

255 Norman. Lachine (Montreal), Que H8R 1A3

## **Material Safety Data Sheet**

EMERGENCY NUMBERS:

(USA) CHEMTREC : 1(800) 424-9300 (24hrs) (CAN) CANUTEC : 1(613) 996-6666 (24hrs) (USA) Anachemia : 1(518) 297-4444 (CAN) Anachemia : 1(514) 489-5711

WHMIS	Protective Clothing	TDG Road/Rail
WHMIS CLASS: B-2 D-2B		TDG CLASS: 3
		PIN: UN1206 PG: II

Product name	HEPTANE	CI#	Not available.
Chemical formula	CH3(CH2)5CH3	CAS#	142-82-5
Synonyms	n-Heptane, Heptyl hydride, Dipropyl methane, GD-4788, AC-4788, AC-4788P, AC-4788T, 44386,		GD-4788
	GD-4788, AC-4788, AC-4788P, AC-47881, 44388, 44388, 44394, 44405	Formula weight	100.21
Supplier	Anachemia Canada. 255 Norman. Lachine (Montreal), Que H8R 1A3	Supersedes	
Material uses	For laboratory use only.		

Section II. Ingredients			
Name	CAS #	%	TLV
1) HEPTANE	142-82-5	90-100	Exposure limits: ACGIH TWA 400 ppm (1640 mg/m3); STEL 500 ppm (2050 mg/m3)

Toxicity values of the hazardous ingredients

HEPTANE: LD50: Not available. LC50: Not available.

Section III. Phys	sical Data	HEPTANE	page 2/4
Physical state and appearance / Odor	Clear liquid, mild odor.		
pH (1% soln/water)	Neutral		
Odor threshold	49 to 200 ppm		
Percent volatile	100% (V/V)		
Freezing point	Not available.		
Boiling point	93 to 98°C		
Specific gravity	0.7 @ 15.5°C (Water = 1)		
Vapor density	3.5 (Air = 1)		
Vapor pressure	40 (83) mm of Hg @ 20°C (38°C)		
Water/oil dist. coeff.	Not available.		
Evaporation rate	»1(n-Butyl acetate = 1).		
Solubility	Insoluble in cold water.		

Section IV. Fire and Explosion Data		
Flash point	CLOSED CUP: -4°C (Tag Closed Cup)	
Flammable limits	LOWER: 1% UPPER: 7%	
Auto-ignition temperatu	re 204°C	
Fire degradation products	Oxides of carbon (CO, CO2).	
Fire extinguishing procedures	Use DRY chemical, carbon dioxide, or foam. Water may be ineffective to extinguish fires. Wear adequate personal protection to prevent contact with material or its combustion products. Self contained breathing apparatus with a full facepiece operated in a pressure demand or other positive pressure mode. Cool containing vessels with flooding quantities of water until well after fire is out. Do not use a direct water stream.	
Fire and Explosion Hazards	Extremely flammable. Vapors formed from this product may travel or be moved by air currents and ignited by pilot lights, other flames, sparks, heaters, electrical equipment, static discharges or other ignition sources at locations distant from handling point. Vapor forms explosive mixture with air. Container explosion may occur under fire conditions or when heated. Contact with oxidizers may cause fire and/or explosion. Liquid can accumulate static charge by flow or agitation. Take precautionary measures against electrostatic discharges. Sensitive to static discharge. The sensitivity to impact is not available. Emits toxic fumes under fire conditions. This material may produce a floating fire hazard.	

## Section V. Toxicological Properties

Routes of entry	Ingestion and inhalation. Eye contact. Skin contact. Skin absorption.
Effects of Acute Exposure	Harmful by inhalation, in contact with skin and if swallowed. Irritant. Narcotic Target organs: central nervous system, skin, respiratory system, lungs, peripheral nervous system. 750 ppm (HEPTANE) is immediately dangerous to life or health
Eye	Causes severe irritation.
Skin	Causes skin irritation. May cause defatting, drying and cracking of the skin. Prolonged and repeated contact may lead to dermatitis. Prolonged or widespread skin contact may result in the absorption of potentially harmful amounts of material.
Inhalation	Material is irritating to mucous membranes and upper respiratory tract. Can cause central nervous system effects including, dizziness, weakness, fatigue, nausea, headache, euphoria, tremors, drowsiness, loss of appetite, and possible unconsciousness and death. Chemical pneumonitis, peripheral nerve damage and pulmonary edema. Heptane vapors are narcotic.
Ingestion	Causes gastrointestinal irritation. Nausea, vomiting, diarrhea and headache. Aspiration of material into the lungs can cause chemical pneumonitis or pulmonary edema which can be fatal.

