MATERIAL SAFETY DATA SHEET

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

EXPONENT MICROPORT INC.
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EMERGENCY TELEPHONE NUMBER: CANUTEC 1-613-996-6666
Date MSDS Prepared: November 2014
CHEMICAL FAMILY: alcohols, aliphatic

SECTION 2 COMPOSITION, INFORMATION ON INGREDIENTS

COMPONENTS: ISOPROPYL ALCOHOL
CAS NUMBER: #77505-#77506-#77500-#77501
EC NUMBER (EINECS): 200-661-7
EC INDEX NUMBER: 603-117-00-0
PERCENTAGE: 100.00

SECTION 3 HAZARDS IDENTIFICATION

NFPA RATINGS (SCALE 0-4): HEALTH=1 FIRE= 3 REACTIVITY=0
EMERGENCY OVERVIEW:
PHYSICAL FORM: soluble concentrate
MAJOR HEALTH HAZARDS: respiratory tract irritation, eye irritation, central nervous system depression
PHYSICAL HAZARDS: Flash back hazard.
POTENTIAL HEALTH EFFECTS:
INHALATION:
SHORT TERM EXPOSURE: same as effects reported in short term ingestion, irritation, hallucinations
LONG TERM EXPOSURE: no information on significant adverse effects
SKIN CONTACT:
SHORT TERM EXPOSURE: same as effects reported in short term ingestion, irritation
LONG TERM EXPOSURE: irritation
EYE CONTACT:
SHORT TERM EXPOSURE: irritation (possibly severe), eye damage
LONG TERM EXPOSURE: irritation

INGESTION
SHORT TERM EXPOSURE: changes in blood pressure, nausea, vomiting, stomach pain, difficulty breathing, irregular heartbeat, headache, drowsiness, dizziness, disorientation, loss of coordination, lung congestion, internal bleeding, kidney damage, coma.
LONG TERM EXPOSURE: no information on significant adverse effects
SECTION 4 FIRST AID MEASURES

INHALATION: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

SKIN CONTACT: Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

EYE CONTACT: Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

INGESTION: Contact local poison control center or physician immediately. Never make an unconscious person vomit or drink fluids. When vomiting occurs, keep head lower than hips to prevent aspiration. If person is unconscious, turn head to side. Get medical attention immediately.

NOTE TO PHYSICIAN: For ingestion, consider gastric lavage and activated charcoal slurry. Consider oxygen.

SECTION 5 FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARDS: Severe fire hazard. The vapor is heavier than air. Vapors or gases may ignite at distant ignition sources and flash back. Vapor/air mixtures are explosive.

EXTINGUISHING MEDIA: alcohol resistant foam, carbon dioxide, regular dry chemical, water.

Larges fires: Use alcohol-resistant foam or flood with fine water spray.

FIRE FIGHTING: Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. 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: 800 meters (1/2 mile). Do not attempt to extinguish fire unless flow of material can be stopped first. Flood with fine water spray. Do not scatter spilled material with high-pressure water streams. Cool containers with water spray until well after the fire is out. Apply water from a protected location or from a safe distance. Avoid inhalation of material or combustion by products. Stay upwind and keep out of low areas.

SECTION 6 ACCIDENTAL RELEASE MEASURES

OCCUPATIONAL RELEASE:
Avoid heat, flames, sparks and other sources of ignition. Remove sources of ignition. Stop leak if possible without personal risk. Reduce vapors with water spray. Small spills: Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Large spills: Dike for later disposal. Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas.
SECTION 7 HANDLING AND STORAGE

STORAGE: Store and handle in accordance with all current regulations and standards. Keep separated from incompatible substances.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance and odor: COLORLESS LIQUID; CHARACTERISTIC ODOR
Boiling point: 180F, 82C
Melting point: -127F, -88C
Vapor pressure (MM Hg/70 F): 33 MMHG
Vapor density (Air=1): 2.07
Specific gravity: 0.7864
Decomposition temperature: UNKNOWN
Evaporate rate and ref: 2.88 (N-BUTYL ACETATE=1)
Solubility in water: COMPLETE
Percent volatiles by volume: 100
Corrosion rate (IPY): UNKNOWN

SECTION 10 STABILITY AND REACTIVITY

REACTIVITY: Stable at normal temperatures and pressure. Stable at normal temperatures and pressure.

