TENNANTS DISTRIBUTION LIMITED
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PRODUCT SPECIFICATION

Product Name	Tenacol 91/6
Alternative Name	Fatty Alcohol Polyethylene Glycol
Specification Reference	TE916/3 (15/09/0080100)

SALES SPECIFICATION

Appearance	Clear liquid at 25°C
Colour Hazen	50 max
Hydroxyl Value (mg/KOH/g)	120 – 133
Cloud Point °C (1% aq. solution)	48 – 56
pH Value	5 – 7
Water Content	0.3% max
Typical Properties	
Pour Point °C, circa	3
Calculated HLB Value	About 12.5

NOTES

Exclusion of Liability

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Health and Safety

A Material Safety Data Sheet has been issued describing the health, safety and environmental properties of this product, identifying the potential hazards and giving advice on the handling precautions and emergency procedures. This must be consulted fully before handling, storage and use.

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

1.1 Product Identifier

Product Name: Tenacol 91-6

Chemical Name Alcohols C9-11, ethoxylated

REACH Registration Number: This product is a Polymer which is exempt from the obligation to register under REACH in accordance with Article II, Section 9.

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

Identified use(s): Use in detergent manufacture

1.3 Details of the supplier of the safety data sheet

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1.4 Emergency telephone number

Tel: 44(0) 844 3350001 (24 hours)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Regulation (EC) No 1272/2008 (CLP)

Hazard Class & Category	Hazard statement
Acute Toxicity - Oral, Category 4	H302
Serious eye damage/eye irritation, Category 1	H318

2.2 Label Elements

Label Name ALCOHOL ETHOXYLATE

Labelling according to Regulation (EC) No 1272/2008

Symbol(s)

Signal Word: Danger

Hazard Statements

PHYSICAL HAZARDS:

Not classified as a physical hazard under CLP criteria.

HEALTH HAZARDS:

H302: Harmful if swallowed.

H318: Causes serious eye damage.

ENVIRONMENTAL HAZARDS:

Not classified as environmental hazard according to CLP criteria.

Precautionary Statements

Response

P301+P312: IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell.

P330: Rinse mouth.

P312: Call a POISON CENTRE or doctor/ physician if you feel unwell.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310: Immediately call a POISON CENTRE or doctor/physician.

Storage: No precautionary phrases.

Disposal: P501: Dispose of contents and container to appropriate waste site or reclaimer in accordance with local and national regulations.

2.3 Other Hazards

Health Hazards: Causes mild skin irritation. **Safety Hazards:** No specific hazards.

3 COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Alcohols C9-11, ethoxylated. Concentration: 100%
CAS No. 68439-46-3
Hazard Class and Category: Acute Tox. 4; Eye Dam. 1
Hazard Statement: H302, H318

4. FIRST AID MEASURES

4.1 Description of first aid measures

Ingestion

If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

Inhalation

No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice

Skin contact

Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available.

Eye contact

Immediately flush eyes with large amounts of water for at least 15 minutes while holding eyelids open. Transport to the nearest medical facility for additional treatment.

4.2 Most important symptoms and effects, both acute and delayed

Eye irritation signs and symptoms may include a sensation, redness, swelling, and/or blurred vision.
Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/cracked appearance. Skin irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blisters.

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

Data not available.

5. FIRE FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

5.1 Extinguishing Media

Suitable extinguishing media: Alcohol-resistant foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media - Water Jet

5.2 Special hazards arising from the substance or mixture

Carbon monoxide may be evolved if incomplete combustion occurs

5.3 Special protective equipment:

Wear full protective clothing and self-contained breathing apparatus
Additional information: Keep adjacent containers cool by spraying with water

6. ACCIDENTAL RELEASE MEASURES

Observe all relevant local and international regulations

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with spilled or released material.
Immediately remove all contaminated clothing. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. For guidance on disposal of spilled material see Chapter 13 of this Material Safety Data Sheet. Use the following as appropriate: Notify authorities if any exposure to the general public or the environment occurs or is likely to occur. Local authorities should be advised if significant spillages cannot be contained. Keep animals off contaminated vegetation. Stay upwind and keep out of low areas. Be ready for fire or possible exposure

6.2 Environmental precautions

Prevent from spreading or entering into drains, ditches, or rivers by using sand, earth, or other appropriate barriers. Use appropriate containment to avoid environmental contamination. Ventilate contaminated area thoroughly

6.3 Methods and material for containment and cleaning up

For large liquid spills (>1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material dispose of safely. Remove contaminated soil and dispose of safely. For small liquid spills (<1 drum), transfer by mechanical means to a labelled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.