Section V. To	xicological Properties	HEPTANE page 3/4
Effects of Chronic Overexposure	Peripheral neuropathy and central nervous system depression. R Carcinogenic effects: Not available. Mutagenic effects: Not avail product to the reproductive system: Not available. To the best of substance has not been fully investigated. Medical conditions diseases of the skin, eye, liver, kidney, or respiratory system may product.	able. Teratogenic effects: Not available. Toxicity of the our knowledge, the chemical, physical, and toxicity of this which may be aggravated: Individuals with preexisting
Section VI. Fi	irst Aid Measures	
Eye contact	IMMEDIATELY flush eyes with copious quantities of water for at the entire surface. Seek immediate medical attention.	least 15 minutes holding lids apart to ensure flushing of
Skin contact	Immediately flush skin with plenty of water and soap for at least shoes. Call a physician. Wash contaminated clothing before reus	
Inhalation	Remove patient to fresh air. Administer approved oxygen supply CPR if breathing has ceased. Seek immediate medical attention.	if breathing is difficult. Administer artificial respiration or
Ingestion	DO NOT induce vomiting. Seek immediate medical attention. If with head down to avoid breathing in of vomitus. Never give anyth	
Section VII	Reactivity Data	
Stability	Stable. Conditions to avoid: High temperatures, sparks, open fla	ames and all other sources of ignition, contamination.
Hazardous decomp. products	Not available.	
Incompatibility	Acids, phosphorus, chlorine, chlorosulfonic acid, halogens, base rubbers and coatings.	es, oxidizing agents. May attack some forms of plastics,

**Reaction Products** 

Not available. Hazardous polymerization will not occur.

