

Safety Data Sheet

TRIAFROST PG/AL

SECTION 1. MATERIAL AND COMPANY IDENTIFICATION

PRODUCT NAME: TRIAFROST PG/AL

VERSION: MARCH 2017

MANUFACTURER: PACIFIC FUNCTIONAL FLUIDS, LLC
2244 PORT OF TACOMA ROAD
TACOMA, WA 98421-3607

CUSTOMER SERVICE: 253-284-4302 / 888-586-7295

24 HOUR EMERGENCY CONTACT: CHEMTREC: 1- 800-424-9300

SECTION 2. HAZARDS IDENTIFICATION



WARNING

THIS PRODUCT IS NOT A "HAZARDOUS CHEMICAL" AS DEFINED BY THE OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200.

POTENTIAL HEALTH EFFECTS:

TARGET ORGANS: REPEATED EXPOSURE MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS.

EYES: MAY CAUSE IRRITATION.

INHALATION: MAY CAUSE RESPIRATORY TRACT IRRITATION. IF INHALED, REMOVE VICTIM TO FRESH AIR AND KEEP AT REST IN A POSITION COMFORTABLE FOR BREATHING. CALL A POISON CENTER OR DOCTOR/PHYSICIAN IF YOU FEEL UNWELL.

SKIN: MAY BE HARMFUL IF ABSORBED THROUGH SKIN. MAY CAUSE SKIN IRRITATION.

INGESTION: MAY BE HARMFUL IF INGESTED.

PRECAUTIONARY STATEMENTS: DO NOT BREATHE DUST/FUME/GAS/MIST/VAPOR/SPRAY. USE ONLY OUTDOORS OR IN A WELL-VENTILATED AREA. STORE IN A WELL-VENTILATED PLACE. KEEP CONTAINER TIGHTLY CLOSED. STORE LOCKED UP. DISPOSE OF CONTENTS/CONTAINER TO AN APPROVED WASTE DISPOSAL PLANT.

NFPA RATINGS

HEALTH	2
FLAMMABILITY	1
REACTIVITY	0
SPECIFIC HAZARD	N/A

HMIS RATINGS

HEALTH	2
FIRE	1
REACTIVITY	0
PERSONAL	C

0 = MINIMAL 1 = SLIGHT 2 = MODERATE 3 = SERIOUS 4 = SEVERE

TRIAFROST PG AL

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	VOLUME %	CAS #	EINECS# / ELINCS#	FORMULA	MOLECULAR WEIGHT
PROPYLENE GLYCOL, 1,2-PROPANEDIOL	≥96	57-55-6	200-388-0	C ₃ H ₈ O ₂	76.10 G/MOL
PROPRIETARY INGREDIENTS & INHIBITORS*	<4	PROPRIETARY	PROPRIETARY	PROPRIETARY	PROPRIETARY
DYE	<1	N/A	N/A	N/A	N/A

SECTION 4. FIRST AID MEASURES

EYES: RINSE WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES AND SEEK MEDICAL ATTENTION IF NECESSARY.

SKIN: FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND WASH USING SOAP. GET MEDICAL ATTENTION IF NECESSARY.

INGESTION: DO NOT INDUCE VOMITING! NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. IF CONSCIOUS, WASH OUT MOUTH WITH WATER. GET MEDICAL ATTENTION IF NECESSARY.

INHALATION: MOVE CASUALTY TO FRESH AIR AND KEEP AT REST. IF BREATHING IS DIFFICULT, GIVE OXYGEN. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. GET MEDICAL ATTENTION IF NECESSARY.

SECTION 5. FIREFIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA: USE WATER SPRAY, ALCOHOL-RESISTANT FOAM, DRY CHEMICAL, OR CARBON DIOXIDE. USE APPROPRIATE MEDIA ON ADJACENT FIRE. COOL UNOPENED CONTAINERS WITH WATER.

