

DECLARATION OF PERFORMANCE

DoP No: FBK-DOP-OMS54-2026-001

According to Regulation (EU) No. 305/2011

CONSTRUCTION PRODUCTS REGULATION (CPR)

1. Unique Identification Code of the Product Type

OneShot Macro 54 Synthetic Fiber Reinforcement

2. Intended Use

Polypropylene Macro Synthetic Fibers for structural use in concrete, mortar and grout in accordance with EN 14889-2 for improving residual load-bearing capacity, toughness, crack control and post-cracking performance.

3. Manufacturer

Fiber Beton Kimya Sanayi ve Ticaret A.Ş.

Address: Akçeşme Mahallesi 2016. Sokak No:18, Merkezefendi / Denizli – Türkiye

Tel: +90 216 641 34 65

Website: www.fiberbeton.com.tr

4. Authorised Representative

Name: Ömer Faruk ASLAN

Tel: +90 530 682 1461

5. System of Assessment and Verification of Constancy of Performance (AVCP)

System 1

6. Harmonised Standard

EN 14889-2:2006

Fibres for Concrete – Part 2: Polymer Fibres

Notified Body

Turkish Ready Mixed Concrete Association

The Economic Enterprise of KGS

Notified Body No: 2055

FİBER BETON KİMYA SAN. VE TİC. A.Ş.

Headquarter: Merkez Mh. Hanzade Sk. No:3/5 CB Çekmeköy – İstanbul -Türkiye

Factory: Akçeşme Mahallesi 2016. Sokak No:18 Merkezefendi – Denizli - Türkiye

Tel. 0216 641 34 65 – **Fax.** 0216 641 34 66 – **Web:** www.fiberbeton.com.tr

7. Declared Performance

Product Description

Macro structural synthetic fiber manufactured from virgin polypropylene for shotcrete and structural concrete applications.

Essential Characteristics	Performance
Fibre Type	Class II Macro Synthetic Fiber
Polymer Type	Polypropylene
Fibre Length	54 mm
Tensile Strength	684.46 MPa
Modulus of Elasticity	8 GPa
Density	0.90 – 0.92 g/cm ³
Melting Point	168 °C
Water Absorption	None
Alkali Resistance	High
Surface Texture	Embossed
Fibre Quantity	≥45,000 fibers/kg
Recommended Dosage	1 – 7 kg/m ³
Effect on Consistence of Concrete	Compliant
Dangerous Substances	No
Durability in Concrete	Pass

CMOD Test Results (See Appendix 1)

Residual Flexural Strength Performance (EN 14651 – ITU Building Materials Laboratory)

5 kg/m³ dosage:

fr1 (CMOD = 0.5 mm) : 2.62 MPa

fr2 (CMOD = 1.5 mm) : 3.49 MPa

fr3 (CMOD = 2.5 mm) : 3.99 MPa

fr4 (CMOD = 3.5 mm) : 4.28 MPa

FİBER BETON KİMYA SAN. VE TİC. A.Ş.

Headquarter: Merkez Mh. Hanzade Sk. No:3/5 CB Çekmeköy – İstanbul -Türkiye

Factory: Akçeşme Mahallesi 2016. Sokak No:18 Merkezefendi – Denizli - Türkiye

Tel. 0216 641 34 65 – **Fax.** 0216 641 34 66 – **Web:** www.fiberbeton.com.tr

EFNARC Test Results (See Appendix 2)

Energy Absorption Performance (BS EN 14488-5 / EFNARC)

Dosage: 4.5 kg/m³

Average Energy Absorption (25 mm displacement):

1145 Joule

Average Maximum Load:

61.5 kN

Initial Type Testing (See Appendix 3)

Initial Type Testing performed under EN 14889-2 by KGS (Notified Body No: 2055).

Measured values:

Tensile Strength: 684.46 MPa

Modulus of Elasticity: 8 GPa

Residual Strength at 0.5 mm CMOD: 1.97 MPa

Residual Strength at 3.5 mm CMOD: 2.39 MPa

8. Technical Documentation

The product performance has been assessed according to:

EN 14889-2:2006

EN 14651 Crack Mouth Opening Displacement (CMOD)

BS EN 14488-5

EFNARC European Specification for Sprayed Concrete

Factory Production Control (FPC) implemented by Fiber Beton Kimya Sanayi ve Ticaret A.Ş.

9. Declaration

The performance of the product identified above is in conformity with the declared performance.

This Declaration of Performance is issued under the sole responsibility of the manufacturer identified above in accordance with Regulation (EU) No. 305/2011.

FİBER BETON KİMYA SAN. VE TİC. A.Ş.

Headquarter: Merkez Mh. Hanzade Sk. No:3/5 CB Çekmeköy – İstanbul -Türkiye

Factory: Akçeşme Mahallesi 2016. Sokak No:18 Merkezefendi – Denizli - Türkiye

Tel. 0216 641 34 65 – **Fax.** 0216 641 34 66 – **Web:** www.fiberbeton.com.tr



Signed for and on behalf of:

Fiber Beton Kimya Sanayi ve Ticaret A.Ş.

Place of Issue: İstanbul, Türkiye

Date of Issue: 22 / 06 / 2026

Name: Ömer Faruk ASLAN

Position: Sales Manager

Stamp & Signature:

**FİBER BETON KİMYA
SAN.VE TİC.A.Ş.**
Merkez Mh. Hanzade Sok.
No:3/5 CB Çekmeköy/İSTANBUL
Sıngazi V.D.: 387 1185 374

FİBER BETON KİMYA SAN. VE TİC. A.Ş.

