



# Material Safety Data Sheet

72467C

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## SHIPSHAPE® RESIN CLEANER

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Responsible Party:** International Specialty Products  
1361 Alps Rd.  
Wayne, N.J. 07470  
U.S.A.  
Telephone: (973) 628-4000

Distributed by:  
ISP (CANADA) Inc.  
4055 Sladeview Cr. #7  
Mississauga, Ontario L5L 5Y1  
TEL: (905)607-2392 or (800)465-5094  
FAX: (905)607-9086

**Emergency Telephone Number:** CHEMTREC: 1-800-424-9300 (Spill Related Emergencies)  
PROSAR: 1-800-241-7439 (Health Related Emergencies)

**Prepared By:** Product Stewardship

**Product Id:** 72467C

**Product Name:** SHIPSHAPE® RESIN CLEANER

**CAS Registry Number:** 96-48-0; 872-50-4

**CAS Name:** 2(3H)-Furanone, dihydro; 2-Pyrrolidinone, 1-methyl

**Product Use:** Solvent

### 2. COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS

Components:	Weight %	ACGIH Threshold Limit Values Data - Time Weighted Average (TWA):	OSHA Specifically Regulated Substances Data - Time Weighted Average (TWA):
Butyrolactone 96-48-0	40-70	No TLV/TWA Established	No TLV/TWA Established
N-METHYL-2-PYRROLIDONE 872-50-4	40-70	No TLV/TWA Established	No TLV/TWA Established

**Statement of Hazardous Nature:** Moderate eye irritant. (BLO)  
ISP recommended exposure limit= 100 ppm. Mild skin irritant. (NMP)

### 3. HAZARDS IDENTIFICATION

#### Emergency Overview

CAUTION! CAUSES MODERATE EYE IRRITATION.

#### Hazard Overview

**Target Organs:** Eyes

**Primary Entry Routes:** Eyes.

**Acute Health Hazards:** Causes moderate eye irritation.

**Chronic Health Hazards:** None known

**Signs and Symptoms of Overexposure**

**Eye Contact:** Causes moderate eye irritation.

**Skin Contact:** Not a hazard under normal use conditions.

**Ingestion:** Ingestion of this material may cause altered mental status, coma, respiratory depression, bradycardia, hypotension, transient metabolic acidosis, mild hypothermia and agitation. Swallowing this material will result in serious health hazard, potentially leading to collapse and death.

**Inhalation:** Not a hazard under normal use conditions.

**4. FIRST AID MEASURES**

**Skin Contact:** Wash with soap and water.

**Ingestion:** Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.

**Inhalation:** No specific treatment is necessary since material is not likely to be hazardous by inhalation. If exposed to excessive levels of dust or fumes, remove to fresh air and get medical attention if cough or other symptoms develop.

**Eye Contact:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

**5. FIRE FIGHTING MEASURES**

**NFPA Rating:** Health: 2 Flammability: 2 Reactivity: 0

**Flash Point (°F):** 191

**Extinguishing Media:** Alcohol foam/ Dry chemical/ Carbon dioxide / Water

**Unusual Fire/Explosion Hazards:** Combustible liquid. Dangerous fire hazard when exposed to heat or flame. Vapors are heavier than air and may travel a considerable distance to a source of ignition and flash back. Vapor-air mixtures are explosive.

**Special Protective Equipment:** Fire fighters should wear full protective clothing, including self-contained breathing equipment.

**HMIS RATING:**

HEALTH	2
FLAMMABILITY	2
PHYSICAL HAZARD	0

**6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautionary Measures:** Use appropriate protective equipment.

**Procedure for Cleaning/Absorption:** Remove ignition sources. Contain spill with sand or other inert materials. Flush area with water.

