

**AEROT INDUSTRIAL SUPPLIES INTL, INC.**

1162A HART STREET

NORTH HOLLYWOOD, CA 91605

(818) 982-2707, FAX (818) 982-1192

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MATERIAL SAFETY DATA SHEET **ITEM #1**

Section 01 Identification  
\*\*\*\*\*  
Info furnished By **AEROT INDUSTRIAL SUPPLIES INC.**  
Address **1162A HART STREET, NORTH HOLLYWOOD, CA 91605**  
Emergency Phone # **818-982-2707** 800/424-9300 (CHINTREC)  
Date Effective **04/08/99** E&P DATE: 04/08/99  
Product or Trade Name **Fixative Formula - 910050** DATE ENT'D.: 04/08/99  
Chemical Family **ALCOHOL MIXTURE**  
Chemical Name/Synonyms **FIXATIVE FORMULA**  
Hazardous Ingredients **CAS REGISTRATION #** HAZARD DATA

ITEM #1  
**ISOPROPYL ALCOHOL**, 67-63-0

OCCUPATIONAL EXPOSURE LIMITS

OSHA PEL/TWA	OSHA PEL/CHILLING	TLV/TWA	ACGIH	TLV/STEL	OTHER
1	40GPPM	400 PPM		500PPM*	50GPPM*

50% ODOR RECOGNITION THRESHOLD IS 7.5 PPM. \* OSHA PEL/STEL.

Section 02 Physical Data

BOTTLING POINT: 180 (DEG. F.)

SPECIFIC GRAVITY: 0.752

VAPOR PRESSURE: 32 @ 60 DEG. F. (MM HG)

MELTING POINT: N/A

SOLUBILITY: COMPLETE (IN WATER)

VAPOR DENSITY: 2.1 (AIR=1)

EVAPORATION RATE (N-PENTYL ACETATE=1): 1.4

VOC: (G/L) = 752

APPEARANCE AND ODOR: COLORLESS, MOBILE LIQUID. MILD ODOR.

Section 03 Fire And Explosion Hazard Data

FLASH POINT AND METHOD: 53 DEG. F. - TCC (LOWEST COMPOUND)

FLAMMABLE LIMITS /% VOLUME IN AIR:

LOWER: 2

UPPER: 12

EXTINGUISHING MEDIA:  
USE WATER FOG, "ALCOHOL" FOAM, DRY CHEMICAL OR CO<sub>2</sub>.

SPECIAL FIRE-FIGHTING PROCEDURES AND PRECAUTIONS:  
W-A-R-N-I-N-G - FLAMMABLE. CLEAR FIRE AREA OF UNPROTECTED PERSONNEL.

DO NOT ENTER CONFINED FIRE SPACE WITHOUT FULL BUNKER GEAR (HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES AND RUBBER BOOTS), INCLUDING A POSITIVE PRESSURE NIOSH-APPROVED, SELF-CONTAINED BREATHING APPARATUS. COOL FIRE-EXPOSED CONTAINERS WITH WATER.

UNUSUAL FIRE AND EXPLOSION HAZARDS:  
CONTAINERS EXPOSED TO INTENSE HEAT FROM FIRES SHOULD BE COOLED WITH WATER TO PREVENT VAPOR PRESSURE BUILDUP WHICH COULD RESULT IN CONTAINER RUPTURE. CONTAINER AREAS EXPOSED TO DIRECT FLAME CONTACT SHOULD BE COOLED WITH LARGE QUANTITIES OF WATER AS NEEDED TO PREVENT WEAKENING OF CONTAINER

FOR PRODUCT EMERGENCY  
CONTACT:  
**CHEM-TEL INC. 1-800-255-3924**

END PAGE

Fax: 8189990111

Dec 11, 01 12:07 P.02

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**MATERIAL SAFETY DATA SHEET FIXATIVE FORMULA**

**Section 03 Fire And Explosion Hazard Data**

**Section 04 Reactivity Data**

**STABILITY: STABLE**

**HAZARDOUS POLYMERIZATION:** WILL NOT OCCUR.

**CONDITIONS TO AVOID:** CONDITIONS AND MATERIALS TO AVOID: AVOID HEAT, SPARKS, FLAME AND CONTACT WITH STRONG OXIDIZING AGENTS. DO NOT STORE OR HANDLE IN ALUMINUM EQUIPMENT AT TEMPERATURES ABOVE 120 DEG. F.

