



BorgWarner Fluid Gen II-V

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Issue date: 11-12-2015 Revision date: 3-12-2020 Supersedes: 26-10-2020 version: 1.6

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

1.1. Product identifier

Product name : BorgWarner Fluid Gen II-V

Product code : 50000BWHS

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, Consumer use

Industrial/Professional use spec : Non-dispersive use
Used in closed systems

Use of the substance/mixture : Lubricants and additives

1.2.2. Uses advised against

Restrictions on use : Use only as described in section 1.2.1 or contact supplier for advice.

1.3. Details of the supplier of the safety data sheet

MPM International Oil Company
Cyclotronweg 1
2629 HN Delft Delft - Nederland
T +31 (0)15 2514030 - F +31 (0)15 2514031
msds@mpmoil.nl - www.mpmoil.nl

1.4. Emergency telephone number

Emergency number : +31 (0)15 2514030 (08.00 - 17.00 GMT+1)

Country	Official advisory body	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	Beaumont Hospital Beaumont Road 9 Dublin	: +353 1 8379964	
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER London	+44 20 7188 7188	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Hazardous to the aquatic environment — Chronic Hazard, Category 3 H412

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

CLP Signal word : -

Hazard statements (CLP) : H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements (CLP) : P273 - Avoid release to the environment.
P501 - Dispose of contents and container to an approved waste disposal plant.

EUH-statements : EUH208 - Contains Olefin derivative, triphenyl phosphite. May produce an allergic reaction.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Comments : Highly refined mineral oil, contains <3% (w / w) DMSO extract, according to IP346

BorgWarner Fluid Gen II-V

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Base oil - not specified	(CAS-No.) 64742-54-7 (EC-No.) 265-157-1 (EC Index-No.) 649-467-00-8 (REACH-no) 01-2119484627-25	70 – 90	Asp. Tox. 1, H304
zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)	(CAS-No.) 4259-15-8 (EC-No.) 224-235-5 (REACH-no) 01-2119493635-27	1 – 2,5	Eye Dam. 1, H318 Aquatic Chronic 2, H411 (M=0)
Olefin derivative	(EC-No.) Polymer (REACH-no) 01-2119976364-28	0,1 – 1	Skin Sens. 1B, H317
triphenyl phosphite	(CAS-No.) 101-02-0 (EC-No.) 202-908-4 (EC Index-No.) 015-105-00-7 (REACH-no) 01-2119511213-58	0,1 – 0,25	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Specific concentration limits:

Name	Product identifier	Specific concentration limits
zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)	(CAS-No.) 4259-15-8 (EC-No.) 224-235-5 (REACH-no) 01-2119493635-27	(1 ≤C < 50) Eye Irrit. 2, H319 (50 ≤C < 100) Eye Dam. 1, H318
triphenyl phosphite	(CAS-No.) 101-02-0 (EC-No.) 202-908-4 (EC Index-No.) 015-105-00-7 (REACH-no) 01-2119511213-58	(5 ≤C < 100) Eye Irrit. 2, H319 (5 ≤C < 100) Skin Irrit. 2, H315

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

General	: Get medical advice/attention if you feel unwell.
After inhalation	: If necessary seek medical advice. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
After skin contact	: Take off contaminated clothing. Wash contaminated clothing before reuse. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
After eye contact	: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
After ingestion	: Rinse mouth. Get medical advice/attention. Do NOT induce vomiting.

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

Symptoms/effects	: Not expected to present a significant hazard under anticipated conditions of normal use.
After inhalation	: Not expected to present a significant hazard under anticipated conditions of normal use.
After skin contact	: May cause an allergic skin reaction.
After eye contact	: May cause eye irritation. Exposed may experience eye tearing, redness and discomfort.
After ingestion	: Not expected to present a significant ingestion hazard under anticipated conditions of normal use.

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	: Dry chemical, CO ₂ , dry sand, or alcohol-resistant foam. Water spray.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	: Incomplete combustion releases dangerous carbon monoxide, carbon dioxide and other toxic gases.
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5.3. Advice for firefighters

Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
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BorgWarner Fluid Gen II-V

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : May be dangerously slippery if spilled.

6.1.1. For non-emergency personnel

Protective equipment : Do not get in eyes, on skin, or on clothing.

6.1.2. For emergency responders

Protective equipment : Use personal protective equipment as required.

6.2. Environmental precautions

Notify authorities if product enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.

Other information : If spilled, may cause the floor to be slippery.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". Information on safe handling - see Section 7.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Provide good ventilation in process area to prevent formation of vapour. Avoid contact with skin, eyes and clothing.

Hygiene measures : Avoid contact with skin and eyes. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a dry place. Store in a closed container. Protect from moisture.

7.3. Specific end use(s)

Lubricant.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Base oil - not specified (64742-54-7)

EU	IOELV TWA (mg/m ³)	5 mg/m ³ 8 h/day
Germany	TRGS 910 Acceptable concentration notes	

Additional information : Based on ACGIH TLV, a concentration of 5 mg/m³ oilspray (TWA, 8 hour workday) is recommended.

8.2. Exposure controls

Technical measures:

The substance must be handled in accordance with good industrial hygiene and safety procedures.

