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SDS

Common Name: PROPANE**Manufacturer:** MATHESON TRI-GAS**SDS Revision Date:** 10/11/2018**SDS Format:** GHS-US**Item Number(s):** 552N04, 552N05, 552N06**Manufacturer Model Number(s):**

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MATHESON

ASK...THE GAS PROFESSIONALS (TM)

SAFETY DATA SHEET

MATERIAL NAME: PROPANE

SDS ID: MAT19690

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION



MATERIAL NAME: PROPANE

SYNONYMS:

MTG MSDS 76; N-PROPANE; DIMETHYLMETHANE; PROPYL HYDRIDE; R-290;
PROPYLHYDRIDE; LIQUEFIED PETROLEUM GAS; LPG; >96% NATURAL GRADE; >99.9%
PURE GRADE; UN 1978; C3H8

CHEMICAL FAMILY: HYDROCARBONS, ALIPHATIC

PRODUCT DESCRIPTION:

CLASSIFICATION DETERMINED IN ACCORDANCE WITH COMPRESSED GAS ASSOCIATION
STANDARDS.

PRODUCT USE: INDUSTRIAL AND SPECIALTY GAS APPLICATIONS.

RESTRICTIONS ON USE: NONE KNOWN.

DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET:

MATHESON TRI-GAS, INC.
150 ALLEN ROAD
SUITE 302
BASKING RIDGE, NJ 07920

GENERAL INFORMATION: 1-800-416-2505

EMERGENCY #: 1-800-424-9300 (CHEMTREC)

OUTSIDE THE US: 703-527-3887 (CALL COLLECT)

SECTION 2 - HAZARDS IDENTIFICATION



CLASSIFICATION IN ACCORDANCE WITH PARAGRAPH (D) OF 29 CFR 1910.1200.:

FLAMMABLE GASES - CATEGORY 1
GASES UNDER PRESSURE - LIQUEFIED GAS
SIMPLE ASPHYXIANANT

GHS LABEL ELEMENTS:

SYMBOL(S):
FLAME
GAS CYLINDER

SIGNAL WORD: DANGER

HAZARD STATEMENT(S):
EXTREMELY FLAMMABLE GAS.
CONTAINS GAS UNDER PRESSURE; MAY EXPLODE IF HEATED.
MAY DISPLACE OXYGEN AND CAUSE RAPID SUFFOCATION.

PRECAUTIONARY STATEMENT(S):

PREVENTION:
KEEP AWAY FROM HEAT/SPARKS/OPEN FLAME/HOT SURFACES - NO SMOKING.

RESPONSE:
LEAKING GAS FIRE: DO NOT EXTINGUISH, UNLESS LEAK CAN BE STOPPED SAFELY.
ELIMINATE ALL IGNITION SOURCES IF SAFE TO DO SO.

STORAGE: PROTECT FROM SUNLIGHT. STORE IN A WELL-VENTILATED PLACE.

DISPOSAL:
DISPOSE OF CONTENTS/CONTAINER IN ACCORDANCE WITH
LOCAL/REGIONAL/NATIONAL/INTERNATIONAL REGULATIONS.

OTHER HAZARDS: MAY CAUSE FROSTBITE UPON SUDDEN RELEASE OF LIQUEFIED GAS.

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS



CAS	COMPONENT NAME	PERCENT
74-98-6	PROPANE	>96

SECTION 4 - FIRST AID MEASURES



INHALATION:

IF ADVERSE EFFECTS OCCUR, REMOVE TO UNCONTAMINATED AREA. GIVE ARTIFICIAL RESPIRATION IF NOT BREATHING. IF BREATHING IS DIFFICULT, OXYGEN SHOULD BE ADMINISTERED BY QUALIFIED PERSONNEL. GET IMMEDIATE MEDICAL ATTENTION.

