



MATERIAL SAFETY DATA SHEET

Autoclimate PAG Series

SECTION 1: CHEMICAL PRODUCT & COMPANY IDENTIFICATION			
Product Name	PAG 46, PAG 100 & PAG 150	Date Prepared	January 21, 2009
Chemical Family	Petroleum Hydrocarbons	Prepared By	David J. Vincent
Manufactured For Harp International Limited Gellihirion Industrial Estate, Pontypridd, Rhondda Cynon Taff, CF37 5SX United Kingdom	Phone		
	Emergency Phone	CHEMTRAC	
Material Uses : Refrigeration Oil			

SECTION II: COMPOSITION & INFORMATION ON INGREDIENTS		
Chemical Name	CAS #	% by V/V
Polyalkylene Glycol	Propreitary	100

SECTION III: HAZARD IDENTIFICATION	
EMERGENCY OVERVIEW	
<p>This is not a dangerous substance. Material has a NFPA rating of 1 - 1 - 0. There are no chemicals in reportable quantities under SARA Section 313. Use of adequate ventilation will avoid aspiration of oil mists. Wash skin after contact, prolonged contact with any oils can cause irritation in some individuals.</p>	
Primary Routes of Entry:	Skin
Eyes :	Tests on similar materials suggest that no eye effect can be expected.
Skin :	Tests on similar materials indicate that no significant adverse health effects are expected to occur upon short-term exposure.
Ingestion :	Tests on similar materials indicate no adverse effects expected. Practically non-toxic.
Inhalation :	Tests on similar material indicate no acute effects are expected..
Chronic (Cancer Information)	Prolonged and/or repeated contact with this material may produce skin irritation and inflammation. Carcinogen listed by: National Toxicology Program (NO); I. A. R. C. (NO); OSHA (NO), ACGIH (NO). This product does not require a cancer hazard warning in accordance with the OSHA Hazard Communication Standard.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE	
Personnel with pre-existing skin disorders should avoid contact with this product.	

SECTION IV : FIRST AID PROCEDURES

Eyes :	Flush eyes immediately with water for at least 15 minutes or until irritation subsides. If irritation persists, consult a physician.
Skin :	Wash thoroughly with soap and water. Remove contaminated clothing and wash before reuse. If irritation or rash develops, obtain medical assistance. Immediately remove soaked clothing.
Inhalation :	Not likely to occur except a mist. Remove patient to fresh air and consult a physician. If breathing is difficult, give oxygen. If not breathing give artificial respiration.
Ingestion :	Drink small quantities of water. DO NOT induce vomiting. Consult physician at once. DO NOT give anything by mouth if person is unconscious or having convulsions.

SECTION V : FIRE FIGHTING PROCEDURES

Flash Point:	>157°C COC ASTM D92
Autoignition	> 188°C
Flammability Class	IIIB
Lower Explosive Limit	(%) : Not determined
Upper Explosive Limit	(%) : Not determined
Fire and Explosion Hazards	Slightly combustible. OSHA/NFPA Class IIIB Combustible Liquid. If heated above its flash point will release flammable vapors which can burn in the open or be explosive in confined spaces if exposed to ignition source. Mists or sprays may be flammable below oil's normal flash point. Keep away from extreme heat or open flame.
Extinguishing Media	Dry Chemical, carbon dioxide, water fog and foam. NOTE: Water, fog and foam may cause frothing and spattering.
Fire Fighting Instructions	Use water to cool containers exposed to flames. Do not enter enclosed or a confined work space without proper protective equipment. Fire fighting personnel should wear respiratory protection (positive pressure if available). Products of combustion include fumes, smoke and carbon monoxide.

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SECTION VI : ACCIDENTAL RELEASE MEASURES

Procedures:	Shut off ignition source. Contain spill and keep from entering waterways or sewers. Use personal protective equipment. Advise EPA; state agency if required. Absorb on inert material. Shovel, sweep or vacuum spill.
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SECTION VII : HANDLING AND STORAGE

Handling and Storage Precautions:	Keep away from flames, sparks or hot surfaces. Never use a torch to cut or weld on or near container. Empty oil containers can contain explosive vapors. NFPA Class IIIB storage. Wash thoroughly after handling.
Storage Temperature:	ambient or slightly elevated to facilitate pumping
Storage Pressure:	atmospheric

SECTION VII : HANDLING AND STORAGE (Cont).**Work/Hygienic Practices**

Wash hands with soap and water before eating, drinking, smoking or use of toilet facilities. Do not use gasoline, solvents, kerosene, or harsh abrasive skin cleaners for washing exposed skin areas. Take a shower after work if general contact occurs. Remove oil-soaked clothing and launder before reuse. Launder or discard contaminated shoes and leather gloves.

