

# SAFETY DATA SHEET



Castrol EDGE 0W-20 V

In accordance with Industrial Safety and Health Act

## Section 1. Chemical product and company identification

**Product name** Castrol EDGE 0W-20 V  
**Code** 469590-DE01  
**SDS no.** 469590  
**Supplier** BP Korea Ltd.  
19F., 302, Teheran-ro, Gangnam-gu, Seoul, 06210  
Republic of Korea  
  
Tel: +82 -1577-1904

**EMERGENCY TELEPHONE NUMBER** Carechem: +65 3158 1074 (24/7)

### Relevant identified uses of the substance or mixture and uses advised against

**Use of the substance/mixture** Engine Oils.  
For specific application advice see appropriate Technical Data Sheet or consult our company representative.

## Section 2. Hazards identification

**GHS Classification** Not classified.

### GHS label elements, including precautionary statements

**Signal word** No signal word.

**Hazard statements** No known significant effects or critical hazards.

### Precautionary statements

**Prevention** Not applicable.

**Response** Not applicable.

**Storage** Not applicable.

**Disposal** Not applicable.

**Other hazards which do not result in classification** None known.

## Section 3. Composition/information on ingredients

**Substance/mixture** Mixture

Highly refined base oil (IP 346 DMSO extract < 3%). Proprietary performance additives.

### Hazardous ingredients

Ingredient name	Synonym	CAS number	%
<input checked="" type="checkbox"/> Distillates (petroleum), hydrotreated heavy paraffinic	Baseoil - unspecified; Distillates, petroleum, hydrotreated heavy paraffinic; Mineral oil, petroleum distillates, hydrotreated heavy paraffinic; Distillates (petroleum), hydro-treated	64742-54-7	67.92001058

## Section 3. Composition/information on ingredients

Distillates (petroleum), hydrotreated heavy paraffinic	heavy paraffinic; Paraffin oil; HYDROTREATED HEAVY PARAFFINIC DISTILLATE; DISTILLATES (PETROLEUM) HYDROFVLD; Distillates (petroleum), hydrotreated heavy paraffinic, Baseoil - unspecified Baseoil - unspecified; Distillates, petroleum, hydrotreated heavy paraffinic; Mineral oil, petroleum distillates, hydrotreated heavy paraffinic; Distillates (petroleum), hydro-treated heavy paraffinic; Paraffin oil; HYDROTREATED HEAVY PARAFFINIC DISTILLATE; DISTILLATES (PETROLEUM) HYDROFVLD; Distillates (petroleum), hydrotreated heavy paraffinic, Baseoil - unspecified	64742-54-7	19.929
Distillates (petroleum), solvent-dewaxed heavy paraffinic	Baseoil - unspecified; Distillates, petroleum, solvent dewaxed heavy paraffinic; Mineral oil, petroleum distillates, solvent-dewaxed heavy paraffinic; Paraffin oil; Distillates, petroleum, solvent-dewaxed heavy paraffinic; Distillate (Pet.) solvent-dewaxed heavy paraffinic; SOLVENT REFINED PARAFFINIC MINERAL OIL; OILS, PARAFFINIC, HEAVY, SOLVENT DEWAXED; Solvent dewaxed heavy paraffinic petroleum oil; PARAFFINIC PETROLEUM DISTILLATES; Distillates (petroleum), solvent-dewaxed heavy paraffinic, Baseoil - unspecified	64742-65-0	2.627
bis(nonylphenyl)amine	Benzenamine, ar-nonyl-N-(nonylphenyl)-; nonyl-N-(nonylphenyl)aniline; bis (nonylphenyl)amine, dinonyldiphenylamine; Reaction products of Benzeneamine, N-phenyl-with nonene (branched);	36878-20-3	1.288279

## Section 3. Composition/information on ingredients

Nickel	TK 40193; Bis(nonan-1-ylphenyl)amine; p,p'-Dialkyl(C8-9)diphenylamine; N,N-bisooctyl (or nonyl)phenylamine; ar-Nonyl-N-(nonylphenyl)benzenamine; ANILINE, AR-NONYL-N-(NONYLPHENYL)-; diphenylamine, dinonyl	7440-02-0	0.00000198
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### Non-hazardous ingredients

