SAFETY DATA SHEET



n-Heptane (Pure Grade)

Version 1.11

Revision Date 2022-05-17

SECTION 1: Identification of the substance/mixture and of the company/undertaking **Product information** Product Name : n-Heptane (Pure Grade) 1119723, 1099971, 1016082, 1099970, 1084145, 1061726, Material 1021845, 1028621, 1021842, 1021844, 1028384, 1028355, 1021843, 10455211 Company : Chevron Phillips Chemical Company LP **Specialty Chemicals** 10001 Six Pines Drive The Woodlands, TX 77380 **Emergency telephone:** Health: 866.442.9628 (North America) 1.832.813.4984 (International) Transport: CHEMTREC 800.424.9300 or 703.527.3887(int'l) Asia: CHEMWATCH (+612 9186 1132) China: 0532 8388 9090 Mexico CHEMTREC 01-800-681-9531 (24 hours) South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600 Argentina: +(54)-1159839431 EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax) Austria: VIZ +43 1 406 43 43 (24 hours/day, 7 days/week) Belgium: 070 245 245 (24 hours/day, 7 days/week) Bulgaria: +359 2 9154 233 Croatia: +3851 2348 342 (24 hours/day, 7 days/week) Cyprus: 1401 Czech Republic: Toxicological Information Center +420 224 919 293, +420 224 915 402 Denmark: Danish Poison Center (Giftlinien): +45 8212 1212 Estonia: BIG +32.14.584545 (phone) or +32.14583516 (telefax) Finland: 0800 147 111 09 471 977 (24 hours/day) France: ORFILA number (INRS): + 33 (0) 1 45 42 59 59 (24 hours/day, 7 days/week) Germany: BIG +32.14.584545 (phone) or +32.14583516 (telefax) Greece: (0030) 2107793777 (24 hours/day, 7 days/week) Hungary: +36-80-201-199 (24 hours/day, 7 days/week) Iceland: 543 2222 (24 hours/day, 7 days/week) Ireland: BIG +32.14.584545 (phone) or +32.14583516 (telefax) Italy: BIG +32.14.584545 (phone) or +32.14583516 (telefax) SDS Number:100000067062 1/15

SAFETY DATA SHEET

n-Heptane (Pure Grade)

