

1. Product and Company Identification

PRODUCT NAME: **UNIVAC 220**
MATERIAL USES: Fire Resistant Hydraulic Fluid
COMPANY: Inland Vacuum Industries
35 Howard Ave
Churchville NY 14428
(585) 293-3330

2. Hazards Identification

Classification of the Substance or the Mixture

Signal word : **Warning**
Hazard statements : **H411** - Toxic to aquatic life with long lasting effects
Label Elements :



Precautionary statements : P273 - Avoid release to the environment
P391 - Collect spillage
P501 - Dispose of contents/container in accordance with national and international regulations

3. Composition/information on ingredients

Substance Details

Components	Weight %	Index No.	EC No.	EU Classification
t-Butylphenyl diphenyl phosphate 56803-37-3	30 - 35		260-391-0	None
Bis(t-butylphenyl)phenyl phosphate 65652-41-7	30 - 35		265-859-8	None
Tri(t-butylphenyl) phosphate 78-33-1	10 - 15		201-106-1	None
Triphenyl phosphate 115-86-6	15 - 25		204-112-2	Aquatic Acute 1, H400 Aquatic Chronic 1, H410 (In accordance with CLP 1272/2008) N;R50/53 (In accordance with DSD 67/548/EEC)

4. First aid measures

Eye Contact	: Immediately flush eyes with plenty of water occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get Medical Attention.
Inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth to mouth resuscitation. Maintain an open airway. Get medical attention if symptoms occur.
Ingestion	: Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. get medical attention if symptoms occur.
To Physician	: Treat symptomatically. Contact poison specialist if product has been ingested.
Specific Treatment	: No Specific Treatment
Protection of First Aiders	: No action should be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
Note To Doctor	: Aspiration during swallowing or vomiting may severely damage the lungs. If evacuation of stomach contents is necessary, use method least likely to cause aspiration.

5. Fire-fighting measures

Suitable extinguishing media	Material is not combustible. Use extinguishing media appropriate to surrounding fire conditions.
Fire fighting procedure	Fire fighters should wear full protective clothing and self-contained Breathing apparatus (SCBA). Contain runoff to prevent entry into water or drainage systems.
Unusual fire and explosion hazards	When heated to decomposition, may release poisonous and corrosive fumes of Carbon Dioxide, Carbon Monoxide and Phosphorus Oxides. The material is not sensitive to ignition from static discharge.

6. Accidental release measures

Personal precautions	Wear appropriate safety clothing and eye/face protection (see Section 8)
Methods for cleaning up	Soak up with sand or other suitable absorbent and dispose of as solid waste. Collect in suitable and properly labeled containers. Ventilate area and wash spill site after material pickup is complete.
Environmental precautions	Prevent product from entering drains, ditches and rivers.

7. Handling and storage

Handling

Avoid bodily contact. Keep containers tightly closed.

Storage

Store in a dry, cool, well-ventilated area away from incompatible materials (see "materials to avoid").
Maximum recommended storage temperature of 65°C (149°F)
Crystallizes at temperatures below 4.4°C (40°F).

8. Exposure controls/personal protection**Exposure Limits :**

Components	ACGIH-TLV Data	OSHA (PEL) Data
t-Butylphenyl diphenyl phosphate 56803-37-3	Not determined	Not determined
Bis(t-butylphenyl)phenyl phosphate 65652-41-7	Not determined	Not determined
Tri(t-butylphenyl) phosphate 78-33-1	Not determined	Not determined
Triphenyl phosphate 115-86-6	3 mg/m ³	3 mg/m ³

Ventilation requirements

Ventilation must be sufficient to maintain atmospheric concentration below recommended exposure limit.

Personal protective equipment:

- **Respiratory protection** In case of insufficient ventilation wear suitable respiratory equipment.
- **Hand protection** Protective gloves
- **Eye protection** Chemical safety goggles
- **Skin and body protection** Body covering clothes and boots

Personal protective equipment (pictograms)**Hygiene measures**

Safety shower and eye bath should be provided. Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking.

9. Physical and chemical properties**GENERAL INFORMATION**

Physical State: Liquid
Form: Clear
Color: Yellow
Odor: Slight
Odor Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 15.6 °C): 1.15 g/ml
Flammability (Solid, Gas): N/A
Flash Point [Method]: 246°C (475°F) [closed cup]
Flammable Limits /Explosive limits: Not explosive/Not flammable
Autoignition Temperature: Not self-ignitable
Boiling Point / Range: >400°C
Decomposition Temperature: N/D
Vapor Density (Air = 1): >1
Vapor Pressure: 0.012mmHg @20°C
Evaporation Rate (n-butyl acetate = 1): N/D
pH: N/A
Log Pow (n-Octanol/Water Partition Coefficient): N/D
Solubility : 1.0 ug/ml
Viscosity: 219 SUS at 38 °C

OTHER INFORMATION

Freezing Point: N/D
Melting Point: N/D
Pour Point: < -17.7°C (0°F)

10. Stability and reactivity

Stability	Stable under normal conditions.
Materials to avoid	Strong oxidizers, strong acids and strong alkalis. It hydrolyzes slowly at normal temperatures in acidic or alkaline aqueous solutions.
Conditions to avoid	Exposure to moisture
Hazardous decomposition products	Phosphorus oxides, Carbon dioxide and carbon monoxide
Hazardous polymerization	Not expected to occur

