

FLIGHT SHIELD

MATERIAL SAFETY DATA SHEET

Surface Pre-Treatment- Aircraft Cleaning and Surface Preparation Solution

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

FlightShield Inc.

65 North River Lane

Suite 201

Geneva IL. 60134

CHEMICAL DESCRIPTION: DRY WASH CLEANING SOLUTION

2. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT(S) CAS # %(BY WEIGHT)

ISOPROPANOL 67-63-0 10-50 %

Butyl Cellosolve 111-76-2 10-20 %

3. HAZARDS IDENTIFICATION

APPEARANCE: COLORLESS LIQUID

ODOR: AROMATIC. PLEASANT RESEMBLING A MIXTURE OF ETHANOL. (SLIGHT)

PRECAUTIONS: WARNING! COMBUSTABLE LIQUID AND VAPOR. KEEP AWAY FROM HEAT AND FLAME. CAUSES EYE

IRRITATION AND MAY CAUSE SKIN IRRITATION. USE ONLY WITH ADEQUATE VENTILATION. AVOID CONTACT WITH SKIN, EYES AND CLOTHING.

ENVIRONMENTAL PRECAUTIONS:

DO NOT FLUSH INTO SURFACE WATER OR SANITARY SEWER SYSTEM. LOW TOXICITY TO QUATIC ORGANISMS SUCH AS BACTERIA, ALGAE, PROTOZOA AND FISH. READILY BIODEGRADABLE.

POTENTIAL HEALTH EFFECTS

EYE- EXPOSURE CAUSES SEVERE EYE IRRITATION. SYMPTOMS MAY INCLUDE STINGING, TEARING, REDNESS, SWELLING AND EYE DAMAGE.

SKIN- MAY CAUSE MILD IRRITATION. PROLONGED OR REPEATED CONTACT MAY DRY THE SKIN. SYMPTOMS MAY INCLUDE REDNESS, BURNING, DRYING & CRACKING OF THE SKIN AND SKIN BURNS. PASSAGE OF THIS MATERIAL INTO THE BODY THROUGH THE SKIN IS POSSIBLE, BUT IT UNLIKELY THAT THIS WOULD RESULT IN HARMFUL EFFECTS DURING SAFE HANDLING AND USE.

SWALLOWING

SWALLOWING SMALL AMOUNTS OF THIS MATERIAL DURING NORMAL IS NOT LIKELY TO CAUSE HARMFUL EFFECTS. SWALLOWING LARGE AMOUNTS MAY BE HARMFUL.

INHALATION

BREATHING OF VAPOR OR MIST IS POSSIBLE. BREATHING SMALL AMOUNTS OF THIS MATERIAL DURING NORMAL HANDLING IS NOT LIKELY TO CAUSE HARMFUL EFFECTS. BREATHING LARGE AMOUNTS MAY BE HARMFUL. SYMPTOMS USUALLY OCCUR AT AIR CONCENTRATIONS HIGHER THAN THE RECOMMENDED EXPOSURE LIMITS. (SEE SECTION 8)

SYMPTOMS OF EXPOSURE

STOMACH OR INTESTINAL UPSET (NAUSEA, VOMITING, DIARRHEA) IRRITATION (NOSE, THROAT, AIRWAYS), CENTRAL NERVOUS SYSTEM DEPRESSION, (DIZZINESS, DROWSINESS, WEAKNESS, FATIGUE, NAUSEA, HEADACHE, UNCONSCIOUSNESS) LOW BLOOD PRESSURE MILD, TEMPORARY CHANGES IN THE LEVER, EFFECTS ON HEART RATE, RESPIRATORY DEPRESSION (SLOWING OF THE BREATHING RATE) LOSS OF ' COORDINATION, CONFUSION,LUNG EDEMA (FLUID BUILD UP IN THE LUNG TISSUE, KIDNEY DAMAGE, COMA.

TARGET ORGAN EFFECTS

OVER EXPOSURE TO THIS MATERIAL (OR ITS COMPONENTS) HAS BEEN SUGGESTED AS A CAUSE FOR THE FOLLOWING EFFECTS IN LAB ANIMALS, AND MAY AGGRAVATE PRE EXISTING DISORDERS OF THESE ORGANS IN HUMANS: MILD, REVERSIBLE LIVER EFFECTS.

DEVELOPMENTAL INFORMATION

THIS MATERIAL (OR ITS COMPONENTS) HAS BEEN SHOWN TO CAUSE HARM TO THE FETUS IN LAB ANIMAL STUDIES. HARM TO THE FETUS OCCURS ONLY AT EXPOSURE TO LEVELS THAT HARM THE PREGNANT ANIMAL. THE RELEVANCE OF THESE FINDINGS TO HUMANS IS UNCERTAIN. CANCER INFORMATION BASED ON THE AVAILABLE INFORMATION, THIS

INFORMATION CANNOT BE CLASSIFIED WITH THE REGARD TO CARCINOGENICITY. THIS MATERIAL IS NOT LISTED AS A CARCINOGEN BUTY THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER, THE NATIONAL TOXICOLOGY PROGRAM, OR THE OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION.

