Chem-Impex International Inc.

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SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

| CATALOG #: | 45678 |
|---------------------------------|---|
| NAME: | 1,1,1,2,2-Pentafluoro-4-iodobutane |
| SYNONYMS: | 3,3,4,4,4-Pentafluorobutyl iodide |
| 24 HOUR EMERGENCY TELEPHONE: | (800) 535-5053(USA) 352-323-3500 (INTERNATIONAL) |
| TO REQUEST AN MSDS: | (800) 869-9290 |
| CUSTOMER SERVICE: | (630) 766-2112 |

SECTION 2. HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

NOT A HAZARDOUS SUBSTANCE OR MIXTURE.

GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

NOT A HAZARDOUS SUBSTANCE OR MIXTURE.

HAZARDS NOT NONE OTHERWISE CLASSIFIED (HNOC) OR NOT COVERED BY GHS

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

| MF: | $\mathrm{C_4H_4F_5I}$ |
|---------|-----------------------|
| MW: | 273.97 |
| CAS-NO. | 40723-80-6 |
| PURITY: | \geq 98% (GC) |

SECTION 4. FIRST-AID MEASURES

DESCRIPTION OF FIRST AID MEASURES

| GENERAL ADVICE | IMMEDIATELY REMOVE ANY CLOTHING CONTAMINATED BY THE PRODUCT. MOVE OUT OF DANGEROUS AREA. CONSULT A PHYSICIAN AND SHOW THIS SAFETY DATA SHEET. |
|----------------------------|--|
| IF INHALED | MOVE PERSON TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN AND CONSULT A PHYSICIAN |
| IN CASE OF SKIN CONTACT | IMMEDIATELY FLUSH SKIN WITH RUNNING WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. WASH CLOTHING BEFORE REUSE. CONSULT A PHYSICIAN IMMEDIATELY |
| IN CASE OF EYE CONTACT | IMMEDIATELY WASH SKIN WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. ASSURE ADEQUATE FLUSHING OF THE EYES BY SEPARATING THE EYELIDS WITH FINGERS. IF IRRITATION PERSISTS, CONSULT A PHYSICIAN. |
| IF SWALLOWED | DO NOT INDUCE VOMITING . NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. RINSE |

MOUTH WITH WATER. CONSULT A PHYSICIAN.

| MOST IMPORTANT | THE MOST IMPORTANT KNOWN SYMPTOMS AND |
|---------------------|---|
| SYMPTOMS AND | EFFECTS ARE DESCRIBED IN THE LABELLING (SEE |
| EFFECTS, BOTH ACUTE | SECTION 2) AND/OR IN SECTION 11 |
| AND DELAYED | |

NO DATA AVAILABLE

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

SECTION 5. FIRE AND EXPLOSION DATA

EXTINGUISHING MEDIA

SUITABLEUSE WATER SPRAY, DRY CHEMICAL, CARBONEXTINGUISHING MEDIADIOXIDE OR CHEMICAL FOAM.

SPECIAL HAZARDSCARBON OXIDES, NITROGEN OXIDES (NOX), SULPHURARISING FROM THEOXIDES, POTASSIUM OXIDESSUBSTANCE OR MIXTURECARBON OXIDES

ADVICE FORWEAR SELF CONTAINED BREATHING APPARATUS FOR**FIREFIGHTERS**FIRE FIGHTING IF NECESSARY.

FURTHER INFORMATION NO DATA AVAILABLE

SECTION 6. ACCIDENTAL RELEASE MEASURES

| PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES | WEAR PROTECTIVE EQUIPMENT AND KEEP UNPROTECTED PERSONNEL AWAY. ENSURE ADEQUATE VENTILATION. REMOVE ALL SOURCES OF IGNITION. PREVENT FURTHER LEAK OR SPILL IF SAFE TO DO SO. FOR PERSONAL PROTECTION SEE SECTION 8. |
|--|---|
| ENVIRONMENTAL PRECAUTIONS | PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. DO NOT LET PRODUCT ENTER DRAINS. DISCHARGE INTO THE ENVIRONMENT MUST BE AVOIDED. |
| METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP | PREVENT FURTHER LEAK OR SPILL IF SAFE TO DO SO. VACUUM, SWEEP UP, OR ABSORB WITH INERT MATERIAL AND PLACE INTO A SUITABLE DISPOSAL |

