TRULOC Technical Data Sheet

Superfit 271 Dated: 01.11.2002

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Product Description

Truloc Superfit 271 is a single component high viscosity anaerobic adhesive designed for high strength fast curing thread locking and retention of cylindrical parts.
It has been designed for applications requiring maximum static strength high dynamic/fatigue resistance and extra large gap filling properties. The cured adhesive is a thermo set plastic with excellent temperature and chemical resistance

Typical Applications

Truloc Superfit 271 will seal threads and retain all cylindrical parts subject to radial and axial forces permitting parts to be slip fitted together instead of being press fitted.

Product Benefits

High strength, fast curing with large gap filling properties.
Maximum static strength with high dynamic/fatigue resistance.
Prevents leakage through porosity's and cracks.
Excellent resistance against solvents and gases.
Excellent thixotropic nature, preventing migration.

Performance Properties of Cured Truloc Superfit 271

Strength (steel parts)M36	Locking torque Nm ISO10964
Breakaway	30-40
Prevailing	55-70
Shear strength DIN 54452	25-30 N.mm²
Handling minutes	2-5
Functional hours	1-3

Physical Properties of uncured Truloc Superfit 271

Monomer	Di-Methacrylate ester
Colour	Green
Viscosity, Brookfield 25 deg C	2500 – 3000cps
Flash Point (CoC)	100 deg C
Max. gap filling ability	M36 /1½" / 0,20mm
Shelf life at 5 - 25 deg C	1 year min

Solvent Resistance

Truloc Superfit 271 has excellent solvent resistance for the majority of locking/fitting and sealing applications. After 30 days immersion at 85 degrees centigrade in oil, transmission fluid, gasoline and glycol the strength retained was between 80-90% of original strength.

Temperature Performance

Truloc Superfit 271 is recommended for use at operating temperatures ranging from minus 55 degrees centigrade to plus 150 degrees centigrade.

Resistance to Vibration Loosening

Assembly failure is generally caused by loosening of the assembly by transverse dynamic loads. Truloc Superfit 271 completely fills the void within the joints and thus prevents movement in the assembly, eliminating vibration loosening. The product provides 100% contact between the locking surfaces.

Packaging

Truloc Superfit 271 is available in 10ml, 50ml and 250ml polythene containers.

Storage

Materials should be stored in original containers, which provide air space to maintain the product in a liquid state. Store between 5 and 25 deg C for maximum shelf life.

Caution

These products are generally non-toxic and are not common allergenic materials. They can however cause skin sensitising when used continuously where skin is bruised or micro-lacerated. Contact with skin in such conditions should be avoided. Adhesive can be removed from the skin with soap and water.

IRRITANT

Note

The information given in this Data sheet is the result of controlled laboratory tests and experience. It is intended only as a guide to the user in selecting the appropriate grade of Truloc product. Users must satisfy themselves by appropriate tests that the grades they propose to use are suitable for their specific application. Truloc Ltd is not responsible for loss, claim or damages resulting from the use of their products.

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TRULOC Material Safety & Data

Superfit 271 Dated: 01.11.2004

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This safety data sheet has been prepared in accordance with the requirements of EC directive 88/379/EEC and 91/155/EEC (and other directives) and provides information relating to the safe handling and use of the product.

1. PRODUCT IDENTIFICATION

1.1 Product:	Superfit 271
1.2 Company Name: Manufacturer: Local Distributor:	Truloc Ltd Truloc Ltd a/a
1.3 Emergency Contact: First call Local Distributor: Contact Name:	a/a a/a Health & Safety Officer
	Tel: +44 (0) 1286675669 Fax: +44 (0) 1286674670

2. COMPOSITIONAL INFORMATION

2.1 Nature	Anaerobic Adhesive			
2.2 Composition	Hazardous ingredients	%*	Symbol	Risk phrases
	Methacrylate esters UE N.607-134.00.4	>10	Xi	R36/37/38
	Hydroxypropylmathacrylate CAS 27813-02-1 EINECS 248-666-3	1-<20	Xi	R36/R43
	Hydroxyethylmathacrylate CAS 868-77-9 EINECS 212-782-2	1-<20	Xi	R36/38,R43
	Acrylic acid CAS 79-10-7 EINECS 201-177-9	1-<5	C,N	R10,R20/21/22,R35,R50
	Cumene hydroperoxide CAS 80-15-9 EINECS 201-254-7	1	O,T,N	R7,R21/22,R23,R34 R48/20/22,R51/53

3. HAZARD IDENTIFICATION

This product is not classified as hazardous.
May cause irritation on prolonged exposure to damaged skin.
May cause irritation with contact to the eyes.

