

This safety data sheet was created pursuant to the requirements of:
UK REACH Regulations (SI 2019/758 as amended)

Revision date 08-Nov-2023

Revision Number 1

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

1.1. Product identifier

Product Code(s) 123869
Safety data sheet number 123869
Product Name PETRONAS HYDRAULIC E 68

Pure substance/mixture Mixture

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

Recommended use Lubricant

1.3. Details of the supplier of the safety data sheet

Supplier

Univar Solutions UK Ltd
Aquarius House
6 Mid Point Business Park
Bradford
GBR

For further information, please contact

E-mail address SDS.EMEA@univarsolutions.com
Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

1.4. Emergency telephone number

Emergency Telephone SGS - +32 (0)3 575 55 55 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Not classified

2.2. Label elements

Not classified

Signal word
Danger

Hazard statements

Not classified

EUH208 - May produce an allergic reaction.

EUH210 - Safety data sheet available on request

Precautionary statements

P201 - Obtain special instructions before use

P202 - Do not handle until all safety precautions have been read and understood

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P308 + P313 - IF exposed or concerned: Get medical advice/attention

P405 - Store locked up

P501 - Dispose of contents/ container to an approved waste disposal plant

Unknown aquatic toxicity

Contains 0 % of components with unknown hazards to the aquatic environment.

2.3. Other hazards

Causes mild skin irritation.

SECTION 3: Composition/information on ingredients**3.1 Substances**

Not applicable

3.2 Mixtures

Chemical name	Weight-%	EC No (EU Index No)	UK REACH registration number	Classification according to GB CLP (SI 2020/1567 as amended)	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
2,6 DI TERT BUTYLPHENOL 128-39-2	0 - 10%	204-884-0	-	Aquatic Chronic 1 (H410) Aquatic Acute 1 (H400) Skin Irrit. 2 (H315)	-	-	-
MALEIC ANHYDRIDE 108-31-6	0 - 10%	203-571-6	-	(EUH071) Acute Tox. 4 (H302) Skin Corr. 1B (H314) Eye Dam. 1 (H318) Resp. Sens. 1 (H334) Skin Sens. 1A (H317) STOT RE 1 (H372)	Skin Sens. 1A :: C>=0.001%	-	-

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

This product does not contain candidate substances of very high concern at a concentration >= 0.1% (UK REACH Article 59)

SECTION 4: First aid measures**4.1. Description of first aid measures****Inhalation**

Remove to fresh air. Get medical attention if symptoms occur.

Eye contact

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.

	Consult a doctor.
Skin contact	Wash skin with soap and water. In the case of skin irritation or allergic reactions see a doctor.
Ingestion	Rinse mouth.

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

Symptoms	Prolonged contact may cause redness and irritation.
Dermal	Prolonged contact may cause redness and irritation.

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

Note to doctors	Treat symptomatically.
------------------------	------------------------

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Dry chemical, CO2, alcohol-resistant foam or water spray.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products	Carbon oxides. Phosphorus oxides. Oxides of sulphur. Nitrogen oxides (NOx).
--------------------------------------	---

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
---	--

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Ensure adequate ventilation.
For emergency responders	Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions	See Section 12 for additional Ecological Information.
----------------------------------	---

6.3. Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Take up mechanically, placing in appropriate containers for disposal.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Advice on safe handling Ensure adequate ventilation.

General hygiene considerations Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place.

7.3. Specific end use(s)

Specific use(s)
See section 1 for more information.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters**

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical name	United Kingdom
MALEIC ANHYDRIDE 108-31-6	TWA: 1 mg/m ³ STEL: 3 mg/m ³ Sen+

Biological occupational exposure limits This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
2,6 DI TERT BUTYLPHENOL 128-39-2		11.25 mg/kg bw/day [4] [6]	70.61 mg/m ³ [4] [6]
MALEIC ANHYDRIDE 108-31-6			0.4 mg/m ³ [5] [6]

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
2,6 DI TERT BUTYLPHENOL 128-39-2	6.75 mg/kg bw/day [4] [6]		20.9 mg/m ³ [4] [6]

Predicted No Effect Concentration (PNEC)

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
MALEIC ANHYDRIDE 108-31-6	0.1 mg/l				

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
MALEIC ANHYDRIDE 108-31-6	0.334 mg/kg/day	0.033 mg/kg/day		0.042 mg/kg/day	44.6 mg/l

8.2. Exposure controls

Engineering controls No information available.

Personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). Use eye protection according to EN 166.

Hand protection Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. Gloves must conform to standard EN 374. Wear suitable gloves.

Skin and body protection Wear suitable protective clothing.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state	Liquid
Appearance	Viscous liquid
Colour	amber
Odour	No information available.
Odour threshold	No information available

Property	Values
Melting point / freezing point	
Initial boiling point and boiling range	> 300 °C
Flammability	
Flammability Limit in Air	
Upper flammability or explosive limits	
Lower flammability or explosive limits	

Remarks • Method
No information available.
No information available.
No information available.

Flash point	230 °C	
Autoignition temperature		No information available.
Decomposition temperature		No information available.
pH		No information available.
pH (as aqueous solution)		No information available.
Kinematic viscosity	68.70 cSt	40 °C.
Dynamic viscosity		No information available.
Water solubility	Immiscible in water	
Solubility(ies)		No information available.
Partition coefficient		No information available.
Vapour pressure		No information available.
Relative density	0.87	
Bulk density		No information available
Liquid Density	No information available	No information available
Relative vapour density		No information available.
Particle characteristics		No information available.
Particle Size	No information available	
Particle Size Distribution	No information available	
Explosive properties	No information available	
Oxidising properties	No information available	

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity Stable under recommended storage conditions.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Excessive heat.

10.5. Incompatible materials

Incompatible materials Acids. Alkali. Oxidising agent.

10.6. Hazardous decomposition products

Hazardous decomposition products Carbon oxides. Nitrogen oxides (NOx). Phosphorus oxides. Oxides of sulphur.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information

Inhalation	May cause irritation.
Eye contact	May cause temporary eye irritation.
Skin contact	May cause slight irritation.
Ingestion	Gastrointestinal discomfort.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Prolonged contact may cause redness and irritation.

Acute toxicity**Numerical measures of toxicity**

The following values are calculated based on chapter 3.1 of the GHS document

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
2,6 DI TERT BUTYLPHENOL	> 5000 mg/kg (Rat)	> 10 g/kg (Rabbit)	-
MALEIC ANHYDRIDE	= 1030 mg/kg (Rat)	= 2620 mg/kg (Rabbit)	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

MALEIC ANHYDRIDE (108-31-6)

Method	Species	Exposure route	Effective dose	Exposure time	Results
	Human evidence				Corrosive

Serious eye damage/eye irritation No information available.

MALEIC ANHYDRIDE (108-31-6)

Method	Species	Exposure route	Effective dose	Exposure time	Results
	Rabbit				Severe eye irritation

Respiratory or skin sensitisation No information available.

MALEIC ANHYDRIDE (108-31-6)

Method	Species	Exposure route	Results
			Sensitising

Germ cell mutagenicity No information available.

Component Information**MALEIC ANHYDRIDE (108-31-6)**

Method	Species	Results
	in vivo	Not mutagenic
	in vitro	In vitro genetic toxicity studies were negative in some cases and positive in other cases.

Carcinogenicity No information available.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Reproductive toxicity No information available.

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as reproductive toxins.

MALEIC ANHYDRIDE (108-31-6)

Method	Species	Results
	Rat	Negative NOAEL 55 mg/kg/day
	Rat	Negative NOAEL 140 mg/kg/day

STOT - single exposure No information available.

MALEIC ANHYDRIDE (108-31-6)

Method	Species	Exposure route	Effective dose	Exposure time	Results
	Human	Inhalation			May cause respiratory irritation

STOT - repeated exposure No information available.

