SAFETY DATA SHEET

NAME OF PRODUCT *HYTRANS 61*

FILE NUMBER: 2791
DATE REVISED: 1/11/13
SUPERCEDES: 6/11/09

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:	**HYTRANS 61**
SYNONYMS:	**DISTILLATE, PETROLEUM**
PRODUCT CODES:	**2791**
MANUFACTURER:	**SAN JOAQUIN REFINING CO., INC**
DIVISION:	**BAKERSFIELD**
ADDRESS:	**P.O. BOX 5576, BAKERSFIELD, CA., 93388**
EMERGENCY PHONE:	**(661) 327-4257**

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM

HMIS® HAZARD RATING		
4 – SEVERE	HEALTH	1
3 – SERIOUS	FLAMMABILITY	1
2 – MODERATE	REACTIVITY	0
1 - SLIGHT		
0 - MINIMAL		

RECOMMENDED USE:	**TRANSFORMER OIL**
RESTRICTIONS ON USE:	**NOT INTENDED TO BE USED AS A FUEL**
PREPARED BY:	**SAN JOAQUIN REFINING CO., INC. HEALTH, SAFETY AND ENVIRONMENTAL DEPARTMENTS**

SECTION 2: HAZARDS IDENTIFICATION

ROUTES OF ENTRY:	**EYES:** Yes	**SKIN:** Yes	**INGESTION:** Yes	**INHALATION:** Yes

OSHA Hazard: irritant

Signal word: Warning
GHS Classification: 2

POTENTIAL HEALTH EFFECTS:

EYES: Eye contact may result in irritation and redness. Exposure to high concentrations of vapors may be irritating to the eyes.

SKIN: Prolonged and repeated contact can defat the skin, which may result in dryness, dermatitis and cracking of the skin.

INGESTION: Do not ingest. Ingestion may result in nausea or stomach discomfort. If swallowed do not induce vomiting, call a physician.

INHALATION: Fumes may be unpleasant and may produce nausea. Remove the person to fresh air if respiratory discomfort occurs.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

Persons with preexisting skin or respiratory disorders may have their conditions aggravated by overexposure to this material.

SECTION 3: HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

CHEMICAL FAMILY: **DISTILLATE (PETROLEUM) HYDROTREATED LIGHT NAPHTHENIC**

HAZARDOUS COMPONENT(S)	CAL-OSHA PEL- TWA (8 HOUR)	ACGIH TLV-TWA (8 HOUR)	OTHER LIMITS RECOMMENDED	% BY WEIGHT
Distillates, Petroleum, Hydrotreated Light CAS No. 64742-53-6	5 mg/m³ (As oil mist)	5 mg/m³ (As oil mist)	None	>99
2, 6-Di-t-butyl-p-cresol (BHT) CAS No. 128-37-0	5 mg/m³ (Nuisance Particulates)	2 mg/m³ (Inhalable aerosol and/or vapor)	10 mg/m³	<1

SECTION 4: FIRST AID MEASURES

EYES:	Avoid contact with eyes. If contact occurs, immediately flush eyes with water for a minimum of 15 minutes. Seek medical attention immediately.
SKIN:	Avoid contact with skin. If contact occurs, wash contact areas with soap and water. Remove and clean oil soaked clothing daily and wash affected area.
INGESTION:	Do not induce vomiting. If ingested, seek medical attention.
INHALATION:	Not expected to be a problem. However, if respiratory irritation, dizziness, nausea or unconsciousness occurs due to excessive vapor or mist exposure, seek medical attention. If operating conditions create airborne concentrations that exceed the exposure standard, the use of an approved NIOSH/OSHA respirator for organic vapors or air- supplied breathing equipment is recommended.

