AMERICAN PACIFIC TRADERS. LLC

MATERIAL SAFETY DATA SHEET

SUPER CLEAN 100

Revision Date 2018-01-07

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product information

Trade name : SUPER CLEAN 100

Material A HIGHLY PURIFIED FORM OF n-Heptane (Pure Grade)

*NOTE: NON HAZARDOUS COMPONENTS
ARE NOT LISTED.

Company AMERICAN PACIFIC TRADERS LLC
1274 DEFENSE HWY,GAMBRILLS,MD-21054 USA

Emergency telephone: 703-741-5500 (INTERNATIONAL)

Responsible Department : R&d Department

E-mail address : info@americanpacific-chemicals.com

Website : www.americanpacific-chemicals.com

SECTION 2: Hazards identification

Emergency Overview

Form: Liquid **Physical state**: Liquid **Color**: Clear **Odor**: Sweet

OSHA Hazards : Flammable Liquid, Moderate skin irritant **GHS Classification**

: Aspiration hazard, Category 1
Flammable liquids, Category 2
Skin irritation, Category 2
Specific target organ systemic toxicity - single exposure, Category 3, Central nervous system
Acute aquatic toxicity, Category 1
Chronic aquatic toxicity, Category 1

GHS-Labeling

human carcinogen by IARC.

NTP No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

ACGIH No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

SECTION 3: Composition/information on ingredients

Synonyms : Normal Heptane
Dipropilmetano
n-Heptane, 99%

Molecular formula : C7H16

Component	CAS-No.	Weight %
n-Heptane	142-82-5	100

SECTION 4: First aid measures

General advice : Move out of dangerous area. Show this material safety data sheet to the doctor in attendance. Symptoms of poisoning may appear several hours later. Do not leave the victim unattended.

If inhaled : Move to fresh air. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

In case of skin contact : If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.

In case of eye contact : Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear. Do NOT induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. Take victim immediately to hospital.

SECTION 5: Firefighting measures

Flash point : -4 °C (25 °F)
Method: Tag closed cup

Autoignition temperature : 203.85 °C (398.93 °F)

Suitable extinguishing media : Dry chemical. Carbon dioxide (CO2). Alcohol-resistant foam.

Unsuitable extinguishing : High volume water jet.

media

Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water Courses.

Special protective equipment for fire-fighters : Wear self contained breathing apparatus for fire fighting if Necessary.

Further information : Collect contaminated fire extinguishing water separately. This Must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in Accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed Containments. Use a water spray to cool fully closed Containers.

Fire and explosion protection : Do not spray on an open flame or any other incandescent Material. Use only explosion-proof equipment. Take necessary action to avoid static electricity discharge (which Might cause ignition of organic vapors). Keep away from open Flames, hot surfaces and sources of ignition.

Hazardous decomposition products : Carbon oxides.

SECTION 6: Accidental release measures

Personal precautions : Use personal protective equipment. Ensure adequate Ventilation. Remove all sources of ignition. Evacuate Personnel to safe areas. Beware of vapors accumulating to Form explosive concentrations. Vapors can accumulate in low Areas.

Environmental precautions : Prevent product from entering drains. Prevent further leakage Or spillage if safe to do so. If the product contaminates rivers And lakes or drains inform respective authorities.

Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to Local / national regulations (see section 13).

SECTION 7: Handling and storage

Handling

Advice on safe handling : Avoid formation of aerosol. Do not breathe vapors/dust. Avoid Exposure - obtain special instructions before use. Avoid Contact with skin and eyes. For personal protection see Section 8. Smoking, eating and drinking should be prohibited In the application area. Provide sufficient air exchange and/or Exhaust in work rooms. Open drum carefully as content may Be under pressure. Dispose of rinse water in accordance with Local and national regulations.
Electrostatic charge may accumulate and create a hazardous Condition when handling this material. To minimize this hazard, bonding and grounding may be necessary, but may not by They are sufficient. Review all operations, which have the

potential to generating and accumulation of electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum Truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106 "Flammable and Combustible Liquids"; National Fire Protection Association (NFPA 77), "Recommended Practice on Static Electricity"; and/or the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising Out of Static, Lightning, and stray Currents".

