

SECTION 1: Identification

1.1. Identification

Product form : Substance
Trade name : Diisobutyl Carbinol
CAS-No. : 108-82-7
Formula : C₉H₁₉OH

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Chemical intermediate
Solvent

1.3. Supplier

Monument Chemical
16717 Jacintoport Blvd.
Houston, TX 77015 - USA
T (281) 452-5951 - F (281) 457-1127
sds@monumentchemical.com - www.monumentchemical.com

1.4. Emergency telephone number

Emergency number : 24 HR CHEMTREC: 1-800-424-9300 (International +1 703-741-5970); 24 HR Emergency Assistance: 1-832-376-2026

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquids Category 4 H227 Combustible liquid
Full text of H- and EUH-statements: see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Signal word (GHS US) : Warning
Hazard statements (GHS US) : H227 - Combustible liquid
Precautionary statements (GHS US) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280 - Wear eye protection, protective clothing, protective gloves.
P370+P378 - In case of fire: Use alcohol resistant foam, carbon dioxide (CO₂), dry extinguishing powder, Water spray to extinguish.
P403+P235 - Store in a well-ventilated place. Keep cool.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

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SECTION 3: Composition/Information on ingredients

3.1. Substances

Name : Diisobutyl Carbinol
CAS-No. : 108-82-7

Name	Product identifier	%
Diisobutyl Carbinol	CAS-No.: 108-82-7	≥ 70
2-Heptanol, 4,6-dimethyl-	CAS-No.: 51079-52-8	≤ 30
2,6-Dimethyl-4-heptanone	CAS-No.: 108-83-8	≤ 3

Full text of hazard classes, H- and EUH-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Allow affected person to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact : Wash skin with plenty of water. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

First-aid measures after eye contact : Rinse eyes with water as a precaution. Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.

First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell. Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : Combustible liquid.

Explosion hazard : May form flammable/explosive vapor-air mixture.

Hazardous decomposition products in case of fire : Toxic fumes may be released.

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5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.

6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.
- Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13. See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapors are flammable. Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- Precautions for safe handling : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear personal protective equipment. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No open flames. No smoking.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Proper grounding procedures to avoid static electricity should be followed.
- Storage conditions : Store in a well-ventilated place. Keep cool. Keep only in the original container in a cool, well ventilated place away from : Heat sources, Ignition sources, Incompatible materials. Keep container closed when not in use. Keep in fireproof place.

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Incompatible products : Strong bases. Strong acids.
Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Diisobutyl Carbinol (108-82-7)

No additional information available

Diisobutyl Carbinol (108-82-7)

No additional information available

2-Heptanol, 4,6-dimethyl- (51079-52-8)

No additional information available

2,6-Dimethyl-4-heptanone (108-83-8)

USA - ACGIH - Occupational Exposure Limits

Local name	Diisobutyl ketone
ACGIH OEL TWA [ppm]	25 ppm
Remark (ACGIH)	URT & eye irr
Regulatory reference	ACGIH 2021

USA - OSHA - Occupational Exposure Limits

Local name	Diisobutyl ketone
OSHA PEL (TWA) [1]	290 mg/m ³
OSHA PEL (TWA) [2]	50 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

USA - IDLH - Occupational Exposure Limits

IDLH [ppm]	500 ppm
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USA - NIOSH - Occupational Exposure Limits

NIOSH REL (TWA)	150 mg/m ³
NIOSH REL TWA [ppm]	25 ppm

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Protective gloves. Wear protective gloves.

Eye protection:

Safety glasses. Chemical goggles or safety glasses

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Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Wear appropriate mask

Personal protective equipment symbol(s):



Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear, colorless liquid.
Color	: Colorless
Odor	: Sweet
Odor threshold	: No data available
pH	: No data available
Melting point	: Not applicable
Freezing point	: -85 °F ; (-65°C)
Boiling point	: 352 °F ; (178°C) 760mmHg
Flash point	: 144 °F ; (62°C) Closed cup
Relative evaporation rate (butyl acetate=1)	: 0.02
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: 0.14 mm Hg @20°C
Relative vapor density at 20 °C	: 5
Relative density	: 0.81 – 0.814 @ 20°C
Molecular mass	: 144.26 g/mol
Solubility	: Insoluble in water. Water: 0.06 %
Partition coefficient n-octanol/water (Log Pow)	: 3.09
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 15.4 cP @ 20°C
Explosion limits	: 0.8 – 6.1 vol %
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

Refractive index : 1.41 – 1.43 @ 20°C

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

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10.2. Chemical stability

Stable under normal conditions. Combustible liquid. May form flammable/explosive vapor-air mixture.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Not established.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition. Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Sparks.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. fume. Carbon monoxide. Carbon dioxide. May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Diisobutyl Carbinol (108-82-7)

LD50 oral rat	3560 mg/kg
LD50 dermal rabbit	4591 mg/kg
ATE US (oral)	3560 mg/kg body weight
ATE US (dermal)	4591 mg/kg body weight

2,6-Dimethyl-4-heptanone (108-83-8)

