

Safety Data Sheet

according to UK REACH (SI 2020/1577) as amended

Issue date: 24.07.2026

Version number: 1.0

Revision date: 24.07.2026

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

- **1.1 Product identifier**
- **Trade name:** Hydrosyn 5W-50
- **Registration number** Mixture
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Product category** PC24 Lubricants, greases, release products
- **Application of the substance / the mixture** Lubricant
- **Uses advised against** None identified
- **1.3 Details of the supplier of the safety data sheet**
- **Supplier:**
Smith & Allan
Valley Street North
Darlington
County Durham
DL1 1QE
Tel: 01325 462228
Fax: 01325 368122
e-mail: enquiries@smithandallan.com
- **Further information obtainable from:** Product safety department.
- **1.4 Emergency telephone number:**
Members of the public seeking specific information on poisons should contact:
In England and Wales: NHS 111 - dial 111
In Scotland: NHS 24 - dial 111

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to GB-CLP** The product is not classified, according to the GB CLP regulation.
- **2.2 Label elements**
- **Labelling according to GB-CLP** Not applicable
- **Hazard pictograms** Not applicable
- **Signal word** Not applicable
- **Hazard statements** Not applicable
- **Additional information:**
EUH208 Contains Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts, Alkyl (C18-C28) toluenesulfonic acid, calcium salts, borated. May produce an allergic reaction.
EUH210 Safety data sheet available on request.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable
- **vPvB:** Not applicable
- **Determination of endocrine-disrupting properties** Not applicable

SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** A blend of highly refined mineral oils with multifunctional additives.

(Contd. on page 2)

GB

Safety Data Sheet

according to UK REACH (SI 2020/1577) as amended

Issue date: 24.07.2026

Version number: 1.0

Revision date: 24.07.2026

Trade name: Hydrosyn 5W-50

(Contd. of page 1)

· Dangerous components:

CAS: 64742-54-7 EINECS: 265-157-1 Index number: 649-467-00-8 Reg.nr.: 01-2119484627-25-XXXX	Distillates (petroleum), hydrotreated heavy paraffinic ⚠ Asp. Tox. 1, H304	25 – 50%
CAS: 64741-89-5 EINECS: 265-091-3 Index number: 649-455-00-2 Reg.nr.: 01-2119487067-30-XXXX	Distillates (petroleum), solvent-refined light paraffinic ⚠ Asp. Tox. 1, H304 Note: L	1 – 2.5%
CAS: 64742-55-8 EINECS: 265-158-7 Index number: 649-468-00-3 Reg.nr.: 01-2119487077-29-XXXX	Distillates (petroleum), hydrotreated light paraffinic ⚠ Asp. Tox. 1, H304 Note: L	1 – 2.5%
CAS: 64742-56-9 EINECS: 265-159-2 Index number: 649-469-00-9 Reg.nr.: 01-2119480132-48-XXXX	Distillates (petroleum), solvent-dewaxed light paraffinic ⚠ Asp. Tox. 1, H304 Note: L	1 – 2.5%
CAS: 64742-65-0 EINECS: 265-169-7 Index number: 649-474-00-6	Distillates (petroleum), solvent-dewaxed heavy paraffinic ⚠ Asp. Tox. 1, H304 Note: L	1 – 2.5%
CAS: 722503-68-6 EC number: 682-816-2	Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts ⚠ Skin Sens. 1B, H317 Specific concentration limit: Skin Sens. 1B; H317: C ≥ 2 %	0.1 – 1%
EC number: 953-650-0	Alkyl (C18-C28) toluenesulfonic acid, calcium salts, borated ⚠ Repr. 2, H361d; ⚠ Skin Sens. 1, H317 Specific concentration limits: Skin Sens. 1; H317: C ≥ 2 % Repr. 2; H361: C ≥ 17.15 %	0.1 – < 1%

· Additional information:

Mineral oil contains <3% DMSO extract as measured by IP346.
For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· 4.1 Description of first aid measures

- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.