SECTION VIII : EXPOSURE CONTROLS AND PERSONAL PROTECTION

		EXPOSURE LIMITS	
Chemical Name	CAS #	TWA Mist	ACIGH TVL Mist
Eye/Face Protection	Safety glasses or splash goggles. Have suitable eye wash water available.		
Skin Protection	Avoid prolonged and/or repeated skin contact. If prolonged contact cannot be avoided, wear protective impervious gloves and clothing. Acceptable materials for gloves are polyvinyl chloride; neoprene; nitrile; polyvinyl alcohol; viton		
Respiratory Protection	Normally not required if adequate ventilation. If occupational exposure limits are exceeded wear NIOSH/MSHA approved apparatus.		
Engineering Controls	Use adequate ventilation to keep oil mists of this material below applicable standard(s). See Section on occupational exposure limits.		
Other/General Protection	If there is a likelihood of splashing, an oil resistant clothing should be worn. Never wear oil soaked clothing. Launder or dry clean before wearing. Discard oil soaked shoes. Affix warning labels on containers in accordance with 29 CFR 1910.1200 (Hazard Communication Standard)		

SECTION IX : PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear pale straw colored liquid	Specific Gravity (H ₂ O=1) @20°C	PAG 46 0.99 PAG 100 1.035 PAG 150 1.051
Physical State	LIQUID	pH	5.0 - 8.0 ASTM E70
Color	Clear to light yellow color	VOC	0.0 g/l
Odor	Mild	Viscosity	PAG46 46 - 56 cSt PAG100 86 - 106 cSt PAG150 135 - 165 cSt
Vapor Pressure	<0.001mm Hg @ 20°C	Evaporation Rate	1000X slower than ethyl ether
Vapor Density (AIR = 1)	> 10	Solubility in Water	negligible
Boiling Point 760mmHg	> 200°C	Pour Point	PAG 46 -48°C PAG 100 -46°C PAG 150 - 44°C
Molecular Weight	N.D.	Packing Density	N/A
Odor Threshold	N.D.		

Physical data may vary slightly to meet specifications.

SECTION X : STABILITY & REACTIVITY	
Stability:	Stable
Conditions to Avoid:	Sources of ignition
Incompatible Materials	Strong oxidizers
Hazardous Decomposition:	Combustion may produce carbon monoxide and other asphyxiants
Hazardous Polymerization:	Will not occur.

SECTION XI: TOXICOLOGICAL INFORMATION	
Acute Studies	Tests on similar materials show a low order of acute oral and dermal toxicity
Eye Effects	Minimal irritation on contact.
Skin Effects	Practically non-toxic if absorbed. May cause mild irritation with prolonged and repeated contact.
Acute Oral Effects	Tests on similar materials indicate low order of acute oral toxicity.
Acute Inhalation Effects	Low acute toxicity expected on inhalation.
Mutagenicity (Genetic Effects)	This product has been tested by modified ames to have a MI less than 1 which would not be predicted to be tumorigenic in a mouse skin-painting bioassay.
Miscellaneous Toxicological Information	This product meets the IP346 European Labelling Requirement Exemption.
<p>This product is severely hydrotreated. Severely hydrotreated naphthenic petroleum oil has not been found to be carcinogen. This product is not listed as carcinogenic or a potential carcinogen by the National Toxicology Program, by the I.A.R.C. monographs or by OSHA. Nevertheless, good industrial hygienic practices are recommended.</p>	

SECTION XII : ECOLOGICAL INFORMATION
No specific ecological data are available for this product. Please refer to Section 6 for information regarding accidental releases and Section 15 for regulatory reporting requirements.

SECTION XIII : DISPOSAL CONSIDERATIONS
Follow federal, state and local regulations. Not a RCRA hazardous waste if uncontaminated. If "used", RCRA criteria must be determined. Do not flush to drain/storm sewer. Contract to authorized disposal service. If permitted, incineration may be practical. Recommend recycling.

SECTION XIV: TRANSPORT INFORMATION	
Proper Shipping Name	Not regulated by DOT
DOT Identification Number	65 Lubricant Nobin
DOT Shipping Label	Not regulated by DOT
Hazard Class	Not Applicable
ICAO/IATA/IMDG/DOT Bulk	Not Regulated

SECTION XV : REGULATORY INFORMATION	
SARA 302 Threshold Planning	NOT APPLICABLE
SARA Reportable Quantity:	NOT APPLICABLE
EPA/TSCA Inventory:	The components of this product are listed on the EPA/TSCA inventory of chemicals.
EPA Hazard Classification Code:	NOT APPLICABLE
Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)	No chemicals in this product are subject to the reporting requirements of CERCLA
SARA TITLE III - HAZARD CLASSES	Acute Health Hazard
SARA TITLE III - Section 313 Supplier Notification	No chemicals in this product exceed the De Minimus reporting level established by SARA Title III, Section 313 and 40 CFR 372.
European (ECC) Regulatory Information	This product is listed on the European Inventory of Existing Commercial Substances.
WHMIS Classification	NOT CONTROLLED

SECTION XV1 : OTHER INFORMATION	
NFPA HAZARD RATING - HEALTH : FIRE : REACTIVITY :	1 NEGLIGIBLE 1 SLIGHT 0 NEGLIBIBLE

Notice To reader

To the best of our knowledge the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.