Latvia: State Fire and Rescue Service, phone number: 112; Toxicology and Sepsis Clini Poisoning and Drug Information Center, Hipokräta 2, Riga, Latvia, LV-1038, phone num 67042473. (24 hours:) Liechtenstein: BIG +32:14.584545 (phone) or +32:14583516 (telefax) Lithunia: +370 (65) 2385052 Luxembourg: (+352) 8002 5500 (24 hours/day, 7 days/week) Mata: +336 2395 2000 The Netherlands: NVIC: +31 (0)88 755 8000 Norway: 22 59 13 00 (24 hours/day, 7 days/week) Poland: BIG +32:14.584545 (phone) or +32:14583516 (telefax) Portugal: ClAV phone number: +351 800 250 250 Romania: +40213183060 Slovakia: +421 2 5477 4166 Sweden: 112 – ask for Poisons Information Responsible Department : Product Safety and Toxicology Group E-mail address : SDS@CPChem.com Website : www.CPChem.com SECTION 2: Hazards Identification Classification of the substance or mixture This product has been classified in accordance with the hazard communication standard 22 1910.1200; the SDS and labels contain all the information as required by the standard. Classification <td colspa<="" th=""><th></th><th></th></td>	<th></th> <th></th>		
Polsoning and Drug Information Center, Hipokräta 2, Riga, Latvia, LV-1038, phone num 67042473. (24 hours.) Liechtenstein: BIG +32.14.584545 (phone) or +32.14583516 (telefax) Lithuania: +370 (85) 2362052 Luxembourg: (+352) 8002 5500 (24 hours/day, 7 days/week) Malta: +336 2395 2000 The Netherlands: NVIC: +31 (0)88 755 8000 Norway: 22.59 13.00 (24 hours/day, 7 days/week) Poland: BIG +32.11.584545 (phone) or +32.14583516 (telefax) Portugal: CIAV phone number: +351 800 250 250 Romania: +40213183606 Slovakia: +421 2 5477 4166 Slovakia: +421 2 5477 4166 Slovakia: +421 2 5477 4166 Slovakia: +421 2 5677 4166 Slovakia: +421 2 55800 Information Responsible Department : Product Safety and Toxicology Group E-mail address : SDS@CPChem.com Website : www.CPChem.com SECTION 2: Hazards Identification Classification of the substance or mixture This product has been classified in accordance with the hazard communication standard 25 1910.1200; the SDS and labels contain all the information as required by the standard. Classification : Flammable liquids, Category 2 Skin irritation, Category 2 Specific target organ toxicity - single exposure, Category 1 : Central nervous system Aspiration hazard, Category 1 : Hazard Statements : H225: Highly flammable liquid and vapor. H306: May be fatal if swallowed and enters airways. H315: Causes skin irritation. H336: May cause drowsiness or dizziness. Precautionary Statements : Prevention: P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking. P233 Keep container and receiving equipment. P240 Ground/bod container and receiving equipment. P242 Use only non-sparking tools.	Version 1.11	Revision Date 2022-05-17	
E-mail address : SDS@CPChem.com Website : www.CPChem.com SECTION 2: Hazards identification Classification of the substance or mixture This product has been classified in accordance with the hazard communication standard 25 1910.1200; the SDS and labels contain all the information as required by the standard. Classification : Flammable liquids, Category 2 Skin irritation, Category 2 Specific target organ toxicity - single exposure, Category 3 Central nervous system Aspiration hazard, Category 1 Labeling Symbol(s) : H225: Highly flammable liquid and vapor. H304: May be fatal if swallowed and enters airways. H315: Causes skin irritation. H336: May cause drowsiness or dizziness. Precautionary Statements : Prevention: P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking. P233 Keep container tightly closed. P240 Ground/bond container and receiving equipment. P242 Use only non-sparking tools.	Poisoning and Drug Informat 67042473. (24 hours.) Liechtenstein: BIG +32.14.58 Lithuania: +370 (85) 2362052 Luxembourg: (+352) 8002 55 Malta: +356 2395 2000 The Netherlands: NVIC: +31 Norway: 22 59 13 00 (24 hou Poland: BIG +32.14.584545 (Portugal: CIAV phone number Romania: +40213183606 Slovakia: +421 2 5477 4166 Slovenia: Phone number: 112 Spain: National Emergency T hours/day, 7 days/week)	tion Center, Hipokrāta 2, Riga, Latvia, LV-1038, phone number +371 84545 (phone) or +32.14583516 (telefax) 2 500 (24 hours/day, 7 days/week) (0)88 755 8000 urs/day, 7 days/week) (phone) or +32.14583516 (telefax) er: +351 800 250 250 2 Felephone Number of Spanish Poison Centre: +34 91 562 04 20 (24	
Classification of the substance or mixture This product has been classified in accordance with the hazard communication standard 29 1910.1200; the SDS and labels contain all the information as required by the standard. Classification : Flammable liquids, Category 2 Skin irritation, Category 2 Specific target organ toxicity - single exposure, Category 2 Central nervous system Aspiration hazard, Category 1 Labeling Symbol(s) : Vigoal Word : Danger Hazard Statements : H225: Highly flammable liquid and vapor. H304: May be fatal if swallowed and enters airways. H315: Causes skin irritation. H336: May cause drowsiness or dizziness. Precautionary Statements : Prevention: P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking. P233 P233 Keep container tightly closed. P240 P242 Use only non-sparking tools.	E-mail address :	SDS@CPChem.com	
Classification of the substance or mixture This product has been classified in accordance with the hazard communication standard 29 1910.1200; the SDS and labels contain all the information as required by the standard. Classification : Flammable liquids, Category 2 Skin irritation, Category 2 Specific target organ toxicity - single exposure, Category 3 Central nervous system Aspiration hazard, Category 1 Labeling : Danger Signal Word : Danger Hazard Statements : H225: Highly flammable liquid and vapor. H336: May cause drowsiness or dizziness. Precautionary Statements : Prevention: P210 Precautionary Statements : Prevention: P233 P233 Keep container tightly closed. P242 Use explosion-proof electrical/ ventilating/ lighting equipment. P242 Use only non-sparking tools.	SECTION 2: Hazards identification		
Symbol(s) : image:	Classification	Flammable liquids, Category 2 Skin irritation, Category 2 Specific target organ toxicity - single exposure, Category 3, Central nervous system	
Signal Word : Danger Hazard Statements : H225: Highly flammable liquid and vapor. H304: May be fatal if swallowed and enters airways. H315: Causes skin irritation. H336: May cause drowsiness or dizziness. Precautionary Statements : Prevention: P210 Yeep away from heat/ sparks/ open flames/ hot surfaces. No smoking. P233 Keep container tightly closed. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ ventilating/ lighting equipment. P242 Use only non-sparking tools.	Labeling		
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 P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking. P233 Keep container tightly closed. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ ventilating/ lighting equipment. P242 Use only non-sparking tools. 	Hazard Statements	H304: May be fatal if swallowed and enters airways. H315: Causes skin irritation.	
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SDS Number:10000067062 2/15	SDS Number:100000067062	2/15	