Advice on protection against fire and explosion : Do not spray on an open flame or any other incandescent Material. Use only explosion-proof equipment. Take necessary action to avoid static electricity discharge (which Might cause ignition of organic vapors). Keep away from open Flames, hot surfaces and sources of ignition.

Storage

Requirements for storage areas and containers : No smoking. Keep container tightly closed in a dry and well-Ventilated place. Containers which are opened must be Carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working Materials must comply with the technological safety standards.

SECTION 8: Exposure controls/personal protection

Ingredients with workplace control parameters

US

Ingredients	Basis	Value	Control parameters	Note
n-Heptane	OSHA Z-1	TW A	500 ppm, 2,000 mg/m3	(b),
	OSHA Z-1-A	TW A	400 ppm, 1,600 mg/m3	
	OSHA Z-1-A	STEL	500 ppm, 2,000 mg/m3	
	ACGIH	TW A	400 ppm,	
	ACGIH	STEL	500 ppm,	

(b) The value in mg/m3 is approximate.

Engineering measures

Adequate ventilation to control airborne concentrations below the exposure guidelines/limits. Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

Personal protective equipment

Respiratory protection : Wear a supplied-air NIOSH approved respirator unless ventilation or other engineering controls are adequate to maintain minimal oxygen content of 19.5% by volume under Normal atmospheric pressure. Wear a NIOSH approved respirator that provides protection when working with this material if exposure to harmful levels of airborne material may Occur, such as:. Air-Purifying Respirator for Organic Vapors. Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not

wn, or other circumstances where air-purifying respirators May not provide adequate protection.

Hand protection : The suitability for a specific workplace should be discussed With the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time Which are provided by the supplier of the gloves? Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the Contact time. Gloves should be discarded and replaced if there Is any indication of degradation or chemical breakthrough?

Eye protection : Eye wash bottle with pure water. Tightly fitting safety goggles.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the Specific work-place. Wear as appropriate: Flame retardant Antistatic protective clothing. Workers should wear antistatic Footwear.

Hygiene measures : When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Form :
Liquid Physical state :
Liquid Color :
Clear Odor :
Sweet

Safety data

Flash point : -4 °C (25 °F)
Method: Tag closed cup

Lower explosion limit : 1

%(V) Upper explosion limit :

7 %(V)

Oxidizing properties : no

Autoignition temperature : 203.85 °C (398.93 °F)

Molecular formula : C7H16

Molecular Weight : 100.23 g/mol pH

: Not applicable Pour point :

No data available Boiling point/boiling range :

98 °C (208 °F)

Vapor pressure : 1.60 PSI
at 38 °C (100 °F)

Relative density	: 0.69, 16 °C(61 °F)
Water solubility	: Negligible
Partition coefficient: n-octanol/water	: No data available
Relative vapor density	: 3.4 (Air = 1.0)
Evaporation rate	: 3.46
Percent volatile	: > 99 %

Other information

Conductivity	: < 1 pSm at 20 °C

SECTION 10: Stability and reactivity

Chemical stability : This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Possibility of hazardous reactions

Conditions to avoid : Not applicable.

Materials to avoid : May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

Other data : No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

Acute oral toxicity

n-Heptane : LD50: > 5,000 mg/kg
Species: rat
Method: OECD Test Guideline 401
Information given is based on data obtained from similar Substances.

Acute inhalation toxicity

n-Heptane : LC50: > 29.29 mg/l
Exposure time: 4 h
Species: rat
Sex: male and female
Test atmosphere: vapor
Method: OECD Test Guideline 403

Acute dermal toxicity

or to be regarded as if they cause human aspiration toxicity Hazard.

