CARTER XEP

Engranes industriales

Lubricante de alto desempeño para engranes cerrados

APLICACIONES

Engranes altamente cargados.

- **CARTE XEP** es una nueva generación de lubricantes de alto rendimiento para reductores con alta carga. Las especificaciones más severas se tuvieron en cuenta cuando se desarrollo este producto, especialmente en materia de protección micropitting y propiedades anti corrosión.

ESPECIFICACIONES

Especificaciones Internacionales.

Especificaciones OEM´s

- DIN 51517 Parte 3 grupo CLP
- ISO 12925 categoría CKD
- AGMA 9005- D94
- US STEEL 224
- DAVID BROWN

VENTAJAS

- Excelente desempeño de extrema presión, remarcada protección de la sobre carga en los dientes de engranes contra el micropitting.
- Excelentes propiedades anti corrosivos, protección de los engranes en entornos críticos (agua de mar ó contaminación con agua acida)
- Muy buena estabilidad térmica asegurando una larga vida de servicio más que un lubricante convencional.
- Antiespumante reforzado. Buen demulsificante.

Total México S.A de C.V
Av. 8 de Julio 2462, Zona Industrial, CP 44940. Guadalajara, Jalisco, México
Conmutador. (0133) 3812-2300, Fax. (0133) 3810-6264
México (0155) 5311-3161 - Monterrey (0181) 8334-6381
www.total.com.mx

CARTER XEP

Engranes industriales

CARACTERISTICAS

CARACTERISTICA	METODO	CARTER XEP				
		150	220	320	460	680
Viscosidad a 40°C, cSt	ISO 3104	150	220	320	460	680
Viscosidad a 100 °C, cSt	ISO 3104	14,6	18,8	24	30,4	35,8
Indice de viscosidad	ISO 2909	96	95	95	95	85
Densidad a 15°C kg/m3	ISO 3675	889	893	898	904	920
Punto de inflamación, °C	ISO 2592	>230	>230	>230	>230	>230
Punto de escurrimiento, °C	ISO 3016	-27	-24	-18	-12	-9
Desgaste, FAG Fe8 mg	DIN 51819-3	<10	<10	<10	<10	<10
FZG A/8.3/90 etapa	DIN 51854/2	>13	>13	>13	>13	>13
FZG micropitting etapa de falla/GFT	FVA 54		>10/alto	>10/alto	>10/alto	>10/alto
Espuma secuencia 3 ml/ml	ISO 6614	0/0	0/0	0/0	0/0	0/0

Los valores típicos mostrados representan un promedio de resultados

CARTER XEP_V24092014

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MATERIAL SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

SDS # : 37290

CARTER XEP 460

Date of the previous version: 2011-11-28 **Revision Date:** 2012-06-05 **Version** 1.01

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name **CARTER XEP 460**
Number NFU
Pure substance/mixture Mixture

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Industrial gear oil.

1.3. Details of the supplier of the safety data sheet

Supplier

TOTAL LUBRIFIANTS
562 Avenue du Parc de L'ile
92029 Nanterre Cedex
Tél: +33 (0)1 41 35 40 00
Fax: +33 (0)1 41 35 84 71

For further information, please contact

Contact Point HSE
E-mail Address rm.msds-lubs@total.com

1.4. Emergency telephone number

+33 1 49 00 00 49 (24h/24, 7d/7)
France - ORFILA (INRS) Tél : +33 (0)1 45 42 59 59
In France : - PARIS : Hôpital Fernand Widal 200, rue du Faubourg Saint-Denis 75475 Paris Cédex 10 , Tel : 01.40.05.48.48. - MARSEILLE : Hopital Salvator, 249 bd Ste Marguerite 13274 Marseille cedex 5, Tel : 04.91.75.25.25. - LYON : Hopital Edouard Herriot, 5 place d'Arsonvol, 69437 Lyon cedex 3, Tel : 04.72.11.69.11. - NANCY : Hopital central, 29 Av du Mal De Lattre de Tassigny, 54000 Nancy, Tel : 03.83.32.36.36 ou le SAMU : Tel (15)

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008
For the full text of the H-Statements mentioned in this Section, see Section 2.2.