SKIN:

IF FROSTBITE OR FREEZING OCCUR, IMMEDIATELY FLUSH WITH PLENTY OF LUKEWARM WATER (105-115 DEG. F; 41-46 DEG. C). DO NOT USE HOT WATER. IF WARM WATER IS NOT AVAILABLE, GENTLY WRAP AFFECTED PARTS IN BLANKETS. GET IMMEDIATE MEDICAL ATTENTION.

EYES:

RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND EASY TO DO. CONTINUE RINSING. THEN GET IMMEDIATE MEDICAL ATTENTION.

INGESTION: IF SWALLOWED, GET MEDICAL ATTENTION.

MOST IMPORTANT SYMPTOMS/EFFECTS:

ACUTE: FROSTBITE, SUFFOCATION

DELAYED: NO INFORMATION ON SIGNIFICANT ADVERSE EFFECTS.

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED: FOR INHALATION, CONSIDER OXYGEN. TREAT SYMPTOMATICALLY AND SUPPORTIVELY.

SECTION 5 - FIRE FIGHTING MEASURES**EXTINGUISHING MEDIA:****SUITABLE EXTINGUISHING MEDIA:**

REGULAR DRY CHEMICAL, CARBON DIOXIDE, LARGE FIRES: WATER SPRAY OR FOG

UNSUITABLE EXTINGUISHING MEDIA:

DO NOT DIRECT WATER AT SOURCE OF LEAK OR SAFETY DEVICES; ICING MAY OCCUR.

SPECIAL HAZARDS ARISING FROM THE CHEMICAL:

SEVERE FIRE HAZARD. SEVERE EXPLOSION HAZARD. GAS/AIR MIXTURES ARE EXPLOSIVE. THE VAPOR IS HEAVIER THAN AIR. VAPORS OR GASES MAY IGNITE AT DISTANT IGNITION SOURCES AND FLASH BACK. ELECTROSTATIC DISCHARGES MAY BE GENERATED BY FLOW OR AGITATION RESULTING IN IGNITION OR EXPLOSION.

HAZARDOUS COMBUSTION PRODUCTS: OXIDES OF CARBON

FIRE FIGHTING MEASURES:

MOVE CONTAINER FROM FIRE AREA IF IT CAN BE DONE WITHOUT RISK. COOL CONTAINERS WITH WATER SPRAY UNTIL WELL AFTER THE FIRE IS OUT. APPLY WATER FROM A PROTECTED LOCATION OR FROM A SAFE DISTANCE. STAY AWAY FROM THE ENDS OF TANKS.

FOR FIRES IN CARGO OR STORAGE AREA:

COOL CONTAINERS WITH WATER FROM UNMANNED HOSE HOLDER OR MONITOR NOZZLES UNTIL WELL AFTER FIRE IS OUT.

IF THIS IS IMPOSSIBLE THEN TAKE THE FOLLOWING PRECAUTIONS:

KEEP UNNECESSARY PEOPLE AWAY, ISOLATE HAZARD AREA AND DENY ENTRY. LET THE FIRE BURN. WITHDRAW IMMEDIATELY IN CASE OF RISING SOUND FROM VENTING SAFETY DEVICE OR ANY DISCOLORATION OF TANKS DUE TO FIRE.

FOR TANK, RAIL CAR OR TANK TRUCK:**EVACUATION RADIUS:**

1600 METERS (1 MILE). STOP LEAK IF POSSIBLE WITHOUT PERSONAL RISK. LET

BURN UNLESS LEAK CAN BE STOPPED IMMEDIATELY. FOR SMALLER TANKS OR CYLINDERS, EXTINGUISH AND ISOLATE FROM OTHER FLAMMABLES.

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS:
WEAR FULL PROTECTIVE FIRE FIGHTING GEAR INCLUDING SELF CONTAINED BREATHING APPARATUS (SCBA) FOR PROTECTION AGAINST POSSIBLE EXPOSURE.