(Contd. on page 3)

GB

Safety Data Sheet

according to UK REACH (SI 2020/1577) as amended

Issue date: 24.07.2026

Version number: 1.0

Revision date: 24.07.2026

Trade name: Hydrosyn 5W-50

(Contd. of page 2)

- **After eye contact:**
Check for and remove any contact lenses.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**
Wash mouth out with water
Do not induce vomiting; call for medical help immediately.
- **Information for doctor:** Treat symptomatically and supportively.
- **4.2 Most important symptoms and effects, both acute and delayed** Allergic reactions
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Use fire extinguishing methods suitable to surrounding conditions.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**
Combustible
In case of fire, the following can be released:
Carbon monoxide and carbon dioxide
Boron compounds
Nitrogen oxides (NO_x)
Sulphur Oxides (SO_x)
Toxic metal oxide smoke
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.
Wear fully protective suit.
- **Additional information**
Cool endangered receptacles with water spray.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Particular danger of slipping on leaked/spilled product.
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
Do not allow to penetrate the ground/soil.
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
- **6.3 Methods and material for containment and cleaning up:**
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.

(Contd. on page 4)

Safety Data Sheet

according to UK REACH (SI 2020/1577) as amended

Issue date: 24.07.2026

Version number: 1.0

Revision date: 24.07.2026

Trade name: Hydrosyn 5W-50

(Contd. of page 3)

· 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

· **Information about fire - and explosion protection:** Do not heat up to temperatures close to flash point.

· 7.2 Conditions for safe storage, including any incompatibilities

· Storage:

· **Requirements to be met by storerooms and receptacles:** Prevent any seepage into the ground.

· **Information about storage in one common storage facility:** Store away from oxidising agents.

· Further information about storage conditions:

Store in cool, dry conditions in well sealed receptacles.

Protect from heat and direct sunlight.

· **Storage class:** 10

· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

· **Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· DNELs

CAS: 64742-54-7 Distillates (petroleum), hydrotreated heavy paraffinic

Oral	Long-term systemic effects	740 µg/kg bw/day (general population)
Dermal	Long-term systemic effects	970 µg/kg bw/day (worker)
Inhalative	Long-term systemic effects	2.73 mg/m ³ (worker)
	Long-term local effects	1.19 mg/m ³ (general population) 5.58 mg/m ³ (worker)

CAS: 64741-89-5 Distillates (petroleum), solvent-refined light paraffinic

Inhalative	Long-term local effects	1.19 mg/m ³ (general population) 5.58 mg/m ³ (worker)
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CAS: 64742-55-8 Distillates (petroleum), hydrotreated light paraffinic

Oral	Long-term systemic effects	740 µg/kg bw/day (general population)
Dermal	Long-term systemic effects	970 µg/kg bw/day (worker)
Inhalative	Long-term systemic effects	2.73 mg/m ³ (worker)
	Long-term local effects	1.19 mg/m ³ (general population) 5.58 mg/m ³ (worker)

(Contd. on page 5)

Safety Data Sheet

according to UK REACH (SI 2020/1577) as amended

Issue date: 24.07.2026

Version number: 1.0

Revision date: 24.07.2026

Trade name: Hydrosyn 5W-50

(Contd. of page 4)

· PNECs

CAS: 64742-54-7 Distillates (petroleum), hydrotreated heavy paraffinic

Secondary poisoning 9.33 mg/kg food

CAS: 64741-89-5 Distillates (petroleum), solvent-refined light paraffinic

Secondary poisoning 9.33 mg/kg food

CAS: 64742-55-8 Distillates (petroleum), hydrotreated light paraffinic

Secondary poisoning 9.33 mg/kg food

· **Additional information:** The lists valid during the making were used as basis.

· 8.2 Exposure controls

· Appropriate engineering controls

Provide general and/or local exhaust ventilation to control airborne levels below the exposure limits.

If exposure limits have not been established, maintain airborne levels to an acceptable level.

· Individual protection measures, such as personal protective equipment

· General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Avoid contact with the eyes and skin.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Do not eat, drink, smoke or sniff while working.

Do not inhale gases / fumes / aerosols.

Do not carry product impregnated cleaning cloths in trouser pockets.