DIRECTIVE 67/548/EEC or 1999/45/EC
For the full text of the R-phrases mentioned in this Section, see Section 16

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The substance/mixture is non-dangerous in accordance with Directive(s) 67/548/EEC with amendments and/or 1999/45/EC with amendments

Symbol(s)
Not Classified

2.2. Label elements

Labelled according to Directive 1999/45/EC

R-phrase(s)
none

S-phrase(s)
none

Contains Reaction products of bis(4- methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched) . May produce an allergic reaction.

2.3. Other hazards

Physical-Chemical Properties Contaminated surfaces will be extremely slippery.

Environmental properties Should not be released into the environment.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixture

Chemical Name	EC-No	REACH registration No	CAS-No	Weight %	Classification (Dir. 67/548)	Classification (Reg. 1272/2008)
Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched)	931-384-6	01-2119493620-38	^	< 0.5	Xn;R22 Xi;R41 R43 N;R51-53	Acute Tox. 4 (H302) Aquatic Chronic 2 (H411) Eye Dam. 1 (H318) Flam. Liq. 3 (H226) Skin Sens. 1 (H317)

Additional information Product containing mineral oil with less than 3% DMSO extract as measured by IP 346

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For the full text of the R-phrases mentioned in this Section, see Section 16
For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1. Description of first-aid measures

General advice	IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, CALL A DOCTOR OR EMERGENCY MEDICAL CARE.
Eye contact	Rinse thoroughly with plenty of water, also under the eyelids.
Skin contact	Remove contaminated clothing and shoes. Wash skin with soap and water. Wash contaminated clothing before reuse. In the case of skin irritation or allergic reactions see a physician.
Inhalation	Move to fresh air
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.

4.2. Most important symptoms and effects, both acute and delayed

Eye contact	Not classified.
Skin contact	Not classified. May produce an allergic reaction.
Inhalation	Not classified. Inhalation of vapors in high concentration may cause irritation of respiratory system.
Ingestion	Not classified. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	Treat symptomatically

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media	Carbon dioxide (CO_2). ABC powder. Foam. Water spray or fog.
Unsuitable Extinguishing Media	Do not use a solid water stream as it may scatter and spread fire

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5.2. Special hazards arising from the substance or mixture

Special Hazard Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration.

5.3. Advice for fire-fighters

Special protective equipment for fire-fighters Wear self-contained breathing apparatus and protective suit

Other information Cool containers / tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

General Information Do not touch or walk through spilled material. Contaminated surfaces will be extremely slippery. Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition.

6.2. Environmental precautions

General Information Do not allow material to contaminate ground water system. Try to prevent the material from entering drains or water courses. Local authorities should be advised if significant spillages cannot be contained.

6.3. Methods and materials for containment and cleaning up

Methods for cleaning up Dam up. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

6.4. Reference to other sections

Personal Protective Equipment See Section 8 for more detail

Waste treatment See section 13

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

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Advice on safe handling	When using, do not eat, drink or smoke. For personal protection see section 8. Use only in well-ventilated areas. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing.
Prevention of fire and explosion	Take precautionary measures against static discharges: Ground/bond containers, tanks and transfer/receiving equipment.
Hygiene measures	Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Do not use abrasives, solvents or fuels. Do not dry hands with rags that have been contaminated with product. Do not put product contaminated rags into workwear pockets.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions	Keep away from food, drink and animal feedingstuffs. Keep in a bunded area. Keep container tightly closed. Keep preferably in the original container. Otherwise reproduce all indication of the regulation label on the new container. Do not remove the hazard labels of the containers (even if they are empty). Design the installations in order to avoid accidental emissions of product (due to seal breakage, for example) onto hot casings or electrical contacts. Protect from frost, heat and sunlight. Protect from moisture.
Materials to Avoid	Strong oxidizing agents.