4. FIRST AID MEASURES

4.1 Inhalation:	Should not be a problem as product is of low volatility. However, if feeling unwell remove to fresh air.
4.2 Skin Contact:	Wash skin with plenty of soap and water, remove contaminated clothing.
4.3 Eye Contact	Flush eyes immediately with plenty of water for at least 15 minutes.
4.4 Ingestion:	Rinse mouth with water, then give plenty of water or milk to drink. Do not induce vomiting.

5. FIRE FIGHTING MEASURES

Non-flammable product (flash point >100^{O}C (CC)).
If product is involved in fire, extinguish with dry powder, foam, carbon dioxide or sand.
Special extinguishing procedures: wear self contained breathing apparatus.
Explosion/fire hazard: Keep containers cool with water spray.

6. ACCIDENTAL RELEASE MEASURES

For small spills wipe up with paper towel and place in container for disposal.
For large spills absorb onto inert absorbent material and place in sealed container for disposal.
Ventilate area.

7. HANDLING AND STORAGE

7.1 Handling:	Adequate ventilation is recommended to remove trace odours while handling. Avoid contact with skin and eyes.
7.2 Storage:	Store in original containers at 5^{O}C-28^{O}C and do not return residual materials to containers as contamination may reduce the shelf life of the bulk product.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

PVC gloves and eye protection are recommended. Local ventilation if necessary.

9. PHYSICAL & CHEMICAL PROPERTIES

Odour:	Slightly pungent smell
PH-value	3-5
Change of physical state:	Polymerisation at over 100°C
Flash Point (COC/DIN/ISO 2592):	>100°C
Auto ignition temperature	>380°C
Specific Gravity:	Approx 1.08g/ml @ 20^{O}C
Solubility in Water:	Immiscible
Solubility in Chloroform:	N/A
Vapour Pressure 20°C DIN 51616:	<0.3 mbar
Viscosity (Brookfield 25°C):	from 10 to more than 100,000 mPa.s

10. STABILITY AND REACTIVITY

The product is stable under normal conditions of use.
Conditions to avoid: heating over 100°C – exposure to direct sunlight.
Materials to avoid: strong oxidising and reducing agents, metals/rust, strong acids.
Hazardous decomposition products: burning produces carbon and nitrogen oxides.

11. ENVIRONMENTAL INFORMATION

Do not convey in water discharges.
Hazard class for water: WGK 1 (self classification): slightly hazardous for water.

12. TOXICOLOGICAL INFORMATION

12.1 Inhalation:	May irritate the respiratory system.
12.2 Skin:	Irritant.
12.3 Eye:	Irritant.
12.4 Ingestion:	LD50 Oral (rat) >5000mg/kg for analogy with similar product.

12.5 Exposure limits (TWA)
Acrylic acid. ACGIH: TLV 2ppm 8hrs. TWA

13. DISPOSAL

Dispose of in accordance with local and national regulations.
Recommended method is by incineration.
European waste disposal number 08 04 00 wastes from MFSU of adhesives and sealants.

14. TRANSPORT INFORMATION

UN No.:	None	Label
Method		
Air:	ICAO.IATA	---
Sea:	IMO/IMDG	---
Road/Rail:	ARD/RID	---

15. REGULATORYLABELLING INFORMATION

Hazard Label: St Andrews Cross – Xi=Irritating
Contains: Hydroxypropyl – Hydroxymethacrylate.
Risk and safety phrases:

R36/37/38	Irritating to eyes, respiratory system and skin.
R43	May cause sensitization by skin contact.
S26	In case of contact with eyes, flush immediately with copious amounts of water, consult medical personnel.
S28	In case of contact with skin wash immediately with copious of water and soap.
S37/39	Wear suitable gloves and eye/face protection.


IRRITANT

16. OTHER INFORMATION

The information contained herein is based upon our present state of knowledge and experience and according to EC regulations and other related: 91/155(2001/58), 67/584(2001/59), 1999/45(2001/60), 91/689(2001/118),89/542, ADR 23.072001.IMDG-Code 30° amd, IATA-DRG 2002.
Relevant R-Phrases

10	Flammable.
20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
23	Toxic by inhalation.
34	Causes burns.
35	Causes severe burns.
36	Irritating to eyes.
36/37/38	Irritating to eyes, respiratory system and skin.
36/38	Irritating to eyes and skin.
43	May cause sensitization by skin contact.
48/20/22	Harmful, danger of serious damage to health by prolonged exposure through inhalation and if swallowed.
50	Very toxic to aquatic organism.
51/53	Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.
7	May cause fire

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