CONTAINER. CONSULT LOCAL REGULATIONS FOR DISPOSAL

REFERENCE TO OTHER FOR DISPOSAL SEE SECTION 13. **SECTIONS**

SECTION 7. HANDLING AND STORAGE

| PRECAUTIONS FOR SAFE HANDLING | AVOID CONTACT WITH SKIN, EYES, AND PERSONAL CLOTHING. WASH HANDS THOROUGHLY AFTER HANDLING. AVOID BREATHING FUMES. USE ONLY WITH ADEQUATE VENTILATION. WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES, AND EYE/FACE PROTECTION. KEEP AWAY FROM SOURCES OF IGNITION. MINIMIZE DUST GENERATION AND ACCUMULATION. KEEP CONTAINER TIGHTLY CLOSED. OPEN AND HANDLE CONTAINER WITH CARE. DO NOT EAT, DRINK, OR SMOKE WHILE HANDLING. FOR PRECAUTIONS SEE SECTION 2. |
|--|--|
| CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES | STORE IN A TIGHTLY-CLOSED CONTAINER WHEN NOT IN USE. STORE IN A COOL, DRY, WELLVENTILATED AREA AWAY FROM INCOMPATIBLE SUBSTANCES. KEEP AWAY FROM SOURCES OF IGNITION. |
| RECOMMENDED STORAGE TEMPERATURE | Store at 2 - 8 °C |
| SPECIFIC END USE(S) | FOR LABORATORY USE ONLY |

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTROL PARAMETERS

COMPONENTS WITHCONTAINS NO SUBSTANCES WITH OCCUPATIONALWORKPLACE CONTROLEXPOSURE LIMIT VALUES.PARAMETERSEXPOSURE LIMIT VALUES.

EXPOSURE CONTROLS

APPROPRIATEAVOID CONTACT WITH SKIN, EYES, AND CLOTHING.ENGINEERINGWASH HANDS BEFORE BREAKS AND IMMEDIATELYCONTROLSAFTER HANDLING THE PRODUCT. FACILITIES STORING
OR UTILIZING THIS MATERIAL SHOULD BE EQUIPPED
WITH AN EYEWASH FOUNTAIN. USE ADEQUATE
VENTILATION TO KEEP AIRBORNE CONCENTRATIONS
LOW.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION SAFETY GLASSES WITH SIDE-SHIELDS CONFORMING TO EN166 USE EQUIPMENT FOR EYE PROTECTION TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR EN 166(EU).

- SKIN PROTECTIONHANDLE WITH GLOVES. GLOVES MUST BE INSPECTED
PRIOR TO USE. USE PROPER GLOVE REMOVAL
TECHNIQUE (WITHOUT TOUCHING GLOVE''S OUTER
SURFACE) TO AVOID SKIN CONTACT WITH THIS
PRODUCT. DISPOSE OF CONTAMINATED GLOVES AFTER
USE IN ACCORDANCE WITH APPLICABLE LAWS AND
GOOD LABORATORY PRACTICES. WASH AND DRY
HANDS.
- **BODY PROTECTION** IMPERVIOUS CLOTHING, THE TYPE OF PROTECTIVE EQUIPMENT MUST BE SELECTED ACCORDING TO THE CONCENTRATION AND AMOUNT OF THE DANGEROUS SUBSTANCE AT THE SPECIFIC WORKPLACE.

RESPIRATORYWHERE RISK ASSESSMENT INDICATES AIR-PURIFYINGPROTECTIONRESPIRATORS ARE REQUIRED USE A DUST MASK TYPEN95 (US) OR TYPE P1 (EN 143) RESPIRATOR.RESPIRATORS AND COMPONENTS MUST TESTED ANDAPPROVED UNDER APPROPRIATE GOVERNMENTSTANDARDS - NIOSH (US) OR CEN (EU).