7.3. Specific end uses

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits	oil mist : 10mg/m^3, for 15 minutes oil mist : 5mg/m^3, for 8 hours
Legend	See section 16

DNEL Worker (Industrial/Professional)

Chemical Name	Short term, systemic effects	Short term, local effects	Long term, systemic effects	Long term, local effects

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Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched) ^			12.5 mg/kg/8h (dermal) 8.56 mg/m³/8h (inhalation) (ECHA CHEM)	

DNEL Consumer

Chemical Name	Short term, systemic effects	Short term, local effects	Long term, systemic effects	Long term, local effects
Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched) ^			6.25 mg/kg/24h (dermal) 2.2 mg/m³/24h (inhalation) 0.25 mg/kg/24h (oral) (ECHA CHEM)	

Predicted No Effect Concentration (PNEC)

Chemical Name	Water	Sediment	Soil	Air	STP	Oral
Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched) ^	0.0012 mg/l (freshwater) 0.12 µg/L (marine water) (ECHA CHEM)	3.13 mg/kg (freshwater) 0.313 mg/kg (marine water) (ECHA CHEM)	2.54 mg/kg soil dw (ECHA CHEM)		24.33 mg/L (ECHA CHEM)	10 mg/kg food (ECHA CHEM)

8.2. Exposure controls

Occupational Exposure Controls

Engineering Measures Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

Personal Protective Equipment

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General Information	If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers. These recommendations apply to the product as supplied.
Respiratory protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Respirator with combination filter for vapour/particulate (EN 141). The use of breathing apparatus must comply strictly with the manufacturer's instructions and the regulations governing their choices and uses.
Eye Protection	If splashes are likely to occur, wear:. Safety glasses with side-shields.
Skin and body protection	Wear suitable protective clothing. Protective shoes or boots. Long sleeved clothing.
Hand Protection	Hydrocarbon-proof gloves: Fluorinated rubber, Nitrile rubber. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves.

Environmental exposure controls

General Information	The product should not be allowed to enter drains, water courses or the soil

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Color	beige
Physical State @20°C	liquid
Odor	Characteristic

Property	Values	Remarks	Method
pH		Not applicable	
Boiling point/boiling range		Not applicable	
Flash point	**244 °C**		Cleveland Open Cup (COC)
	471 °F		Cleveland Open Cup (COC).
Evaporation rate		No information available	
Flammability Limits in Air		No information available	
Vapor Pressure		No information available	
Vapor density		No information available	
Density	910 kg/m^3	@ 15 °C	ISO 3675
Water solubility		Insoluble	

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Solubility in other solvents		No information available	
logPow		No information available	
Autoignition temperature		No information available	
Viscosity, kinematic	460 mm2/s	@ 40 °C	ISO 3104
	30.9 mm2/s	@ 100 °C	ISO 3104

Explosive properties	Not explosive
Oxidizing Properties	Not applicable
Possibility of hazardous reactions	Not applicable

9.2. Other information

10. STABILITY AND REACTIVITY

10.1. Reactivity

General Information No information available.

10.2. Chemical stability

Stability Stable under recommended storage conditions

10.3. Possibility of hazardous reactions

Hazardous Reactions None under normal processing

10.4. Conditions to Avoid

Conditions to Avoid Heat (temperatures above flash point), sparks, ignition points, flames, static electricity.

10.5. Incompatible Materials

Materials to Avoid Strong oxidizing agents.

10.6. Hazardous Decomposition Products

Hazardous Decomposition Products None under normal use

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity Local effects Product Information

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Skin contact Not classified. May produce an allergic reaction.

Eye contact Not classified.

Inhalation Not classified. Inhalation of vapors in high concentration may cause irritation of respiratory system.

Ingestion Not classified. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Acute toxicity Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched)	LD50 = 2000 mg/kg bw (rat - OECD TG 401) (ECHA CHEM)	-	-

Sensitization

Sensitization Not classified as a sensitizer. Contains sensitizer(s). May produce an allergic reaction.

Specific effects

Carcinogenicity This product is not classified carcinogenic.

Mutagenicity This product is not classified as mutagenic.

Reproductive toxicity This product does not contain any known or suspected reproductive hazards.

Repeated Dose Toxicity

Subchronic toxicity No information available.

Target Organ Effects (STOT)

Target Organ Effects (STOT) No information available.