CMR effects

n-Heptane : Carcinogenicity: Not available
Mutagen city: Tests on bacterial or mammalian cell cultures Did not show mutagenic effects.
Teratogenicity: Animal testing did not show any effects on Fetal development.
Reproductive toxicity: No toxicity to reproduction

n-Heptane (Pure Grade)
Further information : Concentrations substantially above the TLV value may cause Narcotic effects. Symptoms of overexposure may be Headache, dizziness, tiredness, nausea and vomiting.
Solvents may degrease the skin.

SECTION 12: Ecological information

Toxicity to fish

n-Heptane : LL50: 1.284 mg/l
Exposure time: 96 h
Species: Oncorhynchus mykiss (rainbow trout)
Method: QSAR

LC50: 375 mg/l
Exposure time: 96 h
Species: Tilapia mosambica (Fish)

Toxicity to daphnia and other aquatic invertebrates

n-Heptane : EC50: 1.5 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)
static test Toxic to aquatic organisms.

LC50: 0.1 mg/l
Exposure time: 96 h
Species: Mysidopsis bahia (mysid shrimp)
semi-static test Very toxic to aquatic organisms.

Toxicity to algae

n-Heptane : EL50: 4.338 mg/l
Exposure time: 72 h
Species: Pseudokirchneriella subcapitata
Method: QSAR

Biodegradability

n-Heptane : Result: Readily biodegradable.
70%

Testing period: 10 d

Results of PBT assessment

n-Heptane	: Non-classified PBT substance, Non-classified vPvB substance
Additional ecological information	: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

The information in this MSDS pertains only to the product as shipped.

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

Product	: The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.
Contaminated packaging	: Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14: Transport information

The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).

Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the MSDS and the bill of lading.

US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)
UN1206, HEPTANES, 3, II

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)
UN1206, HEPTANES, 3, II, (-4 °C), MARINE POLLUTANT, (N-HEPTANE)

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)
UN1206, HEPTANES, 3, II

ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))
UN1206, HEPTANES, 3, II, (D/E), ENVIRONMENTALLY HAZARDOUS, (N-HEPTANE)

RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))
UN1206, HEPTANES, 3, II, ENVIRONMENTALLY HAZARDOUS, (N-HEPTANE)

ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)
UN1206, HEPTANES, 3, II, ENVIRONMENTALLY HAZARDOUS, (N-HEPTANE)

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

SECTION 15: Regulatory information

National legislation

SARA 311/312 Hazards : Fire Hazard
Acute Health Hazard

EPCRA - EMERGENCY PLANNING COMMUNITY RIGHT - TO – KNOW

CERCLA Reportable Quantity : This material does not contain any components with a CERCLA RQ.

SARA 302 Reportable Quantity : This material does not contain any components with a SARA 302 RQ.

SARA 302 Threshold Planning Quantity : SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 304 Reportable Quantity : This material does not contain any components with a section 304 EHS RQ.

SARA 313 Ingredients : SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minims) reporting levels established by SARA Title III, Section 313.

Clean Air Act

Further information

Legacy MSDS Number : 133

Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information in this MSDS pertains only to the product as shipped.

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Key or legend to abbreviations and acronyms used in the safety data sheet

ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%
AICS	Australia, Inventory of Chemical Substances	LOAEL	Lowest Observed Adverse Effect Level
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level
EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration
EGEST	EOSCA Generic Exposure Scenario Tool	OSHA	Occupational Safety & Health Administration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit
EINECS	European Inventory of Existing Chemical Substances	PICCS	Philippines Inventory of Commercial Chemical Substances
MAK	Germany Maximum Concentration Values	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery Act
>=	Greater Than or Equal To	STEL	Short-term Exposure Limit
IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and Reauthorization Act.
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Existing Chemical Substances in China	TWA	Time Weighted Average
ENCS	Japan, Inventory of Existing and New Chemical Substances	TSCA	Toxic Substance Control Act
KECI	Korea, Existing Chemical Inventory	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50	Lethal Concentration 50%		