LD50 oral rat	5750 mg/kg
LD50 dermal rat	> 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal)
LC50 Inhalation - Rat	> 14.5 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Experimental value, Inhalation (vapours), 14 day(s))
LC50 Inhalation - Rat [ppm]	> 2300 ppm/4h
ATE US (oral)	5750 mg/kg body weight

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified

2,6-Dimethyl-4-heptanone (108-83-8)

STOT-single exposure	May cause respiratory irritation.
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STOT-repeated exposure : Not classified

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2,6-Dimethyl-4-heptanone (108-83-8)	
NOAEL (oral, rat, 90 days)	2000 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
NOAEC (inhalation, rat, vapor, 90 days)	5.74 mg/l air Animal: rat, Guideline: OECD Guideline 412 (Subacute Inhalation Toxicity: 28-Day Study)

Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/effects	: Not expected to present a significant hazard under anticipated conditions of normal use.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
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2,6-Dimethyl-4-heptanone (108-83-8)	
LC50 - Fish [1]	140 mg/l (Exposure time: 96 h - Species: <i>Oncorhynchus mykiss</i> [semi-static])
EC50 - Crustacea [1]	37.2 mg/l (OECD 202: <i>Daphnia</i> sp. Acute Immobilisation Test, 48 h, <i>Daphnia magna</i> , Semi-static system, Fresh water, Experimental value, GLP)
ErC50 algae	46.9 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, <i>Pseudokirchneriella subcapitata</i> , Static system, Fresh water, Experimental value, GLP)

12.2. Persistence and degradability

Diisobutyl Carbinol (108-82-7)	
Persistence and degradability	Not established.
Diisobutyl Carbinol (108-82-7)	
Persistence and degradability	Biodegradability in water: no data available.
2,6-Dimethyl-4-heptanone (108-83-8)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.

12.3. Bioaccumulative potential

Diisobutyl Carbinol (108-82-7)	
Partition coefficient n-octanol/water (Log Pow)	3.09
Bioaccumulative potential	Not established.
Diisobutyl Carbinol (108-82-7)	
Partition coefficient n-octanol/water (Log Pow)	2.99 (QSAR)
Bioaccumulative potential	Not bioaccumulative.
2,6-Dimethyl-4-heptanone (108-83-8)	
BCF - Fish [1]	100 (Pisces)
BCF - Other aquatic organisms [1]	130 l/kg (BCFBAF v3.00, QSAR)
Partition coefficient n-octanol/water (Log Pow)	3.71 (Experimental value, 25 °C)

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2,6-Dimethyl-4-heptanone (108-83-8)

Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
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12.4. Mobility in soil

2,6-Dimethyl-4-heptanone (108-83-8)

Surface tension	22.8 N/m (25 °C, 100 vol %)
Partition coefficient n-octanol/water (Log Koc)	2.07 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value)
Ecology - soil	Low potential for adsorption in soil.

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
Additional information : Handle empty containers with care because residual vapors are flammable.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with Department of Transport / IMDG / IATA

14.1. UN number

DOT NA No : NA1993
UN-No. (IMDG) : Not applicable
UN-No. (IATA) : Not applicable

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Combustible liquid, n.o.s. (Diisobutyl Carbinol)
Proper Shipping Name (TDG) : Not applicable
Proper Shipping Name (IMDG) : Not applicable
Proper Shipping Name (IATA) : Not applicable
Transport document description (DOT) : NA1993 Combustible liquid, n.o.s. (Diisobutyl Carbinol), 3, III

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : 3

IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : Not applicable

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14.4. Packing group

Packing group (DOT) : III
Packing group (IMDG) : Not applicable
Packing group (IATA) : Not applicable

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

DOT
UN-No.(DOT) : NA1993
DOT Special Provisions (49 CFR 172.102) : IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).
T1 - 1.5 178.274(d)(2) Normal..... 178.275(d)(2)
T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.

DOT Packaging Exceptions (49 CFR 173.xxx) : 150
DOT Packaging Non Bulk (49 CFR 173.xxx) : 203
DOT Packaging Bulk (49 CFR 173.xxx) : 241
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L
DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

IMDG

No data available

IATA

No data available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for:

2-Heptanol, 4,6-dimethyl-	CAS-No. 51079-52-8	≤ 30%
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This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

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15.2. International regulations

CANADA

Diisobutyl Carbinol (108-82-7)

Listed on the Canadian DSL (Domestic Substances List)

2,6-Dimethyl-4-heptanone (108-83-8)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

Diisobutyl Carbinol (108-82-7)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

2,6-Dimethyl-4-heptanone (108-83-8)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Diisobutyl Carbinol (108-82-7)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on the NCI (National Chemicals Inventory)

2-Heptanol, 4,6-dimethyl- (51079-52-8)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on the NCI (National Chemicals Inventory)

2,6-Dimethyl-4-heptanone (108-83-8)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on the Japanese ISHL (Industrial Safety and Health Law)
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15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	State or local regulations
2,6-Dimethyl-4-heptanone(108-83-8)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - Massachusetts - Right To Know List

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 05/07/2021

Other information : None.

Full text of H-phrases	
H227	Combustible liquid

Safety Data Sheet (SDS), USA

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