



SAFETY DATA SHEET

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

1.1 Product identifier

Product name : Dual Clutch Transmission Fluid D2
Product code : 32339823
Product description : Transmission oil
Product type : Liquid.

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

Identified uses

Transmission oil

Uses advised against

Not applicable.

1.3 Details of the supplier of the safety data sheet

Volvo Car Corp., Customer Service,
SE-405 31 Göteborg, Sweden.

Tel +46 (0)31 59 00 00

**e-mail address of person
responsible for this SDS** : sds@volvo.com

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : Call a POISON CENTER or doctor.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

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

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

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

2.2 Label elements

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.

**Supplemental label
elements** : Safety data sheet available on request. Keep out of reach of children. If ingested, do not induce vomiting. Seek medical advice immediately. Minimise skin contact. Protect the environment. Dispose of used oil at designated sites. Do not mix used oil with solvents, brake fluids or coolants.

SECTION 2: Hazards identification

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Distillates (Fischer-Tropsch), heavy, C18-50-branched, cyclic and linear	REACH #: 01-0000020163-82 EC: 482-220-0 CAS: 848301-69-9	≥80 - ≤90	Asp. Tox. 1, H304	-	[1]
Mineral Oil, Solvent refined	CAS: -	≤10	Asp. Tox. 1, H304	-	[1]
Alkyl Phosphite	EC: 424-820-7 CAS: -	≥0.1 - <0.5	Acute Tox. 4, H312 Skin Corr. 1B, H314 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	ATE [Dermal] = 1100 mg/kg M [Acute] = 10 M [Chronic] = 10	[1]
Ethoxylated amine	CAS: -	≥0.1 - <0.4	Skin Corr. 1C, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 2, H411 See Section 16 for the full text of the H statements declared above.	M [Acute] = 1	[1]

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, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

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

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eye contact** : In case of contact with eyes, rinse immediately with plenty of water.
- Inhalation** : If inhaled, remove to fresh air.
- Skin contact** : Wash contaminated skin with soap and water.
- Ingestion** : If ingested, do not induce vomiting. Get medical attention.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. Refer to protective measures listed in sections 7 and 8.

SECTION 4: First aid measures

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

- Eye contact** : May cause slight transient irritation. (redness)
- Inhalation** : Long term exposure to high concentrations of oil mist or vapors may cause lung damage.
- Skin contact** : Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.
- Ingestion** : Ingestion may cause gastrointestinal irritation and diarrhoea.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Treat symptomatically.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Recommended; , CO₂, powders, Foam
- Unsuitable extinguishing media** : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous combustion products** : Decomposition products may include the following materials:
carbon oxides

5.3 Advice for firefighters

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : Refer to protective measures listed in sections 7 and 8.
- 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".

- 6.2 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).

6.3 Methods and material for containment and cleaning up

SECTION 6: Accidental release measures

- Small spill** : Stop leak if without risk. 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.
- Large spill** : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. 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.
- 6.4 Reference to other sections** : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8).
- Advice on general occupational hygiene** : 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. Wash contaminated clothing before reuse. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Do not store in unlabelled containers. Keep container tightly closed. Keep container in a cool, well-ventilated area. Store in accordance with local regulations.

7.3 Specific end use(s)

- Recommendations** : Transmission oil
- Industrial sector specific solutions** : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

No exposure limit value known.

Biological exposure indices

No exposure indices known.

- 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.

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available

8.2 Exposure controls

SECTION 8: Exposure controls/personal protection

Appropriate engineering controls : Use only with adequate ventilation. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction.

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.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

Skin protection

Hand protection : For prolonged or repeated handling, use gloves > 8 hours (breakthrough time): neoprene, PVC, nitrile rubber (> 0.35 mm thickness).

Body protection : 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.

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.

Respiratory protection : Provide adequate ventilation. Recommended: A respirator is not needed under normal and intended conditions of product use. If ventilation is inadequate, use respirator that will protect against organic vapour and dust/mist.

Environmental exposure controls : Do not allow to enter drains or watercourses.

SECTION 9: Physical and chemical properties

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

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid.

Colour : Amber.

Odour : Not available.

Odour threshold : Not available.

Melting point/freezing point : Not available.

Initial boiling point and boiling range : >280°C (>536°F)

Flammability (solid, gas) : Not available.

Upper/lower flammability or explosive limits : Lower: 1%
Upper: 10%

Flash point : Open cup: 200°C (392°F)

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

pH : Not available.

Viscosity : Kinematic (40°C): 22 mm²/s

Pour point : Not available.

Solubility(ies) :

Media	Result
cold water	Not soluble
hot water	Not soluble

Solubility in water : **Not applicable.**

SECTION 9: Physical and chemical properties

Miscible with water	: No.
Partition coefficient: n-octanol/ water	: >6
Vapour pressure	: <0.0005 kPa (<0.003750308 mm Hg)
Evaporation rate	: Not available.
Relative density	: Not available.
Density	: 0.828 g/cm ³ [15°C (59°F)]
Vapour density	: >1 [Air = 1]
Explosive properties	: Not available.
Oxidising properties	: Not available.
<u>Particle characteristics</u>	
Median particle size	: Not applicable.