Heptane (Pure Grad	de)	SAFETY DATA SHE
rsion 1.11		Revision Date 2022-05
	 P261 Avoid breathing P264 Wash skin thoro P280 Wear protective Response: P301 + P310 IF SWAI CENTER/ doctor. P303 + P361 + P353 immediately all contamin shower. P331 Do NOT induce P362 Take off contam P370 + P378 In case of alcohol-resistant foam to Storage: P403 + P233 Store in tightly closed. P403 + P235 Store in Disposal: 	inated clothing and wash before reuse. of fire: Use dry sand, dry chemical or
Carolinagoniolity		
Carcinogenicity:	N N N N N N N N N N	
IARC		ct present at levels greater than or as probable, possible or confirmed
NTP	equal to 0.1% is identified by NTP.	C. Ict present at levels greater than or as a known or anticipated carcinogen
NTP CTION 3: Composition/info	No ingredient of this produ equal to 0.1% is identified by NTP.	ct present at levels greater than or
	No ingredient of this produ equal to 0.1% is identified by NTP.	ct present at levels greater than or
CTION 3: Composition/info	No ingredient of this produce equal to 0.1% is identified by NTP. prmation on ingredients : Normal Heptane Dipropilmetano	ct present at levels greater than or
CTION 3: Composition/info Synonyms Molecular formula	No ingredient of this produ equal to 0.1% is identified by NTP. prmation on ingredients : Normal Heptane Dipropilmetano n-Heptane, 99%	ct present at levels greater than or
CTION 3: Composition/info	No ingredient of this produ equal to 0.1% is identified by NTP. prmation on ingredients : Normal Heptane Dipropilmetano n-Heptane, 99% : C7H16	ct present at levels greater than or as a known or anticipated carcinogen
CTION 3: Composition/info Synonyms Molecular formula Component n-Heptane	No ingredient of this produ equal to 0.1% is identified by NTP. Dirmation on ingredients : Normal Heptane Dipropilmetano n-Heptane, 99% : C7H16 CAS-No. 142-82-5	tct present at levels greater than or as a known or anticipated carcinogen
CTION 3: Composition/info Synonyms Molecular formula Component	No ingredient of this produ equal to 0.1% is identified by NTP. Dirmation on ingredients : Normal Heptane Dipropilmetano n-Heptane, 99% : C7H16 CAS-No. 142-82-5	tct present at levels greater than or as a known or anticipated carcinogen
CTION 3: Composition/info Synonyms Molecular formula Component n-Heptane	No ingredient of this produequal to 0.1% is identified by NTP. ormation on ingredients : Normal Heptane Dipropilmetano n-Heptane, 99% : C7H16 CAS-No. 142-82-5 es : Move out of dangerous a sheet to the doctor in atte	tct present at levels greater than or as a known or anticipated carcinogen
CTION 3: Composition/info Synonyms Molecular formula Component n-Heptane CTION 4: First aid measure	No ingredient of this produequal to 0.1% is identified by NTP. ormation on ingredients : Normal Heptane Dipropilmetano n-Heptane, 99% : C7H16 CAS-No. 142-82-5 es : Move out of dangerous a sheet to the doctor in attr serious, potentially fatal : Consult a physician after	Weight % 99 - 100
CTION 3: Composition/info Synonyms Molecular formula Component n-Heptane CTION 4: First aid measure General advice	No ingredient of this produequal to 0.1% is identified by NTP.	Weight % 99 - 100