**7. HANDLING AND STORAGE**

**Handling:** Avoid contact with eyes. Wash thoroughly with soap and water after handling.

**Storage:** Keep containers tightly closed when not in use. Store in a cool, dry place, out of direct sunlight.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Engineering Controls:</b>	Use in a well ventilated area.
<b>Respiratory Protection:</b>	Wear a NIOSH approved respirator appropriate for airborne exposure at the point of use.
<b>Hand Protection:</b>	Impervious gloves of natural latex or neoprene (Natural latex gloves AR-340 & Style# Y-18 from Glover Latex Inc. - Anaheim, CA; Neoprene gloves "Scorpio" #8-352 from Edmont Wilson - Coshocton, OH).
<b>Eye Protection:</b>	Chemical goggles; also wear a face shield if splashing hazard exists.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State:</b>	Liquid
<b>Color:</b>	Clear
<b>Odor:</b>	SWEET
<b>Odor Threshold:</b>	Not available
<b>pH:</b>	4-6 (10% solution)
<b>Specific Gravity:</b>	1.06-1.08 @25°C
<b>Boiling Point (°F):</b>	395.6-399.2
<b>Melting Point/Freezing Point(°F):</b>	-4 to 32
<b>Vapor Pressure:</b>	0.29 mm Hg @20°C
<b>Solubility:</b>	Soluble in water

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability:</b>	Stable under normal conditions of handling, use and transportation.
<b>Hazardous Polymerization:</b>	Will not occur
<b>Conditions to Avoid:</b>	Avoid any source of ignition. Keep away from heat, sparks and flame.
<b>Materials to Avoid:</b>	Strong reducing agents. Strong oxidizing agents.
<b>Hazardous Decomposition Products:</b>	Carbon monoxide. Carbon dioxide. Oxides of nitrogen. Smoke.

## 11. TOXICOLOGICAL INFORMATION

<b>Toxicity Test:</b>	
<b>Acute Oral LD50 (mg/kg):</b>	>2,000 (rat)
<b>Acute Dermal LD50 (mg/kg):</b>	8,000 (rat) (NMP) >5,600 (rat) (BLO)
<b>Acute Inhalation LC50 (mg/l):</b>	>400 ppm (rat) (NMP) >5.1 (rat; 4-hour exposure) (BLO)
<b>Sensitization:</b>	Non-sensitizing to guinea pigs (1% v/v solution) Non-sensitizing (Human RIPT- 15 applications) Prolonged, repeated contact found material to be a possible fatiguing agent. (NMP)  Human RIPT: Non-sensitizing (BLO)

<b>Mutagenicity:</b>	<p>Non-mutagenic (Ames Assay, Yeast Aneuploidy Induction Test, CHO/HGPRT Forward Mutation Assay, Mouse Lymphoma Assay, Rat Primary Hepatocyte Unscheduled DNA Synthesis Assay, In vivo Mouse Micronucleus Test, In vivo Dominant Lethal Test, In vivo Chinese Hamster Inhalation Test). (NMP)</p> <p>Sisto Chromabid Exchange: doses up to 1,500 µg/ml: negative. Chromosomal Aberration; doses up to 5,000 µg/ml: negative without activation at doses greater than 2,600 µg/ml: positive with metabolic activation. (BLO)</p>
<b>Reproductive/Developmental Toxicity:</b>	<p>Rat; Dermal; Developmental Toxicity; 75, 237 and 750 mg/kg; Maternal and Developmental NOAEL: 237 mg/kg.</p> <p>Rat; Inhalation; Developmental Toxicity; 0.1 (25 ppm) and 0.36 (89 ppm) mg/L; Maternal and Developmental NOAEL: 0.36 (89 ppm) mg/L.</p> <p>Rabbit; Oral; Developmental Toxicity; 55, 175 and 540 mg/kg/day; Maternal NOAEL: 55 mg/kg/day; Developmental NOAEL: 175 mg/kg/day.</p> <p>Rat; Oral; Multi-generation; 50, 160 and 500 mg/kg/day; Parental, Reproductive and Developmental NOAEL: 160 mg/kg/day.</p> <p>Rat; Oral; Multi-generation; 50, 160 and 350 mg/kg/day; Reproductive NOAEL: 350 mg/kg/day; Parental and Developmental: 160 mg/kg/day.</p> <p>Rat; Oral; Multi-generational; 50, 160 and 350 mg/kg/day; Parental and Reproductive NOAEL: 350 mg/kg/day; Developmental NOAEL: 160 mg/kg/day. (NMP)</p> <p>Rat teratology; graded doses 10-1,000 mg/kg/day (days 6-15 of gestation); maternal and developmental NOAEL: 1,000 mg/kg/day. (BLO)</p>
<b>Carcinogenicity:</b>	<p>Rat; 2-Year; Inhalation: 0.04 (10 ppm) and 0.4 (99 ppm) mg/L/day; 6hrs/day, 5 days/week - no observed adverse (or carcinogenic) effects level (NOAEL) 0.4 (99 ppm) mg/L/day.</p> <p>Rat; 2-Year; Oral: 66.4-87.8 (1,600 ppm), 207-283 (5,000 ppm), and 678-939 (15,000 ppm) mg/kg/day - no observed carcinogenic effects level 678-939 (15,000 ppm) mg/kg/day (M &amp; F); no observed adverse effects level (NOAEL) 207-283 (5,000 ppm) mg/kg/day (M &amp; F). The high dose males had a statistically significant increase in severe chronic progressive nephropathy.</p> <p>Mice; 18-Month; Oral: 89-115 (600 ppm), 173-221 (1,200 ppm), and 1,089-1,399 (7,200 ppm) mg/kg/day - no observed carcinogenic effects level 173-221 (1,200 ppm) mg/kg/day (M &amp; F); no observed adverse effects level (NOAEL) 89 (600 ppm) mg/kg/day in males and 221 (1,200 ppm) mg/kg/day in females. The high dose males had increased hepatocellular adenomas and carcinomas, and high dose females had hepatocellular adenomas only. The high dose males and females had increased relative and absolute liver weights, and in mid-dose males had increased centrilobular hepatocellular hypertrophy. (NMP)</p> <p>IARC 71,367, 1999: No carcinogenic effects noted in mice (oral, subcutaneous and skin) and rats (oral and subcutaneous). (BLO)</p>
<b>Skin Irritation:</b>	<p>Mildly irritating to rabbit skin. (50% solution).</p> <p>However, human experience has demonstrated severe dermatitis, e.g. blisters, cracking, edema, redness upon prolonged or repeated contact.</p> <p>Prolonged contact may induce defatting of skin which may result in redness and/or cracking.</p> <p>Non irritating (Human RIPT). (NMP)</p> <p>Non-irritating to rabbit skin. (BLO)</p>
<b>Eye Irritation:</b>	<p>Moderately irritating to rabbit eye. (100%) (NMP &amp; BLO)</p>