OTHER HEALTH EFFECTS - NO DATA

PRIMARY ROUTE(S) OF ENTRY - INHALATION, SKIN CONTACT, EYE CONTACT

4. FIRST AID MEASURES

EYE CONTACT: IF SYMPTOMS DEVELOP, IMMEDIATELY MOVE INDIVIDUAL AWAY FROM EXPOSURE AND INTO FRESH AIR. FLUSH EYES GENTLY WITH WATER FOR AT LEAST 15 MINUTES WHILE HOLDING EYELIDS APART; SEEK IMMEDIATE MEDICAL ATTENTION. SKIN CONTACT: REMOVE CONTAMINATED CLOTHING. FLUSH EXPOSED AREA WITH LARGE AMOUNTS OF WATER. IF SKIN IS DAMAGED, SEEK IMMEDIATE MEDICAL ATTENTION. IF SKIN IS NOT DAMAGED AND SYMPTOMS PERSIST, SEEK MEDICAL ATTENTION. LAUNDER CLOTHING BEFORE REUSE.

INGESTION: SEEK IMMEDIATE ATTENTION.

IF INDIVIDUAL IS DROWSY OR UNCONSCIOUS, DO NOT GIVE ANYTHING BY MOUTH' PLACE PERSON ON THE LEFT SIDE WITH THE HEAD DOWN. CALL A POISON CONTROL CENTER IMMEDIATELY. DO NOT INDUCE VOMITING WITHOUT MEDICAL ADVICE. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON INHALATION: IF SYMPTOMS DEVELOP, IMMEDIATELY MOVE INDIVIDUAL AWAY FROM EXPOSURE AND INTO FRESH AIR. SEEK IMMEDIATE MEDICAL ATTENTION; KEEP PERSON WARM AND QUIET. IF PERSON IS NOT BREATHING, BEGIN ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN.

NOTE TO PHYSICIANS - NO DATA

5. FIRE FIGHTING MEASURES

HAZARDOUS PRODUCTS OF COMBUSTION - MAY FORM; CARBON DIOXIDE AND CARBON MONOXIDE.

FIRE AND EXPLOSION HAZARDS - VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL ALONG THE GROUND OR MAY BE MOVED BY VENTILATION AND IGNITED BY PILOT LIGHTS, OR OTHER FLAMES, SPARKS, HEATERS, SMOKING, ELECTRIC MOTORS STATIC DISCHARGE OR OTHER IGNITION SOURCES AT LOCATIONS DISTANT FROM MATERIAL HANDLING POINT. NEVER USE WELDING OR CUTTING TORCH ON OR NEAR DRUM, (EVEN WHEN EMPTY) BECAUSE PRODUCT

(EVEN JUST RESIDUE) CAN IGNITE EXPLOSIVELY. EXTINGUISHING MEDIA - ALCOHOL FOAM, CARBON DIOXIDE, DRY CHEMICAL FIRE FIGHTING INSTRUCTIONS WEAR A SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACE PIECE OPERATED IN THE POSITIVE PRESSURE DEMAND MODE WITH APPROPRIATE TURN OUT GEAR AND CHEMICAL RESISTANT PERSONAL PROTECTIVE EQUIPMENT. REFER TO THE PERSONAL PROTECTIVE EQUIPMENT SECTION OF THIS MSDS.

NFPA RATING: HEALTH-1, FLAMMABILITY-3, REACTIVITY-0 TOXICITY - 1

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

SMALL SPILL :

ABSORB LIQUID WITH VERMICULITE, FLOOR ABSORBENT OR OTHER ABSORBENT MATERIAL. LARGE SPILL ELIMINATE ALL IGNITION SOURCES, (FLARES, FLAMES INCLUDING PILOT LIGHTS, ELECTRICAL SPARKS) . PERSONS NOT WEARING PROTECTIVE EQUIPMENT SHOULD BE EXCLUDED FROM ARE OF SPILL UNTIL CLEAN UP HAS BEEN COMPLETED. STOP SPILL AT SOURCE. PREVENT FROM ENTERING DRAINS, SEWERS, STREAMS, OR OTHER BODIES OF WATER. PREVENT FROM SPREADING. IF RUN OFF OCCURS, NOTIFY AUTHORITIES AS REQUIRED. PUMP OR VACUUM TRANSFER SPILLED PRODUCT TO CLEAN CONTAINERS FOR RECOVERY. ABSORB UNRECOVERABLE PRODUCT. TRANSFER CONTAMINATED ABSORBENT, SOIL AND OTHER MATERIALS TO CONTAINERS FOR DISPOSAL. PER GOOD ENVIRONMENTAL MANAGEMENT PRACTICES, PREVENT RUN OFF TO SEWERS, STREAM AND OTHER BODIES OF WATER. STOP SPILL AT THE SOURCE. COVER SEWER GRATES AND DIKE THE SPILL. ABSORB SPILLED MATERIAL ON TO THE ABSORBENTS., SHOVEL MATERIALS INTO CONTAINERS. CLOSE CONTAINER TIGHTLY AND DISPOSE OF PROPERLY.

