



# Material Safety Data Sheet

Material Name: BESTINE Solvent and Thinner

MSDS ID: UR-001

## \*\*\*Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION\*\*\*

Material Name: BESTINE Solvent and Thinner

### Manufacturer Information

Union Rubber, Inc.  
232 Allen Street  
P.O. Box 1040  
Trenton, NJ 08606

Phone: 609-396-9328  
Fax: 609-396-3587

Emergency: Chemtrec: 800-424-9300

### Synonyms

NORMAL HEPTANE; DIPROPYL METHANE; HEPTYL HYDRIDE; DIPROPYLMETHANE; N-HEPTANE; UN 1206; C7H16

### Chemical Family

hydrocarbons, aliphatic

## \*\*\*Section 2 - HAZARDS IDENTIFICATION\*\*\*

NFPA Ratings: Health: 2 Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

### EMERGENCY OVERVIEW

Color: colorless

Physical Form: liquid

Odor: gasoline odor

Health Hazards: respiratory tract irritation, skin irritation, eye irritation, central nervous system depression, aspiration hazard

Physical Hazards: Flammable liquid and vapor. Vapor may cause flash fire. Electrostatic charges may be generated by flow, agitation, etc.

### POTENTIAL HEALTH EFFECTS

#### Inhalation

Short Term: irritation, headache, drowsiness, dizziness, emotional disturbances, loss of coordination, fatigue, nausea, suffocation, unconsciousness

Long Term: no information is available

#### Skin

Short Term: irritation

Long Term: irritation

#### Eye

Short Term: irritation

Long Term: irritation

#### Ingestion

Short Term: gastrointestinal irritation, nausea, vomiting, diarrhea, stomach pain, headache, drowsiness, dizziness, emotional disturbances, loss of coordination, unconsciousness, aspiration hazard

Long Term: no information is available

### Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). This material is a controlled product under Canadian WHMIS regulations.

## \*\*\*Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS\*\*\*

CAS	Component	Percent
142-82-5	HEPTANE	100

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## Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Heptane isomers.

### \*\*\*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

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.

#### Eyes

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

#### Ingestion

Aspiration hazard. DO NOT induce vomiting. If vomiting occurs, keep head lower than hips to help prevent aspiration. Get immediate medical attention. Give artificial respiration if not breathing.

#### Note to Physicians

For inhalation, consider oxygen.

### \*\*\*Section 5 - FIRE FIGHTING MEASURES\*\*\*

See Section 9 for Flammability Properties

#### Flammable Properties

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. Electrostatic discharges may be generated by flow or agitation resulting in ignition or explosion.

#### Extinguishing Media

regular dry chemical, carbon dioxide, water spray, regular foam

#### Protective Equipment and Precautions for Firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

#### 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. 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.

#### Hazardous Combustion Products

Combustion: aldehydes, oxides of carbon

#### Sensitivity to Mechanical Impact

Not sensitive

#### Sensitivity to Static Discharge

Yes

### \*\*\*Section 6 - ACCIDENTAL RELEASE MEASURES\*\*\*

#### Occupational spill/release

Avoid heat, flames, sparks and other 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. Remove sources of ignition. Keep unnecessary people away, isolate hazard area and deny entry.

### \*\*\*Section 7 - HANDLING AND STORAGE\*\*\*

#### Handling Procedures

Wash thoroughly after handling. Keep away from heat, sparks and flame.



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## Storage Procedures

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\* \* \*

### Component Exposure Limits

#### HEPTANE (142-82-5)

**ACGIH:** 400 ppm TWA  
500 ppm STEL  
**NIOSH:** 85 ppm TWA; 350 mg/m<sup>3</sup> TWA  
440 ppm Ceiling (15 min); 1800 mg/m<sup>3</sup> Ceiling (15 min)  
750 ppm IDLH  
**Europe:** 500 ppm TWA; 2085 mg/m<sup>3</sup> TWA  
**OSHA (US):** 500 ppm TWA; 2000 mg/m<sup>3</sup> TWA  
**Mexico:** 400 ppm TWA; 1600 mg/m<sup>3</sup> TWA  
500 ppm STEL; 2000 mg/m<sup>3</sup> STEL  
Skin - potential for cutaneous absorption

### IDLH

750 ppm

### Ventilation

Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

### PERSONAL PROTECTIVE EQUIPMENT

#### Eyes/Face

Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

#### Protective Clothing

Wear appropriate chemical resistant clothing.

#### Glove Recommendations

Wear appropriate chemical resistant gloves.

#### Respiratory Protection

The following respirators and maximum use concentrations are drawn from NIOSH and/or OSHA.

750 ppm

Any air-purifying half-mask respirator equipped with organic vapor cartridge(s).

Any air-purifying full-facepiece respirator (gas mask) with a chin-style, front-mounted or back-mounted organic vapor canister.

Any powered, air-purifying respirator with organic vapor cartridge(s).

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 air-purifying full-facepiece respirator (gas mask) with a chin-style, front-mounted or back-mounted organic vapor canister.

Any appropriate escape-type, self-contained breathing apparatus.