MALEIC ANHYDRIDE (108-31-6)

Method	Species	Exposure route	Effective dose	Exposure time	Results
	Rat	Inhalation	LOAEL 0.0011 mg/L	6 months	May cause damage to organs through prolonged or repeated exposure
	Rat	Inhalation	NOAEL 0.0098 mg/L	6 months	Not classified
	Rat	Oral	NOAEL 55 mg/kg	80 days	Some positive data exist, but the data are not sufficient for classification
	Rat	Oral	LOAEL 250 mg/kg	183 days	Some positive data exist, but the data are not sufficient for classification
	Rat	Oral	NOAEL 600 mg/kg	183 days	Not classified
	Rat	Oral	NOAEL 150 mg/kg	80 days	Not classified
	Dog	Oral	NOAEL 60 mg/kg	90 days	Not classified

Aspiration hazard No information available.

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Not considered to be harmful to aquatic life.

Unknown aquatic toxicity Contains 0 % of components with unknown hazards to the aquatic environment.

MALEIC ANHYDRIDE (108-31-6)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
	Bacteria toxicity	EC10	44.6 mg/L	18 hours	
	Oncorhynchus mykiss (rainbow trout)	LC50	75 mg/L	96 hours	
	Green Algae	ErC50	74.4 mg/L	72 hours	
	Water flea	EC50	93.8 mg/L	48 hours	
	Water flea	NOEC	10 mg/L	21 days	
	Green Algae	ErC50	11.8 mg/L	72 hours	

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
2,6 DI TERT BUTYLPHENOL	-	-	-	EC50: =0.45mg/L (48h, Daphnia magna)

12.2. Persistence and degradability

Persistence and degradability No information available.

MALEIC ANHYDRIDE (108-31-6)

Method	Exposure time	Value	Results
OECD Test No. 301B: Ready Biodegradability: CO2 Evolution Test (TG 301 B)	25 days	>90% Biodegradation	Readily biodegradable

12.3. Bioaccumulative potential

Bioaccumulation There is no data for this product.

Chemical name	Partition coefficient
2,6 DI TERT BUTYLPHENOL	4.5
MALEIC ANHYDRIDE	-2.61

12.4. Mobility in soil

Mobility in soil Insoluble.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB.

Chemical name	PBT and vPvB assessment
2,6 DI TERT BUTYLPHENOL	The substance is not PBT / vPvB
MALEIC ANHYDRIDE	The substance is not PBT / vPvB

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused Dispose of in accordance with local regulations. Dispose of waste in accordance with

products	environmental legislation.
Contaminated packaging	Do not reuse empty containers.

SECTION 14: Transport information

IATA

14.1 UN number or ID number	Not regulated
14.2	
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

IMDG

14.1 UN number or ID number	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None
14.7 Maritime transport in bulk according to IMO instruments	No information available

RID

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

ADR

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

SECTION 15: Regulatory information

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

National regulations

Authorisations and/or restrictions on use:

This product contains one or more substances subject to restriction (UK REACH - Annex XVII).

Persistent Organic Pollutants

Not applicable

Export Notification requirements

Not applicable

Named dangerous substances per COMAH Regulations 2015 (as amended)

Not applicable

The Ozone-Depleting Substances Regulations 2015

Not applicable

The Biocidal Products Regulations 2001 (as amended)

Not applicable

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended)

Not applicable

Poisons Act 1972 (Explosive Precursors) Regulations (as Amended)

Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECL	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status
NZIoC	Contact supplier for inventory compliance status

Legend:

TSCA	- United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL	- Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS	- European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
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
AIIC	- Australian Inventory of Industrial Chemicals
NZIoC	- New Zealand Inventory of Chemicals

15.2. Chemical safety assessment

Chemical Safety Report No information available

SECTION 16: Other information**Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of H-Statements referred to under section 3**

H304 - May be fatal if swallowed and enters airways
H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage
H360F - May damage fertility
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Legend

SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
+	Sensitisers		
Revision Note ***Indicates updated data since last publication			

Classification procedure

Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
European Chemicals Agency (ECHA) (ECHA_API)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGl(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
Organisation for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Prepared By Jitendra Panchal

Revision date 08-Nov-2023

This material safety data sheet complies with the requirements of UK REACH Regulations (SI 2019/758 as amended)
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the

date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet