

TUFGEAR Spray

Heavy-duty open gear lubricant, in aerosol, for demanding applications

Product Overview

ROCOL® TUFGEAR Spray is a heavy duty open gear spray containing a blend of high load carrying solids designed for the effective lubrication and protection of gears used in extreme environments.

TUFGEAR Spray is a highly water resistant, long life grease in an aerosol for the lubrication of all types and sizes of open gears.

Also available in grease form – see ROCOL TUFGEAR Universal.

Features and Benefits

- ROCOL TUFGEAR Spray has a wide temperature range -10°C to +100°C.
- TUFGEAR Spray is a non-melting grease containing a blend of high load carrying solids.
- Combination of high load carrying solids boosts the heavy duty performance particularly in highly loaded applications.
- TUFGEAR Spray demonstrates outstanding EP performance with a weld load of 800 kg.
- TUFGEAR Spray has excellent corrosion resistance to protect in humid, damp and even wet conditions.
- It is highly tenacious to ensure the lubricant adheres to the gear teeth and doesn't fling off.
- TUFGEAR Spray maintains integrity in extreme conditions and continues to protect over extended lubrication intervals, reducing equipment failure, downtime and lubricant usage.
- Thin film minimises attraction of dust and dirt.

Directions for Storage and Use

- It is important to clean the gears prior to application. ROCOL Industrial Cleaner Rapid Dry is recommended.
- Shake aerosol well before use.
- Apply from a distance of 15-30 cm (6-12 inches).
- Hold upright and apply a thin even coating to cover the gear teeth.
- Also available as ROCOL TUFGEAR Universal for grease application.
- Use only in well ventilated areas.
- The storage temperature should be kept below +50°C, and the storage area should be out of direct sunlight.
- Shelf life is 5 years from date of manufacture.

Typical Applications

- TUFGEAR Spray is designed for open gears, girth gears, rack and pinions etc. which are found in all types of industrial applications.
- TUFGEAR Spray has been developed to use on all types and sizes of open gears in aggressive environments, including strong underwater currents.
- TUFGEAR Spray is TUFGEAR Universal in an aerosol therefore it can be used for large gears operating under high loads in extreme conditions.

Pack Sizes

| Pack Size | Part Code |
|-----------|-----------|
| 400ml | 18105 |

TUFGEAR Spray

Heavy-duty open gear lubricant, in aerosol, for demanding applications

| Property | Test Method | Result |
|--|---------------------|--------------------------------------|
| Appearance | Visual | Black almost dry film |
| NLGI No. | IP 50 – ASTM D217 | 2 |
| Base Type | N/A | Blend of high viscosity mineral oils |
| Base Fluid Viscosity at 40°C | IP 71 | >1000cSt |
| Thickener | N/A | Organically modified clay |
| Solids | N/A | Blend of high load carrying solids |
| Solvent | N/A | Hydrocarbon |
| Propellant | N/A | LPG (Hydrocarbon) |
| Temperature Range | N/A | -10°C to +100°C |
| 4-Ball Weld Load | IP 239 – ASTM D2596 | 800kg |
| 4-Ball Mean Hertz Load | IP 239 – ASTM D2596 | 120kg |
| Timken 'OK' Load | IP 326 – ASTM D2509 | 35 lbs |
| Mild Steel Corrosion Test 24 hrs at 100°C | N/A | No stain |
| Copper Corrosion Test | IP 112 – ASTM D130 | 1a |

Values quoted above are typical and do not constitute a specification.

Safety Data Sheets

Safety data sheets are available for download from our website www.rocol.com or may be obtained from your usual ROCOL contact.

The information in this publication is based on our experience and reports from customers. There are many factors outside our control or knowledge which affect the use and performance of our products, for which reason it is given without responsibility.

Issue: 1 Date: 01-11

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ROCOL A division of **ITW** Ltd



BS EN ISO 9001
Certificate No. FM 12448



BS EN ISO 14001
Certificate No. EMS 67596



OHSAS 18001
Certificate No. OHS 78173



INVESTORS
IN PEOPLE



SAFETY DATA SHEET

TUFGEAR SPRAY

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Compilation date: 13/07/2011

Revision No: 3

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

1.1. Product identifier

Product name: TUFGEAR SPRAY

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

Use of substance / mixture: Open gear lubricant.

1.3. Details of the supplier of the safety data sheet

Company name: ROCOL

ROCOL House

Swillington

Leeds

West Yorkshire

LS26 8BS

ENGLAND

Tel: +44 (0) 113 232 2700

Fax: +44 (0) 113 232 2740

Email: customer-service@rocol.com

1.4. Emergency telephone number

Emergency tel: +44 (0) 113 232 2600

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CHIP: F+: R12; -: R67; -: R52/53

Most important adverse effects: Extremely flammable. Vapours may cause drowsiness and dizziness. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2. Label elements

Label elements under CHIP:

Hazard symbols: Extremely flammable.



Risk phrases: R12: Extremely flammable.

R67: Vapours may cause drowsiness and dizziness.

R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases: S16: Keep away from sources of ignition - No smoking.

[cont...]

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S23: Do not breathe spray.

S51: Use only in well-ventilated areas.

S35: This material and its container must be disposed of in a safe way.

Precautionary phrases: Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - No smoking. Keep out of the reach of children.