**HAZARDOUS DECOMPOSITION PRODUCTS:** CARBON MONOXIDE AND UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED DURING COMBUSTION.

**Section 05 Spill, Leak And Disposal Procedures**  
**SPILL OR LEAK PROCEDURES:** W.R.N.I.N.G.: FLAMMABLE. ELIMINATE ALL IGNITION SOURCES. HANDLING EQUIPMENT MUST BE GROUNDED TO PREVENT SPARKING.

**LARGE SPILLS:** EVACUATE THE HAZARD AREA OF UNPROTECTED PERSONNEL. WEAR APPROPRIATE RESPIRATOR AND PROTECTIVE CLOTHING. SHUT OFF SOURCE OF LEAK ONLY IF SAFE TO DO SO. DIKE AND CONTAIN. IF VAPOR CLOUD FORMS, WATER FOG MAY BE USED TO SUPPRESS. CONTAIN RUN-OFF. REMOVE WITH VACUUM TRUCKS OR PUMP TO STORAGE/SKID-VESSELS. SOAK UP RESIDUE WITH AN ABSORBENT SUCH AS CLAY, SAND OR OTHER SUITABLE MATERIAL; PLACE IN NON-LEAKING CONTAINERS FOR PROPER DISPOSAL. FLUSH AREA WITH WATER TO REMOVE TRACE RESIDUE; DISPOSE OF FLASH SOLUTIONS AS ABOVE.

**SMALL SPILLS:** TAKE UP WITH AN ABSORBENT MATERIAL AND PLACE IN NON-LEAKING CONTAINERS; SEAL TIGHTLY FOR PROPER DISPOSAL.

**ENVIRONMENTAL RELEASE INFORMATION:** KEEP OUT OF SURFACE WATERS, SEWERS AND WATERWAYS ENTERING OR LEADING TO SURFACE WATERS. NOTIFY AUTHORITIES IF ANY EXPOSURE TO THE GENERAL PUBLIC OR ENVIRONMENT OCCURS OR IS LIKELY TO OCCUR.

**RCA INFORMATION:** UNDER EPA-RCR (40 CFR 261.21), IF THIS PRODUCT BECOMES A WASTE MATERIAL, IT WOULD BE IGNITABLE, HAZARDOUS WASTE. HAZARDOUS WASTE NUMBER D001. REFER TO LATEST EPA OR STATE REGULATIONS REGARDING PROPER DISPOSAL.

**Section 06 Health Hazard Data**

**ACUTE TOXICITY DATA:**

NO. ACUTE ORAL LD <sub>50</sub>	ACUTE DERMAL LD <sub>50</sub>	ACUTE INHALATION LC <sub>50</sub>
5840 MG/KG (RAT)	13000 MG/KG (RABBIT)	12000 PPM (RAT) 8 HRS

**HEALTH INFORMATION:**

THE HEALTH EFFECTS NOTED BELOW ARE CONSISTENT WITH REQUIREMENTS UNDER THE INFORMATION herein is given in good faith, but no warranty is expressed or implied.

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**MATERIAL SAFETY DATA SHEET FIXATIVE FORMULA**

Section 06 - Health Hazard Data

OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200).

EYE CONTACT:  
MODERATELY IRRITATING TO THE EYES.

SKIN CONTACT:  
MILDLY IRRITATING TO THE SKIN.

INHALATION:

IT MAY CAUSE MILD IRRITATION TO THE NOSE, THROAT AND RESPIRATORY TRACT AND MAY RESULT IN CENTRAL NERVOUS SYSTEM (CNS) DEPRESSION.

INGESTION:  
IRRITATING TO THE GASTROINTESTINAL TRACT, CAUSING ABDOMINAL PAIN AND VOMITING. SOMETIMES BLOODY INGESTION MAY CAUSE CNS DEPRESSION, LOW BLOOD PRESSURE, RAPID HEART BEAT AND LIVER DAMAGE.

