PRODUCT NAME: Ivy-Dry Super

1. PRODUCT AND COMPANY IDENTIFICATION

REVISION DATE: 10/15/2016
SUPERCEDES: None
SYNONYMS: None

Ivy Corporation
299-B Fairfield Avenue - Fairfield - NJ 07004 - 1-800-443-8856

Customer service telephone: 1-800-443-6656

Product name: Ivy-Dry Super

2. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>CAS or CHEMICAL NAME</th>
<th>CAS #</th>
<th>% Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Propanol</td>
<td>67-63-0</td>
<td>15 - 40</td>
</tr>
<tr>
<td>Benzyl Alcohol</td>
<td>100-51-6</td>
<td>5 - 10</td>
</tr>
<tr>
<td>Zinc acetate</td>
<td>557-34-6</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

OSHA Hazard Classification: flammable, central nervous system depressant

Routes of Entry: Ingestion, eye contact, skin contact
Chemical Interactions: May increase the hepatotoxic potential of chlorinated hydrocarbons such as chloroform and 1,1,2 trichloroethane.
Medical Conditions Aggravated: Dermatitis may be aggravated following exposure.
Human Threshold Response Data

Odor Threshold:
2-Propanol 22.0 ppm

Irritation Threshold:
2-Propanol Approximately 400.0 ppm

Hazardous Materials Identification System Classifications

<table>
<thead>
<tr>
<th>Hazard Ratings:</th>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMIS</td>
<td>1*</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

Immediate (Acute) Health Effects

Inhalation Toxicity: Not expected to be toxic by inhalation. Inhalation of high concentrations may result in central nervous system (CNS) effects such as dizziness, weakness, fatigue, nausea, headache, and lack of coordination.

Inhalation Irritation: Not a respiratory irritant.

Skin Contact: No significant adverse effects to health would be expected to occur from dermal contact.

Skin Absorption: Not expected to be absorbed through the skin.

Eye Contact: Contact would be expected to cause minor irritation, consisting of transient redness and swelling. No corneal involvement or visual impairment is expected.

Ingestion Irritation: Ingestion may cause irritation of the gastrointestinal tract and gastrointestinal discomfort with any or all of the following symptoms: nausea, vomiting, lethargy or diarrhea.

Ingestion Toxicity: Not expected to be toxic by ingestion. Ingestion of large quantities of this product may result in central nervous system (CNS) depression.

Acute Target Organ Toxicity: Central nervous system

Prolonged (Chronic) Health Effects

Carcinogenicity: This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA.

Reproductive and Developmental Toxicity: Not known or reported to cause reproductive or developmental toxicity.

Inhalation: There are no known or reported effects from chronic exposure except for effects similar to those experienced from acute exposure.

Skin Contact: Dermal contact may cause defatting of skin and/or dermatitis.

Chronic Target Organ Toxicity: There are no known or reported effects to humans from repeated exposure to this product.

Supplemental Health Hazard Information: None

4. FIRST AID MEASURES

Inhalation: IF INHALED: Remove individual to fresh air.

Skin Contact: IF ON SKIN: Flush skin with water for 15 minutes. Call a physician if irritation develops.

Eyes: IF IN EYES: Flush eyes with plenty of water for at least 15 minutes. Call a physician if irritation develops.

Ingestion: IF SWALLOWED: Immediately drink water to dilute. Consult a physician if symptoms develop. Never give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

Flammability Summary (OSHA): Flammable

Flammable Properties

Flash Point: 29 Deg. C. / 84 Deg. F.
Autoignition Temperature: Not determined.

Upper Flammable/Explosive Limit, % in air: No data
Lower Flammable/Explosive Limit, % in air: No data

Fire/Explosion Hazards: Vapors may be ignited by sparks, flames or other sources of ignition if
material is above the flash point giving rise to a flash fire. Vapors are heavier than air and may travel to a source of ignition and flash back.

Extinguishing Media: Use alcohol resistant foam, carbon dioxide, dry chemical, or vaporizing liquid extinguishing agents. Water spray or fog may also be effective for extinguishing or to absorb heat and keep exposed material from being damaged by fire.

Fire Fighting Instructions: In case of fire, use normal fire fighting equipment including a NIOSH approved self-contained breathing apparatus (SCBA). Use water to cool containers.