If swallowed:Keep re an unce Take viCTION 5: Firefighting measuresFlash point:-4°C (2 MethodAutoignition temperature:203.85Suitable extinguishing media:AlcoholUnsuitable extinguishing media:High volSpecific hazards during fire fighting:Do not coursesSpecial protective equipment for fire-fighters:Wear s necessFurther information:Collect must no contain contain contain contain contain containFire and explosion protection:Do not rake no (which	: Tag closed cup °C (398.93°F) -resistant foam. Carbon dioxide (CO2). Dry chemical. lume water jet. allow run-off from fire fighting to enter drains or water
In case of eye contact:Flush e lenses. rinsing.If swallowed:Keep re an unce Take viCTION 5: Firefighting measuresFlash point:-4°C (2 MethodAutoignition temperature:203.85Suitable extinguishing media:Alcohol mediaUnsuitable extinguishing media:High vo coursesSpecific hazards during fire equipment for fire-fighters:Do not coursesFurther information:Collect must no 	yes with water as a precaution. Remove contact Protect unharmed eye. Keep eye wide open while If eye irritation persists, consult a specialist. espiratory tract clear. Never give anything by mouth to onscious person. If symptoms persist, call a physician. ctim immediately to hospital. 5°F) : Tag closed cup °C (398.93°F) -resistant foam. Carbon dioxide (CO2). Dry chemical. lume water jet.
Autoignition temperature-4°C (2 MethodFlash point:-4°C (2 MethodAutoignition temperature:203.85Suitable extinguishing media:AlcoholUnsuitable extinguishing media:High volSpecific hazards during fire fighting:Do not coursesSpecial protective equipment for fire-fighters:Wear s necessFurther information:Collect must no contain accordaFire and explosion protection:Do not rake no (which	 binscious person. If symptoms persist, call a physician. ctim immediately to hospital. 5°F) Tag closed cup °C (398.93°F) -resistant foam. Carbon dioxide (CO2). Dry chemical. lume water jet. allow run-off from fire fighting to enter drains or water
Flash point:-4°C (2 MethodAutoignition temperature:203.85Suitable extinguishing media:AlcoholUnsuitable extinguishing media:High volSpecific hazards during fire fighting:Do not coursesSpecial protective equipment for fire-fighters:Wear s necessFurther information:Collect must no contain containFire and explosion protection:Do not rake no (which	: Tag closed cup °C (398.93°F) -resistant foam. Carbon dioxide (CO2). Dry chemical. lume water jet. allow run-off from fire fighting to enter drains or water
MethodAutoignition temperature:203.85Suitable extinguishing media:Unsuitable extinguishing media:High vol mediaSpecific hazards during fire fighting:Do not coursesSpecial protective equipment for fire-fighters:Further information:Collect must no contain containFire and explosion protection:Do not rake no (which	: Tag closed cup °C (398.93°F) -resistant foam. Carbon dioxide (CO2). Dry chemical. lume water jet. allow run-off from fire fighting to enter drains or water
Suitable extinguishing media:Alcohol mediaUnsuitable extinguishing media:High vol mediaSpecific hazards during fire fighting:Do not coursesSpecial protective equipment for fire-fighters:Wear s necessFurther information:Collect must no contain accorda of fire, or 	-resistant foam. Carbon dioxide (CO2). Dry chemical. lume water jet. allow run-off from fire fighting to enter drains or water
mediaHigh volUnsuitable extinguishing media:High volSpecific hazards during fire fighting:Do not coursesSpecial protective equipment for fire-fighters:Wear s necessFurther information:Collect must no 	lume water jet. allow run-off from fire fighting to enter drains or water
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fightingcoursesSpecial protective equipment for fire-fighters:Wear s necessFurther information:Collect must no contam accorda of fire, or containFire and explosion protection:Do not Take no (which	
equipment for fire-fighters necess Further information : Collect must necess Collect must necess Collect must necess contain accorda of fire, of contain contain Fire and explosion protection : Do not Take necess	
Fire and explosion protection : Do not Take ne (which	elf-contained breathing apparatus for firefighting if ary.
protection Take no (which	contaminated fire extinguishing water separately. This of be discharged into drains. Fire residues and inated fire extinguishing water must be disposed of in ance with local regulations. For safety reasons in case cans should be stored separately in closed ments. Use a water spray to cool fully closed ers.
surface	spray on a naked flame or any incandescent material. ecessary action to avoid static electricity discharge might cause ignition of organic vapors). Use only on-proof equipment. Keep away from open flames, hot s and sources of ignition.
Hazardous decomposition : Carbon products	oxides.
CTION 6: Accidental release measures	
ventilat	rsonal protective equipment. Ensure adequate on. Remove all sources of ignition. Evacuate nel to safe areas. Beware of vapors accumulating to plosive concentrations. Vapors can accumulate in low
or spilla	
S Number:10000067062	product from entering drains. Prevent further leakage ge if safe to do so. If the product contaminates rivers es or drains inform respective authorities.