Other information

Other adverse effects Characteristic skin lesions (pimples) may develop following prolonged and repeated exposures (contact with contaminated clothing).

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12. ECOLOGICAL INFORMATION

12.1. Toxicity

Not classified.

Acute aquatic toxicity Product Information
No information available.

Acute aquatic toxicity Component Information
.

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Toxicity to microorganisms
Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched) ^	EL50 (96h) > 15 mg (Selenastrum capricornutum - OECD 201) (ECHA CHEM)	EL50 (48h) ca. 91.4 mg/L (Daphnia magna - OECD 202) (ECHA CHEM)	LL50 (96h) ca. 24 mg/L (Oncorhynchus mykiss - OECD TG 203) (ECHA CHEM)	

Chronic aquatic toxicity Product Information
No information available.

Chronic aquatic toxicity Component Information
.

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Toxicity to microorganisms
Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched) ^	EC50 (96h) 6.4 mg/L (Selenastrum capricornutum/Pseudokirchnerella subcapitata - OECD TG 201) (ECHA CHEM)	EL50 (21d) 0.91 mg/L (Daphnia magna - OECD TG 211) (ECHA CHEM)	-	EC50 (3h) ca. 2433 mg/L (Activated Sludge, domestic - OECD TG 209) (ECHA CHEM)

Effects on terrestrial organisms
No information available.

12.2. Persistence and degradability

General Information
No information available

12.3. Bioaccumulative potential

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Product Information No information available

logPow No information available

Component Information

Chemical Name	log Pow
Reaction products of bis(4- methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched) - ^	< 0.30 to >7.10 (OECD TG 117) (ECHA CHEM)

12.4. Mobility in soil

Soil Given its physical and chemical characteristics, the product generally shows low soil mobility.

Air Loss by evaporation is limited.

Water Insoluble. The product spreads on the surface of the water.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment No information available.

12.6. Other adverse effects

General Information No information available.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues / Unused Products Should not be released into the environment. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations. Where possible recycling is preferred to disposal or incineration. After use, this oil must be sent to a licensed waste oil facility. Incorrect disposal of used oil poses a risk to the environment. Mixture with other waste types such as solvents, brake- and cooling liquids is forbidden.

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal

EWC Waste Disposal No. The following Waste Codes are only suggestions:. 13 02 05. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

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14. TRANSPORT INFORMATION

ADR/RID	Not regulated
IMDG/IMO	Not regulated
ICAO/IATA	Not regulated
ADN	Not regulated

15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

European Union

International Inventories

EINECS/ELINCS	-
TSCA	-
DSL	-
ENCS	-
IECSC	-
KECL	-
PICCS	-
AICS	-
NZIoC	-

Legend

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals

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Further information

15.2. Chemical Safety Assessment

Chemical Safety Assessment No information available

16. OTHER INFORMATION

Full text of R-phrases referred to under sections 2 and 3
R43 - May cause sensitization by skin contact
R41 - Risk of serious damage to eyes
R22 - Harmful if swallowed
R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Full text of H-Statements referred to under section 2 and 3
H302 - Harmful if swallowed
H411 - Toxic to aquatic life with long lasting effects
H318 - Causes serious eye damage
H226 - Flammable liquid and vapor
H317 - May cause an allergic skin reaction

Abbreviations, acronyms

Legend Section 8

+	Sensitizer	*	Skin designation
**	Hazard Designation	C:	Carcinogen
M:	Mutagen	R:	Toxic to reproduction

Revision Date: 2012-06-05
Revision Note *** Indicates updated section
This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

This safety data sheet serves to complete but not to replace the technical product sheets. The information contained herein is given in good faith and is accurate to the best of knowledge at the date indicated above.It is understood by the user that any use of the product for purposes other than those for which it was designed entails potential risk.The information given herein in no way dispenses the user from knowing and applying all provisions regulating his activity.The user bears sole liability for the precautions required when using the product.The regulatory texts indicated herein are intended to aid the user to fulfil his obligations. This list is not to be considered complete and exhaustive.It is the user's responsibility to ensure that he is subject to no other obligations than those mentioned.

End of the safety data sheet