Ingredient name	Synonym	CAS number	%
Trade secret.	Trade secret.	Trade secret.	1.527 - 2.036
Trade secret.	Trade secret.	Trade secret.	0.64027
Trade secret.	Trade secret.	Trade secret.	0.61202
Trade secret.	Trade secret.	Trade secret.	0.6
Trade secret.	Trade secret.	Trade secret.	0.1018 - 0.509
Trade secret.	Trade secret.	Trade secret.	0.1018 - 0.509
Trade secret.	Trade secret.	Trade secret.	0.1018 - 0.509
Trade secret.	Trade secret.	Trade secret.	0.1018 - 0.509
Trade secret.	Trade secret.	Trade secret.	0.1018 - 0.509
Trade secret.	Trade secret.	Trade secret.	0.1018 - 0.509
Trade secret.	Trade secret.	Trade secret.	0.48132
Trade secret.	Trade secret.	Trade secret.	0.48132
Trade secret.	Trade secret.	Trade secret.	0.41208
Trade secret.	Trade secret.	Trade secret.	0.4
Trade secret.	Trade secret.	Trade secret.	0.2 - 0.3
Trade secret.	Trade secret.	Trade secret.	0.28529
Trade secret.	Trade secret.	Trade secret.	0.26264
Trade secret.	Trade secret.	Trade secret.	0.24941
Trade secret.	Trade secret.	Trade secret.	0.08 - 0.14
Trade secret.	Trade secret.	Trade secret.	0.01018 - 0.10078
Trade secret.	Trade secret.	Trade secret.	0.01018 - 0.10078
Trade secret.	Trade secret.	Trade secret.	0.01018 - 0.10078
Trade secret.	Trade secret.	Trade secret.	0.01018 - 0.10078
Trade secret.	Trade secret.	Trade secret.	0.01018 - 0.10078
Trade secret.	Trade secret.	Trade secret.	0.01018 - 0.10078

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.

## Section 4. 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.

### Skin contact

Wash skin thoroughly with soap and water or use recognised skin cleanser. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur.

### Inhalation

If inhaled, remove to fresh air. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. Get medical attention if symptoms occur.

## Section 4. First aid measures

<b>Ingestion</b>	Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
<b><u>Indication of immediate medical attention and special treatment needed, if necessary</u></b>	
<b>Specific treatments</b>	No specific treatment.
<b>Notes to physician</b>	Treatment should in general be symptomatic and directed to relieving any effects. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
<b>Protection of first-aiders</b>	No action shall be taken involving any personal risk or without suitable training.

## Section 5. Firefighting measures

### Extinguishing media

<b>Suitable</b>	In case of fire, use foam, dry chemical or carbon dioxide extinguisher or spray.
<b>Not suitable</b>	Do not use water jet.
<b>Specific hazards arising from the chemical</b>	In a fire or if heated, a pressure increase will occur and the container may burst.
<b>Hazardous thermal decomposition products</b>	☑ Combustion products may include the following: carbon oxides (CO, CO <sub>2</sub> ) (carbon monoxide, carbon dioxide) nitrogen oxides (NO, NO <sub>2</sub> etc.)
<b>Special protective equipment for fire-fighters</b>	Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.
<b>Special protective actions for fire-fighters</b>	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.

## Section 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	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.
<b>Environmental precautions</b>	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).
<b><u>Methods and material for containment and cleaning up</u></b>	
<b>Small spill</b>	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.
<b>Large spill</b>	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.

## Section 7. Handling and storage

### Precautions for safe handling

<b>Protective measures</b>	Put on appropriate personal protective equipment (see Section 8).
<b>Advice on general occupational hygiene</b>	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.

## Section 7. Handling and storage

### Conditions for safe storage, including any incompatibilities

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

## Section 8. Exposure controls/personal protection

### Control parameters

Ingredient name	Exposure limits
Distillates (petroleum), hydrotreated heavy paraffinic	<b>ACGIH TLV (United States).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Issued/Revised: 11/2009 Form: Inhalable fraction
Distillates (petroleum), hydrotreated heavy paraffinic	<b>ACGIH TLV (United States).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Issued/Revised: 11/2009 Form: Inhalable fraction
Distillates (petroleum), solvent-dewaxed heavy paraffinic	<b>ACGIH TLV (United States).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Issued/Revised: 11/2009 Form: Inhalable fraction
Nickel	<b>Ministry of Employment and Labor (Republic of Korea).</b> TWA: 1 mg/m <sup>3</sup> 8 hours. Issued/Revised: 3/1997

Other ingredients including trade secret: not applicable

### 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.

### 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.

### Personal protective equipment

## Section 8. Exposure controls/personal protection

### 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.

### Eye protection

Safety glasses with side shields.

### Hand protection

Wear protective gloves if prolonged or repeated contact is likely. Wear chemical resistant gloves. Recommended: Nitrile 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.

### 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.

### 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.

## Section 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

Amber.

#### Odour

Not available.

#### Odour threshold

Not available.

#### pH

Not applicable.

#### Melting/freezing point

Not available.

#### Boiling point, initial boiling point, and boiling range

Not available.

#### Flash point

Closed cup: >185°C (>365°F) [Pensky-Martens]

#### Evaporation rate

Not available.

