JUNSEI Material safety data sheet

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Catalog Numbers: 96706
Catalog Name: Phenolphthalein ethanol(90) solution (10g/L)

Company Identification:
Junsei Chemical Co., Ltd.
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Tokyo, 103-0023 JAPAN
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CREATION DATE: May 18, 2009
REVISION DATE:

SECTION 2 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient 1
Chemical name: Phenolphthalein
Molecular Formula: C20H1404
Molecular Weight: 318.33
CAS NUMBER: 77-09-8
EC NUMBER (EINECS): 201-004-7
JAPAN NUMBER (ENCS):9-1152
Content: ca.1.2%

Ingredient 2
Chemical name: ethanol
CAS NUMBER: 64-17-5
EC NUMBER (EINECS): 200-578-6
JAPAN NUMBER (ENCS):2-202
Content: 84.7%

Ingredient 3
Chemical name: Water
CAS NUMBER: 7732-18-5
EC NUMBER (EINECS): 231-791-2
JAPAN NUMBER (ENCS):EXISTING HHEMICAL SUBSTANCE
Content: 14.1%

SECTION 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

MAJOR HEALTH HAZARDS: respiratory tract irritation, skin irritation, eye irritation, liver damage, central nervous system depression
PHYSICAL HAZARDS: Flammable liquid and vapor. Vapor may cause flash fire.

POTENTIAL HEALTH EFFECTS:
INHALATION:
SHORT TERM EXPOSURE: irritation, difficulty breathing, headache, drowsiness, symptoms of drunkenness
SKIN CONTACT:
SHORT TERM EXPOSURE: irritation, rash
EYE CONTACT:
SHORT TERM EXPOSURE: irritation, tearing
INGESTION:
SHORT TERM EXPOSURE: rash, low body temperature, vomiting, digestive disorders, irregular heartbeat, headache, drowsiness, symptoms of drunkenness, disorientation, dilated pupils, lung congestion, convulsions, coma

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: If a large amount is swallowed, get medical attention.

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, alcohol resistant foam

Large 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). Water may be ineffective.

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

Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.106. Grounding and bonding required. Keep separated from incompatible substances.

SECTION 8 EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS:
ETHYL ALCOHOL:
ETHYL ALCOHOL (ETHANOL):
1000 ppm (1900 mg/m3) OSHA TWA
1000 ppm ACGIH TWA
1000 ppm (1900 mg/m3) NIOSH recommended TWA 10 hour(s)
960 mg/m3 (500 ml/m3) DFG MAK (peak limitation category-II, 1)
1000 ppm (1920 mg/m3) UK OES TWA

VENTILATION: Provide local exhaust ventilation system. Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Ensure compliance with applicable exposure limits.
EYE PROTECTION: Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.
CLOTHING: Wear appropriate chemical resistant clothing.
GLOVES: Wear appropriate chemical resistant gloves.

RESPIRATOR: The following respirators and maximum use concentrations are drawn from NIOSH and/or OSHA.3300 ppm

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SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: liquid
APPEARANCE: clear
PHYSICAL FORM: volatile liquid
ODOR: alcohol odor
BOILING POINT: 78 C
FREEZING POINT: -117 C
VAPOR PRESSURE: 40 mmHg @ 19 C
VAPOR DENSITY (air=1): 1.59
SPECIFIC GRAVITY (water=1): 0.7893
WATER SOLUBILITY: soluble
PH: Not available
VOLATILITY: 100%
SOLVENT SOLUBILITY:
Soluble: benzene, ether, acetone, chloroform, methanol, organic solvents

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SECTION 10 STABILITY AND REACTIVITY

REACTIVITY: Stable at normal temperatures and pressure.
CONDITIONS TO AVOID: Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode if exposed to heat.
INCOMPATIBILITIES: halo carbons, metals, metal salts, oxidizing materials, halogens, peroxides, acids, metal oxides, bases, combustible materials
HAZARDOUS DECOMPOSITION:
Thermal decomposition products: oxides of carbon
POLYMERIZATION: Will not polymerize.

SECTION 11 TOXICOLOGICAL INFORMATION

Phenolphthalein

RTECS#:
CAS# 77-09-8: SM8380000
LD50/LC50:
Not available.
Carcinogenicity:
Phenolphthalein -
California: carcinogen; initial date 5/15/98
NTP: Suspect carcinogen
OSHA: Possible Select carcinogen
IARC: Group 2B carcinogen
See actual entry in RTECS for complete information.

