

1. Product and company identification

Product name	Castrol React Performance DOT 4
Product code	467157-JP25
SDS no.	467157
Original preparation date	04/05/2015
Supplier	BP Castrol K.K. 1-11-2, Osaki, Shinagawaku, Tokyo, 141-0032 East Tower 20F, Gate City Osaki Telephone : 03-5719-7860 (days & hours of operation : Monday - Friday, 09:00 - 17:00) Facsimile : 03-5435-2256
EMERGENCY TELEPHONE NUMBER	Carechem: 0120-015-230 (Operation time: 24 hrs)
<u>Relevant identified uses of the substance or mixture and uses advised against</u>	
Use of the substance/ mixture	Brake fluids. For specific application advice see appropriate Technical Data Sheet or consult our company representative.

2. Hazards identification

GHS Classification	Not classified.
<u>GHS label elements</u>	
Signal word	No signal word.
Hazard statements	No known significant effects or critical hazards.
<u>Precautionary statements</u>	
Prevention	Not applicable.
Response	Not applicable.
Storage	Not applicable.
Disposal	Not applicable.
Other hazards which do not result in classification	None known.

3. Composition/information on ingredients

Substance/mixture	Mixture
Polyalkylene glycol ethers / glycols. Proprietary performance additives.	

Ingredient name	%	CAS number
Dicyclohexylamine	≤0.30	101-83-7

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Product name	Castrol React Performance DOT 4	Product code	467157-JP25	Page:	1/10
Version	2.01	Date of issue	2022 May 13	Format	Japan
	Date of previous issue	2022 March 17.	Build	6.1.1 (Japan)	Language
					ENGLISH (ENGLISH)

3. Composition/information on ingredients

Applicability to local regulations are determined with consideration of reactions of constituents included in the formulation. Please see section 15 for regulatory information.

4. First aid measures

Description of necessary first aid measures

Eye contact	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention if symptoms occur.
Inhalation	If inhaled, remove to fresh air. Get medical attention if symptoms occur.
Skin contact	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur.
Ingestion	Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

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

Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training.
Notes to physician	Treatment should in general be symptomatic and directed to relieving any effects.
Specific treatments	No specific treatment.

5. Firefighting measures

Extinguishing media

Suitable	In case of fire, use foam, dry chemical or carbon dioxide extinguisher or spray.
Not suitable	Do not use water jet.
Specific hazards arising from the chemical	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	Combustion products may include the following: carbon oxides (CO, CO ₂) (carbon monoxide, carbon dioxide)
Special protective actions for fire-fighters	No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.
Special protective equipment for fire-fighters	Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment. Floors may be slippery; use care to avoid falling.
For emergency responders	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental precautions	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and material for containment and cleaning up

Product name	Castrol React Performance DOT 4	Product code	467157-JP25	Page: 2/10		
Version	2.01	Date of issue	2022 May 13	Format Japan	Language	ENGLISH
		Date of previous issue	2022 March 17.	Build 6.1.1 (Japan)		(ENGLISH)

6. Accidental release measures

Small spill

Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill

Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor.

In the case of spillage at sea approved dispersants may be used where authorised by the appropriate government/regulatory authorities.

7. Handling and storage

Protective measures

Put on appropriate personal protective equipment (see Section 8).

Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Store and use only in equipment/containers designed for use with this product. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

Not suitable

Prolonged exposure to elevated temperature

8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
None.	

Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Appropriate engineering controls

All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained.

Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards.

Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits. The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

8. Exposure controls/personal protection

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. Safety procedures should be developed for each intended application. Respiratory protection equipment should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Hand protection

Wear protective gloves if prolonged or repeated contact is likely. Wear chemical resistant gloves. Recommended: Butyl gloves. Neoprene gloves. The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Eye protection

Safety glasses with side shields.

Skin protection

Use of protective clothing is good industrial practice. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.

Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state

Liquid.

Colour

Yellow. [Light]

Odour

Mild

pH

7 to 7.5

Melting point/freezing point

Not available.

Softening point

Not available.

Boiling point, initial boiling point, and boiling range

280°C (536°F)

Product name Castrol React Performance DOT 4

Product code 467157-JP25

Page: 4/10

Version 2.01 **Date of issue** 2022 May 13

Format Japan

Language

ENGLISH

Date of previous issue 2022 March 17.