SIGNS AND SYMPTOMS:

IRRITATION AS NOTED ABOVE. EARLY TO MODERATE CNS (CENTRAL NERVOUS SYSTEM) DEPRESSION MAY BE EVIDENCED BY DIZZINESS, HEADACHE, DIZZINESS AND NAUSEA; IN EXTREME CASES, UNCONSCIOUSNESS, RESPIRATORY DEPRESSION AND DEATH MAY OCCUR. LIVER DAMAGE MAY BE EVIDENCED BY LOSS OF APPETITE, JAUNDICE (YELLOW SKIN COLOR) AND SOMETIMES PAIN IN THE UPPER ABDOMEN ON THE RIGHT SIDE.

**SUPPLEMENTAL HEALTH INFORMATION:**

IPA:

IN RESPONSE TO A TSCA TEST RULE, SEVERAL STUDIES OF IPA HAVE NOW BEEN COMPLETED. THE STUDIES AND THEIR RESULTS ARE AS FOLLOWS:

1. BOTH MUTAGENICITY STUDIES, THE MOUSE MICRONUCLEUS AND CHD ASSAYS, WERE NEGATIVE.
2. RAT AND RABBIT ORAL TERATOGENICITY AND DEVELOPMENTAL TOXICOLOGY: A) THERE WAS NO EVIDENCE THAT IPA CAUSED TERATOGENICITY IN RATS OR RABBITS. B) DEVELOPMENTAL TOXICITY WAS SHOWN IN RATS AT 1200 MG/KG (EVIDENCED BY DECREASED BODY WEIGHT\*\*) WHILE NO DEVELOPMENTAL TOXICITY WAS SEEN IN THE RABBIT STUDY. FOR RATS, THE NOAEL WAS 400 MG/KG; FOR RABBITS, 480 MG/KG. THIS WORK ALSO IDENTIFIED PREGNANT RABBITS TO BE APPROXIMATELY EIGHT TIMES MORE SENSITIVE TO IPA'S LETHAL EFFECTS THAN NON-PREGNANT RABBITS\*\*.

OTHER TEST RULE RELATED STUDIES: 3. RAT ORAL REPRODUCTIVE TOXICITY: IN THE RAT REPRODUCTIVE TOXICITY STUDY, THE NOAEL FOR REPRODUCTION INDICES WAS 1900 MG / KG. HOWEVER, THERE WAS A MARKED INCREASE IN POST - MEANING PUP MORTALITY AT THIS LEVEL\*\*; THE NOAEL FOR THIS EFFECT WAS 500 MG / KG.

ALSO, THE NOAEL FOR PARENTAL FEMALE BODY WEIGHT DECREASE WAS 100 MG / KG.

4. IN RAT INHALATION NEUROTOXICITY AND ORAL DEVELOPMENTAL, NEUROTOXICITY STUDIES, THERE WAS NO EVIDENCE BASED ON CLINICAL SIGNS OF CNS DEPRESSION (BOTH SPECIES) AND INCREASED BODY WEIGHT AND BLOOD EFFUSIS (RAT ONLY) SEEN AT 1500 PPM. (NOTE: THE INFORMATION TAUGHT BY \*\* ABOVE WERE SUBMITTED TO EPA UNDER THE REQUIREMENTS OF TSCA 8(E).

Section 07: First Aid Procedures And Physician Notes

EYE CONTACT:  
IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION.

Information herein is given in good faith, but no war

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**MATERIAL SAFETY DATA SHEET PIXATIVE FORMULA**

Section 07 First Aid Procedures and Physician Notes

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**Skin Contact:**

FUSH SKIN WITH WATER. IF IRRITATION OCCURS, GET MEDICAL ATTENTION.

**Inhalation:**

REMOVE VICTIM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT. GET MEDICAL ATTENTION.

**Ingestion:**

DO NOT GIVE LIQUIDS IF VICTIM IS UNCONSCIOUS OR VERY DROWSY. OTHERWISE, GIVE NO MORE THAN 2 GLASSES OF WATER AND INDUCE VOMITING BY GIVING JUICE (1 TABLESPOON) SYRUP OF IPECAC. IF IPECAC IS UNAVAILABLE, GIVE 2 GLASSES OF WATER AND INDUCE VOMITING BY TOUCHING FINGER TO BACK OF VICTIM'S THROAT. KEEP VICTIM'S HEAD BELOW HIPS WHILE VOMITING. GET MEDICAL ATTENTION.