Ethanol

IRRITATION DATA:
400 mg open skin-rabbit mild; 20 mg/24 hour(s) skin-rabbit moderate; 500 mg eyes-rabbit severe; 500 mg/24 hour(s) eyes-rabbit mild; 100 mg/4 second(s) rinsed eyes-rabbit moderate
TOXICITY DATA:
3371 ul/kg oral-man TDLo; 2 gm/kg oral-child LDLo; 14400 mg/kg/30 minute(s) intermittent oral-child TDLo; 700 mg/kg oral-man TDLo; 1400 mg/kg oral-human LDLo; 50 mg/kg oral-man TDLo; 1430 ug/kg oral-man TDLo; 256 gm/kg/12 week(s) oral-woman TDLo; 19440 mg/kg subcutaneous-infant LDLo; 7060 mg/kg oral-rat LD50; 20000 ppm/10 hour(s) inhalation-rat LC50; 20 gm/kg skin-rabbit LDLo; 963 mg/kg intraperitoneal-rabbit LD50; 20 gm/kg subcutaneous-rabbit LDLo; 2374 mg/kg intravenous-rabbit LD50; 5560 mg/kg oral-guinea pig LD50; 21900 ppm inhalation-guinea pig LCLo; 3414 mg/kg intraperitoneal-guinea pig LD50; 5068 mg/kg intraperitoneal-hamster LD50; 5 gm/kg subcutaneous-pigeon LDLo; 5 gm/kg subcutaneous-chicken LDLo; 8216 mg/kg intravenous-chicken LDLo;
CARCINOGEN STATUS: NTP: Known Human Carcinogen (Alcoholic beverages); IARC: Human Sufficient Evidence, Group 1 (Alcoholic beverages), Animal Inadequate Evidence; ACGIH: A4 -Not Classifiable as a Human Carcinogen
LOCAL EFFECTS:
Irritant: inhalation, skin, eye
ACUTE TOXICITY LEVEL:
Slightly Toxic: inhalation, ingestion
TARGET ORGANS: central nervous system, liver
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: central nervous system disorders, kidney disorders, liver disorders
TUMORIGENIC DATA:
320 mg/kg oral-mouse TDLo/50 week(s) intermittent; 120 gm/kg rectal-mouse TDLo/18 week(s) intermittent; 400 gm/kg oral-mouse TD/57 week(s) intermittent
MUTAGENIC DATA:
mutation in microorganisms - Salmonella typhimurium 11 pph (+S9); mutation in microorganisms - Salmonella typhimurium 8500 ppm (-S9); mutation in microorganisms - Escherichia coli 140 gm/L (-S9); DNA repair - Escherichia coli 5 mg/well; sex chromosone loss and non disjunction - Drosophila melanogaster oral 10 pph; mutation in microorganisms - Saccharomyes cerevisae 24 pph (-S9);
REPRODUCTIVE EFFECTS DATA:
41 gm/kg oral-woman TDLo 41 week(s) pregnant female continuous; 250 mg/kg oral-woman TDLo 37 week(s) pregnant female continuous; 8 gm/kg intravenous-woman TDLo 32 week(s) pregnant female continuous; 200 mg/kg intrauterine-woman TDLo 5 day(s) pre pregnancy continuous; 4 gm/kg oral-rat TDLo 13 day(s) pregnant female continuous;
ADDITIONAL DATA: May cross the placenta. May be excreted in breast milk. Allergic reactions to alcohols have been reported.

SECTION 12 ECOLOGICAL INFORMATION

Ethanol

ECOTOXICITY DATA:
FISH TOXICITY: 93 ug/L 96 hour(s) LC50 (Mortality) Bluegill (Lepomis macrochirus)
INVERTEBRATE TOXICITY: 24 ug/L 48 hour(s) EC50 (Immobilization) Water flea (Daphnia pulex)
ALGAL TOXICITY: 10000-25000 ug/L 1-2 hour(s) (Photosynthesis) Green algae (Acrosiphonia sonderi)
OTHER TOXICITY: 0.89-187.40 ug/L 3 hour(s) (Hatchability) Moorfrog (Rana arvalis)

FATE AND TRANSPORT:
BIOCONCENTRATION: 2230 ug/L 72 hour(s) BCF (Residue) Mayfly (Ephemera danica) 0.761 ug/L

ENVIRONMENTAL SUMMARY:
Highly toxic to aquatic life.

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

SECTION 14 TRANSPORT INFORMATION

Ethanol

LAND TRANSPORT ADR/RID:
- SUBSTANCE NAME: Ethanol or ethanol solution containing more than 70 vol.-% alcohol/Ethyl alcohol solution
- UN NUMBER: UN1170
- ADR/RID CLASS: 3
- ITEM NUMBER: 3(b)
- WARNING SIGN/LABEL: 3
- HAZARD ID NUMBER: 33

AIR TRANSPORT IATA/ICAO:
- CORRECT TECHNICAL NAME: Ethanol
- UN/ID NUMBER: UN1170
- IATA/ICAO CLASS: 3
- PACKAGING GROUP: II
- LABEL: Flammable liquid

MARITIME TRANSPORT IMDG:
- CORRECT TECHNICAL NAME: Alcohol
- UN/ID NUMBER: UN1170
- IMDG CLASS: 3.2

PACKAGING GROUP: II
EmS No.: 3-06
MFAG Table No.: 305
MARINE POLLUTANT: N

SECTION 15 REGULATORY INFORMATION

Ethanol

U.S. REGULATIONS:
TSCA INVENTORY STATUS: Y

TSCA 12(b) EXPORT NOTIFICATION: Not listed.
CERCLA SECTION 103 (40CFR302.4): N
SARA SECTION 302 (40CFR355.30): N
SARA SECTION 304 (40CFR355.40): N
SARA SECTION 313 (40CFR372.65): N
SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40CFR370.21):
ACUTE: Y
CHRONIC: Y
FIRE: Y
REACTIVE: N
SUDDEN RELEASE: N
OSHA PROCESS SAFETY (29CFR1910.119): N
STATE REGULATIONS:
California Proposition 65: N
EUROPEAN REGULATIONS:
EC NUMBER (EINECS): 200-578-6

EC RISK AND SAFETY PHRASES:

R 11	Highly flammable.
S 2	Keep out of reach of children.
S 7	Keep container tightly closed.
S 16	Keep away from sources of ignition - No smoking.

GERMAN REGULATIONS:
WATER HAZARD CLASS (WGK): 0 (Official German Classification)

SECTION 16 OTHER INFORMATION

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability 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 way shall the company be liable for any claims, losses, or damages of any third

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