· **Respiratory protection:** Use suitable respiratory protective device in case of insufficient ventilation.

· Hand protection



Protective gloves.

Use gloves tested and approved under appropriate government standards such as NIOSH (US) or EN374 (EU).

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

Nitrile rubber, NBR

Neoprene gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

Break-through time: > 480 minutes

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye/face protection



Safety glasses with side-shields conforming to EN166.

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

(Contd. on page 6)

GB

Safety Data Sheet

according to UK REACH (SI 2020/1577) as amended

Issue date: 24.07.2026

Version number: 1.0

Revision date: 24.07.2026

Trade name: Hydrosyn 5W-50

(Contd. of page 5)

· Body protection:



Protective work clothing

Body protection must be chosen depending on product properties, activity and possible exposure.

· **Environmental exposure controls** Do not allow to enter drains, sewers or watercourses.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Physical state	Liquid
· Colour:	Brown
· Odour:	Mild
· Melting point/freezing point:	Undetermined
· Boiling point or initial boiling point and boiling range	> 250 °C
· Flammability	Not applicable
· Lower and upper explosion limit	
· Lower:	Not applicable
· Upper:	Not applicable
· Flash point:	230 °C
· Auto-ignition temperature:	Not applicable
· Decomposition temperature:	Decomposition is not expected under normal conditions of use.
· pH	Not determined
· Viscosity:	
· Kinematic viscosity at 40 °C	106 mm ² /s
· Dynamic:	Not determined
· Solubility	
· water:	Not miscible or difficult to mix.
· Vapour pressure:	Not determined
· Density and/or relative density	
· Density at 20 °C:	0.847 g/cm ³
· Relative density	Not determined
· Particle characteristics	Not applicable

· 9.2 Other information

· Appearance:	
· Form:	Liquid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Product is not self-igniting.
· Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

(Contd. on page 7)

Safety Data Sheet

according to UK REACH (SI 2020/1577) as amended

Issue date: 24.07.2026

Version number: 1.0

Revision date: 24.07.2026

Trade name: Hydrosyn 5W-50

(Contd. of page 6)

- **Change in condition**
- **Evaporation rate** Not determined
- **Information with regard to physical hazard classes** Not applicable

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
At elevated temperatures, explosive vapour/air mixtures may be formed.
- **10.3 Possibility of hazardous reactions** Reacts with oxidising agents.
- **10.4 Conditions to avoid** Heat and static discharge.
- **10.5 Incompatible materials:**
Strong acids.
Strong bases.
Strong oxidising agents.
- **10.6 Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Boron compounds
Nitrogen oxides (NO_x)
Sulphur oxides (SO_x)
Toxic metal oxide smoke

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**

CAS: 64741-89-5 Distillates (petroleum), solvent-refined light paraffinic

Oral	LD50	> 5,000 mg/kg (rat)
Dermal	LD50	> 2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	> 5,000 mg/l (rat)

CAS: 64742-55-8 Distillates (petroleum), hydrotreated light paraffinic

Oral	LD50	> 5,000 mg/kg (rat)
Dermal	LD50	> 2,000 mg/kg (rabbit)

CAS: 64742-65-0 Distillates (petroleum), solvent-dewaxed heavy paraffinic

Oral	LD50	> 5,000 mg/kg (rat)
Dermal	LD50	> 3,000 mg/kg (rabbit)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

(Contd. on page 8)

Safety Data Sheet

according to UK REACH (SI 2020/1577) as amended

Issue date: 24.07.2026

Version number: 1.0

Revision date: 24.07.2026

Trade name: Hydrosyn 5W-50

(Contd. of page 7)

- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **Subacute to chronic toxicity:** Prolonged or repeated skin contact may irritate and cause dermatitis.
- **Additional toxicological information:**
Prolonged and repeated contact with USED engine oils may cause serious skin disorders, including dermatitis and cancer. Engine oils are known to accumulate polycyclic aromatic hydrocarbons in use and there is evidence that used crankcase oils from petrol engines are carcinogenic to animals. Used engine oils fall within the definition of 'carcinogen'. Precautions advised by the Enforcing Authorities include controlling exposure by systems of work, personal protection and personal hygiene.
- **11.2 Information on other hazards**

· **Endocrine disrupting properties**

None of the ingredients are listed.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** Not easily biodegradable
- **12.3 Bioaccumulative potential** Contains components with the potential to bioaccumulate.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable
- **vPvB:** Not applicable
- **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Recommended Hierarchy of Controls:
 - Minimise waste;
 - Reuse if not contaminated;
 - Recycle, if possible; or
 - Safe disposal (if all else fails).
 Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Contact waste processors for recycling information.
Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.