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS: WEAR SELF-CONTAINED, APPROVED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING, INCLUDING EYE PROTECTION AND BOOTS.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL: EMITS TOXIC FUMES (CARBON OXIDES) UNDER FIRE CONDITIONS. (SEE ALSO STABILITY AND REACTIVITY SECTION).

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: SEE SECTION 8 FOR RECOMMENDATIONS ON THE USE OF PERSONAL PROTECTIVE EQUIPMENT.

ENVIRONMENTAL PRECAUTIONS: PREVENT SPILLAGE FROM ENTERING DRAINS. ANY RELEASE TO THE ENVIRONMENT MAY BE SUBJECT TO A FEDERAL/NATIONAL OR LOCAL REPORTING REQUIREMENTS.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: ABSORB SPILL WITH NONCOMBUSTIBLE ABSORBENT MATERIAL, THEN PLACE IN A SUITABLE CONTAINER FOR DISPOSAL. CLEAN SURFACES THOROUGHLY WITH WATER TO REMOVE RESIDUAL CONTAMINATION. DISPOSE OF ALL WASTE AND CLEANUP MATERIALS IN ACCORDANCE WITH REGULATIONS.

TRIAFROST PG AL

SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

SEE SECTION 8 FOR RECOMMENDATIONS ON THE USE OF PERSONAL PROTECTIVE EQUIPMENT. USE WITH ADEQUATE VENTILATION. WASH THOROUGHLY AFTER USING. KEEP CONTAINER CLOSED WHEN NOT IN USE. AVOID FORMATION OF AEROSOLS.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

STORE IN A COOL, DRY, WELL VENTILATED AREA. THE MATERIAL IS HYGROSCOPIC AND LIGHT SENSITIVE. KEEP CONTAINERS TIGHTLY CLOSED. KEEP AWAY FROM HEAT. KEEP AWAY FROM INCOMPATIBLE MATERIALS (SEE SECTION 10 FOR INCOMPATIBILITIES).

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE CONTROLS:

COMPONENT	EXPOSURE LIMITS	BASIS	ENTITY
PROPYLENE GLYCOL	10 MG/M ³	WEEL	AIHA

TWA: TIME WEIGHTED AVERAGE OVER 8 HOURS OF WORK.

TLV: THRESHOLD LIMIT VALUE OVER 8 HOURS OF WORK.

REL: RECOMMENDED EXPOSURE LIMIT

PEL: PERMISSIBLE EXPOSURE LIMIT

STEL: SHORT TERM EXPOSURE LIMIT DURING X MINUTES.

IDLH: IMMEDIATELY DANGEROUS TO LIFE OR HEALTH

WEEL: WORKPLACE ENVIRONMENTAL EXPOSURE LEVELS

CEIL: CEILING

PERSONAL PROTECTION:

EYES: WEAR CHEMICAL SAFETY GLASSES OR GOGGLES.

INHALATION: PROVIDE LOCAL EXHAUST, PREFERABLY MECHANICAL. IF EXPOSURE LEVELS ARE EXCESSIVE, USE AN APPROVED RESPIRATOR.

SKIN: WEAR NITRILE OR RUBBER GLOVES, APRON OR LAB COAT.

OTHER: NOT AVAILABLE

OTHER RECOMMENDATIONS:

PROVIDE EYEWASH STATIONS, QUICK-DRENCH SHOWERS AND WASHING FACILITIES ACCESSIBLE TO AREAS OF USE AND HANDLING. HAVE SUPPLIES AND EQUIPMENT FOR NEUTRALIZATION AND RUNNING WATER AVAILABLE.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/PHYSICAL STATE:

ODOR:

PH:

SPECIFIC GRAVITY:

FREEZING POINT:

BOILING POINT:

FLASH POINT:

FLAMMABILITY (SOLID, GAS)

UPPER/LOWER FLAMMABILITY

OR EXPLOSIVE LIMIT:

CLEAR LIQUID

MILD/CHARACTERISTIC

8.0-9.5

1.056 MIN.

60°C (-76°F)

188°C (370°F)

NOT FLAMMABLE

NOT FLAMMABLE

NOT EXPLOSIVE

TRIAFROST PG AL

VAPOR PRESSURE:	10 mmHg AT 20°C (68°F)
VAPOR DENSITY (AIR = 1):	2.1
SOLUBILITY:	COMPLETELY SOLUBLE IN WATER.
PERCENT VOLATILE BY VOLUME:	NIL

SECTION 10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: STABLE.