Heptane (Pure Grad	e)				SA	4FET	Y DATA SHEI
rsion 1.11	•)				Revis	sion	Date 2022-05-
Methods for cleaning up	:	absorben vermiculit	t material, (e e) and place	then collect e.g. sand, ea e in containe tions (see se	rth, diatoma r for disposa	ceou	is earth,
CTION 7: Handling and stor	age						
Handling							
Advice on safe handling	:	exposure contact w section 8. in the app static disc exhaust in be under	- obtain spe ith skin and Smoking, blication are charges. Pr n work room	ecial instructi eyes. For p eating and d a. Take prec ovide sufficie s. Open dru Dispose of rin	ons before u ersonal prote rinking shoul autionary m ent air excha m carefully a	ise. ectio ld be leasu nge a as co	n see prohibited ires against and/or ontent may
Advice on protection against fire and explosion	:	Take nec (which mi explosion	essary actio		atic electricit anic vapors)	ty dis . Us	charge
Storage							
Requirements for storage areas and containers	:	ventilated carefully i Observe	l place. Cor resealed and label precau	ontainer tight tainers whic d kept uprigh tions. Electi y with the tee	h are opene t to prevent ical installati	d mu leaka ions	ist be age.
CTION 8: Exposure controls	s/per	sonal pro	tection				
Ingredients with workplac	e co	ntrol para	meters				
omponents	Bas	s	Value	Con	rol parameters		Note
Heptane		S A Z-1	TWA		opm, 2,000 mg/m3		
	OSH	A Z-1-A	TWA	400 p	pm, 1,600 mg/m3	3	
	OSH	A Z-1-A	STEL	500 p	pm, 2,000 mg/m3		
		ш —	TWA	400 p	nm	1	
	ACG ACG		STEL	500 p			

Substance name	CAS-No.	Control parameters	Update
n-Heptane	142-82-5	Immediately Dangerous to Life or Health Concentration Value 750 parts per million	1995-03-01

Engineering measures

Adequate ventilation to control airborned concentrations below the exposure guidelines/limits.