(Contd. on page 9)

Safety Data Sheet

according to UK REACH (SI 2020/1577) as amended

Issue date: 24.07.2026

Version number: 1.0

Revision date: 24.07.2026

Trade name: Hydrosyn 5W-50

(Contd. of page 8)

Delivery of waste oil to officially authorised collectors only.

· UK List of Waste

13 02 05* mineral-based non-chlorinated engine, gear and lubricating oils

· Uncleaned packaging:
· Recommendation:

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.
Disposal must be made according to official regulations.

Containers, even those that are "empty," may contain residues that can develop flammable and/or hazardous vapours upon heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

· Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

· 14.1 UN number or ID number
· ADR, IMDG, IATA

Not applicable

· 14.2 UN proper shipping name
· ADR, IMDG, IATA

Not applicable

· 14.3 Transport hazard class(es)
· ADR, ADN, IMDG, IATA
· Class

Not applicable

· 14.4 Packing group
· ADR, IMDG, IATA

Not applicable

· 14.5 Environmental hazards:

Not applicable

· 14.6 Special precautions for user

Not applicable

· 14.7 Maritime transport in bulk according to IMO instruments

Not applicable

· Transport/Additional information:

Not dangerous according to the above specifications.

· UN "Model Regulation":

Not applicable

SECTION 15: Regulatory information

· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
· Poisons Act
· Regulated explosives precursors

None of the ingredients are listed.

· Regulated poisons

None of the ingredients are listed.

(Contd. on page 10)

Safety Data Sheet

according to UK REACH (SI 2020/1577) as amended

Issue date: 24.07.2026

Version number: 1.0

Revision date: 24.07.2026

Trade name: Hydrosyn 5W-50

(Contd. of page 9)

· Reportable explosives precursors

None of the ingredients are listed.

· Reportable poisons

None of the ingredients are listed.

· Per- and polyfluoroalkyl substances (PFAS)

None of the ingredients are listed.

· Control Of Major Accident Hazards Regulations 2015 (COMAH)
· Named dangerous substances - ANNEX I None of the ingredients are listed.

· DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients are listed.

· REGULATION (EU) 2019/1148
· Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients are listed.

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients are listed.

· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

This Safety Data Sheet is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

· Relevant phrases

H304 May be fatal if swallowed and enters airways.

H317 May cause an allergic skin reaction.

H361 Suspected of damaging fertility or the unborn child.

H361d Suspected of damaging the unborn child.

· Department issuing SDS: Product safety department.

· Abbreviations and acronyms:

UK REACH: REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals

GB CLP: REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

UFI: Unique Formula Identifier

UK- REACH: The UK REACH etc. (Amendment etc.) (EU Exit) Regulations 2019 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals

GB- CLP: Retained GB CLP Regulation (EU) No. 1272/2008 as amended for Great Britain on the Classification, Labelling and Packaging of Chemicals.

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

(Contd. on page 11)

Safety Data Sheet

according to UK REACH (SI 2020/1577) as amended

Issue date: 24.07.2026

Version number: 1.0

Revision date: 24.07.2026

Trade name: Hydrosyn 5W-50

(Contd. of page 10)

DNEL: Derived No-Effect Level (UK REACH)
PNEC: Predicted No-Effect Concentration (UK REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
ATE: Acute toxicity estimate values
Skin Sens. 1: Skin sensitisation – Category 1
Skin Sens. 1B: Skin sensitisation – Category 1B
Repr. 2: Reproductive toxicity – Category 2
Asp. Tox. 1: Aspiration hazard – Category 1

GB