Hand protection:

Wear suitable gloves resistant to chemical penetration

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Reusable gloves	Nitrile rubber (NBR), Polyvinylchloride (PVC)	5 (> 240 minutes)			

Eye protection:

Safety goggles

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation. In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls:

Avoid release to the environment.

BorgWarner Fluid Gen II-V

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: brown.
Odour	: characteristic.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 190 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 860 g/l
Solubility	: insoluble in water.
Log Pow	: > 3
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

None under normal conditions.

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

Sparks. Heat. Open flame.

10.5. Incompatible materials

Strong oxidizing agent.

10.6. Hazardous decomposition products

When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, nitrogen oxides (NOx), NH3, sulphur compounds.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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

Base oil - not specified (64742-54-7)

LD50 oral rat	> 5000 mg/kg
LD50 dermal rat	> 2000 mg/kg
LD50 dermal rabbit	> 3000 mg/kg
LC50 Inhalation - Rat	> 5 mg/l/4h

zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) (4259-15-8)

LD50 oral rat	3100 mg/kg
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BorgWarner Fluid Gen II-V

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

LD50 dermal rabbit	> 5000 mg/kg
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triphenyl phosphite (101-02-0)

LD50 oral rat	1590 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 1,45 - 2,13
LD50 dermal rabbit	2000 – 5000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	> 6,7 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)

Skin corrosion/irritation	: Not classified
Additional information	: Repeated exposure may cause skin dryness or cracking.
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

Base oil - not specified (64742-54-7)

NOAEL (dermal, rat/rabbit)	> 2000 mg/kg bodyweight
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STOT-repeated exposure	: Not classified
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Base oil - not specified (64742-54-7)

LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight OECD 408
NOAEL (dermal, rat/rabbit, 90 days)	> 1000 mg/kg bodyweight/day
NOAEL (subacute, oral, animal/male, 28 days)	> 220 mg/kg bodyweight
NOAEL (subchronic, oral, animal/male, 90 days)	> 980 mg/kg bodyweight

zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) (4259-15-8)

NOAEL (oral, rat, 90 days)	125 mg/kg bodyweight OECD 407
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triphenyl phosphite (101-02-0)

LOAEL (oral, rat, 90 days)	40 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
NOAEL (oral, rat, 90 days)	15 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

Aspiration hazard	: Not classified
Additional information	: At high concentrations, the vapours can be irritating to the respiratory system
Other information	: When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Harmful to aquatic life with long lasting effects.

Base oil - not specified (64742-54-7)

LC50 fish 1	> 100 mg/l @Pimephales promelas
EC50 Daphnia 1	> 10000 mg/l
EC50 Daphnia 2	> 10 mg/l @21D
EC50 72h algae (1)	> 100 mg/l @Scenedesmus quadricauda 3D
NOEC chronic fish	> 10 mg/l @21 D

BorgWarner Fluid Gen II-V

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) (4259-15-8)

LC50 fish 1	10 – 35 mg/l 96h Pimephales promelas (semi static)
LC50 fish 2	1 – 5 ppm Pimephales promelas (static)
EC50 Daphnia 1	1 – 1,5 mg/l Daphnia magna, 48h
EC50 other aquatic organisms 1	1 – 5 mg/l 96h Pseudokirchneriella subcapitata

triphenyl phosphite (101-02-0)

LC50 fish 1	0,94 mg/l (Daphnia magna)
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12.2. Persistence and degradability

Base oil - not specified (64742-54-7)

Biodegradation	31 % @28D -OECD TG 301 B
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zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) (4259-15-8)

Persistence and degradability	Under test conditions no biodegradation observed.
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triphenyl phosphite (101-02-0)

BOD (% of ThOD)	0,14 % ThOD @28D OECD TTG 301 D
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12.3. Bioaccumulative potential

BorgWarner Fluid Gen II-V

Log Pow	> 3
Bioaccumulative potential	Expected to bio accumulate.

zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) (4259-15-8)

Log Kow	3,59
Bioaccumulative potential	Low bioaccumulation potential. The substance has low potential for bioaccumulation.

triphenyl phosphite (101-02-0)

Log Kow	6,25 @25C Calc.
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12.4. Mobility in soil

zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) (4259-15-8)

Soil	No data available.
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12.5. Results of PBT and vPvB assessment

Component

zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) (4259-15-8)	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
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12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Dispose as hazardous waste.
European List of Waste (LoW) code	: 13 01 11* - synthetic hydraulic oils

SECTION 14: Transport information

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

BorgWarner Fluid Gen II-V

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

ADR	IMDG
14.1. UN number	
Not applicable	Not applicable
14.2. UN proper shipping name	
Not applicable	Not applicable
14.3. Transport hazard class(es)	
Not applicable	Not applicable
14.4. Packing group	
Not applicable	Not applicable
14.5. Environmental hazards	
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No
No supplementary information available	
14.6. Special precautions for user	
Overland transport No data available	
Transport by sea No data available	
14.7. Transport in bulk according to Annex II of Marpol and the IBC Code 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 no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance 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.

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

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
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 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1B	Skin sensitisation, category 1B

BorgWarner Fluid Gen II-V

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH208	Contains Olefin derivative, triphenyl phosphite. May produce an allergic reaction.

SDS MPM REACH

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.