SECTION 6 - ACCIDENTAL RELEASE MEASURES



PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:
WEAR PERSONAL PROTECTIVE CLOTHING AND EQUIPMENT, SEE SECTION 8.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:
AVOID HEAT, FLAMES, SPARKS AND OTHER SOURCES OF IGNITION. ALL EQUIPMENT USED WHEN HANDLING THE PRODUCT MUST BE GROUNDED. REMOVE SOURCES OF IGNITION. DO NOT TOUCH OR WALK THROUGH SPILLED MATERIAL. STOP LEAK IF POSSIBLE WITHOUT PERSONAL RISK. IF POSSIBLE, TURN LEAKING CONTAINERS SO THAT GAS ESCAPES RATHER THAN LIQUID. USE WATER SPRAY TO REDUCE VAPORS OR DIVERT VAPOR CLOUD DRIFT. AVOID ALLOWING WATER RUNOFF TO CONTACT SPILLED MATERIAL. DO NOT DIRECT WATER AT SPILL OR SOURCE OF LEAK. KEEP UNNECESSARY PEOPLE AWAY, ISOLATE HAZARD AREA AND DENY ENTRY. VENTILATE CLOSED SPACES BEFORE ENTERING.

ENVIRONMENTAL PRECAUTIONS: AVOID RELEASE TO THE ENVIRONMENT.

SECTION 7 - HANDLING AND STORAGE



PRECAUTIONS FOR SAFE HANDLING:
KEEP AWAY FROM HEAT, SPARKS, OPEN FLAME, AND HOT SURFACES - NO SMOKING. AVOID BREATHING DUST/FUME/GAS/MIST/VAPORS/SPRAY. USE ONLY OUTDOORS OR IN A WELL-VENTILATED AREA. WASH HANDS THOROUGHLY AFTER HANDLING.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:
PROTECT FROM SUNLIGHT. STORE IN A WELL-VENTILATED PLACE.

STORE AND HANDLE IN ACCORDANCE WITH ALL CURRENT REGULATIONS AND STANDARDS. KEEP CONTAINER TIGHTLY CLOSED. GROUNDING AND BONDING REQUIRED. KEEP SEPARATED FROM INCOMPATIBLE SUBSTANCES.

INCOMPATIBLE MATERIALS: COMBUSTIBLE MATERIALS, OXIDIZING MATERIALS

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION



COMPONENT EXPOSURE LIMITS:

PROPANE 74-98-6:
ACGIH: (SEE APPENDIX F: MINIMAL OXYGEN CONTENT, EXPLOSION HAZARD)

NIOSH:
1000 PPM TWA; 1800 MG/M3 TWA
2100 PPM IDLH (10% LEL)

OSHA (US): 1000 PPM TWA; 1800 MG/M3 TWA

ACGIH - THRESHOLD LIMIT VALUES - BIOLOGICAL EXPOSURE INDICES (BEI):
THERE ARE NO BIOLOGICAL LIMIT VALUES FOR ANY OF THIS PRODUCT'S COMPONENTS.

ENGINEERING CONTROLS:
VENTILATION EQUIPMENT SHOULD BE EXPLOSION-RESISTANT IF EXPLOSIVE CONCENTRATIONS OF MATERIAL ARE PRESENT. PROVIDE LOCAL EXHAUST VENTILATION SYSTEM. ENSURE COMPLIANCE WITH APPLICABLE EXPOSURE LIMITS.

INDIVIDUAL PROTECTION MEASURES, SUCH AS PERSONAL PROTECTIVE EQUIPMENT:

EYE/FACE PROTECTION:

FOR THE GAS: EYE PROTECTION NOT REQUIRED, BUT RECOMMENDED.

FOR THE LIQUID: WEAR SPLASH RESISTANT SAFETY GOGGLES.

CONTACT LENSES SHOULD NOT BE WORN. PROVIDE AN EMERGENCY EYE WASH FOUNTAIN AND QUICK DRENCH SHOWER IN THE IMMEDIATE WORK AREA.