6.4 Reference to other sections

No further information

7. HANDLING AND STORAGE

Avoid breathing vapours or contact with material. Only use in well ventilated areas. Wash thoroughly after handling. On guidance on selection of personal equipment see Chapter 8 of this Material Safety Data Sheet. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.

7.1 Precautions for safe handling

Avoid contact with skin, eyes, and clothing. Do not empty into drains.

7.2 Conditions for safe storage, including any incompatibilities

Bulk storage tanks should be diked (bunded). Keep away from flammables, oxidizing agents, and corrosives. Vapours from tanks should not be released to atmosphere. Breathing losses during storage should be controlled by a suitable vapour treatment system. Nitrogen blanket recommended for large tanks (capacity 100 m^3 or higher). Storage Temperature: 50 Deg C maximum. Insulation (lagging) will minimize heat loss in areas of low ambient temperature.

7.3 Specific end use(s)

Not applicable. Ensure that all local regulations regarding handling and storage facilities are followed

Further Information

Product Transfer: Keep containers closed when not in use. Do not use compressed air for filling, discharging or handling

Recommended Materials: Stainless steel. Epoxy resins. Polyester.

Unsuitable Materials: Aluminium. Copper. Copper alloys.

Container Advice: Containers, even those that have been emptied, can contain explosive vapours. Do not cut, drill, grind, weld or perform similar operations on or near containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters.

UK Workplace Exposure Limits: None established

Additional Information

Wash hands before eating, drinking, smoking and using the toilet. Launder contaminated clothing before re-use

8.2 Exposure controls

General Information

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate ventilation to control airborne concentrations. Local exhaust ventilation is recommended. Eye washes and showers for emergency use.

Personal Protective Equipment

Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

Eye Protection

Chemical splash goggles (gas-tight monogoggles) and face shield. Approved to EU Standard EN166, AS/NZS:1337.

Hand Protection

Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739, AS/NZS: 2161) made from the following materials may provide suitable chemical protection:
Incidental contact/Splash protection: 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, glove thickness, 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.

Body Protection

Chemical resistant gloves/gauntlets, boots, and apron (where risk of splashing).

Respiratory Protection

Select a filter suitable for combined particulate/organic gases and vapours (boiling point >65 Deg C (149 Deg F) meeting EN14387 (AS/NZS:1716). If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Where air-filtering respirators are unsuitable (e.g. airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus.

Thermal Hazards: Not applicable

Monitoring Methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be

required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate. Examples of sources of recommended air monitoring methods are given below or contact supplier. Further national methods may be available.
National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods.
http://www.cdc.gov/niosh/nmam/nmammenu.html
Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods.
http://www.osha-slc.gov/dts/sltc/methods/toc.html.
Health and Safety Executive (SE), UK: Methods for the Determination of Hazardous Substances,
http://www.hsl.gov.uk/publications/mdhs.aspx.
erufsgenossenschaftliches Institut fur Arbeitssicherheit (BIA), Germany
http://www.hvbg.de/d/bia/index.html
L'Institut National de Recherche et De Securite, (INRS), France.
http://www.inrs.fr/securite/hygiene-securite-travail.html.

Environmental Exposure Controls

Environmental Exposure

Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated

8.3 Occupational exposure controls

No further information

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties	
Appearance	Slightly viscous liquid
Odour	Mild
Odour Threshold	Data not available
pH	6.8
Boiling Point	>232.2°C/450°F
Pour Point	6.1°C/43°F
Flash Point	142.8°C/289°F (Pensky-Martens Closed Cup)
Explosion/Flammability Limits In Air	Data not available
Auto-Ignition Temperature	Data not available
Vapour Pressure	<0.1 hPa at 37.8°C/100°F
Specific Gravity	0.984 at 25°C/77°F
Density	976 kg/m^3 at 40°C/104°F
Water Solubility	100 g/l. Complete, may form gel
Solubility In Other Solvents	Data not available
n-Octanol/Water Partition Co-efficient (Log Pow)	Data not available
Dynamic viscosity	Data not available
Kinematic Viscosity	Data not available
Vapour Density (Air=1)	15.0
Evaporation Rate (nBuAC=1)	Data not available
Surface Tension	Data not available
9.2 Other Information	
Co-efficient of expansion	0.0036 LB/GAL
State of aggregation	Liquid/solid
Stability	Stable
Viscosity	23.0 cst at 37.8°C/100°F
Other Information	Data not available

10. STABILITY AND REACTIVITY

10.1 Reactivity

Stable under normal temperature conditions of use.

