. CHECK WITH MANUFACTURER  
OTHER/TYPE: EYEWASH AND SAFETY SHOWER SHOULD BE READILY AVAILABLE

## **Section 9: Physical and Chemical Properties**

PHYSICAL STATE: LIQUID.  
ODOUR: SLIGHT ALCOHOL ODOUR.  
ODOUR THRESHOLD:2000 PPM, (IRRITATION AT 1000 PPM, POOR OLFACTORY WARNING PROPERTIES).  
VAPOUR PRESSURE (MMHG): 96 AT 20 C (68 F).  
VAPOUR DENSITY (AIR=1):1.105 AT 15 C (59 F).  
EVAPORATION RATE:2.1.

BOILING POINT:64.5 C (148 F) AT 760 MM HG.  
FREEZING POINT: -97.8 C (-144 F).  
PH: N.AP.  
SPECIFIC GRAVITY (WATER=1):0.792.  
PERCENT VOLATILE:100.  
SOLUBILITY IN WATER (% W/W):SOLUBLE (AT 20 C).  
COEFFICIENT OF WATER/OIL DIST: READILY SOLUBLE IN WATER, SEPARATES FROM OIL

## **Section 10: Stability and Reactivity**

STABILITY: STABLE  
CONDITIONS TO AVOID: PRESENCE OF INCOMPATIBLE MATERIALS AND IGNITION SOURCES  
INCOMPATIBILITY (MATERIALS TO AVOID): STRONG OXIDIZERS, STRONG ACID, STRONG BASES.  
MAY BE CORROSIVE TO LEAD AND ALUMINUM  
HAZARDOUS DECOMPOSITION OF BYPRODUCTS: FORMALDEHYDE, CARBON DIOXIDE, AND  
CARBON MONOXIDE  
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

## **Section 11: Toxicological Information**

EXPOSURE LIMIT OF MATERIAL: METHANOL: ACGIH TLV-TWA 200 PPM, STEL 250 PPM  
SKIN NOTATION; OSHA PEL C229200 PPM, STEL 250 PPM - SKIN  
LC 50 OF MATERIAL, SPECIES & ROUTE.. METHANOL: 64000 PPM (INHALATION RAT).  
LD 50 OF MATERIAL, SPECIES & ROUTE.. METHANOL: 5.6-13.0 G/KG (ORAL-RAT); 20 ML/KG  
(DERMAL-RABBIT).  
CARCINOGENICITY OF MATERIAL:NOT LISTED WITH IARC, NTP, ACGIH OR OSHA AS A  
CARCINOGEN.  
REPRODUCTIVE EFFECTS:REPORTED TO CAUSE BIRTH DEFECTS IN RATS EXPOSED TO  
20,000 PPM.  
TERATOGENICITY: NO.  
MUTAGENICITY: NO.  
IRRITANCY OF MATERIAL:SEE SECTION 03. 1000 PPM IN AIR MAY CAUSE IRRITATION OF MUCOUS  
MEMBRANE. SENSITIZING CAPABILITY OF MATERIAL. NO. SYNERGISTIC MATERIALS:N.AV.

## **Section 12: Ecological Information**

ENVIRONMENTAL DATA: BIODEGRADES EASILY IN WATER. METHANOL IN FRESH OR  
SALT WATER MAY HAVE SERIOUS EFFECTS ON AQUATIC LIFE. A STUDY ON METHANOL'S  
TOXIC EFFECTS ON SEWAGE SLUDGE BACTERIA REPORTED LITTLE EFFECT ON  
DIGESTION AT 0.1% WHILE 0.5% METHANOL RETARDED DIGESTION. METHANOL WILL BE  
BROKEN DOWN TO CARBON DIOXIDE AND WATER

## **Section 13: Disposal Considerations**

WASTE DISPOSAL: DISPOSE OF IN ACCORDANCE TO ALL LOCAL, PROVINCIAL AND FEDERAL  
REGULATIONS

## **Section 14: Transport Information**

UN NUMBER: 1230  
TDG CLASSIFICATION: 3(6.1)  
PACKING GROUP: II

## **Section 15: Other Regulatory Information**

Other regulatory information not available

## **Section 16: Other Information**

**References:** Not available

**Other Special Considerations:** Not available

**Created:** 03/02/2015

The information above is believed to be accurate and represents the best information currently available to us.

**All Pyrotechnics should be used and handled with extreme caution, in accordance with all relevant regulations and codes only by experienced professional Pyrotechnicians.**