CONTROL OFPREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TOENVIRONMENTALDO SO. DO NOT LET PRODUCT ENTER DRAINS.EXPOSUREDISCHARGE INTO THE ENVIRONMENT MUST BE
AVOIDED.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE ODOUR ODOUR THRESHOLD PH MELTING POINT/FREEZING POINT Colorless to light yellow to light orange clear liquid NO DATA AVAILABLE NO DATA AVAILABLE NO DATA AVAILABLE

| INITIAL BOILING POINT AND BOILING RANGE | 100 °C |
|--|-------------------|
| FLASH POINT | |
| EVAPORATION RATE | NO DATA AVAILABLE |
| FLAMMABILITY (SOLID, | NO DATA AVAILABLE |
| GAS) | |
| UPPER/LOWER | NO DATA AVAILABLE |
| FLAMMABILITY OR | |
| EXPLOSIVE LIMITS | |
| VAPOUR PRESSURE | NO DATA AVAILABLE |
| VAPOUR DENSITY | NO DATA AVAILABLE |
| RELATIVE DENSITY | 1.93 |
| WATER SOLUBILITY | NO DATA AVAILABLE |
| PARTITION COEFFICIENT: | NO DATA AVAILABLE |
| N- OCTANOL/WATER | |
| AUTO-IGNITION | NO DATA AVAILABLE |
| TEMPERATURE | |
| DECOMPOSITION | NO DATA AVAILABLE |
| TEMPERATURE | |
| VISCOSITY | NO DATA AVAILABLE |
| EXPLOSIVE PROPERTIES | NO DATA AVAILABLE |
| OXIDIZING PROPERTIES | NO DATA AVAILABLE |
| | |
| OTHER SAFETY | NO DATA AVAILABLE |

INFORMATION

NO DATA AVAILABLE

SECTION 10. STABILITY AND REACTIVITY

| REACTIVITY | NO DATA AVAILABLE |
|--|---|
| CHEMICAL STABILITY | STABLE UNDER RECOMMENDED STORAGE CONDITIONS. |
| POSSIBILITY OF HAZARDOUS REACTIONS | NO DATA AVAILABLE |
| CONDITIONS TO AVOID | HEAT, FLAMES AND SPARKS |
| INCOMPATIBLE MATERIALS | STRONG OXIDIZING AGENTS |
| HAZARDOUS DECOMPOSITION PRODUCTS | CARBON MONOXIDE, NITROGEN OXIDES, HYDROGEN CHLORIDE IN THE EVENT OF FIRE: SEE SECTION 5 |

SECTION 11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

| ACUTE TOXICITY | NO DATA AVAILABLE |
|--|---|
| SKIN CORROSION/IRRITATION | NO DATA AVAILABLE |
| SERIOUS EYE DAMAGE/EYE IRRITATION | NO DATA AVAILABLE |
| RESPIRATORY OR SKIN SENSITISATION | NO DATA AVAILABLE |
| GERM CELL MUTAGENICITY | NO DATA AVAILABLE |
| CARCINOGENICITY IARC: | NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS PROBABLE, POSSIBLE OR CONFIRMED |
| ACGIH: | HUMAN CARCINOGEN BY IARC. NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A CARCINOGEN OR POTENTIAL |
| NTP: | CARCINOGEN BY ACGIH. NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A KNOWN OR ANTICIPATED |
| OSHA: | CARCINOGEN BY NTP. NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A CARCINOGEN OR POTENTIAL CARCINOGEN BY OSHA. |
| REPRODUCTIVE TOXICITY | NO DATA AVAILABLE |
| SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE | NO DATA AVAILABLE |
| SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE | NO DATA AVAILABLE |
| ASPIRATION HAZARD | NO DATA AVAILABLE |
| ADDITIONAL INFORMATION | RTECS: NOT AVAILABLE TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL AND TOXICOLOGICAL PROPERTIES OF THIS SUBSTANCE HAVE NOT BEEN THOROUGHLY INVESTIGATED. |