Hazardous Combustion Products: Carbon monoxide, Carbon dioxide

6. ACCIDENTAL RELEASE MEASURES

Personal Protection for Emergency Situations: In case of fire, use normal fire fighting equipment including a NIOSH approved self-contained breathing apparatus (SCBA).

Spill Mitigation Procedures

Air Release: Hazardous concentrations in air may be found in local spill area and immediately downwind. Vapors may be suppressed by the use of water fog. Contain all liquid for treatment and/or disposal as a (potential) hazardous waste.

Water Release: This material is soluble in water. Contain all liquid for treatment and/or disposal as a (potential) hazardous waste. Notify all downstream users of possible contamination. Divert water flow around spill if possible and safe to do so.

Land Release: Create a dike or trench to contain materials. Cover with dry lime, sand or soda ash. Absorb spill with inert material (e.g., dry sand, clay, earth or commercial absorbent), then place in a chemical waste container.

Additional Spill Information: Stop source of spill as soon as possible and notify appropriate personnel. Utilize emergency response personal protection equipment prior to the start of any response. Evacuate all non-essential personnel. Dispose of spill residues per guidelines under Section 13, Disposal Consideration. Remove all sources of ignition.

7. HANDLING AND STORAGE

Handling: Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash off with water. Avoid breathing mist or vapor. Ground and bond containers when transferring material.

Storage: Store in a cool dry ventilated location, away from sources of ignition or other incompatible conditions and chemicals. Keep container closed when not in use.

Incompatible Materials for Storage: Refer to Section 10, "Incompatible Materials."

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Ventilation: Use explosion-proof local exhaust ventilation to maintain levels to below the exposure limits.

Protective Equipment for Routine Use of Product

Respiratory Protection: Wear a NIOSH approved respirator if levels above the exposure limits are possible. If spraying or misting occurs use a NIOSH approved respirator.

Respirator Type(s): A NIOSH approved air purifying respirator with organic vapor. Air purifying respirators should not be used in oxygen deficient or IDLH atmospheres or if exposure concentrations exceed ten (10) times the published limit.

Skin: Wear impermeable gloves. When exposure to high concentrations is prolonged or repeated use protective boots and apron in addition to gloves.

Eyes: Use safety glasses with side shields.

Protective Clothing Type: Nitrile, Butyl rubber
9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Clear liquid
Color: Colorless
Odor: Methyl alcohol-like
pH: ~7
Solubility in Water: Miscible
Specific Gravity: ~1
Vapor Density: >1 (air = 1)
Vapor Pressure: >10 mmHg
Evaporation Rate: Approximately 1.00 (water = 1)
Boiling Point: Approximately 83 Deg. C.
Freezing Point: Approximately 0 Deg. C.
Volatiles, % by vol.: No data

10. STABILITY AND REACTIVITY

Stability and Reactivity Summary: Stable under normal conditions. Static discharge may cause ignition at temperatures at or above the flash point.
Reactive Properties: None known
Hazardous Polymerization: Will not occur
Conditions to Avoid: Temperatures above the flash point in combination with sparks, open flames, or other sources of ignition.
Chemical Incompatibility: Strong oxidizing agents.
Hazardous Decomposition Products: Oxides of carbon

11. TOXICOLOGICAL INFORMATION

Component Animal Toxicology
Oral LD50 value:
2-Propanol: Oral LD50: Rat = 5045 mg/kg
Dermal LD50 value:
2-Propanol: Dermal LD50 Rabbit = 13 g/kg
Inhalation LC50 value:
2-Propanol: Inhalation LC50 (8h) Rat = 16000 ppm

Product Animal Toxicity:
Oral LD50 value: Believed to be > 5.0 g/kg; practically non-toxic
Dermal LD50 value: Believed to be > 2.0 g/kg; practically non-toxic

Skin Irritation: Not expected to be irritating to the skin.
Eye Irritation: This material is expected to be slightly irritating.
Skin Sensitization: Not a skin sensitizer.

Reproductive and Developmental Toxicity:
Component Data:
2-Propanol: This material at concentrations above the occupational exposure limits has caused developmental effects in animals. However, these effects were observed only at those doses that resulted in maternal toxicity.

Mutagenicity: Not known or reported to be mutagenic.
Component Data:
2-Propanol
This product has been shown to be non-mutagenic based on a battery of assays.