**Other Information:** Sub-Chronic Oral Toxicity: Mice; 90-Day; Oral: 277 (1,000 ppm), 619 (2,500 ppm) and 1,931 (7,500 ppm) mg/kg/day - no observed adverse effect level (NOAEL) 277 (1,00 ppm) mg/kg/day. The high dose animals had an increase in absolute and relative liver weights and centrilobular hepatocellular hypertrophy, and the mid-dose males had increased absolute and relative liver weights.  
 Rat; 90-Day; Oral: 69-217 (3,000 ppm), 433-565 (7,500 ppm) and 1,057-1,344 (18,000 ppm) mg/kg/day - no observed adverse effect level (NOAEL) 169-217 (3,000 ppm) mg/kg/day. The mid and high dose animals had decreased body weights and body weight gains.  
 Sub-Chronic Inhalation Toxicity: Inhalation studies; Rats, guinea pigs, rabbits, cats; No gross or histopathological abnormalities when exposed to 50 ppm M-Pyrol for 8 hrs/day for 20 days; Exposures as high as 370 ppm for 6 hrs/day for 10 days similarly caused no effects in rats.  
 4-Week; Rat; Aerosol-vapor mixture of M-Pyrol at 0, 0.1 (25 ppm), 0.5 (123 ppm) and 1.0 (247 ppm) mg/L for 6 hrs/day, 5 days/week; no effects at 0.1 or 0.5 mg/L; hemopoietic effects observed at 1.0 mg/L.  
 Sub-Chronic Dermal Toxicity: 20-Day; Rabbit; 0.4, 0.8 and 1.6 ml/kg/day on abraded and intact skin; Mild local irritation; No systemic effects; 1/4 animals died at 1.6 ml/kg/day.  
 Neurobehavior: Rat; 90-Day; Oral: 169-217 (3,000 ppm), 433-565 (7,500 ppm) and 1,057-1,344 (18,000 ppm) mg/kg/day - no observed adverse effect level (NOAEL) 1,344 (18,000 ppm) mg/kg/day in females; 169 (3,000 ppm) mg/kg/day in males. The mid high dose males had increased low arousal; foot splay; palpebral closure. (NMP)