**Notes to Physician:**

IF VICTIM IS A CHILD, GIVE NO MORE THAN 1 GLASS OF WATER AND 15 CC (1 TABLESPOON) SYRUP OF IPECAC. IF SYMPTOMS SUCH AS LOSS OF GAG REFLEX, CONVULSIONS OR UNCONSCIOUSNESS OCCUR BEFORE EMESIS, GASTRIC LAVAGE SHOULD BE CONSIDERED FOLLOWING INTUBATION WITH A CUFFED ENDOTRACHEAL TUBE.

**Section 08 Special Handling Information**

**Respiratory Protection:**

IF EXPOSURE MAY OR DOES EXCEED OCCUPATIONAL EXPOSURE LIMITS (SEE SECTION 1), USE NIOSH-APPROVED RESPIRATOR TO PREVENT OVEREXPOSURE. IN ACCORD WITH 29 CFR 1910.134, USE EITHER AN ATMOSPHERE-SUPPLYING RESPIRATOR OR AN AIR-PURIFYING RESPIRATOR FOR ORGANIC VAPORS.

**Protective Clothing:** WEAR CHEMICAL GOGGLES IF THERE IS LIKELIHOOD OF AVOID CONTACT WITH EYES. WEAR CHEMICAL-RESISTANT GLOVES AND OTHER CLOTHING AS REQUIRED TO MINIMIZE CONTACT. TEST DATA FROM PUBLISHED LITERATURE AND/OR GLOVE AND CLOTHING MANUFACTURERS INDICATE THE BEST PROTECTION IS PROVIDED BY NITRILE, NEOPRENE AND NATURAL RUBBER GLOVES.

**Additional Protective Measures:** USE EXPLOSION-PROOF VENTILATION AS REQUIRED TO CONTROL VAPOR CONCENTRATIONS. EYE WASH FOUNTAINS AND SAFETY SHOWERS SHOULD BE AVAILABLE FOR EMERGENCY USE.

**Section 09 Special Precautions**

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KEEP LIQUID AND VAPOR AWAY FROM HEAT, SPARKS AND FLAME. SURFACES THAT ARE SUFFICIENTLY HOT MAY IGNITE EVEN LIQUID PRODUCT IN THE ABSENCE OF SPARKS OR FLAME. EXTINGUISH PILOT LIGHTS, CIGARETTES, AND TURN OFF SOURCES OF IGNITION PRIOR TO USE AND UNTIL ALL VAPORS ARE GONE.

VAPORS MAY ACCUMULATE AND TRAVEL TO IGNITION SOURCES DISTANT FROM THE HANDLING SITE; FLASH-FIRE CAN RESULT. KEEP CONTAINERS CLOSED WHEN NOT IN USE. USE WITH ADEQUATE VENTILATION. CONTAINERS, EVEN THOSE THAT HAVE BEEN EMPTIED, CAN CONTAIN EXPLOSIVE VAPORS. DO NOT CUT, DRILL, GRIND, WELD OR PERFORM SIMILAR OPERATIONS ON OR NEAR CONTAINERS. DO NOT PRESSURIZE DRUM CONTAINERS TO EMPTY THEM. STATIC ELECTRICITY MAY ACCUMULATE AND CREATE A FIRE HAZARD. GROUND FIXED EQUIPMENT. BOND AND GROUND TRANSFER CONTAINERS EQUIPMENT.

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Section 9: Special Precautions

WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING OR USING TOILET FACILITIES. LAUNDRY CONTAMINATED CLOTHING BEFORE REUSE. AIR-DRY CLOTHING IN A WELL-VENTILATED AREA BEFORE LAUNDERING.

DO NOT STORE OR HANDLE IN ALUMINUM EQUIPMENT AT TEMPERATURES ABOVE 120 DEG. F.

Section 10: Additional Information

DOD ISOPROPYL SOLUTION, 3, UN1219, PGII

Section 11: SARA Title III Information

ISOPROPANOL, 1, 2, 3, CAS 67-63-0 SUPPER CONC.

93.5

Section 99: Footnotes

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRECT; HOWEVER, ARMT MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. ARMT ASSUMES NO RESPONSIBILITY FOR INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.