SECTION 5: FIREFIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, (% BY VOLUME)	UPPER: No data available LOWER: No data available
FLASH POINT: COC °F:	293° Minimum
EXTINGUISHING MEDIA:	Foam, water fog, dry chemical, CO^2
SPECIAL FIRE FIGHTING PROCEDURES:	Do not enter confined fire space without proper protective equipment including self-contained breathing apparatus. See Hazardous Decomposition Products.
HAZARDOUS DECOMPOSITION PRODUCTS:	Normal combustion forms carbon dioxide and water vapor, and may produce oxides of sulfur and nitrogen. Incomplete combustion can produce carbon monoxide.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PROTECTION:	Wear safety glasses, rubber gloves, Tyvek type coveralls and rubber boots.
ACCIDENTAL RELEASE MEASURES:	In case of spill, clean up using absorbent material such as earth or sand.
RCRA HAZARD CLASS:	This product is not a characteristic hazardous waste under RCRA. No EPA waste numbers are applicable for this product's components.

SECTION 7: HANDLING AND STORAGE

PERSONAL PROTECTION:	Wear safety glasses, rubber gloves, Tyvek type coveralls and rubber boots.
HANDLING AND STORAGE:	Avoid fire, sparks or open flame. Wear appropriate personal protective equipment to ensure that this product does not contact the eyes or skin.
VENTILATION:	Use adequate ventilation to keep the airborne concentrations of this material below the established exposure standard.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION:	If operating conditions create airborne concentrations that exceed the exposure standard for this product, the use of an approved NIOSH/OSHA respirator for organic vapors or air supplied breathing equipment is recommended.
EYE PROTECTION:	Wear appropriate safety glasses, goggles or full-face shield.
SKIN PROTECTION:	Long sleeve cotton shirt and cotton pants are recommended. Wear appropriate gloves.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Straw colored liquid	**UPPER/LOWER FLAM/EXP LMT:**	NDA
ODOR:	Petroleum odor	**VAPOR PRESSURE (mmHg): @**	100° F<0.1
ODOR THRESHHOLD:	NDA	**VAPOR DENSITY (AIR = 1):**	4
pH:	NDA	**RELATIVE DENSITY:**	NDA
MELTING/FREEZING PT:	-40°F Max	**SOLUBILITY IN WATER:**	NIL
INITIAL BOILING POINT: @760° mmHg:	560° F	**PART. COEF. N-OCT/H2O**	NDA
FLASH POINT: COC °F:	293° Minimum	**AUTOIGNITION TEMP:**	NDA
EVAPORATION RATE (ETHYL ETHER = 1):	<1	**DECOMPOSITION TEMP:**	NDA
FLAMMABILITY (solid, gas):	NA	**SPECIFIC GRAVITY (H2O = 1):**	0.88
PERCENT VOLATILE (% BY VOL.):	0		

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS CONTRIBUTING TO INSTABILITY: None

INCOMPATIBILITY (MATERIAL TO AVOID): May react with strong oxidizers.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Normal combustion forms carbon dioxide and water vapor, and may produce oxides of sulfur and nitrogen. Incomplete combustion can produce carbon monoxide.

HAZARDOUS POLYMERIZATION: Will not occur

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE STUDIES: Low order of acute oral or dermal toxicity

HEALTH EFFECTS: Mild eye and skin irritant

CARCINOGENICITY:

ACGIH, NTP, OSHA and IARC carcinogen lists were checked for those components with CAS Registry Numbers (64742-53-6) & (128-37-0).

ACGIH: This product is not listed as carcinogenic.

IARC: The International Agency for research on cancer has concluded that highly or severely refined light and middle distillates are Group 3 substances, "not classifiable as to their carcinogenicity to humans," based on inadequate human or animal evidence.

NTP: This product is not listed as carcinogenic.

OSHA: This product is not listed as carcinogenic.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY: NDA
PERSISTENCE & DEGRADABILITY: NDA
BIOACCUMULATIVE POTENTIAL: NDA
MOBILITY IN SOIL: NDA
OTHER ADVERSE EFFECTS: NDA
AQUATIC RELEASE: Advise authorities if product has entered or may enter watercourses or sewer drains.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE RESIDUES DESCRIPTION: This product is not a characteristic hazardous waste under RCRA. No EPA waste numbers are applicable for this product's components.