SDS Number:100000067062

5/15

n-Heptane (Pure Grade)

Version 1.11

Revision Date 2022-05-17

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, aerosolization, exposure levels are not known, 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 phy	sical and chemical properties
Appearance	
Form Physical state Color Odor	: liquid : liquid : Clear : Sweet
Safety data	
Flash point	: -4°C (25°F) Method: Tag closed cup
Lower explosion limit	: 1 %(V)
SDS Number:100000067062	6/15

eptane (Pure Grade	SAFETY DA	TA SH
ion 1.11	Revision Date 2	2022-0
Jpper explosion limit	: 7 %(V)	
Oxidizing properties	: No	
Autoignition temperature	: 203.85°C (398.93°F)	
Molecular formula	: C7H16	
Molecular weight	: 100.23 g/mol	
рН	: 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 at 16 °C (61 °F)	
Density	: 5.75 L/G at 20°C (68°F)	
Water solubility	: negligible	
Partition coefficient: n-	: No data available	
octanol/water Relative vapor density	: 3.4 (Air = 1.0)	
Evaporation rate	: 3.46	
Percent volatile	: > 99 %	
Conductivity	: <1 pSm at 20 °C	
ΓΙΟΝ 10: Stability and react	tivity	
Reactivity	: Stable under recommended storage conditions.	
Chemical stability	: This material is considered stable under normal ambier anticipated storage and handling conditions of tempera and pressure.	
Possibility of hazardous re	actions	
Hazardous reactions	: Hazardous reactions: Hazardous polymerization does r occur.	not
Number:100000067062	7/15	

-Heptane (Pure Grade)	SAFETY DATA SHEE
/ersion 1.11	Revision Date 2022-05-1
	Hazardous reactions: Vapors may form explosive mixture with air.
Conditions to avoid	: Heat, flames and sparks.
Materials to avoid	: May react with oxygen and strong oxidizing agents, such as
Hazardous decomposition products	chlorates, nitrates, peroxides, etc. : Carbon oxides
Other data	: No decomposition if stored and applied as directed.
ECTION 11: Toxicological inform	ation
Acute oral toxicity	
-	 LD50: > 5,000 mg/kg Species: Rat Method: OECD Test Guideline 401 Information given is based on data obtained from similar substances.
Skin irritation	
n-Heptane	: Skin irritation Information given is based on data obtained from similar substances.
Eye irritation n-Heptane	 No eye irritation Information given is based on data obtained from similar substances.
Sensitization	
n-Heptane	 Did not cause sensitization on laboratory animals. Information given is based on data obtained from similar substances.
Repeated dose toxicity	
n-Heptane	: Species: Rat, male Sex: male Application Route: Inhalation Dose: 12.47 mg/l Exposure time: 16 wk Number of exposures: 12 h/d, 7 d/wk NOEL: 12.47 mg/l No adverse effect has been observed in chronic toxicity tests.
DS Number:100000067062	8/15