Build 6.1.1 **(Japan)**

(ENGLISH)

9. Physical and chemical properties

Flash point

Open cup: 144°C (291.2°F)

Fire point

Not available.

Evaporation rate

Not available.

Flammability

Not available.

Lower and upper explosive (flammable) limits

Not available.

Vapour pressure

Not available.

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
2-(2-(2-methoxyethoxy)ethoxy)ethanol	0.08	0.011				

Relative vapour density

Not available.

Relative Density

Not available.

Density

1.063 to 1.073 g/cm³ [20°C (68°F)]

Auto-ignition temperature

Not available.

Ingredient name	°C	°F	Method
2-(2-(2-methoxyethoxy)ethoxy)ethanol	210	410	

Decomposition temperature

Not available.

Lower and upper explosion limit/flammability limit

Not available.

Volatility

Not available.

Critical temperature

Not available.

Oxidising properties

Not available.

Viscosity

Kinematic: 2.1 mm²/s (2.1 cSt) at 100°C

Drop Point

Not available.

Density

1063 to 1073 kg/m³ (1.063 to 1.073 g/cm³) at 20°C

Solubility

Miscible in water.

Solubility at room temperature (g/l)

Not available.

Dispersibility properties

Not available.

Partition coefficient (LogKow)

Not applicable.

Remarks

Not available.

Particle characteristics

Median particle size

Not applicable.

Product name Castrol React Performance DOT 4

Product code 467157-JP25

Page: 5/10

Version 2.01 **Date of issue** 2022 May 13

Format Japan

Language ENGLISH

Date of previous issue 2022 March 17.

Build 6.1.1 (Japan)

(ENGLISH)

10. Stability and reactivity

Reactivity	No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.
Chemical stability	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerisation will not occur.
Conditions to avoid	Avoid excessive heat.
Incompatible materials	Miscible in water. Do not use in brake systems requiring mineral oil. On contact these fluids will soften and may lift industrial coatings and paints.
	Reactive or incompatible with the following materials: strong acids Strong oxidising materials
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

[Acute toxicity](#)

No data available

[Irritation/Corrosion](#)

No data available

[Sensitiser](#)

No data available

[Carcinogenicity](#)

No data available

[Mutagenicity](#)

No data available

[Teratogenicity](#)

No data available

[Reproductive toxicity](#)

[Aspiration hazard](#)

No data available

[Information on likely routes of exposure](#)

Routes of entry anticipated: Dermal, Inhalation.

[Potential acute health effects](#)

[Eye contact](#)

No known significant effects or critical hazards.

[Inhalation](#)

Vapour inhalation under ambient conditions is not normally a problem due to low vapour pressure.

[Skin contact](#)

No known significant effects or critical hazards.

[Ingestion](#)

No known significant effects or critical hazards.

Product name	Castrol React Performance DOT 4	Product code	467157-JP25	Page: 6/10		
Version	2.01	Date of issue	2022 May 13	Format Japan	Language	ENGLISH
		Date of previous issue	2022 March 17.	Build 6.1.1 (Japan)		(ENGLISH)

11. Toxicological information

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	No specific data.
Inhalation	May be harmful by inhalation if exposure to vapour, mists or fumes resulting from thermal decomposition products occurs.
Skin contact	No specific data.
Ingestion	No specific data.

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

Eye contact	Potential risk of transient stinging or redness if accidental eye contact occurs.
Inhalation	Overexposure to the inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.
Skin contact	Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
Ingestion	Ingestion of large quantities may cause nausea and diarrhoea.

Potential chronic health effects

General	No known significant effects or critical hazards.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Teratogenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

No data available

12. Ecological information

Environmental effects	No known significant effects or critical hazards.
Persistence and degradability	Expected to be biodegradable.
Bioaccumulative potential	This product is not expected to bioaccumulate through food chains in the environment.
Mobility	Spillages may penetrate the soil causing ground water contamination.
Hazardous to the ozone layer	Not applicable.
Other ecological information	Miscible in water.

