



TECHNICAL DATA SHEET

GROUNDSMAN 4 STROKE

A high performance engine oil formulated from a carefully balanced mixture of mineral base stocks fortified with the latest additive technology.

Groundsman 4 Stroke is suitable for all makes of four stroke petrol and naturally aspirated diesel stationary engines found on horticultural machines.

FEATURES

- Produced specifically for horticultural engines
- Multi-grade viscosity offering maximum protection under extreme operating conditions
- Excellent thermal stability for peak engine performance under all conditions
- Low carbon build-up
- Highly sophisticated anti wear package to prolong engine life

PERFORMANCE SPECIFICATIONS, APPROVALS & RECOMMENDATIONS

API SJ, SH, SG, SF, SE, SD, SC, CF-4, CF, CE, CD, CC

TYPICAL PHYSICAL CHARACTERISTICS

Characteristic	Method	UoM	Typical
SAE Viscosity	J300	-	10W-30 / 10W-40
Density @ 15°C	ASTM D4052	g/cm ³	0.8654
Kinematic Viscosity @ 40°C	ASTM D445	mm ² /s	91.30
Kinematic Viscosity @ 100°C	ASTM D445	mm ² /s	12.50
Viscosity Index	ASTM D2270	-	132
CCS Viscosity (@ 25°C)	ASTM D5293	mPa.s	5300
HT/HS Viscosity @ 150°C	ASTM D5481	mPa.s	3.5
Total Base Number (TBN)	ASTM D2896	mgKOH/g	6.5
Flash Point (COC)	ASTM D92	°C	238
Pour Point	ASTM D97	°C	-48
NOACK Volatility @ 250°C	ASTM D5800B	% mass	11.0
KO Shear Stability (90 cycles):			
After Shear Viscosity @100°C	ASTM D6278	mm ² /s	11.0
Shear Stability Index (SSI)	ASTM D6278	%	12.0

Details continue on next page.



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Foaming Tendency:

Seq. I/II/III (24°C/93.5°C/24°C)	ASTM D892	mL	0-0/0-0/0-0
Sulphated Ash	ASTM D874	% mass	0.9
Phosphorus Content	ASTM D6443	% mass	0.09
Sulphur Content	ASTM D6443	% mass	0.27
Appearance	ASTM D4176-1	-	Clear & Bright
Colour	Visual	-	Amber
Product Code	-	-	02101

This data sheet and the information it contains is believed to be accurate as of the date of creation. Please email technical@rockoil.co.uk or telephone +44 (0) 1925 636191 if you require any further information.



GROUNDSMAN 4 STROKE

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 28/10/2013 Revision date: 14/08/2024 Version: 3.0

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

1.1. Product identifier

Product form	: Mixture
Product name	: GROUNDSMAN 4 STROKE
Product code	: 02101
Type of product	: Use in lubricants
Product group	: Blend
Uses Advised Against	: This product must not be used in applications other than those recommended in Section 1.2.1, without first seeking the advice of the supplier.

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

Relevant identified uses

Intended for general public	
Main use category	: Consumer use
Industrial/Professional use spec	: Industrial For professional use only
Use of the substance/mixture	: Lubricant

1.3. Details of the supplier of the safety data sheet

Rock Oil
90 Priestley Street
WA5 1ST Warrington, Cheshire
UK
T +44 1925 636191
mail@rockoil.co.uk

1.4. Emergency telephone number

Emergency number	: +44 1925 636191 (8am-5pm Mon-Fri except Bank Holidays)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Not classified

Adverse physicochemical, human health and environmental effects

Not expected to present a significant hazard under anticipated conditions of normal use.

2.2. Label elements

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

Precautionary statements (CLP)	: P102 - Keep out of reach of children.
Child-resistant fastening	: Not applicable
Tactile warning	: Not applicable

2.3. Other hazards

Other hazards which do not result in classification : None under normal conditions.

Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

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SECTION 3: Composition/information on ingredients

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Distillates (petroleum), hydrotreated heavy naphthenic	CAS-No.: 64742-52-5 EC-No.: 265-155-0	≥ 80	Asp. Tox. 1, H304

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

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Allow affected person to breathe fresh air. Allow the victim to rest.
First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

Symptoms/effects	: Not expected to present a significant hazard under anticipated conditions of normal use.
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4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	: Carbon monoxide. Carbon dioxide. fume.
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5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Protective equipment	: Avoid contact with skin and eyes.
Emergency procedures	: Evacuate unnecessary personnel.

For emergency responders

Protective equipment	: Equip cleanup crew with proper protection.
Emergency procedures	: Ventilate area.

