

GEAR POWER TO-4 50

Heavy Duty Powershift Transmission Fluid

GEAR POWER TO-4 50 is specifically designed for powershift transmissions, final drives and wet brakes on heavy duty off-highway equipment used in earthmoving, mining logging, road transport and agricultural applications.

GEAR POWER TO-4 50 is formulated with a high refined solvent mineral base stock in combination with a special additive package to reach the following properties.

- Excellent thermal- and oxidation stability.
- Very good dispersancy and detergency.
- High anti-foam, anti-wear and anti-corrosion properties.
- Excellent protection against Bore Polishing.
- Extended drain intervals possible.

GEAR POWER TO-4 50 meets the following performance criteria:

Caterpillar TO-4

Komatsu KES 07.868.1

Tremac/ TTC

API CF-2/CF

Typical Analysis

Properties	Unit	Method	Typical Value
SAE Grade		SAE J300	50
Density @15°C	kg/m ³	ASTM D4052	899
Kin. Viscosity @40°C	mm ² /s	ASTM D7042	223
Kin. Viscosity @100°C	mm ² /s	ASTM D7042	18.7
Viscosity Index		ASTM D2270	93
Flash Point COC	°C	ASTM D92	>201
Pour Point	°C	ASTM D7346	-28
Total Base Number	mgKOH/g	ASTM D2896	5.9
Date Issued: 16-6-2021		Supersedes: 20-12-2017	Revision Nr.: 02



SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : 73150 - GEAR POWER TO-4 50
Product code : 73150
Type of product : Lubricant

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

1.2.1. Relevant identified uses

Main use category : Professional use
Function or use category : Lubricants and additives

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

North Sea Lubricants B.V. B.V.
Ampèrestraat 5
NL- 3846AN Harderwijk
The Netherlands
T +31 651345369
support@northsealubricants.com - www.northsealubricants.com

1.4. Emergency telephone number

Emergency number : +31 (0)786527652
Monday to Friday: 09:00 - 16:00 (CET)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

EUH-statements : EUH208 - Contains Benzene, polypropene derivatives, sulfonated, calcium salts(75975-85-8). May produce an allergic reaction.
EUH210 - Safety data sheet available on request.

2.3. Other hazards

Component

Nonylphenol, branched, ethoxylated (68412-54-4)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
---	---

The mixture contains substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

73150 - GEAR POWER TO-4 50

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Component	
Mineral oil	The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
Nonylphenol, branched, ethoxylated(68412-54-4)	The substance is included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil substance with national workplace exposure limit(s) (BE, BG, CZ, DK, HR, NL, NO); substance with a Community workplace exposure limit	CAS-No.: 64742-54-7 EC-No.: 265-157-1 EC Index-No.: 649-467-00-8 REACH-no: 01-2119484627-25	25 – 50	Asp. Tox. 1, H304
Zinc bis[bis(tetrapropylphenyl)] bis(hydrogen dithiophosphate)	CAS-No.: 11059-65-7 EC-No.: 234-277-6 REACH-no: 01-2119972705-28	1 – 5	Aquatic Chronic 3, H412
Mineral oil substance with national workplace exposure limit(s) (BE, BG, CZ, ES, FI, GR, LT, LV, NL, PL, SE); substance with a Community workplace exposure limit	-	1 – 5	Not classified
Benzene, polypropene derivatives, sulfonated, calcium salts	CAS-No.: 75975-85-8 EC-No.: 616-278-7 REACH-no: 01-2120040541-70	0.05 – 0.5	Skin Sens. 1B, H317

73150 - GEAR POWER TO-4 50

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
<p>Nonylphenol, branched, ethoxylated substance listed as REACH Candidate (4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof])</p> <p>substance listed in REACH Annex XIV (4-Nonylphenol, branched and linear, ethoxylated (substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof))</p> <p>substance identified as having endocrine disrupting properties</p>	<p>CAS-No.: 68412-54-4</p> <p>EC-No.: 500-209-1</p> <p>REACH-no: 01-2119485218-31</p>	0.05 – 0.5	<p>Aquatic Acute 1, H400</p> <p>Aquatic Chronic 1, H410 (M=10)</p>

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

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

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

73150 - GEAR POWER TO-4 50

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil (64742-54-7)

EU - Indicative Occupational Exposure Limit (IOEL)

IOEL TWA	5 mg/m ³
----------	---------------------

Mineral oil

EU - Indicative Occupational Exposure Limit (IOEL)

IOEL TWA	5 mg/m ³
----------	---------------------

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

73150 - GEAR POWER TO-4 50

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

No additional information available

8.2.2.2. Skin protection

Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Reusable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	>0.35		EN ISO 374

