

SAFETY DATA SHEET

Product name	FYRQUEL EHC PLUS	
Product id	7080	
Revision date	30/05/2016	Revision: 8
Supersedes	31/03/2014	

1. Identification of the substance & the company

Chemical name	Phenol, isobutylenated, phosphate (3:1)
Synonym(s)	Butylated triphenyl phosphate ester.
Chemical family	Aryl phosphate
Type of product and use	Fire-resistant hydraulic fluid
Company	ICL-IP America Inc. 622 Emerson Road - Suite 500 St Louis, Missouri 63141, USA Phone - 1 800 666 1200

Emergency telephone number:

- For Europe	+32 (0) 3 575 5555 SGS
- For USA	Chemtrec (800) 424-9300
- For Asia - Pacific	ALERT-SGS 24 hr Toll Free Number : +800 ALERTSGS (+800-2537-8747) 24 hr Singapore Exchange Number : +65 6542-9595
- For Japan	Tel: 03-6801 8430: 03-6801 6970

2. Hazards identification

GHS Product is not subject to classification according to GHS. No label elements required.

NFPA Ratings (Scale 0-4) Health = 1, Fire = 1, Reactivity = 0

3. Composition / information on ingredients

Components	Weight %	Index No.	EC No.	EU Classification
Triphenyl phosphate 115-86-6	0-4		204-112-2	Aquatic Acute 1, H400 Aquatic Chronic 2, H411
t-Butylphenyl diphenyl phosphate 56803-37-3	32-78		260-391-0	-
Bis(t-butylphenyl)phenyl phosphate 65652-41-7	10-40		265-859-8	-

SAFETY DATA SHEET

Product name	FYRQUEL EHC PLUS		
Product id	7080		
Revision date	30/05/2016	Revision: 8	
Supersedes	31/03/2014		

tri(t-butylphenyl) phosphate 78-33-1	0-10			-
---	------	--	--	---

This product can also be described as: CAS No. 68937-40-6 , Phenol, isobutyleneated, phosphate (3:1)

4. First-aid measures

Eye contact	Holding the eyelids apart, flush eyes promptly with copious flowing water for at least 20 minutes. Get medical attention immediately.
Skin contact	Remove contaminated clothing. Wash skin thoroughly with mild soap and plenty of water for at least 15 minutes. Wash clothing before reuse. Get medical attention if irritation persists.
Inhalation	In case of mist inhalation or breathing fumes released from heated material, remove person to fresh air. Keep him quiet and warm. Apply artificial respiration if necessary and get medical attention immediately.
Ingestion	If swallowed, wash mouth thoroughly with plenty of water. Get medical attention immediately.

NOTE: Never give an unconscious person anything to drink

Symptoms / Effects, Acute and Delayed No specific information available

Most important symptoms and effects, acute or delayed

None known

Notes to the physician Treat symptomatically and supportively.
No specific antidote.

5. Fire - fighting measures

Suitable extinguishing media	Use extinguishing media appropriate to surrounding fire conditions.
Unusual fire and explosion hazards	When heated to decomposition, may release poisonous and corrosive fumes of carbon dioxide, carbon monoxide and phosphorus oxides.
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.

6. Accidental release measures

Personal precautions Wear appropriate safety clothing and eye/face protection (see Section 8)

SAFETY DATA SHEET

Product name	FYRQUEL EHC PLUS	
Product id	7080	
Revision date	30/05/2016	Revision: 8
Supersedes	31/03/2014	

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 50°C (122°F) Store above 4.4°C (40° F) for improved pumping rates. Temperatures between 27 - 37.8°C (80 - 100°F) provide good flow rates.

8. Exposure controls / personal protection

Exposure Limits :

Components	ACGIH-TLV Data	OSHA (PEL) Data
Triphenyl phosphate 115-86-6	3 mg/m ³	3 mg/m ³
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

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** Neoprene gloves
- **Eye protection** Chemical splash goggles and/or face shield if splash hazard exists
- **Skin and body protection** Body covering clothes and boots

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

9. Physical and chemical properties

Appearance Clear liquid

SAFETY DATA SHEET

Product name	FYRQUEL EHC PLUS	
Product id	7080	
Revision date	30/05/2016	Revision: 8
Supersedes	31/03/2014	

Odor	Slight.
Melting point/range	-21°C
Boiling point/range	>400°C (762mmHg)
Flash point	>246°C (>475°F) (closed cup)
Evaporation rate (ether=1)	Not available
Flammability (solid, gas)	Not applicable
Flammable/Explosion limits	Not flammable/Not explosive
Vapor pressure	1.08x10 ⁽⁻³⁾ Pa (20°C)
Vapor density	Not available
Density	1.16-1.18 g/mL (25°C)
Solubility:	
- Solubility in water	121 µg/l (20°C) Based on primary component
Partition coefficient (n-octanol/water)	Log Pow : 5.61
Auto-ignition temperature	Not self-ignitable
Viscosity	42-46 cSt. (40°C)
Ignition temperature	593°C (1100°F)
Explosive properties	There are no chemical groups associated with explosive properties present in the molecule
Oxidising properties	The structure indicates non oxidizing properties