10.2 Chemical stability

Oxidises on contact with air. Stable up to 50°C.

10.3 Possibility of hazardous reactions

None expected under normal use conditions

10.4 Conditions to avoid

Temperatures above 50°C

10.5 Incompatible materials

Copper. Copper Alloys. Alumium. Strong oxidising agents

10.6 Hazardous decomposition products

None expected under normal use conditions

Other Information

Sensitivity to static discharge: Data not available

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Basis for Assessment: Information given is based on product testing, and/or similar products, and/or components.

Routes of Exposure: Exposure may occur via inhalation, ingestion, skin absorption, skin or eye contact, and accidental ingestion.

Acute Oral Toxicity: Harmful if swallowed. LD50 >300-<=2000 mg/kg.

Acute Dermal Toxicity: Expected to be of low toxicity, LD50 > 2000 mg/kg

Acute Inhalation Toxicity : Low toxicity if inhaled.

Skin Irritation: Causes mild skin irritation. Repeated exposure may cause skin dryness or cracking.

Eye Irritation: Causes serious eye irritation.

Respiratory Irritation: Not expected to be a respiratory irritant.

Sensitisation: Not expected to be a sensitizer.

Aspiration hazard: Not considered an aspiration hazard.

Mutagenicity: Not considered to be a mutagenic hazard.

Carcinogenicity: Not expected to be carcinogenic.

Reproductive and Developmental Toxicity: Does not impair fertility. Not a development toxicant.

Specific target organ: Not expected to be a hazard.

Toxicity – single exposure

Toxicity – repeated exposure

Specific target organ: Expected to have low toxicity on repeated exposure.

12. ECOLOGICAL INFORMATION

Basis for Assessment :

Incomplete ecotoxicological data are available for this product. The information given below is based partly on a knowledge of the components and the ecotoxicology of similar products.

12.1 Toxicity

Acute Toxicity

Fish: Expected to be toxic: LL/EL/IL50 1-10 mg/l

Aquatic Invertebrates: Toxic: LL/EL/IL50 1-10 mg/l

Algae: Expected to be toxic: LL/EL/IL50 1-10 mg/l

Microorganisms: Expected to be practically non toxic: LL/EL/IL50 >100 mg/l

12.2 Persistence and degradability: Readily biodegradable.

12.3 Bioaccumulative Potential: Bioaccumulation is unlikely to occur due to metabolism and excretion.

12.4 Mobility: If product enters soil, one or more constituents will be mobile and may contaminate groundwater. Dissolves in water.

12.5 Result of the PBT assessment: Not applicable.

12.6 Other Adverse Effects: Data not available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Material Disposal

Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses. Waste product should not be allowed to contaminate soil or water.

Container Disposal

Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard. Do not puncture, cut or weld uncleaned drums. Send to drum recoverer or metal reclaimer.

Local Legislation

Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be complied with.

14. TRANSPORT INFORMATION

ADR/RID/ADN/IMDG/ICAO/IATA

This product is not classified as dangerous goods under transport regulations.

Annex II of MARPOL 73/78 and the IBC Code

Pollution Category: Y

Ship Type: 3

Product Name: Alcohol (C9-11) poly (2.5-9) ethoxylate

Special Precaution: Refer to Chapter 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport

Additional Information: This product may be transported under nitrogen blanketing. Nitrogen is an odourless and invisible gas. Exposure to nitrogen may cause asphyxiation or death. Personnel must observe strict safety precautions when involved with a confined space entry

15. REGULATORY INFORMATION

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

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Chemical Inventory Status

AICS:	Listed.	
DSL:	Listed.	
INV (CN):	Listed.	
ENCS (JP) :	Listed.	(7)-97
TSCA:	Listed.	
KECI (KR):	Listed.	KE-13383
PICCS (PH):	Listed.	

15.2 Chemical safety assessment

Not applicable

16. OTHER INFORMATION

Text of Hazard Statements

H302: Harmful if swallowed

H318: Causers serious eye damage

Source of key data used to compile the data sheet

Supplier information

Modifications from last revision

Section one of the safety data sheet has been updated.

Date: 17/02/2026