SKIN PROTECTION:

FOR THE GAS: PROTECTIVE CLOTHING IS NOT REQUIRED.

FOR THE LIQUID: WEAR APPROPRIATE PROTECTIVE, COLD INSULATING CLOTHING.

RESPIRATORY PROTECTION:

THE FOLLOWING RESPIRATORS AND MAXIMUM USE CONCENTRATIONS ARE DRAWN FROM NIOSH AND/OR OSHA. 2100 PPM. ANY SUPPLIED-AIR RESPIRATOR. ANY SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE. EMERGENCY OR PLANNED ENTRY INTO UNKNOWN CONCENTRATIONS OR IDLH CONDITIONS -. ANY SELF-CONTAINED BREATHING APPARATUS THAT HAS A FULL FACEPIECE AND IS OPERATED IN A PRESSURE-DEMAND OR OTHER POSITIVE-PRESSURE MODE. ANY SUPPLIED-AIR RESPIRATOR WITH A FULL FACEPIECE THAT IS OPERATED IN A PRESSURE-DEMAND OR OTHER POSITIVE-PRESSURE MODE IN COMBINATION WITH AN AUXILIARY SELF-CONTAINED BREATHING APPARATUS OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE-PRESSURE MODE. ESCAPE -. ANY APPROPRIATE ESCAPE-TYPE, SELF-CONTAINED BREATHING APPARATUS.

GLOVE RECOMMENDATIONS: WEAR INSULATED GLOVES.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES



APPEARANCE: COLORLESS GAS

PHYSICAL STATE: GAS

ODOR: GASOLINE ODOR

COLOR: COLORLESS

ODOR THRESHOLD: 5000 - 20000 PPM

PH: NOT AVAILABLE

MELTING POINT: -190 DEG. C (-310 DEG. F)

BOILING POINT: -40 DEG. C (-40 DEG. F)

BOILING POINT RANGE: NOT AVAILABLE

FREEZING POINT: NOT AVAILABLE

EVAPORATION RATE: NOT AVAILABLE

FLAMMABILITY (SOLID, GAS): FLAMMABLE GAS

AUTOIGNITION TEMPERATURE: 450 DEG. C (842 DEG. F)

FLASH POINT: -105 DEG. C (-157 DEG. F)

LOWER EXPLOSIVE LIMIT: 2.1%

UPPER EXPLOSIVE LIMIT: 9.5%

DECOMPOSITION TEMPERATURE: NOT AVAILABLE

VAPOR PRESSURE: 6398 MMHg @ 211 DEG. C

VAPOR DENSITY (AIR=1): 1.55

SPECIFIC GRAVITY (WATER=1): 0.5853 AT -45 DEG. C

WATER SOLUBILITY: (VERY SLIGHTLY SOLUBLE)

PARTITION COEFFICIENT N-OCTANOL/WATER: NOT AVAILABLE

VISCOSITY: NOT AVAILABLE

KINEMATIC VISCOSITY: NOT AVAILABLE

SOLUBILITY (OTHER): NOT AVAILABLE

DENSITY: NOT AVAILABLE

LOG KOW: 2.36

PHYSICAL FORM: LIQUEFIED GAS

MOLECULAR FORMULA: C-H3-C-H2-C-H3

MOLECULAR WEIGHT: 44.11

CRITICAL TEMPERATURE: 96.74 DEG. C

SOLVENT SOLUBILITY:

SOLUBLE: ABSOLUTE ALCOHOL, ETHER, CHLOROFORM, BENZENE, TURPENTINE

SECTION 10 - STABILITY AND REACTIVITY



REACTIVITY: NO REACTIVITY HAZARD IS EXPECTED.

CHEMICAL STABILITY: STABLE AT NORMAL TEMPERATURES AND PRESSURE.