10. Stability and reactivity

Reactivity	No reactive hazards known/expected.
Stability	Stable under normal conditions
Possibility of hazardous reactions	Not expected to occur
Conditions to avoid	Heating above decomposition temperature.
Materials to avoid	Strong oxidizers, strong acids and strong alkalis. It hydrolyzes slowly at normal temperatures in acidic or alkaline aqueous solutions.
Hazardous decomposition products	Phosphorus oxides Carbon dioxide and carbon monoxide

11. Toxicological information

Note: *The toxicological data refer to a similar product*

Acute toxicity:

- Rat oral LD50	> 5000 mg/kg
- Rabbit dermal LD50	> 2000 mg/kg
- Rat inhalation LC50	> 0.4 mg/l

SAFETY DATA SHEET

Product name	FYRQUEL EHC PLUS	
Product id	7080	
Revision date	30/05/2016	Revision: 8
Supersedes	31/03/2014	

- Dermal irritation (rabbit)	Not irritant
- Eye irritation (rabbit)	Not irritant
Dermal sensitization	Not a sensitizer
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 13th 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
Specific Target Organ Toxicity (STOT) - Single exposure	No effects on specific target organs have been identified
Specific Target Organ Toxicity (STOT) - Repeat exposure	NOAEL 107.5 mg/kg bw /day (90 days oral, male rat) NOAEL 124.8 mg/kg bw /day (90 days oral, female rat)
Aspiration hazard	Not expected to occur
Neurotoxicity	No signs of acute delayed neurotoxicity when administered orally to hens at 11.7 g/kg

12. Ecological information

Aquatic toxicity :	No effects on aquatic organisms occurred at concentrations up to the substances water solubility.
Biodegradation	Readily biodegradable
Bioaccumulative potential	Not bioaccumulative The wholefish BCF was found to be 1850.
Mobility in soil	Not relevant
Note:	Not considered to be PBT or vPvB

SAFETY DATA SHEET

Product name	FYRQUEL EHC PLUS	
Product id	7080	
Revision date	30/05/2016	Revision: 8
Supersedes	31/03/2014	

13. Disposal considerations

Waste disposal	Dispose of in a safe manner in accordance with local/national regulations.
Disposal of Packaging	Dispose of in a safe manner in accordance with local/national regulations.

14. Transportation information

IMDG	Not regulated
ADR/RID	Not regulated
ICAO/IATA	Not regulated
DOT	Not regulated

15. Regulatory information

EU	Reported in EINECS
EC No.	939-505-4
USA	Reported in the EPA TSCA Inventory.
Australia	Listed in AICS
Canada	Listed in DSL
China	
- China inventory	Listed in IECSC
- Hazardous Chemicals List	The substance is not included
- Toxic Chemicals List	The substance is not included
Japan	Listed in ENCS
Korea	Listed in ECL
New Zealand Inventory	Listed in NZIoC
Philippines	Listed in PICCS
Taiwan	Listed

SAFETY DATA SHEET

Product name	FYRQUEL EHC PLUS	
Product id	7080	
Revision date	30/05/2016	Revision: 8
Supersedes	31/03/2014	

16. Other information

This data sheet contains changes from the previous version in section(s)

1, 3, 8, 11, 12, 15

Health, Safety & Environment Policy

We will strive to ensure that our operations and products meet the needs of the present global community without compromising the ability of future generations to meet their needs We accept that the success of our business is dependent on the supply of products and services that will benefit society whilst ensuring human safety and protection of the environment and natural resources Within the framework of our commitment to the Responsible Care program, we will provide a healthy and safe work environment for employees and will responsibly manage our products at all stages of their life cycle in order to protect human health and the environment whilst maintaining high production standards of operation

TO MEET THIS COMMITMENT WE WILL: Comply with or exceed applicable national and international regulatory requirements and other requirements to which we subscribe Communicate openly and actively encourage dialogue with employees, customers and community concerning our products and operations Implement documented management systems consistent with and for promotion of the Responsible Care ethics

Develop and supply products that can be manufactured, transported, used and disposed of safely whilst best meeting the needs of our customers Regularly assess, continually improve and responsibly manage health, safety and environmental risks associated with products and processes throughout their life-cycles Share knowledge and expertise with others and seek to learn from and incorporate improved practices into our own operations

Educate and train employees, contractors and customers to improve their HSE performance Communicate up-to-date information to enable our workers, customers and other interested parties to handle our products in a safe and environmentally responsible manner Endeavor to work with customers, suppliers, distributors and contractors to foster the safe use, transport and disposal of our chemicals Support Product Stewardship programs in cooperation with customers, distributors and transporters

Although the information and recommendations set forth herein (hereinafter "information") are presented in good faith and believed to be correct as of the date hereof, ICL-IP America Inc. makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its safety and suitability for their purposes prior to use. In no event will ICL-IP America Inc. be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. **NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE, ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH THE INFORMATION REFERS.**

Prepared by HERA Division
telephone: +/972-8-6297835
telefax: +/972-8-6297832
www.icl-ip.com

End of safety data sheet