ontano (Puro Grad	SAFETY DATA S
eptane (Pure Grade	Revision Date 2022-
1011 1.11	Species: Rat, Male and female Sex: Male and female Application Route: Inhalation Dose: 12.35 mg/l Exposure time: 26 wk Number of exposures: 6 h/d, 5 d/wk Method: OECD Test Guideline 413 No adverse effect has been observed in chronic toxicity tests
Genotoxicity in vitro	
n-Heptane	: Test Type: Ames test Method: Mutagenicity (Escherichia coli - reverse mutation assay) Result: negative
	Test Type: Mammalian cell gene mutation assay Method: OECD Guideline 476 Result: negative
	Test Type: Chromosome aberration test in vitro Method: OECD Guideline 473 Result: negative
	Test Type: Mitotic recombination Result: negative
Reproductive toxicity	
n-Heptane	: Species: Rat Sex: male and female Application Route: Inhalation Dose: 0, 900, 3000, 9000 ppm Number of exposures: 6 hr/d, 5 d/wk Test period: 13 wk Method: OECD Test Guideline 416 NOAEL Parent: 9000 ppm NOAEL F1: 3000 ppm NOAEL F2: 3000 ppm Information given is based on data obtained from similar substances.
Developmental Toxicity	
n-Heptane	: Species: Rat Application Route: Inhalation Dose: 0, 900, 3000, 9000 ppm Exposure time: GD6-15 Number of exposures: 6 hrs/d NOAEL Teratogenicity: 9000 ppm NOAEL Maternal: 3000 ppm
n-Heptane (Pure Grade) Aspiration toxicity	: May be fatal if swallowed and enters airways.
CMR effects	

-Heptane (Pure Grade)	SAFETY DATA SHEET
/ersion 1.11	Revision Date 2022-05-1
	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	: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Concentrations substantially above the TLV value may cause narcotic effects. Solvents may degrease the skin.
ECTION 12: Ecological information	on
Toxicity to fish	
n-Heptane	: LL50: 5.738 mg/l Exposure time: 96 h Species: Oncorhynchus mykiss (rainbow trout) Method: QSAR modeled data
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 (microalgae) Method: QSAR
Toxicity to fish (Chronic toxic	ity)
n-Heptane	: NOELR: 1.284 mg/l Exposure time: 28 d Species: Oncorhynchus mykiss (rainbow trout) Method: QSAR modeled data
Biodegradability	
n-Heptane	: Result: Readily biodegradable. 70 % Testing period: 10 d
DS Number:100000067062	10/15

leptane (Pure Grade	SAFETY DATA SH
sion 1.11	Revision Date 2022-0
Bioaccumulation	
n-Heptane	: Bioconcentration factor (BCF): 552 Method: QSAR modeled data This material is not expected to bioaccumulate.
Mobility	
n-Heptane	: Medium: Air Method: Calculation, Mackay Level I Fugacity Model Content: 100 % After release, disperses into the air.
Results of PBT assessment n-Heptane	: Non-classified PBT substance, Non-classified vPvB substance
Additional ecological information Ecotoxicology Assessment	: Very toxic to aquatic life with long lasting effects.
Short-term (acute) aquatic haz n-Heptane	zard : Very toxic to aquatic life.
Long-term (chronic) aquatic ha n-Heptane	: Very toxic to aquatic life with long lasting effects.
CTION 13: Disposal considera	ations
The information in this SDS pe	ertains only to the product as shipped.
may meet the criteria of a haz other State and local regulatio regulated components may be	Surpose or recycle if possible. This material, if it must be discarded ardous waste as defined by US EPA under RCRA (40 CFR 261) or ons. Measurement of certain physical properties and analysis for a necessary to make a correct determination. If this material is te, federal law requires disposal at a licensed hazardous waste
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 water management company.
	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.
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.
CTION 14: Transport informat The shipping descriptions s	: 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.
CTION 14: Transport informat The shipping descriptions s shipments in non-bulk pack Consult the appropriate dome Goods Regulations for addition	 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. ion hown here are for bulk shipments only, and may not apply to