11. Toxicological information

Acute toxicity:	
- Rat oral LD50	> 5000 mg/kg
- Rabbit dermal LD50	> 2000 mg/kg
- Rat inhalation LC50	> 3.1 mg/l
- Dermal irritation (rabbit)	Mild irritant
- Eye irritation (rabbit)	Mild irritant
Sub-chronic toxicity:	
- NOEL	100 ppm (13 weeks oral rat)
Effects of overexposure :	
- Ocular	May cause mild irritation to the eyes
- Dermal	May cause mild irritation to the skin
- Sensitization	No sensitizing effects known
- Inhalation	No effects observed at highest attainable concentration.
Chronic toxicity	No data available
Mutagenicity	Not mutagenic by the Ames Test and by mouse lymphoma assay. Negative in chromosome aberration and sister chromatid exchange tests in

mouse lymphoma cells.

Carcinogenicity

Not included in NTP 11th Report on Carcinogens Not classified by IARC

Reproductive toxicity

Butylated triphenyl phosphate did not demonstrate reproductive toxicity. In a rat reproduction study, male and female animals received either 50, 250 or 1000 mg/kg/day for several weeks after which they mated. There was no reproductive toxicity observed at any dose level. Diagnostic pathology confirmed no alterations to the reproductive organs. There was no effect on mating index, litter size, survival of the offspring or on any other measured parameter.

Teratogenicity

Not teratogenic when administered orally up to 1000 mg/kg

Neurotoxicity

No signs of acute delayed neurotoxicity when administered orally to hens at 23 g/kg

12. Ecological information

Note:

The following data refer to studies conducted with similar product Containing >25% triphenyl phosphate

Aquatic toxicity :

- 96 Hour-LC50, Fish

0.8 mg/l (Ictalurus punctatus)

- 48 Hour-EC50, Daphnia magna

202 ug/L

Biodegradation

Readily biodegradable

Bioaccumulative potential

The wholefish BCF was found to be 1850.

13. Disposal considerations

Waste treatment methods

: Dispose of according to Federal, State, Local, or Provincial regulations.

Disposal Methods

: Recycle used oil.

Waste Disposal

: Spent or discarded material is non-hazardous according to environmental regulations.

Contaminated packaging

: Recycle containers whenever possible!

14. Transport information

UN No.

3082

IMO

Proper shipping name: Environmentally hazardous substance, liquid, n.o.s (triphenyl phosphate, tert-butylated triphenyl phosphate mixtures containing 10% to 48% triphenyl phosphates)

Class: 9 - Miscellaneous Dangerous Substances and articles

Label:9

Mark: MARINE POLLUTANT

Packing Group: III

ADR/RID

Proper shipping name: Environmentally hazardous substance, liquid, n.o.s (triphenyl phosphate, tert-butylated triphenyl phosphate mixtures containing 10% and

48% triphenyl phosphates)
Classification Code: M6
Class: 9 - Miscellaneous Dangerous Substances and Articles
Danger Label Model No.: 9
Hazard identification No. 90
Packing group: III
Marking: Environmentally hazardous substance

ICAO/IATA

Proper shipping name: Environmentally hazardous substance, liquid , n.o.s
(triphenyl phosphate, tert-butylated triphenyl phosphate mixtures containing 10% to 48% triphenyl phosphates)
Class: 9
Hazard label(s): Miscellaneous
Packing group: III
Marking: Environmentally hazardous substance

DOT

Proper shipping name: Environmentally hazardous substances, liquid , n.o.s
(triphenyl phosphate, tert-butylated triphenyl phosphate mixtures containing 10% to 48% triphenyl phosphates)
Class: 9 - Miscellaneous Hazardous Material Label:
9
Packing Group: III

Not regulated for surface and air transport in non-bulk (<119 gallons) packagings.
(contains triphenyl phosphate which is a Marine Pollutant per 49CFR 172.101 Appendix B)

15. Regulatory information

EU

Reported in EINECS

- Indication of danger

N - Dangerous for the Environment.

- R Phrases

R 51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

- S Phrases

S61: Avoid release to the environment. Refer to special instructions/Safety data sheets.

USA

Reported in the EPA TSCA Inventory.

Australia

Listed in AICS

Canada

Listed in DSL

China inventory

Listed in IECSC

Japan

Listed in ENCS

Korea

Listed in ECL

New Zealand Inventory

Listed in NZIoC

Philippines

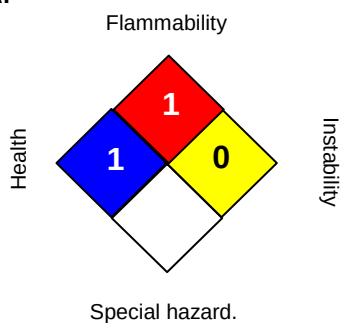
Listed in PICCS

16. Other information

N/D = Not determined, N/A = Not applicable

The customer is responsible for determining the PPE code for this material.

NFPA:



HMIS III:

HEALTH	1
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

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