SECTION 10: Stability and reactivity

10.1 Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: Stable under recommended storage and handling conditions (see Section 7).
10.3 Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: No specific data.
10.5 Incompatible materials	: Reactive or incompatible with the following materials: Strong oxidising materials
10.6 Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Dual Clutch Transmission Fluid D2	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-

Conclusion/Summary : Based on available data, the classification criteria are not met. Not toxic.

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Dual Clutch Transmission Fluid D2	5001	5001	N/A	N/A	N/A
Alkyl Phosphite	N/A	1100	N/A	N/A	N/A

Irritation/Corrosion

Conclusion/Summary

Skin	: Based on available data, the classification criteria are not met. Contains substances Irritating to skin.
Eyes	: Based on available data, the classification criteria are not met. Contains substances Irritating to eyes.
Respiratory	: Based on available data, the classification criteria are not met.

SECTION 11: Toxicological information

Sensitisation

Conclusion/Summary

- Skin** : Based on available data, the classification criteria are not met.
Respiratory : Based on available data, the classification criteria are not met.

Mutagenicity

- Conclusion/Summary** : Based on available data, the classification criteria are not met.

Carcinogenicity

- Conclusion/Summary** : Based on available data, the classification criteria are not met.

Reproductive toxicity

- Conclusion/Summary** : Based on available data, the classification criteria are not met.

Teratogenicity

- Conclusion/Summary** : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Product/ingredient name	Result
Distillates (Fischer-Tropsch), heavy, C18-50-branched, cyclic and linear	ASPIRATION HAZARD - Category 1
Mineral Oil, Solvent refined	ASPIRATION HAZARD - Category 1

Information on likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

- Eye contact** : May cause slight transient irritation.
Inhalation : Inhalation of oil mist or vapours at elevated temperatures may cause respiratory irritation.
Skin contact : Defatting to the skin.
Ingestion : Ingestion may cause gastrointestinal irritation and diarrhoea.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : May cause slight transient irritation. (redness)
Inhalation : Long term exposure to high concentrations of oil mist or vapors may cause lung damage.
Skin contact : Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.
Ingestion : Ingestion may cause gastrointestinal irritation and diarrhoea.

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

Short term exposure

- Potential immediate effects** : Not available. Aspiration hazard is based on product viscosity data, Product - Based on available data, the classification criteria are not met.
Potential delayed effects : Not available.

Long term exposure

- Potential immediate effects** : Not available.
Potential delayed effects : Not available.

Potential chronic health effects

SECTION 11: Toxicological information

Not available.

Conclusion/Summary	: Based on available data, the classification criteria are not met.
General	: Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.
Carcinogenicity	: Not applicable. IP 346: DMSO <3% (w/w)
Mutagenicity	: Not applicable
Reproductive toxicity	: No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not applicable.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

Not readily biodegradable. This product shows a high bioaccumulation potential. Oils are in general persistent in the environment. Upon release the oil spreads on the soil or water surface and can affect the area for a long time.

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Dual Clutch Transmission Fluid D2	Acute EC50 10 to 100 mg/l	Algae	72 hours
	Acute EC50 10 to 100 mg/l	Daphnia	48 hours
	Acute LC50 10 to 100 mg/l	Fish	96 hours

Conclusion/Summary : Based on available data, the classification criteria are not met.

12.2 Persistence and degradability

Conclusion/Summary : Not biodegradable

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Dual Clutch Transmission Fluid D2	-	-	Not readily
Mineral Oil, Solvent refined	-	-	Not readily
Alkyl Phosphite	-	-	Not readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Dual Clutch Transmission Fluid D2	>6	-	high

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Expected to be distributed to soil and sediment.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties

Not applicable.

SECTION 12: Ecological information

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Hazardous waste : Yes.

European waste catalogue (EWC)

Waste code	Waste designation
13 02 06*	synthetic engine, gear and lubricating oils

Packaging

Methods of disposal : Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special 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

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.

Additional information

ADR/RID : Not applicable

ADN : Not applicable

IMDG : Not applicable

IATA : Not applicable

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Maritime transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Other EU regulations

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

National regulations

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

15.2 Chemical safety assessment : No Chemical Safety Assessment has been carried out for this mixture by the supplier.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms :

- ATE = Acute Toxicity Estimate
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- DMEL = Derived Minimal Effect Level
- DNEL = Derived No Effect Level
- EUH statement = CLP-specific Hazard statement
- N/A = Not available
- PBT = Persistent, Bioaccumulative and Toxic
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number
- SGG = Segregation Group
- vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

Full text of abbreviated H statements

H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
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.

Full text of classifications [CLP/GHS]

Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
Skin Corr. 1C	SKIN CORROSION/IRRITATION - Category 1C

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Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2020/878