POSSIBILITY OF HAZARDOUS REACTIONS: WILL NOT OCCUR.

CONDITIONS TO AVOID: STORAGE BELOW 15.5°C (60°F) OR ABOVE 65.5°C (150°F).

INCOMPATIBLE MATERIALS: OXIDIZING AGENTS, ACIDS, ALKALIS, CHLOROFORMATES, CAUSTICS, ALIPHATIC AMINES, ISOCYANATES, ACID ANHYDRIDES, SILVER NITRATE, REDUCING AGENTS.

HAZARDOUS DECOMPOSITION PRODUCTS: OXIDES OF CARBON.

SECTION 11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

PROPYLENE GLYCOL

SKIN	LD50 DERMAL – RABBIT – 20,800 MG/KG
EYES	NOT AVAILABLE
RESPIRATORY	NOT AVAILABLE
INGESTION	LD50 ORAL – RAT – 20,000 MG/KG
OTHER	LD50 INTRAMUSCULAR – RAT – 14 G/KG LD50 INTRAVENOUS – DOG – 26 G/KG LD50 INTRAPERITONEAL – RAT – 6,660 MG/KG LD50 SUBCUTANEOUS – RAT – 22,500 MG/KG LD50 INTRAVENOUS – RAT – 6,423 MG/KG LD50 INTRAPERITONEAL – MOUSE – 9,718 MG/KG LD50 SUBCUTANEOUS – MOUSE – 17,370 MG/KG LD50 INTRAVENOUS – MOUSE – 6,630 MG/KG LD50 INTRAVENOUS – RABBIT – 6,500 MG/KG

CARCINOGENICITY

IARC	NO COMPONENTS OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS PROBABLE, POSSIBLE OR CONFIRMED HUMAN CARCINOGEN BY IARC.
ACGIH	NO COMPONENTS OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A CARCINOGEN OR POTENTIAL CARCINOGEN BY ACGIH.
NTP	NO COMPONENTS OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A KNOWN OR ANTICIPATED CARCINOGEN BY NTP.
OSHA	NO COMPONENTS OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A CARCINOGEN OR POTENTIAL CARCINOGEN BY OSHA.

SIGNS & SYMPTOMS OF EXPOSURE

SKIN	MILD IRRITATION.
EYES	MILD IRRITATION.
RESPIRATORY	IRRITATION TO RESPIRATORY TRACT.
INGESTION	GASTROINTESTINAL IRRITATION, NAUSEA; HEADACHE.
CHRONIC TOXICITY	MAY CAUSE DAMAGE TO CENTRAL NERVOUS SYSTEM (CNS).
TERATOGENICITY	MAY CAUSE ADVERSE REPRODUCTIVE EFFECTS AND BIRTH DEFECTS.

TRIAFROST PG AL

MUTAGENICITY	MAY AFFECT GENETIC MATERIAL.
EMBRYOTOXICITY	NOT AVAILABLE
SPECIFIC TARGET ORGAN TOXICITY	NOT AVAILABLE
REPRODUCTIVE TOXICITY	NOT AVAILABLE
RESPIRATORY/SKIN SENSITIZATION	NOT AVAILABLE

SECTION 12. ECOLOGICAL INFORMATION

ECOTOXICITY

PROPYLENE GLYCOL

AQUATIC VERTEBRATE	MORTALITY NOEC – PIMEPHALES PROMELAS (FATHEAD MINNOW) – 52,930 MG/L – 96 HOURS
AQUATIC INVERTEBRATE	MORTALITY NOEC – DAPHNIA MAGNA (WATER FLEA) – 13,020 MG/L – 48 HOURS EC50 – DAPHNIA MAGNA (WATER FLEA) - >10,000 MG/L – 48 HOURS
TERRESTRIAL	NOT AVAILABLE