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6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Section 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container closed when not in use. Protect from moisture. Keep only in original container. Store in a well-ventilated place. Keep cool.
Incompatible products : Oxidizing agent. Strong bases. Strong acids.
Incompatible materials : Sources of ignition. Direct sunlight.
Storage temperature : 0 – 40 °C

7.3. Specific end use(s)

Lubricant oil.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

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USA - ACGIH - Occupational Exposure Limits

ACGIH OEL TWA	5 mg/m ³ Refined mineral oil, mist
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8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:

Ensure exposure is below occupational exposure limits (where available).

Personal protection equipment

Personal protective equipment:

Avoid all unnecessary exposure. Gas mask with filter type A at conc. in air > 5 ppm. Gloves. Nitrile rubber gloves. In case of splash hazard: safety glasses.

Personal protective equipment symbol(s):



Eye and face protection

Eye protection:

If there is a risk of liquid being splashed : Standard EN 166 - Personal eye-protection. Chemical goggles or safety glasses

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Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection. PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same, but recognize that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time maybe acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is not a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Glove thickness should be typically greater than 0.35 mm depending on the glove make and model.

Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Wear appropriate mask

Thermal hazards

Thermal hazard protection:

Not specifically applicable.

Environmental exposure controls

Environmental exposure controls:

SECTION 6.

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: amber.
Appearance	: Mobile liquid.
Odour	: characteristic.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: > 280 °C IBP
Flammability	: Non flammable.
Explosive properties	: Not classified.
Oxidising properties	: Not classified.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: > 210 °C PMCC

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Auto-ignition temperature	: > 320 °C
Decomposition temperature	: Not available
pH	: Not classified
Viscosity, kinematic	: 90 mm ² /s @40°C
Solubility	: Insoluble in water. Soluble in aliphatic hydrocarbons.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: < 0.5 kPa @ 20°C
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: 0.87 kg/l @ 15°C
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

9.2. Other information

Other safety characteristics

VOC content : 0 %

SECTION 10: Stability and reactivity

10.1. Reactivity

No reactivity hazard other than the effects described in sub-sections below.

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Oxidizing agent. Strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

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

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Skin corrosion/irritation	: Not classified
	pH: Not classified
Additional information	: Based on available data, the classification criteria are not met
Serious eye damage/irritation	: Not classified
	pH: Not classified
Additional information	: Based on available data, the classification criteria are not met
Respiratory or skin sensitisation	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Reproductive toxicity	: Not classified

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Additional information	: Based on available data, the classification criteria are not met
STOT-single exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-repeated exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified
Additional information	: Based on available data, the classification criteria are not met

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Viscosity, kinematic	90 mm²/s @40°C
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11.2. Information on other hazards

Other information

Potential adverse human health effects and symptoms	: Based on available data, the classification criteria are not met
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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

12.2. Persistence and degradability

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Persistence and degradability	Not readily biodegradable. Not established.
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Distillates (petroleum), hydrotreated heavy naphthenic (64742-52-5)

Persistence and degradability	Rapidly degradable
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12.3. Bioaccumulative potential

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Bioaccumulative potential	Not established.
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12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

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Results of PBT assessment	Not classified as PBT or vPvB.
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12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Additional information	: Avoid release to the environment.
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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
Ecological waste information	: Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1. UN number or ID number

Not regulated for transport

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: Not applicable
Proper Shipping Name (IMDG)	: Not applicable
Proper Shipping Name (IATA)	: Not applicable
Proper Shipping Name (ADN)	: Not applicable
Proper Shipping Name (RID)	: Not applicable

14.3. Transport hazard class(es)

ADR
Transport hazard class(es) (ADR) : Not applicable

IMDG
Transport hazard class(es) (IMDG) : Not applicable

IATA
Transport hazard class(es) (IATA) : Not applicable

ADN
Transport hazard class(es) (ADN) : Not applicable

RID
Transport hazard class(es) (RID) : Not applicable

14.4. Packing group

Packing group (ADR)	: Not applicable
Packing group (IMDG)	: Not applicable
Packing group (IATA)	: Not applicable
Packing group (ADN)	: Not applicable
Packing group (RID)	: Not applicable

14.5. Environmental hazards

Other information	: No supplementary information available
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14.6. Special precautions for user

Overland transport

No data available

Transport by sea

No data available

Air transport

No data available

Inland waterway transport

No data available

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Rail transport

No data available

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

VOC Directive (2004/42)

VOC content : 0 %

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

National regulations

Germany

Water hazard class (WGK) : WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1).
Hazardous Incident Ordinance (12. BImSchV) : Is not subject to the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen : Distillates (petroleum), hydrotreated heavy naphthenic is listed
SZW-lijst van mutagene stoffen : Distillates (petroleum), hydrotreated heavy naphthenic is listed
SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed
SZW-lijst van reprotoxische stoffen – : None of the components are listed
Vruchtbaarheid
SZW-lijst van reprotoxische stoffen – Ontwikkeling : None of the components are listed

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

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according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H- and EUH-statements:	
Asp. Tox. 1	Aspiration hazard, Category 1
H304	May be fatal if swallowed and enters airways.

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.