



SAFETY DATA SHEET

1. Identification

Product identifier	Knock'er Loose® Penetrating Solvent
Other means of identification	
Product code	No. 03021 (Item# 1003272)
Recommended use	Penetrant
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Manufactured or sold by:	
Company name	CRC Industries, Inc.
Address	885 Louis Dr. Warminster, PA 18974 US
Telephone	
General Information	215-674-4300
Technical Assistance	800-521-3168
Customer Service	800-272-4620
24-Hour Emergency	800-424-9300 (US)
(CHEMTREC)	703-527-3887 (International)
Website	www.crcindustries.com

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 4
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Sensitization, skin	Category 1A
	Aspiration hazard	Category 1
Environmental hazards	Hazardous to the aquatic environment, long-term hazard	Category 2
OSHA defined hazards	Not classified.	
Label elements		



Signal word	Danger
Hazard statement	Combustible liquid. May be fatal if swallowed and enters airways. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Toxic to aquatic life with long lasting effects.
Precautionary statement	
Prevention	Keep away from flames and hot surfaces-No smoking. Use with adequate ventilation. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area. Avoid breathing mist or vapor. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/eye protection/face protection. Avoid release to the environment.
Response	If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. In case of fire: Do not use water jet as an extinguisher, as this will spread the fire. Collect spillage.

Storage	Store in a well-ventilated place. Keep cool. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national regulations.
Hazard(s) not otherwise classified (HNOC)	None known.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
distillates (petroleum), hydrotreated middle		64742-46-7	50 - 60
dipropylene glycol monomethyl ether acetate		88917-22-0	10 - 20
dipropylene glycol monopropyl ether (dpmp)		29911-27-1	10 - 20
turpentine, oil		8006-64-2	10 - 20
2,6-dimethyl-4-heptanone		108-83-8	3 - 5
distillates (petroleum), hydrotreated light		64742-47-8	1 - 3
naphtha (petroleum), hydrotreated heavy		64742-48-9	1 - 3
pine oil		8002-09-3	1 - 3

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	The product is combustible, and heating may generate vapors which may form explosive vapor/air mixtures. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
General fire hazards	Combustible liquid.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water. Prevent product from entering drains.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Keep away from open flames, hot surfaces and sources of ignition. When using do not smoke. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices. Use care in handling/storage. For product usage instructions, see the product label.

Conditions for safe storage, including any incompatibilities

Keep away from heat, sparks and open flame. Store in a cool, dry place out of direct sunlight. Keep container tightly closed. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
2,6-dimethyl-4-heptanone (CAS 108-83-8)	PEL	290 mg/m3	
distillates (petroleum), hydrotreated light (CAS 64742-47-8)	PEL	50 ppm 400 mg/m3	
distillates (petroleum), hydrotreated middle (CAS 64742-46-7)	PEL	100 ppm 5 mg/m3	Mist.
naphtha (petroleum), hydrotreated heavy (CAS 64742-48-9)	PEL	400 mg/m3 100 ppm 400 mg/m3	
turpentine, oil (CAS 8006-64-2)	PEL	100 ppm 560 mg/m3	
		100 ppm	

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
2,6-dimethyl-4-heptanone (CAS 108-83-8)	TWA	25 ppm	
distillates (petroleum), hydrotreated middle (CAS 64742-46-7)	TWA	5 mg/m3	Inhalable fraction.
turpentine, oil (CAS 8006-64-2)	TWA	20 ppm	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
2,6-dimethyl-4-heptanone (CAS 108-83-8)	TWA	150 mg/m3	
		25 ppm	
distillates (petroleum), hydrotreated light (CAS 64742-47-8)	TWA	100 mg/m3	
distillates (petroleum), hydrotreated middle (CAS 64742-46-7)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.
naphtha (petroleum), hydrotreated heavy (CAS 64742-48-9)	TWA	400 mg/m3	
		100 ppm	
turpentine, oil (CAS 8006-64-2)	TWA	560 mg/m3	
		100 ppm	

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Wear safety glasses with side shields (or goggles).

Skin protection**Hand protection**

Wear protective gloves such as: Nitrile. Rubber.

Other

Wear appropriate chemical resistant clothing.