The provide the provide any former measure in the container . Use own the dram the generative copyoper and the container while dispersing. Ground all equipment. Keep away from thest studies the strong incredences in the container while dispersing. Ground all equipment containing metanets. Use only explosion proof equipment, use new provide and metan stardous residence. Do not use pressure to disperse. May develop pressure; vert periodically. Hande and open containers may contain a hazardous residence. Do not use pressure to disperse. May develop pressure; vert periodically. Hande and open containers may contain a hazardous residence. Do not use pressure to disperse. May develop pressure; vert periodically. Hande and open containers may contain a hazardous residence. Do not use pressure to disperse. May develop pressure; vert periodically. Hande and open containers may contain a hazardous residence. Do not use the two wells or cutting toch on or near drum (even empty) because product (even just residue) can signific explosively. <b>Section X. Concervice Measures Trotective clothing</b> Splinh grogles. Imperioas polying alcohol gives, apon, coverells, and/or shore is polying approximation. The container who dive divert is product to prote the near and presso. No a container should continin generalize on the account who and entry or an entra drum (even empty) because product (even just residue) can signific explosively. <b>Extentions Besinh grogles</b> . Imperioas polying alcohol gives, apon, coverells, and/or other near and aley dower is power from the container who are accounted work and aley dower is power from the container who are accounted work and and grogenes. Do not use as appropriate, the should along a maximum residue and and grogenes. The other accounted work and and grogenes. The other accounted work and and grogenes. The other accounted work and and and grogenes. The other accounted work and and and grogenes and	Section VIII. F	Preventive Measures	HEPTANE	bage 4/4
Absorb on sand or verniculie and place in a closed container for disposal. Use non-sparking took deminer or splicid material. Runoff to sever may create fire or explosion hazard.         Waste disposal       Burn in a chemical incinerator equipped with an after burner and scrubber. According to all applicable regulations. Hermful to aquatic life at high concernitations. Can be dangerous if allowed to enter drinking water intakes. Do not contaminate domestic or inglation water supplies. Mass, streams, ponds, or lives.         Storage and Humilian:       Store in a cod place away from heeted areas, sparks, and flame. Store in a well ventilated areas. Stora away from incompatible material. Do not dearts of the material is the container. Do not went down the data. Do not beather gashines/opportpary. In case of hestflocent ventilation, water subplies. New for well available or place away from incompatible discharges. Courd dia container. Do not well down the data. Do not beather gashines/opportpary. In case of hestflocent ventilation, were subble respiratory equipment. Keep away from disct subplies. Use on yourclean equipment will be densing. Control and any other intervals on early down and areas. Empty containers may contain a hazardous residue. Do not use prostate (well) preserve with the dispense. My down hest data container. Do not beather gashines/opportpary. In case of hestflocent ventilation, were subble down and use other intervals on early down and use other material. Bot on opparing tools. Watch for accumulation in two confined areas. Empty containers may contain a hazardous residue. Do not use prostate (down), there datas. Example beacae product (even just costau) can ignite explosion/proof wells and the subpart datas. Exam the sevent hadre and bank of the material bank of the sevent hadre and any travel along the ground or pool in low areas. Because vaports in heavy travel along the ground or pool in low	Protective Clothing in case of spill and leak	Wear self-contained breathing apparatus, rubber boots and heave	y rubber gloves.	
Harmful to aquatic life at high concentrations. Can be dangerous if allowed to enter diniking water intakes. Do not contaminate domestic or inigation water supplies, lakes, streams, ponds, or rivers.         Storage and Handlin       Store in a cool place away from heated areas, sparks, and flame. Store in a well ventilated area. Store away from incompatible methods wells and any other materials to the container. Do not wash down the drain. Do not deer supplies of storage incombescent light declarages. Ground the container why device pressure, vent periodically, Handle and open container methods of the only explosion poor of quipment. Use non-sparking tools, Water hor accumulated pressure, vent periodically, Handle and open container with care. Take off immediately all or other storage frontoms. Wethough and the container why devices pressure, vent periodically, Handle and open container with care. Take off immediately all or any pressure to depense. May device pressure, vent periodically, Handle and open container with care. Take off immediately all or container while and other metatic pressure based on a spark starter and the one of the one and the one of t	Spill and leak	Absorb on sand or vermiculite and place in a closed container wash spill site after material pick up is complete. DO NOT e	for disposal. Use non-sparking tools. Ventilate a mpty into drains. DO NOT touch damaged contra	rea and
Notice and halfwalling materials. Do not add any other material to the container. Do not weak down the drain. Do not breathe gas/furmes/vapor/sprok. Mean paway from direct sunlight or strong increduceson light. Keep container tightly closed and dry. Manpualer under an adequate turne hood. Take precationary measures against electrostatic discharges. Ground the container with disposing. Ground al equipment containing material. Use only explosion proof equipment. Mean paway from direct sunlight vortainers make against electrostatic use in accordance with good storage and handling practices. Do not allow smoking and food consumption while handling, validited personnel. Do not get in eyes, on skin, or on defining. Wash were use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Section X. Credenting Means ploying labels diper, aprox. coveralls, and or the adate of the dates as a proprinte. New paway from direct submits and use as approprine, bee aways. A strong the explosion proof were use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Section X. Credenting Means ploying labels diper, aprox. coveralls, and one and adate y approved response to a state of the date and empropring the lose in adate. A strong the adate of the adates of propriot. The object is the adates of propriot. The object is a strate of the date and empropring the lose base. The object is a strate of the adates of propriot. The object is a strate of the date adates and the adates adapted and the explosion proof. We restrict a strate of the date adates are adates. The object is a strate of the date adates adates. The product must be provided at floor level as well as at higher levels. Explosion for the adates of propriot. Do not use in unventilated spaces. Vapors are heavier than an and may travel along the ground or pool in low areas. Because vapor is heavy, ventilation must be provided at floor le	Waste disposal	Harmful to aquatic life at high concentrations. Can be dange	erous if allowed to enter drinking water intakes.	