8.2.2.3. Respiratory protection

No additional information available

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Not available
Odour	: Not available
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: -24 °C
Boiling point	: Not available
Flammability	: Not applicable
Explosive limits	: Not available
Lower explosive limit (LEL)	: Not available
Upper explosive limit (UEL)	: Not available
Flash point	: > 220 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: 205 mm ² /s @40°C
Solubility	: insoluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: 900 kg/m ³
Relative density	: Not available

73150 - GEAR POWER TO-4 50

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Relative vapour density at 20 °C	: Not available
Particle size	: Not applicable
Particle size distribution	: Not applicable
Particle shape	: Not applicable
Particle aspect ratio	: Not applicable
Particle aggregation state	: Not applicable
Particle agglomeration state	: Not applicable
Particle specific surface area	: Not applicable
Particle dustiness	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil (64742-54-7)	
LD50 oral (rat)	> 5000 mg/kg bodyweight
LD50 dermal (rabbit)	> 5000 mg/kg
LC50 inhalation (rat) (Vapours - mg/l/4h)	> 5.53 mg/l/4h
Mineral oil	
LD50 oral (rat)	> 5000 mg/kg
LD50 dermal (rabbit)	> 5000 mg/kg
LC50 inhalation (rat) (Dust/Mist - mg/l/4h)	> 5000 mg/l/4h

73150 - GEAR POWER TO-4 50

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified

Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil (64742-54-7)

LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight
----------------------------	----------------------

Aspiration hazard : Not classified

73150 - GEAR POWER TO-4 50

Viscosity, kinematic	205 mm ² /s @40°C
----------------------	------------------------------

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil (64742-54-7)

LC50 - Fish [1]	> 100 mg/l Pimephales promelas
EC50 - Crustacea [1]	> 10000 mg/l Daphnia magna
NOEC chronic fish	1000 mg/l Oncorhynchus mykiss
NOEC chronic crustacea	10 mg/l Daphnia magna
NOEC chronic algae	> 100 mg/l Pseudokirchneriella subcapitata

Benzene, polypropene derivatives, sulfonated, calcium salts (75975-85-8)

NOEC (acute)	100 mg/l
--------------	----------

Nonylphenol, branched, ethoxylated (68412-54-4)

LC50 - Fish [1]	218 µg/l Pimephales promelas
EC50 72h - Algae [1]	3 mg/l
NOEC chronic fish	148 µg/L
NOEC chronic crustacea	6 µg/L

Mineral oil

LC50 - Fish [1]	> 100 mg/l Pimephales promelas
EC50 - Crustacea [1]	> 10000 mg/l
EC50 72h - Algae [1]	> 100 mg/l Scenedesmus quadricauda

73150 - GEAR POWER TO-4 50

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

12.2. Persistence and degradability

Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil (64742-54-7)

Persistence and degradability	Not readily biodegradable.
Biodegradation	31 % 28 d OECD 301F

Nonylphenol, branched, ethoxylated (68412-54-4)

Persistence and degradability	Not readily biodegradable.
-------------------------------	----------------------------

Mineral oil

Biodegradation	31 %
----------------	------

12.3. Bioaccumulative potential

Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil (64742-54-7)

Partition coefficient n-octanol/water (Log Kow)	> 4
---	-----

Benzene, polypropene derivatives, sulfonated, calcium salts (75975-85-8)

Partition coefficient n-octanol/water (Log Kow)	10.88
---	-------

Nonylphenol, branched, ethoxylated (68412-54-4)

Partition coefficient n-octanol/water (Log Pow)	5.39
Bioaccumulative potential	Bioaccumulative potential.

12.4. Mobility in soil

Nonylphenol, branched, ethoxylated (68412-54-4)

Ecology - soil	Adsorbs into the soil.
----------------	------------------------

12.5. Results of PBT and vPvB assessment

Component

Nonylphenol, branched, ethoxylated (68412-54-4)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
---	---

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

73150 - GEAR POWER TO-4 50

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

14.6. Special precautions for user

Overland transport

No data available

Transport by sea

No data available

Air transport

No data available

Inland waterway transport

No data available

Rail transport

No data available

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains a substance on the REACH candidate list in concentration $\geq 0.1\%$ or with a lower specific limit: 4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof] (EC 500-209-1, CAS 68412-54-4)

Contains REACH Annex XIV substances: 4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof] (EC 500-209-1, CAS 68412-54-4)

Substances subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals: Nonylphenol ethoxylates (C₂H₄O)_nC₁₅H₂₄O (68412-54-4)

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

73150 - GEAR POWER TO-4 50

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Full text of H- and EUH-statements:	
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1
EUH208	Contains Benzene, polypropene derivatives, sulfonated, calcium salts(75975-85-8). May produce an allergic reaction.
EUH210	Safety data sheet available on request.
H304	May be fatal if swallowed and enters airways.
H317	May cause an allergic skin reaction.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
Skin Sens. 1B	Skin sensitisation, category 1B

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.