Respiratory protection

If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties**Appearance****Physical state**

Liquid.

Form

Liquid.

Color

Red.

Odor

Pleasant pine.

Odor threshold

Not available.

pH

Not available.

Melting point/freezing point

-121 °F (-85 °C) estimated

Initial boiling point and boiling range

311 °F (155 °C) estimated

Flash point

147 °F (63.9 °C) Tag Closed Cup

Evaporation rate

Moderate.

Flammability (solid, gas)

Not available.

Upper/lower flammability or explosive limits**Flammability limit - lower (%)**

0.7 % estimated

Flammability limit - upper (%)	8.3 % estimated
Vapor pressure	4.7 hPa estimated
Vapor density	> 1 (air = 1)
Relative density	0.86
Solubility (water)	Negligible.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	401 °F (205 °C) estimated
Decomposition temperature	Not available.
Viscosity (kinematic)	Not available.
Percent volatile	100 % estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong acids. Strong bases. Strong oxidizing agents.
Hazardous decomposition products	Aldehydes. Ketones. Organic acids. Carbon oxides.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.
Ingestion	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

Symptoms related to the physical, chemical and toxicological characteristics Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

Information on toxicological effects

Acute toxicity May be fatal if swallowed and enters airways.

Components	Species	Test Results
2,6-dimethyl-4-heptanone (CAS 108-83-8)		
Acute		
Dermal		
LD50	Rabbit	16200 mg/kg
Inhalation		
LC50	Rat	> 5 mg/l, 4 hours
Oral		
LD50	Rat	5285 mg/kg
dipropylene glycol monomethyl ether acetate (CAS 88917-22-0)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Inhalation		
LC50	Rat	> 20 mg/l, 4 Hours
Oral		
LD50	Rat	> 5000 mg/kg

Components	Species	Test Results
dipropylene glycol monopropyl ether (dpmp) (CAS 29911-27-1)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg 5340 mg/kg
Oral		
LD50	Rat	> 2000 mg/kg 1475 mg/kg
distillates (petroleum), hydrotreated light (CAS 64742-47-8)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg
distillates (petroleum), hydrotreated middle (CAS 64742-46-7)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg
Oral		
LD50	Rat	> 5000 mg/kg
naphtha (petroleum), hydrotreated heavy (CAS 64742-48-9)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
turpentine, oil (CAS 8006-64-2)		
Acute		
Inhalation		
LC50	Rat	3590 mg/l, 1 Hours
Oral		
LD50	Rat	5760 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory or skin sensitization	
ACGIH sensitization	
TURPENTINE AND SELECTED MONOTERPENES (CAS 8006-64-2)	Dermal sensitization
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	May cause an allergic skin reaction.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not classifiable as to carcinogenicity to humans.
IARC Monographs. Overall Evaluation of Carcinogenicity	
Not listed.	
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	
Not regulated.	
US. National Toxicology Program (NTP) Report on Carcinogens	
Not listed.	
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard May be fatal if swallowed and enters airways. If aspirated into lungs during swallowing or vomiting, may cause chemical pneumonia, pulmonary injury or death.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Components		Species	Test Results
dipropylene glycol monomethyl ether acetate (CAS 88917-22-0)			
Aquatic			
<i>Acute</i>			
Crustacea	LC50	Water flea (Daphnia magna)	2701 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	151 mg/l, 96 hours
		Rainbow trout,donaldson trout (Oncorhynchus mykiss)	111 mg/l, 96 hours
dipropylene glycol monopropyl ether (dpmp) (CAS 29911-27-1)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Water flea (Daphnia magna)	> 100 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	> 100 mg/l, 96 hours
distillates (petroleum), hydrotreated light (CAS 64742-47-8)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Water flea (Daphnia magna)	1.1 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	3 mg/l, 96 hours
distillates (petroleum), hydrotreated middle (CAS 64742-46-7)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia pulex)	2.7 - 5.1 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	8.8 mg/l, 96 hours
			8.8 mg/l, 96 hours
naphtha (petroleum), hydrotreated heavy (CAS 64742-48-9)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia pulex)	2.7 - 5.1 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	8.8 mg/l, 96 hours
			8.8 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

dipropylene glycol monomethyl ether acetate	0.61 OECD 107
dipropylene glycol monopropyl ether (dpmp)	0.87 OECD 107
	0.88 OECD 107

Mobility in soil No data available.