POSSIBILITY OF HAZARDOUS REACTIONS: WILL NOT POLYMERIZE.

CONDITIONS TO AVOID:

AVOID HEAT, FLAMES, SPARKS AND OTHER SOURCES OF IGNITION. MINIMIZE CONTACT WITH MATERIAL. CONTAINERS MAY RUPTURE OR EXPLODE IF EXPOSED TO HEAT.

INCOMPATIBLE MATERIALS: COMBUSTIBLE MATERIALS, OXIDIZING MATERIALS

HAZARDOUS DECOMPOSITION PRODUCTS: OXIDES OF CARBON

SECTION 11 - TOXICOLOGICAL INFORMATION



INFORMATION ON LIKELY ROUTES OF EXPOSURE:

INHALATION:

NAUSEA, SUFFOCATION, VOMITING, IRREGULAR HEARTBEAT, HEADACHE, DROWSINESS, DIZZINESS, DISORIENTATION, MOOD SWINGS, LOSS OF COORDINATION, CONVULSIONS, UNCONSCIOUSNESS, COMA

SKIN CONTACT: BLISTERS, FROSTBITE

EYE CONTACT: FROSTBITE, BLURRED VISION

INGESTION: INGESTION OF A GAS IS UNLIKELY

ACUTE AND CHRONIC TOXICITY:

COMPONENT ANALYSIS - LD50/LC50:

THE COMPONENTS OF THIS MATERIAL HAVE BEEN REVIEWED IN VARIOUS SOURCES AND THE FOLLOWING SELECTED ENDPOINTS ARE PUBLISHED:

PROPANE (74-98-6):

INHALATION LC50 RAT: >800000 PPM 15 MIN

PRODUCT TOXICITY DATA:

ACUTE TOXICITY ESTIMATE:

INHALATION - GAS: >20000 PPM

IMMEDIATE EFFECTS: FROSTBITE, SUFFOCATION

DELAYED EFFECTS: NO INFORMATION ON SIGNIFICANT ADVERSE EFFECTS.

IRRITATION/CORROSIVITY DATA: NO DATA AVAILABLE.

RESPIRATORY SENSITIZATION: NO DATA AVAILABLE.

DERMAL SENSITIZATION: NO DATA AVAILABLE.

COMPONENT CARCINOGENICITY:

NONE OF THIS PRODUCT'S COMPONENTS ARE LISTED BY ACGIH, IARC, NTP, DFG OR OSHA.

GERM CELL MUTAGENICITY: NO DATA AVAILABLE.

TUMORIGENIC DATA: NO DATA AVAILABLE

REPRODUCTIVE TOXICITY: NO DATA AVAILABLE.

SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE:

NO TARGET ORGANS IDENTIFIED.

SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE:

NO TARGET ORGANS IDENTIFIED.

ASPIRATION HAZARD: NOT APPLICABLE.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: NONE KNOWN.

ADDITIONAL DATA:

STIMULANTS SUCH AS EPINEPHRINE MAY INDUCE VENTRICULAR FIBRILLATION.

SECTION 12 - ECOLOGICAL INFORMATION

COMPONENT ANALYSIS - AQUATIC TOXICITY:

NO LOLI ECOTOXICITY DATA ARE AVAILABLE FOR THIS PRODUCT'S COMPONENTS.

PERSISTENCE AND DEGRADABILITY: THIS MATERIAL IS EXPECTED TO BIODEGRADE.

BIOACCUMULATIVE POTENTIAL:

BIOCONCENTRATION POTENTIAL IN AQUATIC ORGANISMS IS LOW BASED ON A BCF VALUE OF 13.

MOBILITY: EXPECTED TO HAVE MODERATE MOBILITY IN SOIL.

OTHER TOXICITY: NO ADDITIONAL INFORMATION IS AVAILABLE.

SECTION 13 - DISPOSAL CONSIDERATIONS

DISPOSAL METHODS: DISPOSE IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.