13. Disposal considerations

Disposal methods	The generation of waste should be avoided or minimised wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.
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Product name	Castrol React Performance DOT 4	Product code	467157-JP25	Page: 7/10		
Version	2.01	Date of issue	2022 May 13	Format Japan	Language	ENGLISH
	Date of previous issue	2022 March 17.	Build 6.1.1 (Japan)	(ENGLISH)		

14. Transport information

	IMDG	IATA
UN number	Not regulated.	Not regulated.
UN proper shipping name	-	-
Transport hazard class(es)	-	-
Packing group	-	-
Environmental hazards	No.	No.
Additional information	-	-

Special precautions for user Not available.

[Transport in bulk according to IMO instruments](#)

Not available.

15. Regulatory information

[Fire Service Law](#)

Category	Substance name/Type	Danger category	Signal word	Designated quantity
Category IV	Class III petroleum	III	Flammable - Keep Fire Away	4000 L

[ISHL](#)

Special Organic Solvents, etc. Not available.

[Substances requiring labelling](#)

None of the components are listed.

[Chemicals requiring notification](#)

None of the components are listed.

[Pollutant Release and Transfer Registers \(PRTR\)](#)

Not applicable.

[Other regulations](#)

Australia inventory (AIC)	All components are listed or exempted.
Canada inventory	All components are listed or exempted.
China inventory (IECSC)	All components are listed or exempted.
Japan inventory (CSCL)	All components are listed or exempted.
Korea inventory (KECI)	All components are listed or exempted.
Philippines inventory (PICCS)	All components are listed or exempted.

Product name	Castrol React Performance DOT 4	Product code	467157-JP25	Page: 8/10
Version	2.01	Date of issue	2022 May 13	Format Japan
	Date of previous issue	2022 March 17.	Build 6.1.1 (Japan)	Language ENGLISH (ENGLISH)

15. Regulatory information

Taiwan Chemical Substances Inventory (TCSI)	All components are listed or exempted.
United States inventory (TSCA 8b)	Not determined.
REACH Status	For the REACH status of this product please consult your company contact, as identified in Section 1.

16. Other information

History

Date of issue/Date of revision	2022 May 13.
Date of previous issue	2022 March 17.
Prepared by	Product Stewardship

The Japan key to abbreviations is as follows:

GHS = Global Harmonized System
CAS Number = Chemical Abstracts Service Registry Number
ISHL = Industrial Safety and Health Law
OSHL = Occupational Safety and Health Law
PRTR = Law Concerning Reporting of the Release into the Environment of Specific Chemical Substances and Promoting Improvements in Their Management
ENCS = Existing and New Chemical Substances
METI = Ministry of Economy, Trade and Industry
OEL = Occupational Exposure Limit
JSOH = Japan Society for Occupational Health
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006]
TWA = Time weighted average
STEL = Short term exposure limit
IMDG = International Maritime Organization Rules, rules governing shipment of goods by water.
IATA = International Air Transport Association, the organization
UN Number = United Nations Number, a four digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods.
Varies = may contain one or more of the following 64741-88-4, 64741-89-5, 64741-95-3, 64741-96-4, 64742-01-4, 64742-44-5, 64742-45-6, 64742-52-5, 64742-53-6, 64742-54-7, 64742-55-8, 64742-56-9, 64742-57-0, 64742-58-1, 64742-62-7, 64742-63-8, 64742-65-0, 64742-70-7, 72623-85-9, 72623-86-0, 72623-87-1

Procedure used to derive the classification

Classification	Justification
Not classified.	

 Indicates information that has changed from previously issued version.

Notice to reader

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from BP Group.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for

Product name	Castrol React Performance DOT 4	Product code	467157-JP25	Page: 9/10		
Version	2.01	Date of issue	2022 May 13	Format Japan	Language	ENGLISH
		Date of previous issue	2022 March 17.	Build 6.1.1 (Japan)		(ENGLISH)

16. Other information

supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken. You can contact the BP Group to ensure that this document is the most current available. Alteration of this document is strictly prohibited.

Product name	Castrol React Performance DOT 4	Product code	467157-JP25	Page: 10/10		
Version	2.01	Date of issue	2022 May 13	Format Japan	Language	ENGLISH
		Date of previous issue	2022 March 17.	Build 6.1.1 (Japan)		(ENGLISH)