Other adverse effects The product contains volatile organic compounds which have a photochemical ozone creation potential.

13. Disposal considerations

Disposal of waste from residues / unused products	This product is not a RCRA hazardous waste (See 40 CFR Part 261.20 – 261.33). Empty containers may be recycled. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose in accordance with all applicable regulations.
Hazardous waste code	Not regulated.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT	Not regulated as dangerous goods.
IATA	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.

15. Regulatory information

US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)	Not regulated.
SARA 304 Emergency release notification	Not regulated.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	Not regulated.
US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance	Not listed.
CERCLA Hazardous Substance List (40 CFR 302.4)	Not listed.
CERCLA Hazardous Substances: Reportable quantity	Not listed. Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List	Not regulated.
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)	Not regulated.
Safe Drinking Water Act (SDWA)	Not regulated.
FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace	2,6-dimethyl-4-heptanone (CAS 108-83-8) Other Flavoring Substances with OSHA PEL's
Food and Drug Administration (FDA)	Not regulated.
Superfund Amendments and Reauthorization Act of 1986 (SARA)	
Section 311/312 Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No
SARA 302 Extremely hazardous substance	No
US state regulations	
US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))	distillates (petroleum), hydrotreated middle (CAS 64742-46-7)

naphtha (petroleum), hydrotreated heavy (CAS 64742-48-9)

US. New Jersey Worker and Community Right-to-Know Act

2,6-dimethyl-4-heptanone (CAS 108-83-8)

naphtha (petroleum), hydrotreated heavy (CAS 64742-48-9)

pine oil (CAS 8002-09-3)

turpentine, oil (CAS 8006-64-2)

US. Massachusetts RTK - Substance List

2,6-dimethyl-4-heptanone (CAS 108-83-8)

naphtha (petroleum), hydrotreated heavy (CAS 64742-48-9)

turpentine, oil (CAS 8006-64-2)

US. Pennsylvania Worker and Community Right-to-Know Law

2,6-dimethyl-4-heptanone (CAS 108-83-8)

distillates (petroleum), hydrotreated light (CAS 64742-47-8)

US. Rhode Island RTK

2,6-dimethyl-4-heptanone (CAS 108-83-8)

naphtha (petroleum), hydrotreated heavy (CAS 64742-48-9)

turpentine, oil (CAS 8006-64-2)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

benzene (CAS 71-43-2)

Listed: February 27, 1987

ethylbenzene (CAS 100-41-4)

Listed: June 11, 2004

naphthalene (CAS 91-20-3)

Listed: April 19, 2002

US - California Proposition 65 - CRT: Listed date/Developmental toxin

benzene (CAS 71-43-2)

Listed: December 26, 1997

toluene (CAS 108-88-3)

Listed: January 1, 1991

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

benzene (CAS 71-43-2)

Listed: December 26, 1997

Volatile organic compounds (VOC) regulations

EPA

VOC content (40 CFR 51.100(s)) 100 %

Consumer products (40 CFR 59, Subpt. C) Not regulated

State

Consumer products This product is regulated as a Penetrant. This product is compliant for use in all 50 states.

VOC content (CA) 24 %

VOC content (OTC) 24 %

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 05-06-2016
Revision date 08-18-2017
Prepared by Allison Yoon
Version # 04
Further information CRC # 548A/1002565
HMIS® ratings Health: 1
Flammability: 2
Physical hazard: 0
Personal protection: B
NFPA ratings Health: 1
Flammability: 2
Instability: 0

NFPA ratings



Disclaimer

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC's knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this (M)SDS consult your supervisor, a health & safety professional, or CRC Industries, Inc..

Revision Information

This document has undergone significant changes and should be reviewed in its entirety.