7. HANDLING AND STORAGE

HANDLING:

CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTIED. SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUES (VAPOR, LIQUID, AND OR SOLID) ALL HAZARD PRECAUTIONS GIVEN IN THE DATA SHEET MUST BE OBSERVED. ALL FIVE GALLON PAILS AND LARGER METAL CONTAINERS, INCLUDING TANK CARS AD TANK TRUCKS, SHOULD BE GROUNDED AND OR BONDED WHEN MATERIAL IS TRANSFERRED. WARNING: SUDDEN RELEASE OF HOT ORGANIC CHEMICAL VAPORS OR MISTS FORM PROCESS EQUIPMENT OPERATING ELEVATED TEMPERATURE AND PRESSURE OR SUDDEN INGRESS OF AIR INTO VACUUM EQUIPMENT, MAY RESULT IN IGNITIONS WITHOUT THE PRESENCE OF OBVIOUS IGNITION

SOURCES, PUBLISHED "AUTO IGNITION: OR "IGNITION" TEMPERATURE VALUES CANNOT BE TREATED AS SAFE OPERATING TEMPERATURES IN CHEMICAL PROCESSES WITHOUT ANALYSIS OF THE ACTUAL PROCESS CONDITIONS. ANY USE OF THIS PRODUCT IN ELEVATED TEMPERATURE PROCESSES SHOULD BE THOROUGHLY EVALUATED TO ESTABLISH AND MAINTAIN SAFE OPERATING CONDITIONS.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT

EYE PROTECTION;

CHEMICAL SPLASH GOGGLES AND FACE SHIELD (8" MIN) IN COMPLIANCE WITH OSHA REGULATIONS ARE ADVISED; HOWEVER OSHA REGULATIONS ALSO PERMIT OTHER TYPE SAFETY GLASSES. (CONSULT YOUR INDUSTRIAL HYGIENIST.)

SKIN PROTECTION:

WEAR RESISTANT GLOVES (CONSULT YOUR SAFETY EQUIPMENT SUPPLIER.) TO PREVENT SKIN CONTACT, WEAR IMPERVIOUS CLOTHING AND BOOTS.

RESPIRATORY PROTECTIONS:

IF WORK PLACE EXPOSURE LIMIT(S) OF PRODUCT OR ANY COMPONENT IS EXCEEDED (SEE EXPOSURE GUIDELINES) A NIOSH/MSHA APPROVED

WEAR SUPPLIED RESPIRATOR IS ADVISED IN ABSENCE OF PROPER ENVIRONMENTAL CONTROL. OSHA REGULATIONS ALSO PERMIT OTHER

NIOSH/MSHA RESPIRATORS (NEGATIVE PRESSURE TYPE) UNDER SPECIFIED CONDITIONS (SEE YOUR INDUSTRIAL HYGIENIST).

ENGINEERING OR ADMINISTRATIVE CONTROLS SHOULD BE IMPLEMENTED TO REDUCE EXPOSURE.

ENGINEERING CONTROLS:

PROVIDE SUFFICIENT MECHANICAL (GENERAL AND/OR LOCAL EXHAUST) VENTILATION TO MAINTAIN EXPOSURE BELOW TV(S).

EXPOSURE GUIDELINES

COMPONENT

ISOPROPANOL (67-63-0)

OSHA VPEL 400.000 ppm - TWA

OSHA VPEL 500.000 ppm - STEL

ACGIH TLV 400.00 ppm - TWA

ACGIH TLV 500.000 ppm - STEL

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Blue with an Alcohol Aroma

FORM: LIQUID

BOILING POINT: FOR PRODUCT 108.0 F (82.2 C) @ 750 mmHg

SPECIFIC GRAVITY: .906 @ 60.0 OF

LIQUID DENSITY: 7.540 LBS/GAL @ 60.00 F

PERCENT VOLATILE: N/A

EVAPORATION RATE : 1.7

PHYSICAL FORM: NEAT

COLOR: Colorless,

pH: NO DATA

SOLUBILITY in Water: 100%

10. STABILITY AND REACTIVITY

HAZARDOUS POLYMERIZATION

PRODUCT WILL NOT UNDERGO HAZARDOUS POLYMERIZATION.

HAZARDOUS DECOMPOSITION

MAY FORM, CARBON DIOXIDE AND CARBON MONOXIDE.

CHEMICAL STABILITY: STABLE

INCOMPATIBILITY:

AVOID CONTACT WITH:, ACETALDEHYDE, ACIDS, CHLORINE, ETHYLENE OXIDE ISOCYANATES, STRONG OXIDIZING AGENTS, DO NOT USE WITH ALUMINUM EQUIPMENT AT TEMPERATURES ABOVE 120 F..

11. TOXICOLOGICAL INFORMATION

ADDITIONAL REMARKS

EXPOSURE CAN CAUSE NAUSEA, HEADACHE AND VOMITING. MAY BE HARMFUL BY INHALATION, INGESTION AND SKIN

ABSORPTION

EYES: IRRITATING TO EYES SKIN: ACUTE DERMAL LD50 (RABBIT) 12800 MG/K

INHALATION: ACUTE 4 HRS LC50 (RAT): 16970 MG/L INGESTION: ACUTE ORAL LD50(RAT) 5045 MG/KG

CARCINOGENICITY: THIS PRODUCT CNTAINS NO CARCINOGENIC SUBSTANCES

12. ECOLOGICAL INFORMATION

AQUATIC TOXICITY:

Marine Pollutant: No

Stowage and Segregation: A

13. DISPOSAL CONSIDERATIONS

WASTE MANAGEMENT INFORMATION

DISPOSE OF IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.

WASTE CODE: D001

IGNITABILITY (RQ 100 LB) THIS PRODUCT HAS THE RCRA CHARACTERISTIC OF IGNITABILITY. RE-EVALUATION OF THE PRODUCT MAY BE REQUIRED BY THE USER AT THE TIME OF DISPOSAL, SINCE THE PRODUCT USES, TRANSFORMATIONS, MIXTURES, CONTAMINATION AND SPILLAGE MAY CHANGE THE CLASSIFICATION. DISPOSAL METHOD: DISPOSE OF ONLYIN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. DO NOT CONTAMINATE ANY LAKES, STREMS, PONDS, GROUNDWATER OR SOIL.

EMPTY CONTAINERS:

EMPTY CONTAINERS RETAIN PRODUCT RESIDUE (LIQUID AND OR VAPOR) CAN BE DANGEROUS. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. EMPTY DRUMS SHOULD BE COMPLETELY DRAINED, TRIPLE RINSES, PROPERLY BUNGED AND PROMPTLY RETURNED TO A DRUM RECONDITIONER OR PROPERLY DISPOSED.

14. TRANSPORT INFORMATION

DOT INFORMATION - 49 CFR 172.101

DOT DESCRIPTION –COMBUSTABLE N.O.S. (CONTAINS ISOPROPYL ALCOHOL), CLASS 3, UN1219, PG GROUP III

CONTAINER MODE: 55 GAL DRUM/TRUCK PACKAGE

NOS COMPONENT: NONE

RQ (REPORT QUANTITY) - 49 CFR 172.101 N/A

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are as follows.

15. REGULATORY INFORMATION

US FEDERAL REGULATIONS

TSCA (TOXIC SUBSTANCES CONTROL ACT) STATUS

TSCA (UNITED STATES) THE INTENTIONAL INGREDIENTS OF THIS PRODUCT ARE LISTED.

CERCLA RQ - 40 CFR 302.4 NONE LISTED

SARA 302 COMPONENTS - 40 CFR 355 APPENDIX A NONE

SECTION 311/312 HAZARD CLASS - 40 CFR 370.2

IMMEDIATE (X) DELAYED (X) FIRE (X) REACTIVE () SUDDEN ()

RELEASE OF PRESSURE ()

SARA 313 COMPONENTS - 40 CFR 372.65 NONE

INTERNAL REGULATIONS

INVENTORY STATUS -

DSL (CANADA) THE INTENTIONAL INGREDIENTS OF THIS PRODUCT ARE LISTED

EINESC (EUROPE) THE INTENTIONAL INGREDIENTS OF THIS PRODUCT ARE LISTED

STATE AND LOCAL REGULATIONS -

CALIFORNIA PROPOSITION 65 - NONE

NEW JERSEY RTK LABEL INFORMATION

ISOPROPYL ALCOHOL 67-63-0

PENNSYLVANIA RTK LABEL INFORMATION

2 - PROPANOL 67-63-0

16. OTHER INFORMATION

THE INFORMATION ACCUMULATED HEREIN IS BELIEVED TO BE ACCURATE BUT IS NOT WARRANTED TO BE WHETHER

ORIGINATING WITH THE COMPANY OR NOT. RECIPIENTS ARE ADVISED TO CONFIRM IN ADVANCE OF NEED THAT THE

INFORMATION IS CURRENT, APPLICABLE AND SUITABLE TO THEIR CIRCUMSTANCES.

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.