#### Flammability (solid, gas)

Not available.

Not applicable. Based on - Physical state

#### Lower and upper explosive (flammable) limits

Not available.

#### Vapour pressure

## Section 9. Physical and chemical properties

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Distillates (petroleum), hydrotreated heavy paraffinic	<0.08	<0.011	ASTM D 5191			
Distillates (petroleum), hydrotreated heavy paraffinic	<0.08	<0.011	ASTM D 5191			
Distillates (petroleum), solvent-dewaxed heavy paraffinic	<0.08	<0.011	ASTM D 5191			
bis(nonylphenyl)amine	<0.01	<0.0013	EU A.4	0	0	EU A.4

### Solubility

insoluble in water.

### Vapour density

Not available.

### Relative density

Not available.

### Density

<1000 kg/m<sup>3</sup> (<1 g/cm<sup>3</sup>) at 15°C

### Partition coefficient: n-octanol/water

Not applicable.

### Auto-ignition temperature

Ingredient name	°C	°F	Method
bis(nonylphenyl)amine	440	824	EU A.15

### Decomposition temperature

Not available.

### Viscosity

Kinematic: 47.4 mm<sup>2</sup>/s (47.4 cSt) at 40°C

Kinematic: 8.9 to 9.3 mm<sup>2</sup>/s (8.9 to 9.3 cSt) at 100°C

### Molecular weight

Not applicable as it is a mixture

### Particle characteristics

#### Median particle size

Not applicable.

## Section 10. Stability and reactivity

### 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 all possible sources of ignition (spark or flame).

### Incompatible materials

Reactive or incompatible with the following materials: oxidising materials.

### Hazardous decomposition products

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

## Section 11. Toxicological information

### Information on likely routes of exposure

Routes of entry anticipated: Dermal, Inhalation.

#### Acute toxicity

##### Inhalation

Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

##### Ingestion

No known significant effects or critical hazards.

##### Skin contact

Defatting to the skin. May cause skin dryness and irritation.

##### Eye contact

No known significant effects or critical hazards.

## Section 11. Toxicological information

### Symptoms related to the physical, chemical and toxicological characteristics

<b>Inhalation</b>	No specific data.
<b>Ingestion</b>	No specific data.
<b>Skin</b>	Adverse symptoms may include the following: irritation dryness cracking
<b>Eyes</b>	No specific data.

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

Product/ingredient name	Test	Species	Result	Exposure	Remarks
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Not available.

### Irritation/Corrosion

Product/ingredient name	Test authority / Test number	Species	Route / Result	Conc.	Remarks
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Not available for product and all ingredients.

**Skin corrosion or irritation** Not available for product and all ingredients.

**Serious eye damage/eye irritation** Not available for product and all ingredients.

**Respiratory Irritation** Not available for product and all ingredients.

### Sensitisation

**Respiratory Sensitisation** Not available for product and all ingredients.

**Skin Sensitisation** Not available for product and all ingredients.

Product/ingredient name	Route of exposure	Species	Result	Remarks
Not available for product and all ingredients.				

### CMR - ISHA Article 42 Public Notice No 2016-41 Occupational Exposure Limits

Product/ingredient name	CAS number	Classification
Nickel	7440-02-0	CARCINOGENICITY - Category 2

### Carcinogenicity

Not available for product and all ingredients.

### Germ cell mutagenicity

Product/ingredient name	Test	Experiment	Result	Remarks
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Not available for product and all ingredients.

### Reproductive toxicity

Product/ingredient name	Test detail	Species	Exposure	Developmental toxin	Maternal toxicity	Fertility	Remarks
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## Section 11. Toxicological information

Not available for product and all ingredients.

**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.

### Specific target organ toxicity (single exposure)

Not available for product and all ingredients.

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Nickel	Category 1	-	-

### **Potential chronic health effects**

**General** USED ENGINE OILS  
Combustion products resulting from the operation of internal combustion engines contaminate engine oils during use. Used engine oil may contain hazardous components which have the potential to cause skin cancer. Frequent or prolonged contact with all types and makes of used engine oil must therefore be avoided and a high standard of personal hygiene maintained.

**Carcinogenicity** No known significant effects or critical hazards.

**Mutagenicity** No known significant effects or critical hazards.

### Aspiration hazard

Name	Result
Distillates (petroleum), hydrotreated heavy paraffinic	ASPIRATION HAZARD - Category 1

**Other information** Not available.

## Section 12. Ecological information

**Ecotoxicity** No known significant effects or critical hazards.

### Persistence/degradability

Expected to be biodegradable.