SAFETY DATA SHEET

1. Identification

Product identifier	Knock'er Loose® Penetrating Solvent
Other means of identification	
Product code	No. 03021 (Item# 1003272)
Recommended use	Penetrant
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Manufactured or sold by:	
Company name	CRC Industries, Inc.
Address	885 Louis Dr. Warminster, PA 18974 US
Telephone	
General Information	215-674-4300
Technical Assistance	800-521-3168
Customer Service	800-272-4620
24-Hour Emergency	800-424-9300 (US)
(CHEMTREC)	703-527-3887 (International)
Website	www.crcindustries.com

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 4
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Sensitization, skin	Category 1A
	Aspiration hazard	Category 1
Environmental hazards	Hazardous to the aquatic environment, long-term hazard	Category 2
OSHA defined hazards	Not classified.	
Label elements		



Signal word	Danger
Hazard statement	Combustible liquid. May be fatal if swallowed and enters airways. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Toxic to aquatic life with long lasting effects.
Precautionary statement	
Prevention	Keep away from flames and hot surfaces-No smoking. Use with adequate ventilation. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area. Avoid breathing mist or vapor. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/eye protection/face protection. Avoid release to the environment.
Response	If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. In case of fire: Do not use water jet as an extinguisher, as this will spread the fire. Collect spillage.

Storage	Store in a well-ventilated place. Keep cool. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national regulations.
Hazard(s) not otherwise classified (HNOC)	None known.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
distillates (petroleum), hydrotreated middle		64742-46-7	50 - 60
dipropylene glycol monomethyl ether acetate		88917-22-0	10 - 20
dipropylene glycol monopropyl ether (dpmp)		29911-27-1	10 - 20
turpentine, oil		8006-64-2	10 - 20
2,6-dimethyl-4-heptanone		108-83-8	3 - 5
distillates (petroleum), hydrotreated light		64742-47-8	1 - 3
naphtha (petroleum), hydrotreated heavy		64742-48-9	1 - 3
pine oil		8002-09-3	1 - 3

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	The product is combustible, and heating may generate vapors which may form explosive vapor/air mixtures. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
General fire hazards	Combustible liquid.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water. Prevent product from entering drains.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Keep away from open flames, hot surfaces and sources of ignition. When using do not smoke. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices. Use care in handling/storage. For product usage instructions, see the product label.

Conditions for safe storage, including any incompatibilities

Keep away from heat, sparks and open flame. Store in a cool, dry place out of direct sunlight. Keep container tightly closed. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
2,6-dimethyl-4-heptanone (CAS 108-83-8)	PEL	290 mg/m ³	
distillates (petroleum), hydrotreated light (CAS 64742-47-8)	PEL	50 ppm 400 mg/m ³	
distillates (petroleum), hydrotreated middle (CAS 64742-46-7)	PEL	100 ppm 5 mg/m ³	Mist.
naphtha (petroleum), hydrotreated heavy (CAS 64742-48-9)	PEL	400 mg/m ³ 100 ppm 400 mg/m ³	
turpentine, oil (CAS 8006-64-2)	PEL	100 ppm 560 mg/m ³ 100 ppm	

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
2,6-dimethyl-4-heptanone (CAS 108-83-8)	TWA	25 ppm	
distillates (petroleum), hydrotreated middle (CAS 64742-46-7)	TWA	5 mg/m ³	Inhalable fraction.
turpentine, oil (CAS 8006-64-2)	TWA	20 ppm	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
2,6-dimethyl-4-heptanone (CAS 108-83-8)	TWA	150 mg/m3	
		25 ppm	
distillates (petroleum), hydrotreated light (CAS 64742-47-8)	TWA	100 mg/m3	
distillates (petroleum), hydrotreated middle (CAS 64742-46-7)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.
naphtha (petroleum), hydrotreated heavy (CAS 64742-48-9)	TWA	400 mg/m3	
		100 ppm	
turpentine, oil (CAS 8006-64-2)	TWA	560 mg/m3	
		100 ppm	

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Wear safety glasses with side shields (or goggles).

Skin protection**Hand protection**

Wear protective gloves such as: Nitrile. Rubber.

Other

Wear appropriate chemical resistant clothing.

Respiratory protection

If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties**Appearance****Physical state**

Liquid.

Form

Liquid.

Color

Red.

Odor

Pleasant pine.