leptane (Pure Grac	
sion 1.11	Revision Date 2022-0
description for the material. bill of lading.	Flashpoints for the material may vary slightly between the SDS and
	5 DEPARTMENT OF TRANSPORTATION) 3, II, MARINE POLLUTANT, (N-HEPTANE)
	NAL MARITIME DANGEROUS GOODS) 3, II, (-4 °C c.c.), MARINE POLLUTANT, (N-HEPTANE)
IATA (INTERNATIONAL A UN1206, HEPTANES, 3	IR TRANSPORT ASSOCIATION) 3, II
	ANGEROUS GOODS BY ROAD (EUROPE)) 3, II, (D/E), ENVIRONMENTALLY HAZARDOUS, (N-HEPTANE)
DANGEROUS GOODS (E	ICERNING THE INTERNATIONAL TRANSPORT OF UROPE)) ., 3, II, ENVIRONMENTALLY HAZARDOUS, (N-HEPTANE)
	BY INLAND WATERWAYS) 3, II, ENVIRONMENTALLY HAZARDOUS, (N-HEPTANE)
UN1206, HEPTANES, 3	8, II, ENVIRONMENTALLY HÁZARDOUS, (N-HEPTANE) k according to IMO instruments
UN1206, HEPTANES, 3	8, II, ENVIRONMENTALLY HÁZARDOUS, (N-HEPTANE) k according to IMO instruments
UN1206, HEPTANES, 3 Maritime transport in bul TION 15: Regulatory infor	8, II, ENVIRONMENTALLY HÁZARDOUS, (N-HEPTANE) k according to IMO instruments
UN1206, HEPTANES, 3 Maritime transport in bull TION 15: Regulatory infor National legislation	 B, II, ENVIRONMENTALLY HÁZARDOUS, (N-HEPTANE) k according to IMO instruments mation Flammable (gases, aerosols, liquids, or solids) Aspiration hazard Skin corrosion or irritation
UN1206, HEPTANES, 3 Maritime transport in bull TION 15: Regulatory infor National legislation SARA 311/312 Hazards	 8, II, ENVIRONMENTALLY HÁZARDOUS, (N-HEPTANE) k according to IMO instruments mation Flammable (gases, aerosols, liquids, or solids) Aspiration hazard Skin corrosion or irritation Specific target organ toxicity (single or repeated exposure) This material does not contain any components with a CERCL.
UN1206, HEPTANES, 3 Maritime transport in bull TION 15: Regulatory infor National legislation SARA 311/312 Hazards CERCLA Reportable Quantity SARA 302 Reportable	 B, II, ENVIRONMENTALLY HÁZARDOUS, (N-HEPTANE) k according to IMO instruments mation Flammable (gases, aerosols, liquids, or solids) Aspiration hazard Skin corrosion or irritation Specific target organ toxicity (single or repeated exposure) This material does not contain any components with a CERCL. RQ. This material does not contain any components with a SARA

	e)
sion 1.11	Revision Date 2022-05
SARA 304 Reportable Quantity	: This material does not contain any components with a section 304 EHS RQ.
SARA 313 Components	: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
Clean Air Act	
Potential Class	roduct neither contains, nor was manufactured with a Class I or II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR lbpt. A, App.A + B).
This product does not contain Act Section 112 (40 CFR 61)	n any hazardous air pollutants (HAP), as defined by the U.S. Clean A
Accidental Release Prevention	n any chemicals listed under the U.S. Clean Air Act Section 112(r) for on (40 CFR 68.130, Subpart F).
This product does not contair Intermediate or Final VOC's (n any chemicals listed under the U.S. Clean Air Act Section 111 SOC (40 CFR 60.489).
US State Regulations	
Pennsylvania Right To Know	: n-Heptane - 142-82-5
California Prop. 65 Components	: This product, as shipped, does not contain any carcinogens or reproductive toxins presently known by the State of California to cause cancer or reproductive toxicity at a level of exposure subject to the requirements of California Proposition 65.
Notification status Europe REACH	: This product is in full compliance according to REACH regulation 1907/2006/EC.

Jantana / Dura						
leptane (Pure	e Grade)					
sion 1.11					Revision Date 202	2-0
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n-Heptane (Pure Grade)

SAFETY DATA SHEET

Version 1.11

Revision Date 2022-05-17

			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%		