Protective cluthing       Splesh paggies. Impervious polywhyl alcohel gloses, aprox, coveralls, and/or other resistant proteche dething. Sufficient to protect skin. Prior to use, user synchronic face and confirm impervises. Make eye bath and emergency shows available. Ensure that eyewash bation and safety shows the provide lop table and uses a sporphate, face and emergency shows available. Ensure that eyewash bation and safety shows the provide lop table and uses and provide splate and use.         Engineering controls       Use only in a chemical fume hood to keep airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Do not use in unventilated spaces. Vapors are heavier than air and may travel along the ground or pool in low areas. Because vapor is heavy, ventilation must be provided at floor level as well as at higher levels.         Special Precautions or Extremely flammable liquid! Harnful liquid! Irritant! Do not breathe vapor. Avoid all contact with the product. Avoid prolonged or repeated exposure. Use only in a chemical fume hood. Keep away from heat, sparks and flame. Take precautionary measures against static discharges. Liquid can accumulate static charge by liow or agitation. Use on-sparking tools. Bord and ground transfer containers and equipment to avoid static accumulation. Attract avoid protocol avoid static accumulation. RTECS NO: MI7700000 (Heptane).         Prepared by MSDS Department/Département de F.S       Validated 08-Apr-2005         1       Clephone# (514) 489-5711         While the company believes the date stor for therein are accurate as of the date hereof, the company makes no warranty with respect thereto	Storage and Handling	materials. Do not add any other material to the container. Do not was case of insufficient ventilation, wear suitable respiratory equipment. Keep container tightly closed and dry. Manipulate under an adequate discharges. Ground the container while dispensing. Ground all equip Use non-sparking tools. Watch for accumulation in low confined areas use pressure to dispense. May develop pressure; vent periodically. I contaminated clothing. This product must be manipulated by qualified well after use. In accordance with good storage and handling practices	h down the drain. Do not breathe gas/fumes/vapor/s Keep away from direct sunlight or strong incandesce fume hood. Take precautionary measures against elec ment containing material. Use only explosion proof eq . Empty containers may contain a hazardous residue. landle and open container with care. Take off immed personnel. Do not get in eyes, on skin, or on clothin s. Do not allow smoking and food consumption while h	pray. In ent light. ctrostatic uipment. Do not liately all g. Wash
Protective cluthing       Splesh goggles. Impenvious polyhyll alcohel gloses, apron, coveralls, and/or other resistent particle dothing. Sufficient to protect skin. Prior to use, user synchronic task and confirm impenvious polyhyll alcohel gloses, appropriate, face approprint, face appropriate, face approprint, f	Section IX P	Protective Measures		
Bit and a set of the product of the product of the provided states of the provided at floor level as well as at higher levels.         Special Precautions or Extremely flammable liquid! Harmful liquid! Irritant! Do not breathe vapor. Avoid all contact with the product. Avoid prolonged or repeated exposure. Use only in a chemical fume hood. Keep away from heat, sparks and flame. Take precautionary measures against static discharges. Liquid can accumulate static charge by flow or agitation. Use non-sparking tools. Bond and ground transfer containers and equipment to avoid static accumulation. Handle and open container with care. Container should be opened only by a technically qualified person. RTECS NO: MI7700000 (Heptane).         Prepared by MSDS Department/Département de F.S       Validated 08-Apr-2005         Telephone# (514) 489-5711       While the company believes the data set forth herein are accurate as of the date hereof, the company makes no warranty with respect thereto		Splash goggles. Impervious polyvinyl alcohol gloves, apron, coveralls, and/or othe should confirm impermeability. Have available and use as appropriate: face shiel advised in the absence of proper environmental controls. If more than TLV, do not br	ds, rubber suits, and boots. A OSHA/MSHA jointly approved reseathe vapor. Wear self-contained breathing apparatus. Do not wea	pirator is
Special Precautions or Extremely flammable liquid! Harmful liquid! Irritant! Do not breathe vapor. Avoid all contact with the product. Avoid prolonged or repeated exposure. Use only in a chemical fume hood. Keep away from heat, sparks and flame. Take precautionary measures against static discharges. Liquid can accumulate static charge by flow or agitation. Use non-sparking tools. Bond and ground transfer containers and equipment to avoid static accumulation. Handle and open container with care. Container should be opened only by a technically qualified person.         RTECS NO: MI7700000 (Heptane).         Prepared by MSDS Department/Département de F.S         Validated 08-Apr-2005         J Telephone# (514) 489-5711         While the company believes the data set forth herein are accurate as of the date hereof, the company makes no warranty with respect thereto	Engineering controls	ventilation equipment. Do not use in unventilated spaces. Vapor	s are heavier than air and may travel along the gro	
comments       with the product. Avoid prolonged or repeated exposure. Use only in a chemical furme hood.         Keep away from heat, sparks and flame. Take precautionary measures against static discharges. Liquid can accumulate static charge by flow or agitation. Use non-sparking tools. Bond and ground transfer containers and equipment to avoid static accumulation. Handle and open container with care. Container should be opened only by a technically qualified person.         RTECS NO: MI7700000 (Heptane).       Image: Comment for the product of the product	Section X. O	ther Information		
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While the company believes the data set forth herein are accurate as of the date hereof, the company makes no warranty with respect thereto	Prepared by MSDS D	epartment/Département de F.S	3-Apr-2005	
	) Telephone#	(514) 489-5711		
and expressly disclaims all liability for reliance thereon. Such data are offered solely for your consideration, investigation and verification.	While the company b	pelieves the data set forth herein are accurate as of the date here		