Odor threshold

Not available.

pH

Not available.

Melting point/freezing point

-121 °F (-85 °C) estimated

Initial boiling point and boiling range

311 °F (155 °C) estimated

Flash point

147 °F (63.9 °C) Tag Closed Cup

Evaporation rate

Moderate.

Flammability (solid, gas)

Not available.

Upper/lower flammability or explosive limits**Flammability limit - lower (%)**

0.7 % estimated

Flammability limit - upper (%)	8.3 % estimated
Vapor pressure	4.7 hPa estimated
Vapor density	> 1 (air = 1)
Relative density	0.86
Solubility (water)	Negligible.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	401 °F (205 °C) estimated
Decomposition temperature	Not available.
Viscosity (kinematic)	Not available.
Percent volatile	100 % estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong acids. Strong bases. Strong oxidizing agents.
Hazardous decomposition products	Aldehydes. Ketones. Organic acids. Carbon oxides.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.
Ingestion	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

Symptoms related to the physical, chemical and toxicological characteristics Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

Information on toxicological effects

Acute toxicity May be fatal if swallowed and enters airways.

Components	Species	Test Results
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2,6-dimethyl-4-heptanone (CAS 108-83-8)

Acute

Dermal

LD50	Rabbit	16200 mg/kg
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Inhalation

LC50	Rat	> 5 mg/l, 4 hours
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Oral

LD50	Rat	5285 mg/kg
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dipropylene glycol monomethyl ether acetate (CAS 88917-22-0)

Acute

Dermal

LD50	Rabbit	> 2000 mg/kg
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Inhalation

LC50	Rat	> 20 mg/l, 4 Hours
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Oral

LD50	Rat	> 5000 mg/kg
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Components	Species	Test Results
dipropylene glycol monopropyl ether (dpmp) (CAS 29911-27-1)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg 5340 mg/kg
Oral		
LD50	Rat	> 2000 mg/kg 1475 mg/kg
distillates (petroleum), hydrotreated light (CAS 64742-47-8)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg
distillates (petroleum), hydrotreated middle (CAS 64742-46-7)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg
Oral		
LD50	Rat	> 5000 mg/kg
naphtha (petroleum), hydrotreated heavy (CAS 64742-48-9)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
turpentine, oil (CAS 8006-64-2)		
Acute		
Inhalation		
LC50	Rat	3590 mg/l, 1 Hours
Oral		
LD50	Rat	5760 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory or skin sensitization	
ACGIH sensitization	
TURPENTINE AND SELECTED MONOTERPENES (CAS 8006-64-2)	Dermal sensitization
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	May cause an allergic skin reaction.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not classifiable as to carcinogenicity to humans.
IARC Monographs. Overall Evaluation of Carcinogenicity	
Not listed.	
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	
Not regulated.	
US. National Toxicology Program (NTP) Report on Carcinogens	
Not listed.	
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard May be fatal if swallowed and enters airways. If aspirated into lungs during swallowing or vomiting, may cause chemical pneumonia, pulmonary injury or death.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Components		Species	Test Results
dipropylene glycol monomethyl ether acetate (CAS 88917-22-0)			
Aquatic			
<i>Acute</i>			
Crustacea	LC50	Water flea (<i>Daphnia magna</i>)	2701 mg/l, 48 hours
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>)	151 mg/l, 96 hours
		Rainbow trout,donaldson trout (<i>Oncorhynchus mykiss</i>)	111 mg/l, 96 hours
dipropylene glycol monopropyl ether (dpmp) (CAS 29911-27-1)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Water flea (<i>Daphnia magna</i>)	> 100 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (<i>Oncorhynchus mykiss</i>)	> 100 mg/l, 96 hours
distillates (petroleum), hydrotreated light (CAS 64742-47-8)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Water flea (<i>Daphnia magna</i>)	1.1 mg/l, 48 hours
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>)	3 mg/l, 96 hours
distillates (petroleum), hydrotreated middle (CAS 64742-46-7)			
Aquatic			
Crustacea	EC50	Water flea (<i>Daphnia pulex</i>)	2.7 - 5.1 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (<i>Oncorhynchus mykiss</i>)	8.8 mg/l, 96 hours
			8.8 mg/l, 96 hours
naphtha (petroleum), hydrotreated heavy (CAS 64742-48-9)			
Aquatic			
Crustacea	EC50	Water flea (<i>Daphnia pulex</i>)	2.7 - 5.1 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (<i>Oncorhynchus mykiss</i>)	8.8 mg/l, 96 hours
			8.8 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

dipropylene glycol monomethyl ether acetate	0.61 OECD 107
dipropylene glycol monopropyl ether (dpmp)	0.87 OECD 107
	0.88 OECD 107

Mobility in soil No data available.