INCOMPATIBILITIES: acids, metals, oxidizing materials, combustible materials, halogens, peroxides, bases, metal salts.

SECTION 11 TOXICOLOGICAL INFORMATION

ISOPROPYL ALCOHOL:
LOCAL EFFECTS:
   Irritant: inhalation, eye
ACUTE TOXICITY LEVEL:
   Slightly Toxic: inhalation, dermal absorption, ingestion
TARGET ORGANS: central nervous system

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: kidney disorders, liver disorder, respiratory disorders, skin disorders and allergies.

SKIN CONTACT:
ACUTE EXPOSURE:
   ISOPROPYL ALCOHOL: Contact with the skin may cause slight irritation. Contact dermatitis has been reported in a few sensitive individuals. Substance may be dermally absorbed resulting in systemic toxicity as detailed in acute ingestion. Toxic effects may become more marked if absorption and inhalation occur concurrently.

CHRONIC EXPOSURE:
   ISOPROPYL ALCOHOL: Repeated or prolonged exposure may cause dermatitis due to the defatting action on the skin. Repeated and prolonged exposure to the skin of rabbits caused slight erythema, drying and superficial desquamation.

EYE CONTACT:
ACUTE EXPOSURE:
ISOPROPYL ALCOHOL: May cause severe irritation with eye damage. In rabbit eyes, a drop caused mild transitory injury and a 50% aqueous solution after 3 minutes caused moderate irritation. Contact with a 70% solution caused conjunctivitis, iritis and corneal opacity.

CHRONIC EXPOSURE:
ISOPROPYL ALCOHOL: Prolonged or repeated exposure to vapors may cause conjunctivitis.

INGESTION:
ACUTE EXPOSURE:
ISOPROPYL ALCOHOL: Ingestion may cause abdominal pain, hematemesis, nausea, vomiting and hemorrhage. Central nervous system depression may occur with headache, dizziness, flushing, incoordination, hallucinations, stupor, confusion, hypotension, areflexia and refractory narcosis. Oliguria followed by diuresis and coma may also occur. Other symptoms may include hypoglycemia, tenderness and edema of muscles and arrhythmias. Vomiting with aspiration may cause aspiration pneumonia.

CHRONIC EXPOSURE:
ISOPROPYL ALCOHOL: No adverse effects resulted in humans following daily ingestion of 2.6 and 6.4 mg/kg for 6 weeks. Rats that ingested 0.5 to 10.0% isopropyl alcohol in drinking water for 27 weeks showed decreased body weight. Prolonged oral administration in rabbits produced anesthesia and death. Reproductive effects have been reported in animals.

SECTION 12 ECOLOGICAL INFORMATION
Not determined

SECTION 13 DISPOSAL CONSIDERATIONS
Dispose in accordance with all applicable regulations.

SECTIONS 14 TRANSPORT INFORMATION
U.S. DEPARTMENT OF TRANSPORTATION:
DOT PSN Code: HWY
DOT Proper Shipping Name: ISOPROPANOL OR ISOPROPYL ALCOHOL
DOT Class: 3
DOT ID Number: UN1219
DOT Pack Group: ll
DOT Label: FLAMMABLE LIQUID
IMO PSN Code: ITK
IMO Proper Shipping Name: ISOPROPYL ALCOHOL
IMO Regulations Page Number: 3244
IMO UN Number: 1219
IMO UN Class: 3.2
IMO Subsidiary Risk Label: -
IATA PSN Code: ONH
IATA UN ID Number: 1219
IATA Proper Shipping Name: ISOPROPANOL
IATA UN Class: 3
IATA Label: FLAMMABLE LIQUID