2.3. Other hazards

PBT: This substance is not identified as a PBT substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

HYDROCARBON AEROSOL PROPELLANT (<0.1% 1,3-BUTADIENE)

| EINECS | CAS | CHIP Classification | CLP Classification | Percent |
|-----------|------------|---------------------|--------------------|---------|
| 270-704-2 | 68476-85-7 | F+: R12 | - | 50-70% |

ISOPARAFFINIC HYDROCARBON

| | | | | |
|-----------|------------|---|---|--------|
| 292-458-5 | 90622-56-3 | F: R11; Xn: R65; Xi: R38; -: R67; N: R51/53 | - | 10-30% |
|-----------|------------|---|---|--------|

ACETONE

| | | | | |
|-----------|---------|---------------------------------|---|-------|
| 200-662-2 | 67-64-1 | F: R11; Xi: R36; -: R66; -: R67 | - | 1-10% |
|-----------|---------|---------------------------------|---|-------|

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Wash immediately with plenty of soap and water.

Eye contact: Bathe the eye with running water for 15 minutes. Consult a doctor.

Ingestion: Wash out mouth with water. Do not induce vomiting. Consult a doctor.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. Consult a doctor.

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

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and redness. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat. May cause dizziness.

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest. Drowsiness or mental confusion may occur.

4.3. Indication of any immediate medical attention and special treatment needed

[cont...]

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Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Do not use water. Alcohol resistant foam. Carbon dioxide. Dry chemical powder. Use water spray to cool containers.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: Extremely flammable. Forms explosive air-vapour mixture. In combustion emits toxic fumes of carbon dioxide / carbon monoxide.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Refer to section 8 of SDS for personal protection details. Eliminate all sources of ignition.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Do not use equipment in clean-up procedure which may produce sparks. Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

6.4. Reference to other sections

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Ensure there is sufficient ventilation of the area. Do not handle in a confined space. Smoking is forbidden.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in cool, well ventilated area. Keep away from sources of ignition. Keep away from direct sunlight. Ensure lighting and electrical equipment are not a source of ignition.

Suitable packaging: Must only be kept in original packaging.

7.3. Specific end use(s)

Section 8: Exposure controls/personal protection

[cont...]

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8.1. Control parameters

Hazardous ingredients:

HYDROCARBON AEROSOL PROPELLANT (<0.1% 1,3-BUTADIENE)

Workplace exposure limits:

Respirable dust

| State | 8 hour TWA | 15 min. STEL | 8 hour TWA | 15 min. STEL |
|-------|-------------------|-------------------|------------|--------------|
| UK | 1000ppm 1750mg/m3 | 1250ppm 2180mg/m3 | - | - |

ISOPARAFFINIC HYDROCARBON

| | | | | |
|----|------------|---|---|---|
| UK | 1200 mg/m3 | - | - | - |
|----|------------|---|---|---|

8.2. Exposure controls

Engineering measures: Ensure there is sufficient ventilation of the area. Ensure lighting and electrical equipment are not a source of ignition.

Respiratory protection: Respiratory protection not normally required.

Hand protection: Protective gloves.

Eye protection: Safety glasses with side-shields.

Skin protection: Protective clothing.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Aerosol

Colour: Black

Odour: Characteristic odour

Evaporation rate: Fast

Oxidising: Non-oxidising (by EC criteria)

Solubility in water: Not miscible

Viscosity: Non-viscous

Boiling point/range°C: < 0

Melting point/range°C: < -130

Flammability limits %: lower: 1.8

upper: 9.4

Flash point°C: < -100

Autoflammability°C: > 200

Vapour pressure: > 210

Relative density: < 1

9.2. Other information

Other information: Not applicable.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

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10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions.

10.4. Conditions to avoid

Conditions to avoid: Direct sunlight. Heat. Sources of ignition.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Strong reducing agents.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes of carbon dioxide / carbon monoxide.

Section 11: Toxicological information

11.1. Information on toxicological effects

Toxicity values: Not applicable.

Symptoms / routes of exposure

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and redness. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat. May cause dizziness.

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest. Drowsiness or mental confusion may occur.

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity values: Not applicable.

12.2. Persistence and degradability

Persistence and degradability: Only slightly biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: No bioaccumulation potential.

12.4. Mobility in soil

Mobility: Highly volatile. Heavier than air.

12.5. Results of PBT and vPvB assessment

PBT identification: This substance is not identified as a PBT substance.

12.6. Other adverse effects

Other adverse effects: Harmful to aquatic organisms.

[cont...]

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Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal of packaging: Dispose of in a regulated landfill site or other method for hazardous or toxic wastes.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

14.1. UN number

UN number: UN1950

14.2. UN proper shipping name

Shipping name: AEROSOLS

14.3. Transport hazard class(es)

Transport class: 2

14.4. Packing group

14.5. Environmental hazards

Environmentally hazardous: No

Marine pollutant: No

14.6. Special precautions for user

Tunnel code: D

Transport category: 2

Section 15: Regulatory information

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

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

Safety data sheet prepared in accordance with Commission Directive 2008/47/EC of 8 April 2008 amending, for the purposes of adapting to technical progress, Council Directive 75/324/EEC relating to aerosol dispensers

Phrases used in s.2 and 3: R11: Highly flammable.
R12: Extremely flammable.
R36: Irritating to eyes.

[cont...]

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R38: Irritating to skin.

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R65: Harmful: may cause lung damage if swallowed.

R66: Repeated exposure may cause skin dryness or cracking.

R67: Vapours may cause drowsiness and dizziness.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.