SECTION 12. ECOLOGICAL INFORMATION

| TOXICITY | NO DATA AVAILABLE |
|---------------------------------------|--|
| PERSISTENCE AND DEGRADABILITY | NO DATA AVAILABLE |
| BIOACCUMULATIVE POTENTIAL | NO DATA AVAILABLE |
| MOBILITY IN SOIL | NO DATA AVAILABLE |
| RESULTS OF PBT AND VPVB ASSESSMENT | PBT/VPVB ASSESSMENT NOT AVAILABLE AS CHEMICAL SAFETY ASSESSMENT NOT REQUIRED/NOT CONDUCTED |
| OTHER ADVERSE EFFECTS | NO DATA AVAILABLE |

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

PRODUCTOFFER SURPLUS AND NON-RECYCLABLE CHEMICAL TO
A LICENSED DISPOSAL COMPANY. CONTACT A
LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE
TO DISPOSE OF THIS MATERIAL.

CONTAMINATEDDISPOSE OF AS UNUSED PRODUCT.PACKAGING

SECTION 14. TRANSPORT INFORMATION

DOT (US) NOT DANGEROUS GOODS

IMDG NOT DANGEROUS GOODS

IATA NOT DANGEROUS GOODS

SECTION 15. REGULATORY INFORMATION

SARA 302 COMPONENTS SARA 302: NO CHEMICALS IN THIS MATERIAL ARE SUBJECT TO THE REPORTING REQUIREMENTS OF SARA TITLE III, SECTION 302.

SARA 313 COMPONENTSSARA 313: THIS MATERIAL DOES NOT CONTAIN ANY
CHEMICAL COMPONENTS WITH KNOWN CAS NUMBERS
THAT EXCEED THE THRESHOLD (DE MINIMIS)
REPORTING LEVELS ESTABLISHED BY SARA TITLE III,
SECTION 313.

| MASSACHUSETTS RIGHT | NO COMPONENTS ARE SUBJECT TO THE |
|---------------------|----------------------------------|
| TO KNOW COMPONENTS | MASSACHUSETTS RIGHT TO KNOW ACT. |

PENNSYLVANIA RIGHT TO KNOW COMPONENTS

| | CAS-NO. | REVISION DATE |
|--------------------------|------------|----------------------|
| 1,1,1,2,2-Pentafluoro-4- | 40723-80-6 | |
| iodobutane | | |

NEW JERSEY RIGHT TO KNOW COMPONENTS

| | CAS-NO. |
|--------------------------|------------|
| 1,1,1,2,2-Pentafluoro-4- | 40723-80-6 |
| iodobutane | |

CALIFORNIA PROP. 65THIS PRODUCT DOES NOT CONTAIN ANY CHEMICALSCOMPONENTSKNOWN TO STATE OF CALIFORNIA TO CAUSE CANCER,
BIRTH DEFECTS, OR ANY OTHER REPRODUCTIVE
HARM.

REVISION DATE

SECTION 16. OTHER INFORMATION

| MSDS LEGEND | | |
|---|---|--|
| MW: | MOLECULAR WEIGHT | |
| MF: | MOLECULAR FORMULA | |
| VOC: | VOLATILE ORGANIC COMPOUNDS | |
| ACGIH: | AMERICAN CONFERENCE OF GOVERNMENENTAL INDUSTRIAL | |
| | HYGINISTS | |
| CAS: | CHEMICAL ABSTRACTS SERIVE REGISTRY NUMBER | |
| OSHA: | OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION | |
| PEL: | PERMISSIBLE EXPOSURE LIMIT (OSHA) | |
| TLV: | THRESHOLD LIMIT VALUE (ACGIH) | |
| IMPORTANT: | | |
| THE INFORMATION ABOVE IS BELIEVED TO BE ACCURATE AND REPRESENTS THE BEST | | |
| INFORMATION CURRENTLY AVAILABLE TO US. HOWEVER, WE MAKE NO WARRANTY OF | | |
| | OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, WITH RESPECT | |
| TO SUCH INFORMATION, AND WE ASSUME NO LIABILITY RESULTING FROM ITS USE. | | |
| USERS SHOULD MAKE THEIR OWN INVESTIGATIONS TO DETERMINE THE SUITABILITY | | |
| OF THE INFORMATION FOR THEIR PARTICULAR PURPOSES. IN NO EVENT SHALL CII BE | | |

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