COMPONENT WASTE NUMBERS:

THE U.S. EPA HAS NOT PUBLISHED WASTE NUMBERS FOR THIS PRODUCT'S COMPONENTS.

SECTION 14 - TRANSPORT INFORMATION

US DOT INFORMATION:

SHIPPING NAME: PROPANE

HAZARD CLASS: 2.1

UN/NA #: UN1978

REQUIRED LABEL(S): 2.1

IMDG INFORMATION:

SHIPPING NAME: PROPANE

HAZARD CLASS: 2.1

UN#: UN1978

REQUIRED LABEL(S): 2.1

INTERNATIONAL BULK CHEMICAL CODE:

THIS MATERIAL DOES NOT CONTAIN ANY CHEMICALS REQUIRED BY THE IBC CODE TO BE IDENTIFIED AS DANGEROUS CHEMICALS IN BULK.

SECTION 15 - REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

NONE OF THIS PRODUCT'S COMPONENTS ARE LISTED UNDER SARA SECTIONS 302/304 (40 CFR 355 APPENDIX A), SARA SECTION 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(B), OR REQUIRE AN OSHA PROCESS SAFETY PLAN.

SARA SECTION 311/312 (40 CFR 370 SUBPARTS B AND C) REPORTING CATEGORIES: FLAMMABLE; GAS UNDER PRESSURE; SIMPLE ASPHYXIAN

U.S. STATE REGULATIONS:

THE FOLLOWING COMPONENTS APPEAR ON ONE OR MORE OF THE FOLLOWING STATE HAZARDOUS SUBSTANCES LISTS:

COMPONENT	CAS	CA	MA	MN	NJ	PA
PROPANE	74-98-6	NO	YES	YES	YES	YES

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): NOT LISTED UNDER CALIFORNIA PROPOSITION 65.

CANADA REGULATIONS:

CANADIAN WHMIS INGREDIENT DISCLOSURE LIST (IDL):

THE COMPONENTS OF THIS PRODUCT ARE EITHER NOT LISTED ON THE IDL OR ARE PRESENT BELOW THE THRESHOLD LIMIT LISTED ON THE IDL.

COMPONENT ANALYSIS - INVENTORY:

PROPANE (74-98-6):

US: YES

CA: DSL

EU: EIN

AU: YES

PH: YES

JP - ENCS: NO

JP - ISHL: NO

KR KECI - ANNEX 1: YES

KR KECI - ANNEX 2: NO

KR - REACH CCA: NO

CN: YES

NZ: YES
MX: YES
TW: YES
VN (DRAFT): YES

SECTION 16 - OTHER INFORMATION



NFPA RATINGS:
HEALTH 2
FIRE 4
INSTABILITY 0

HAZARD SCALE:
0 = MINIMAL
1 = SLIGHT
2 = MODERATE
3 = SERIOUS
4 = SEVERE

SUMMARY OF CHANGES:
UPDATED: 10/09/2018

KEY / LEGEND:

ACGIH: AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS

ADR: EUROPEAN ROAD TRANSPORT

AU: AUSTRALIA

BOD: BIOCHEMICAL OXYGEN DEMAND

C: CELSIUS

CA: CANADA

CA/MA/MN/NJ/PA: CALIFORNIA/MASSACHUSETTS/MINNESOTA/NEW JERSEY/PENNSYLVANIA*

CAS: CHEMICAL ABSTRACTS SERVICE

CERCLA:

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT

CFR: CODE OF FEDERAL REGULATIONS (US)

CLP: CLASSIFICATION, LABELLING, AND PACKAGING

CN: CHINA

CPR: CONTROLLED PRODUCTS REGULATIONS

DFG: DEUTSCHE FORSCHUNGSGEMEINSCHAFT

DOT: DEPARTMENT OF TRANSPORTATION

DSD: DANGEROUS SUBSTANCE DIRECTIVE

DSL: DOMESTIC SUBSTANCES LIST

EC: EUROPEAN COMMISSION

EEC: EUROPEAN ECONOMIC COMMUNITY

EIN: EUROPEAN INVENTORY OF (EXISTING COMMERCIAL CHEMICAL SUBSTANCES)