**Other Information:** Subchronic Oral: 90 day feeding study in rats; no effects at highest dose level (0.9% of diet)  
 Mouse; Intraperitoneal LD50:1,100 mg/kg  
 Rat; Intraperitoneal LD50 : 1,100 mg/kg  
 Mouse; Intravenous LD50: 880 mg/kg. (BLO)

## 12. ECOLOGICAL INFORMATION

**Biodegradability:** Warburg Respirometry Method: Biodegradable (NMP)  
 72% Biodegradation in 28 days: Readily biodegradable. (BLO)

**Aquatic Toxicity:** Bluegill (*Lepomis Macrochirus*) LC50 @22°C: 832 mg/l  
 Fathead Minnow (*Pimephales Promelas*) LC50 @22°C: 1,072 mg/l  
 Trout (*Salmo Gairdneri*) LC50 @12°C: 3,048 mg/l.  
 (NMP)

## 13. DISPOSAL CONSIDERATIONS

**Disposal of Waste Method:** Federal, state and local disposal laws and regulations will determine the proper waste disposal/recycling/reclamation procedure. Disposal requirements are dependent on the hazard classification and will vary by location and the type of disposal selected.

## 14. TRANSPORT INFORMATION

### Land Transportation:

#### **DOT (Non-Bulk):**

**DOT Shipping Name:** NOT REGULATED

**UN/NA Number:** NONE

**Hazard Class:** NONE

#### **DOT (Bulk):**

**DOT Shipping Name:** COMBUSTIBLE LIQUID, N.O.S. (CONTAINS N-METHYL-2-PYRROLIDONE)

**UN/NA Number:** 1993  
**Hazard Class:** COMBUSTIBLE LIQUID  
**Packing Group:** III  
**Air Transportation (IATA):**  
**Proper Shipping Name:** NOT REGULATED  
**UN Number:** NONE  
**Hazard Classification:** NONE  
**Sea Transportation (IMO):**  
**Proper Shipping Name:** NOT REGULATED  
**UN/ID Number:** NONE  
**Hazard Classification:** NONE  
**TDG (Canada):**  
**Proper Shipping Name:** NOT REGULATED  
**Hazard Class:** NONE

### 15. REGULATORY INFORMATION

**TSCA Inventory List:** This product and/or its components is listed on TSCA.  
**California Proposition 65 Carcinogens & Reproductive Toxicity (CRT) List:** One or more components of this product is listed on CALPROP.  
**WHMIS Ingredient Disclosure List:** None of the components of this product is listed on WHMIS Ingredient Disclosure list.  
**WHMIS Hazard Class:** B3 COMBUSTIBLE LIQUIDS  
 D2B TOXIC MATERIALS



**Canada DSL Inventory List:** This product and/or its components is listed on DSL.  
**Canada NDSL Inventory List:** This product and/or its components is not listed on NDSL.  
**Japan Inventory of Existing & New Chemical Substances (ENCS):** This product and/or its components is listed on ENCS.  
**Australia Inventory of Chemical Substances (AICS) List:** This product and/or its components is listed on AICS.  
**EU EINECS List:** This product and/or its components is listed on EINECS.  
**ELINCS:** This product and/or its components is not listed on ELINCS.

<b>Components:</b>	N-METHYL-2-PYRROLIDONE 872-50-4
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<b>EPCRA (SARA Title III) Section 313 Toxic Chemical Data - De minimis concentration:</b>	Listed
<b>EPCRA (SARA Title III) Section 313 Toxic Chemical -</b>	Listed. Listed.

## 16. OTHER INFORMATION

**Prepared By:** Product Stewardship

**Legend:** N.Av.= Not Available; N.Ap.= Not Applicable

**Important Note:** For purposes of this MSDS, International Specialty Products, as responsible party, provides the information herein which is intended for use by persons who have or should obtain professional knowledge and experience in the subjects discussed. ISP's industrial products are used as materials in the production of products by industrial customers. ISP usually has only limited information about the products of its customers and their composition, methods of manufacture and use. Accordingly, ISP MAKES NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, COMPLETENESS OR RELIABILITY OF INFORMATION HEREIN EXCEPT THAT SUCH INFORMATION IS, TO THE BEST OF ISP'S KNOWLEDGE AND BELIEF, ACCURATE AS OF THE DATE INDICATED. ISP recommends that customers independently test and evaluate its products and their products and processes in which ISP products are used in order to decide their safety and effectiveness.

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