Other adverse effects The product contains volatile organic compounds which have a photochemical ozone creation potential.

13. Disposal considerations

Disposal of waste from residues / unused products	This product is not a RCRA hazardous waste (See 40 CFR Part 261.20 – 261.33). Empty containers may be recycled. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose in accordance with all applicable regulations.
Hazardous waste code	Not regulated.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT	Not regulated as dangerous goods.
IATA	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.

15. Regulatory information

US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)	Not regulated.
SARA 304 Emergency release notification	Not regulated.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	Not regulated.
US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance	Not listed.
CERCLA Hazardous Substance List (40 CFR 302.4)	Not listed.
CERCLA Hazardous Substances: Reportable quantity	Not listed. Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List	Not regulated.
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)	Not regulated.
Safe Drinking Water Act (SDWA)	Not regulated.
FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace	2,6-dimethyl-4-heptanone (CAS 108-83-8) Other Flavoring Substances with OSHA PEL's
Food and Drug Administration (FDA)	Not regulated.
Superfund Amendments and Reauthorization Act of 1986 (SARA)	
Section 311/312 Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No
SARA 302 Extremely hazardous substance	No
US state regulations	
US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))	distillates (petroleum), hydrotreated middle (CAS 64742-46-7)

naphtha (petroleum), hydrotreated heavy (CAS 64742-48-9)

US. New Jersey Worker and Community Right-to-Know Act

2,6-dimethyl-4-heptanone (CAS 108-83-8)

naphtha (petroleum), hydrotreated heavy (CAS 64742-48-9)

pine oil (CAS 8002-09-3)

turpentine, oil (CAS 8006-64-2)

US. Massachusetts RTK - Substance List

2,6-dimethyl-4-heptanone (CAS 108-83-8)

naphtha (petroleum), hydrotreated heavy (CAS 64742-48-9)

turpentine, oil (CAS 8006-64-2)

US. Pennsylvania Worker and Community Right-to-Know Law

2,6-dimethyl-4-heptanone (CAS 108-83-8)

distillates (petroleum), hydrotreated light (CAS 64742-47-8)

US. Rhode Island RTK

2,6-dimethyl-4-heptanone (CAS 108-83-8)

naphtha (petroleum), hydrotreated heavy (CAS 64742-48-9)

turpentine, oil (CAS 8006-64-2)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

benzene (CAS 71-43-2)

Listed: February 27, 1987

ethylbenzene (CAS 100-41-4)

Listed: June 11, 2004

naphthalene (CAS 91-20-3)

Listed: April 19, 2002

US - California Proposition 65 - CRT: Listed date/Developmental toxin

benzene (CAS 71-43-2)

Listed: December 26, 1997

toluene (CAS 108-88-3)

Listed: January 1, 1991

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

benzene (CAS 71-43-2)

Listed: December 26, 1997

Volatile organic compounds (VOC) regulations

EPA

VOC content (40 CFR 51.100(s)) 100 %

Consumer products (40 CFR 59, Subpt. C) Not regulated

State

Consumer products This product is regulated as a Penetrant. This product is compliant for use in all 50 states.

VOC content (CA) 24 %

VOC content (OTC) 24 %

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 05-06-2016
Revision date 08-18-2017
Prepared by Allison Yoon
Version # 04
Further information CRC # 548A/1002565
HMIS® ratings Health: 1
Flammability: 2
Physical hazard: 0
Personal protection: B
NFPA ratings Health: 1
Flammability: 2
Instability: 0

NFPA ratings



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Revision Information

This document has undergone significant changes and should be reviewed in its entirety.