SAFE HANDLING INFORMATION: See Section 7 (Handling and Storage)

WASTE DISPOSAL METHOD: Observe Federal, State and Local regulations covering chemical waste spills.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION:

PROPER SHIPPING NAME: Not regulated as a hazardous material for transportation by USA DOT.

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

TSCA (TOXIC SUBSTANCE CONTROL ACT) REGISTRY: Listed

CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT):
This product is not a hazardous substance under CERCLA.

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):

302/304 This product is not listed as an extremely hazardous substance in 40 CFR Part 355, and is not known to contain an extremely hazardous substance in a concentration greater than one percent by weight.

311/312 HAZARD CATEGORIES:

Acute Health Hazard:	No
Chronic Health Hazard:	No
Fire Hazard:	No
Pressure Release Hazard:	No
Reactivity Hazard:	No

313 This product is not known to contain any components in concentrations above *de minimus* levels that are listed as toxic in 40 CFR Part 372 pursuant to the requirements of Section 313 of SARA.

WHMIS: NDA

OSHA: 29 CFR 1910.1200 (Hazard Communication) required.

STATE REGULATIONS:

Mineral oil, petroleum extract, heavy naphthenic distillate solvent appears on one or more of the Hazardous substances lists in the following states:

MA

SECTION 16: OTHER INFORMATION

The information provided in this Material Safety Data Sheet is believed to be accurate and reliable on and as of the date on page one. **However, this Material Safety Data Sheet is not a guarantee or warranty of any kind, express or implied. Any and all warranties of merchantability and/or fitness for a particular purpose are specifically disclaimed.** It is the user's responsibility to determine the conditions under which the product is used, including the selection of engineering controls, work practices and Personal Protective Equipment to minimize hazards.

SAN JOAQUIN REFINING CO., INC.

Product Data Sheet

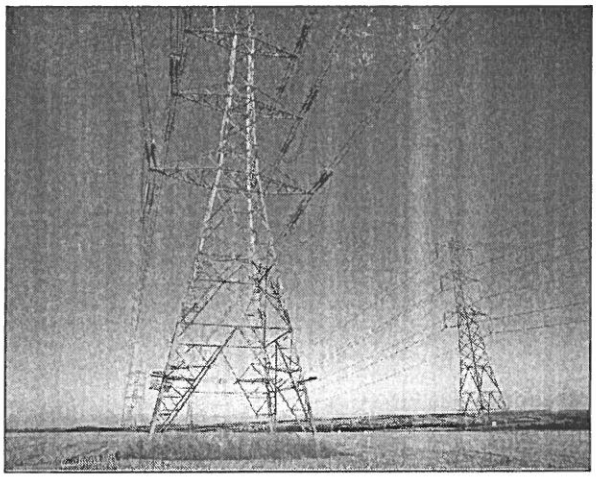
HYTRANS® 61

Type II Inhibited Transformer Oil

HYTRANS® 61 is a specially processed, inhibited, naphthenic transformer oil made in the U.S.A. It's severely hydrotreated using wax-free, ultra-low sulfur feedstocks and the latest technology.

It does not contain corrosive sulfur or harmful polychlorinated biphenyls (PCBs). The special processing and the low moisture content of HYTRANS® 61 insures high electrical resistance and both thermal and oxidative stability.

HYTRANS® 61 is highly stable and noncorrosive to copper. Its low pour point and low viscosity provides excellent conductive heat transfer under all operating conditions.