EINECS: EUROPEAN INVENTORY OF EXISTING COMMERCIAL CHEMICAL SUBSTANCES

ENCS: JAPAN EXISTING AND NEW CHEMICAL SUBSTANCE INVENTORY

EPA: ENVIRONMENTAL PROTECTION AGENCY

EU: EUROPEAN UNION

F: FAHRENHEIT

F: BACKGROUND (FOR VENEZUELA BIOLOGICAL EXPOSURE INDICES)

IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

IATA: INTERNATIONAL AIR TRANSPORT ASSOCIATION

ICAO: INTERNATIONAL CIVIL AVIATION ORGANIZATION

IDL: INGREDIENT DISCLOSURE LIST

IDLH: IMMEDIATELY DANGEROUS TO LIFE AND HEALTH

IMDG: INTERNATIONAL MARITIME DANGEROUS GOODS

ISHL: JAPAN INDUSTRIAL SAFETY AND HEALTH LAW

IUCLID: INTERNATIONAL UNIFORM CHEMICAL INFORMATION DATABASE

JP: JAPAN

KOW: OCTANOL/WATER PARTITION COEFFICIENT

KR KECI ANNEX 1:
KOREA EXISTING CHEMICALS INVENTORY (KECI) / KOREA EXISTING CHEMICALS LIST (KECL)

KR KECI ANNEX 2:
KOREA EXISTING CHEMICALS INVENTORY (KECI) / KOREA EXISTING CHEMICALS LIST (KECL), KR - KOREA

LD50/LC50: LETHAL DOSE/LETHAL CONCENTRATION

LEL: LOWER EXPLOSIVE LIMIT

LLV: LEVEL LIMIT VALUE

LOLI: LIST OF LISTS(TM) - CHEMADVISOR'S REGULATORY DATABASE

MAK: MAXIMUM CONCENTRATION VALUE IN THE WORKPLACE

MEL: MAXIMUM EXPOSURE LIMITS

MX: MEXICO

NE: NON-SPECIFIC

NFPA: NATIONAL FIRE PROTECTION AGENCY

NIOSH: NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH

NJTSR: NEW JERSEY TRADE SECRET REGISTRY

NQ: NON-QUANTITATIVE

NSL: NON-DOMESTIC SUBSTANCE LIST (CANADA)

NTP: NATIONAL TOXICOLOGY PROGRAM

NZ: NEW ZEALAND

OSHA: OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

PEL: PERMISSIBLE EXPOSURE LIMIT

PH: PHILIPPINES

RCRA: RESOURCE CONSERVATION AND RECOVERY ACT

REACH:

REGISTRATION, EVALUATION, AUTHORISATION, AND RESTRICTION OF CHEMICALS

RID: EUROPEAN RAIL TRANSPORT

SARA: SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT

SC: SEMI-QUANTITATIVE

STEL: SHORT-TERM EXPOSURE LIMIT

TCCA: KOREA TOXIC CHEMICALS CONTROL ACT

TDG: TRANSPORTATION OF DANGEROUS GOODS

TLV: THRESHOLD LIMIT VALUE

TSCA: TOXIC SUBSTANCES CONTROL ACT

TW: TAIWAN

TWA: TIME WEIGHTED AVERAGE

UEL: UPPER EXPLOSIVE LIMIT

UN/NA: UNITED NATIONS/NORTH AMERICAN

US: UNITED STATES

VLE: EXPOSURE LIMIT VALUE (MEXICO)

VN (DRAFT): VIETNAM (DRAFT)

WHMIS: WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (CANADA).

OTHER INFORMATION:

DISCLAIMER:

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