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## \*\*\*Section 9 - PHYSICAL AND CHEMICAL PROPERTIES\*\*\*

<b>Physical State:</b> Liquid	<b>Appearance:</b> clear, colorless liquid
<b>Color:</b> colorless	<b>Physical Form:</b> liquid
<b>Odor:</b> gasoline odor	<b>Odor Threshold:</b> 200 ppm
<b>pH:</b> essentially neutral	<b>Melting/Freezing Point:</b> -91 °C
<b>Boiling Point:</b> 88-105 °C	<b>Flash Point:</b> -4 °C (CC)
<b>Evaporation Rate:</b> 4.5 (butyl acetate=1)	<b>OSHA Flammability Class:</b> IB
<b>LEL:</b> 1.05 %	<b>UEL:</b> 6.7 %
<b>Vapor Pressure:</b> ~40 mmHg @20 °C	<b>Vapor Density (air = 1):</b> 3.45
<b>Density:</b> Not available	<b>Specific Gravity (water = 1):</b> 0.68
<b>Water Solubility:</b> slightly soluble	<b>Coeff. Water/Oil Dist:</b> Not available
<b>Auto Ignition:</b> 285 °C	<b>Viscosity:</b> Not available
<b>VOC:</b> 5.79 lbs/gal	<b>Volatility:</b> 100 % @25 °C
<b>Molecular Weight:</b> 100.21	<b>Molecular Formula:</b> C-H3-(C-H2)5-C-H3

### Solvent Solubility

**Soluble:** ethanol, ether, chloroform, acetone

## \*\*\*Section 10 - STABILITY AND REACTIVITY\*\*\*

### Chemical Stability

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. Keep out of water supplies and sewers.

### Materials to Avoid

calcium hypochlorite, combustible materials, concentrated oxygen, liquid chlorine, oxidizing materials, sodium hypochlorite

### Hazardous Decomposition

**Combustion:** aldehydes, oxides of carbon

### Possibility of Hazardous Reactions

Will not polymerize.

## \*\*\*Section 11 - TOXICOLOGICAL INFORMATION\*\*\*

### Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

#### HEPTANE (142-82-5)

Inhalation LC50 Rat 103 g/m<sup>3</sup> 4 h; Oral LD50 Mouse 5000 mg/kg; Dermal LD50 Rabbit 3000 mg/kg

### Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, NTP, DFG or OSHA.

### Irritation

Causes skin, eye and respiratory irritation.

### Target Organs

central nervous system

### Medical Conditions Aggravated by Exposure

respiratory disorders, skin disorders and allergies

### Tumorigenic

No data available.

### Mutagenic

No data available.

### Reproductive Effects

No data available.

### Additional Data

Stimulants such as epinephrine may induce ventricular fibrillation.



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## \*\*\*Section 12 - ECOLOGICAL INFORMATION\*\*\*

### Component Analysis - Aquatic Toxicity

#### HEPTANE (142-82-5)

Fish: 96 Hr LC50 Cichlid fish: 375.0 mg/L  
Invertebrate: 24 Hr EC50 Daphnia magna: >10 mg/L

## \*\*\*Section 13 - DISPOSAL CONSIDERATIONS\*\*\*

### Disposal Methods

Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001.

### Component Waste Numbers

The U.S. EPA has not published waste numbers for this product's components.

## \*\*\*Section 14 - TRANSPORT INFORMATION\*\*\*

### US DOT Information (49 CFR)

Shipping Name: Heptanes  
UN/NA #: UN1206 Hazard Class: 3 Packing Group: II  
Required Label(s): 3

### TDG Information

Shipping Name: Heptanes  
UN #: UN1206 Hazard Class: 3 Packing Group: II  
Required Label(s): 3

### IATA Information

Shipping Name: Heptanes  
UN #: UN1206 Hazard Class: 3 Packing Group: II  
Required Label(s): 3

## \*\*\*Section 15 - REGULATORY INFORMATION\*\*\*

### U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified 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), and/or require an OSHA process safety plan.

#### HEPTANE (142-82-5)

TSCA 12b: Section 4, 1 % de minimus concentration

### SARA 311/312

Acute Health: Yes Chronic Health: No Fire: Yes Pressure: No Reactive: No

### 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	RI
HEPTANE	142-82-5	Yes	Yes	Yes	Yes	Yes	Yes

Not regulated under California Proposition 65

### Canada

This product has been classified in accordance with the criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

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## Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which fall under WHMIS criteria specified in the Controlled Products Regulations and present above the threshold limits listed on the IDL.

HEPTANE (142-82-5)

1 %

## WHMIS Classification

B2, D2B.

## Canadian Inventory

Listed on DSL.

## U.S. Inventory (TSCA)

Listed on inventory.

## Component Analysis - Inventory

Component	CAS	US	CA
HEPTANE	142-82-5	Yes	DSL

## \*\*\*Section 16 - OTHER INFORMATION\*\*\*

### Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSL - Domestic Substances List; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; RID - European Rail Transport; RTECS - Registry of Toxic Effects of Chemical Substances®; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States

### Disclaimer

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