Carcinogenicity:
This chemical is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP, or EPA.

Component Data:
2-Propanol
Animal studies do not support the contention that isopropanol is a carcinogen.

12. ECOLOGICAL INFORMATION

Overview: No data

Ecological Toxicity Values:
2-Propanol
Common shrimp (Crangon crangon) 48 hr. LC50: = 1400 mg/l (nominal, renewal).
Mosquito fish 96 hr. LC50: > 1400 mg/l (nominal, static).
Bluegill 96 hr. LC50: > 1400 mg/l (nominal, static).
Fathead minnow, 96 hr. LC50: = 10400 mg/l (measured, flow-through).
Daphnia magna, 24 hr. EC50: = 9714 mg/l (nominal, static).

13. DISPOSAL CONSIDERATIONS

CARE MUST BE TAKEN TO PREVENT ENVIRONMENTAL CONTAMINATION FROM THE USE OF THIS MATERIAL. THE USER OF THIS MATERIAL HAS THE RESPONSIBILITY TO DISPOSE OF UNUSED MATERIAL, RESIDUES AND CONTAINERS IN COMPLIANCE WITH ALL RELEVANT LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS REGARDING TREATMENT, STORAGE AND DISPOSAL FOR HAZARDOUS AND NONHAZARDOUS WASTES.

Waste Disposal Summary: Spent or discarded material is a hazardous waste.
Potential US EPA Waste Codes: D001
Disposal Methods: As a hazardous liquid waste, it must be disposed of in accordance with local, state and federal regulations in a permitted hazardous waste treatment, storage and disposal facility by incineration.
Components subject to land ban restrictions: Isopropyl alcohol (D001),

14. TRANSPORT INFORMATION

THIS MATERIAL IS REGULATED AS A DOT HAZARDOUS MATERIAL.
DOT Description (49 CFR 172.101):
Land (U.S. DOT): Flammable liquids, N.O.S., (Isopropanol) , UN1993 , PGIII.
Air (IATA/ICAO): Flammable liquid, N.O.S., (Isopropanol), 3, UN1993, PGIII.
Water (IMO): FLAMMABLE LIQUID, N.O.S., (IsopropanolL), 3, UN1993, PGIII.
Flash Point: (C) 29
Hazard Label/Placard: (Primary) Flammable
Emergency Response Guide Number: 128
Reportable Quantity (49 CFR 172.101, Appendix):
Zinc acetate 1000 lb RQ; 454 kg RQ
Emergency Response Guide Number: 128

15. REGULATORY INFORMATION

UNITED STATES:
Toxic Substances Control Act (TSCA): The components of this product are listed on the TSCA Inventory of Existing Chemical Substances.

Superfund Amendments and Reauthorization Act (SARA) Title III:
Hazard Categories Sections 311/312 (40 CFR 370.2):
Health: None
Physical: Fire

Extremely Hazardous Substance Section 302 - Threshold Planning Quantity:
Not applicable

Reportable Quantity (40 CFR 302.4):
Zinc acetate 1000 lb final RQ; 454 kg final RQ

Supplier Notification Requirements (40 CFR 372.45), 313 Reportable Components
Isopropyl alcohol 1.0 percent de minimis concentration (only if manufactured by the strong acid process, no supplier notification)

Clean Air Act Socmi: Benzyl alcohol,
Clean Air Act VOC Section 111 Isopropanol, Benzyl alcohol,

State Right-to-Know Regulations Status of Ingredients
Pennsylvania: 2-Propanol, Benzyl alcohol, Acetic acid, zinc salt
New Jersey: Isopropyl alcohol, Zinc acetate
Massachusetts: Isopropyl alcohol, Benzyl alcohol, Zinc acetate

Canada:
Ingredient Disclosure List: Isopropanol, Benzyl alcohol

16. OTHER INFORMATION

THIS MATERIAL SAFETY DATA SHEET (MSDS) HAS BEEN PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200. THE INFORMATION IN THIS MSDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. THIS INFORMATION HAS BEEN PREPARED FOR THE GUIDANCE OF PLANT ENGINEERING, OPERATIONS AND MANAGEMENT AND FOR PERSONS WORKING WITH OR HANDLING THIS PRODUCT. IVY CORP. MAKES NO WARRANTY.