PERSISTENCE AND DEGRADABILITY	NOT AVAILABLE
BIOACCUMULATIVE POTENTIAL	NOT AVAILABLE
MOBILITY IN SOIL	NOT AVAILABLE
PBT AND VPVB ASSESSMENT	NOT AVAILABLE
OTHER ADVERSE EFFECTS	NOT AVAILABLE

SECTION 13. DISPOSAL CONSIDERATIONS

THE GENERATOR OF A WASTE IS ALWAYS RESPONSIBLE FOR MAKING PROPER HAZARDOUS WASTE DETERMINATIONS AND NEEDS TO CONSIDER STATE AND LOCAL REQUIREMENTS IN ADDITION TO FEDERAL REGULATIONS.

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND OR INTO ANY BODY OF WATER.

RECYCLE OR DISPOSE OF IN ACCORDANCE WITH PREVAILING REGULATIONS, BY A RECOGNIZED COLLECTOR OR CONTRACTOR. THE COMPETENCE OF THE CONTRACTOR TO DEAL SATISFACTORILY WITH THIS TYPE OF PRODUCT SHOULD BE ESTABLISHED BEFOREHAND.

RECYCLE OR DISPOSE OF THE CONTAINER IN ACCORDANCE WITH THE LEGISLATION IN FORCE WITH A RECOGNIZED COLLECTOR OR CONTRACTOR.

SECTION 14. TRANSPORT INFORMATION

US DOT: NOT REGULATED

TDG: NOT DANGEROUS GOODS

IDMG: NOT DANGEROUS GOODS

MARINE POLLUTANT: NOT DANGEROUS GOODS

IATA/ICAO: NOT DANGEROUS GOODS

THE INFORMATION OFFERED IN SECTION 13 IS FOR THE PRODUCT AS SHIPPED. USE AND/OR ALTERATIONS TO THE PRODUCT MAY SIGNIFICANTLY CHANGE THE CHARACTERISTICS OF THE MATERIAL AND ALTER THE WASTE CLASSIFICATION AND PROPER DISPOSAL METHODS.

SECTION 15. REGULATORY INFORMATION

TSCA INVENTORY STATUS	ALL INGREDIENTS ARE LISTED ON THE TSCA INVENTORY.
DSCL (EEC)	ALL INGREDIENTS ARE LISTED ON THE DSCL INVENTORY.
CALIFORNIA PROPOSITION 65	NOT LISTED
SARA 302	NO SARA HAZARD
SARA 304	NO SARA HAZARD
SARA 311	NO SARA HAZARD
SARA 312	NO SARA HAZARD
SARA 313	NO SARA HAZARD
WHMIS CANADA	NOT WHMIS LISTED

SECTION 16. OTHER INFORMATION

HAZARD RATING SYSTEM

NFPA

HEALTH
2

FIRE
1

REACTIVITY
0

RECOMMENDED USES AND RESTRICTIONS:

INTENDED AS A HEAT TRANSFER FLUID FOR CLOSED-LOOP SYSTEMS. WE RECOMMEND THAT YOU USE THIS PRODUCT IN A MANNER CONSISTENT WITH THE LISTED USE.

THE INFORMATION PROVIDED IN THIS 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 GUIDANCE FOR SAFE HANDLING, USE, PROCESSING, STORAGE, TRANSPORTATION, DISPOSAL AND RELEASE AND IS NOT 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.

REGULATORY REQUIREMENTS ARE SUBJECT TO CHANGE AND MAY DIFFER FROM ONE LOCATION TO ANOTHER. IT IS THE BUYER'S RESPONSIBILITY TO INSURE THAT IT COMPLIES WITH FEDERAL, STATE/PROVINCIAL AND LOCAL LAWS.