**Mobility in soil** Spillages may penetrate the soil causing ground water contamination.

**Bioaccumulative potential** This product is not expected to bioaccumulate through food chains in the environment.

**Other adverse effects** No known significant effects or critical hazards.

**Other ecological information** Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

## Section 13. Disposal considerations

**Disposal methods** The generation of waste should be avoided or minimised wherever possible. 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

## Section 13. Disposal considerations

### Disposal precautions

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 spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

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

**Special precautions for user** Not available.

## Section 15. Regulatory information

### Regulation according to ISHA

**ISHA article 117 (Harmful substances prohibited from manufacture)** None of the components are listed.

**ISHA article 118 (Harmful substances requiring permission)** None of the components are listed.

### Exposure Limits of Chemical Substances and Physical Factors

The following components have an OEL:

Distillates (petroleum), hydrotreated heavy paraffinic  
Distillates (petroleum), hydrotreated heavy paraffinic  
Distillates (petroleum), solvent-dewaxed heavy paraffinic  
Nickel

**ISHA Enforcement Regs Annex 19 (Exposure standards established for harmful factors)** The following components are listed: Nickel and its insoluble inorganic compounds

**ISHA Enforcement Regs Annex 21 (Harmful factors subject to Work Environment Measurement)** None of the components are listed.

**ISHA Enforcement Regs Annex 22 (Harmful Factors Subject to Special Health Check-up)**  The following components are listed: metal working fluids: oil mist, mineral

## Section 15. Regulatory information

**Standard of Industrial Safety and Health Annex 12 (Hazardous substances subject to control)** None of the components are listed.

### Regulation according to Chemicals Control Act

**Article 20 Toxic Chemicals (K-Reach Article 20)** Not applicable

**Article 18 Prohibited (K-Reach Article 27)** None of the components are listed.

**Article 20 Restricted (K-Reach Article 27)** None of the components are listed.

**CCA Article 11 (TRI)** None of the components are listed.

**CCA Article 39 (Accident Precaution Chemicals)** None of the components are listed.

**Dangerous Materials Safety Management Act**  
**Class:** Class 4 - Flammable Liquid  
**Item:** 5. Class 3 petroleums - Water-insoluble liquid  
**Threshold:** 2000 L  
**Danger category:** III  
**Signal word:** Contact with sources of ignition prohibited

**Wastes regulation** Designated Waste

### Regulation according to other foreign laws

**Australia inventory (AIRC)** At least one component is not listed.

**Canada inventory** All components are listed or exempted.

**China inventory (IECSC)** At least one component is not listed.

**REACH Status** The company, as identified in Section 1, sells this product in the EU in compliance with the current requirements of REACH.

**Japan inventory (CSCL)** At least one component is not listed.

**Korea inventory (KECI)** All components are listed or exempted.

**Philippines inventory (PICCS)** At least one component is not listed.

**Taiwan inventory (TCSI)** All components are listed or exempted.

**United States inventory (TSCA 8b)** All components are active or exempted.

## Section 16. Other information

### History

**Source of Information** Sources of key data used to compile the Safety Data Sheet: Hazard assessment review data, toxicological reviews, and product physical properties; component supplier hazard communication data; and other publically available resources.

**Date first prepared** 22/05/2019

**Number of revisions and date of last revision** 6 23/01/2022.

**Prepared by** Product Stewardship

## Section 16. Other information

### Key to abbreviations

AMP = Acceptable Maximum Peak  
ACGIH = American Conference of Governmental Industrial Hygienists, an agency that promulgates exposure standards.  
ADG = Australian Code for the Transport of Dangerous Goods by Road and Rail  
ADG Code = Australian Code for the Transport of Dangerous Goods by Road and Rail  
CAS Number = Chemical Abstracts Service Registry Number  
HAZCHEM Code = Emergency action code of numbers and letters which gives information to emergency services. Its use is required by the ADG Code for Dangerous Goods in bulk.  
ICAO = International Civil Aviation Organization.  
IATA = International Air Transport Association, the organization promulgating rules governing shipment of goods by air.  
IMDG = International Maritime Organization Rules, rules governing shipment of goods by water.  
IP 346 = A chemical screening assay for dermal toxicity. The European Commission has recommended that Method IP 346 be used as the basis for labelling certain lubricant oil base stocks for carcinogenicity. The EU Commission has stipulated that the classification as a carcinogen need not apply if it can be shown that the substance contains less than 3% DMSO extract as measured by IP 346. (See Note L, European Commission Directive 67/548/EEC as amended and adapted.) DMSO is a solvent.  
NOHSC = National Occupational Health & Safety Commission, Australia  
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006]  
TWA = Time weighted average  
STEL = Short term exposure limit  
UN Number = United Nations Number, a four digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods.  
TCCA = Toxic Chemical Control Act  
GHS = Global Harmonized System  
ISHA = Industrial Safety and Health Act  
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

✔ 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.

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