Performance Features

- Meets or exceeds the performance requirements of ASTM D3487, CSA-C50 Class B standards and DOBLE TOPS specifications.
- HYTRANS® 61 is colorless, odorless, non-carcinogenic and non-hazardous.
- Designed for Type II applications.
- High oxidation stability limits the formation of sludges, deposits and soluble compounds which break down the electrical properties of the oil in extended service conditions.
- High dielectric strength and low dissipation factor provides excellent insulating characteristics.
- Excellent conductive heat transfer properties improve cooling of transformer components prolonging life.
- Rapid quenching of arcs reduces contact erosion.
- Contains no corrosive sulfur and does not require passivators
- Full compatibility with existing naphthenic insulating oils.

Applications

HYTRANS® 61 is recommended for use in arc-forming apparatus such as:

- switches
- oil-immersed transformers
- circuit breakers
- electrical reclosures
- fuses
- oil filled capacitors
- tap changers

PROPERTY	TEST	HYTRANS 61	ASTM D3487 TYPE II	CSA-C50 CLASS B TYPE II
PHYSICAL PROPERTIES				
Appearance	Visual	Clear & Bright	Clear & Bright	N/A
Color	ASTM D1500	L0.5	0.5 max	0.5 max
Specific Gravity @ 15°C	ASTM D1298	0.8890	0.91 max	0.906 max
Kinematic Viscosity, cSt @ 100°C	ASTM D445	2.31	3.0 max	N/A
Kinematic Viscosity, cSt @ 40°C	ASTM D445	9.63	12.0 max	12 max
Kinematic Viscosity, cSt @ 0°C	ASTM D445	62.0	76 max	76 max
Kinematic Viscosity, cSt @ -40°C	ASTM D445	3874.5	N/A	6000 max
Pour Point, °C	ASTM D5950	-60	-40 max	-40 max
Interfacial Tension @ 25°C, dynes/cm	ASTM D971	51	40 min	40 min
Flash Point, °C	ASTM D92	156	145 min	145 min
CHEMICAL PROPERTIES				
Neutralization Number, mg KOH/g	ASTM D974	<0.01	0.03 max	0.03 max
Water Content, ppm	ASTM D1533	15	35 max	35 max
Corrosive Sulfur	ASTM D1275B	Non-corrosive	Non-corrosive	Non-corrosive
PCB Content, ppm	ASTM D4059	<1ppm	Not detectable	2 max
Oxid. Stability, wt.% Sludge @ 72h	ASTM D2440	0.01	0.1 max	N/A
Oxid. Stability, Neut # mg KOH/g @ 72h	ASTM D2440	<0.01	0.3 max	N/A
Oxid. Stability, wt.% Sludge @ 164h	ASTM D2440	0.01	0.2 max	0.05 max
Oxid. Stability, Neut # mg KOH/g @ 164h	ASTM D2440	<0.01	0.4 max	0.2 max
Inhibitor Content, wt%	ASTM D2668	0.22	> 0.08 - 0.30	> 0.08 - 0.40
Rotary Pressure Vessel Oxidation Test, min	ASTM D2112	280	195 min	195 min
ELECTRICAL PROPERTIES				
Dielectric Breakdown Voltage, @ 60Hz Disk Electrode, min, kV	ASTM D877	55	30 min	30 min
Dielectric Breakdown Voltage, @ 60Hz 1 mm gap, min, kV	ASTM D1816	44	20 min	24 min *
2 mm gap, min, kV		60		56 min **
Dielectric Breakdown Impulse, kV	ASTM D3300	>300	145 min	145 min
Gassing Tendency, uL/min	ASTM D2300	+22	+30 max	N/A
Power Factor @ 60Hz, 100°C, ppm (w%)	ASTM D924	0.0038ppm (0.038 w%)	(0.30 max)	0.005 max
Power Factor @ 60Hz, 25°C, ppm (w%)	ASTM D924	0.00001ppm (0.001w%)	(0.05 max)	0.0005 max
The figures above are typical of normal production tolerances and do not constitute a specification.				

* Following transport (unprocessed oil).

** After filtering, drying and degasification (new processed oil).