Headquarter: Merkez Mh. Hanzade Sk. No:3/5 CB Çekmeköy – İstanbul -Türkiye

Factory: Akçeşme Mahallesi 2016. Sokak No:18 Merkezefendi – Denizli - Türkiye

Tel. 0216 641 34 65 – **Fax.** 0216 641 34 66 – **Web:** www.fiberbeton.com.tr

Appendix -1



**T.C.
ISTANBUL TECHNICAL UNIVERSITY RECTORATE
CIVIL ENGINEERING FACULTY
MASLAK, ISTANBUL**

Registration No/Date: 1224909/11.05.2023

**EVOLUTION OF BEAM SAMPLES CONTAINING
“ONESHOT” SYNTHETIC FIBER TAKEN WITHIN THE SCOPE
OF “KOCAELI CITY HOSPITAL TRAM LINE PROJECT”
CARRIED OUT BY “EZE İNŞAAT A. Ş.”**

TECHNICAL REPORT

*In preparation of this report, the regulation of ITU Research and Development
Foundation has been followed.*

Prepared by:

Asst. Prof. Unal Anıl DOĞAN

MAY 2024

*Istanbul Technical University, Civil Engineering Faculty, Civil Engineering
Department 34469 Maslak, Istanbul*



Registration No / Date: 1224909/16.05.2024

FİBER BETON KİMYA SANAYİ VE TİCARET A.Ş.

1. SUBJECT

Within the scope of application, 12 prism samples containing OneShot fiber (6 samples-4 kg/m³, 6 samples-5 kg/m³) were tested in the ITU Building Materials Laboratory following EN 14651 and TS EN 14889-2. and the evaluation report on the results is given in detail below.

2. BENDING TEST

The experiments were carried out according to EN 14651, and by obtaining load-crack mouth opening displacement relationships, the residual stresses were calculated at CMOD width values of 0.5mm (fr_1), 1.5mm (fr_2), 2.5mm (fr_3) and 3.5mm (fr_4). The standard bending test setup according to EN 14651 is given in Figure 1.

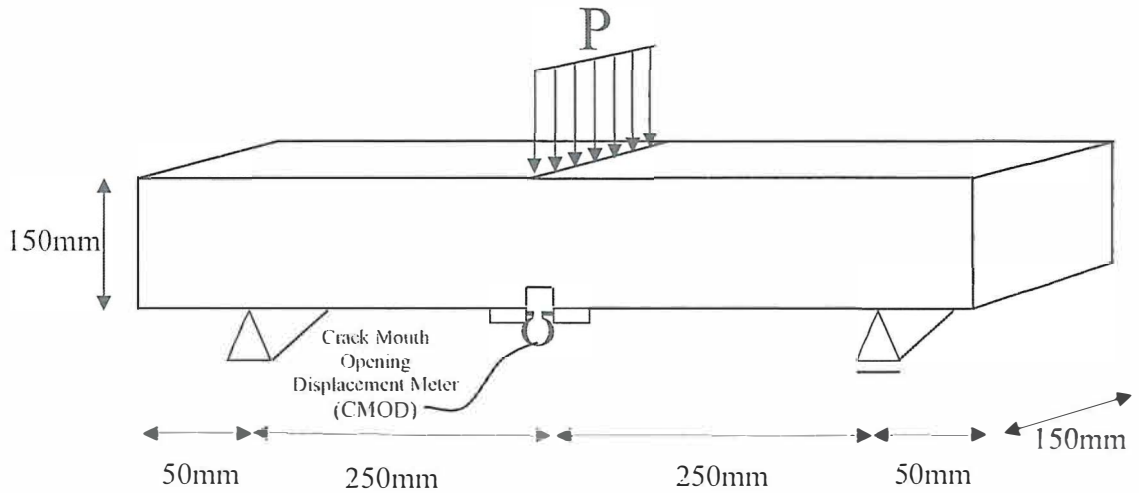


Figure 1. Sample geometry and experimental setup used in fiber-reinforced concrete prisms

As seen in Figure 1, the dimensions of the fiber-reinforced beam samples are 150mmx150mmx600mm, and the distance between the supports is taken as 500 mm. Before the experiment, 25 mm deep notches were cut in the middle of the opening on the samples, and the load-crack mouth opening displacement (CMOD) relationship was obtained by placing a crack mouth opening displacement meter in these notches.

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İSTANBUL TEKNİK ÜNİVERSİTESİ – İNŞAAT FAKÜLTESİ
YAPI MALZEMELERİ LABORATUVARI

34469 MASLAK / İSTANBUL TEL: (0212) 285 3757-58 FAX: (0212) 285 6587

3. TEST RESULTS

Samples containing OneShot fiber were tested. The results of the beam samples are given in Table 1 and Table 2.

Table 1: Test Results in MPa (OneShot Fiber-4 kg/m³)

Sample Code	Crack Mouth Opening Displacement (CMOD)			
	0.5 mm fr ₁	1.5 mm fr ₂	2.5 mm fr ₃	3.5 mm fr ₄
NO-1	1,99	2,55	2,93	2,99
NO-2	1,55	1,96	2,25	2,44
NO-3	2,30	2,71	2,99	3,21
NO-4	2,01	2,62	3,14	3,37
NO-5	1,57	2,09	2,44	2,61
NO-6	1,98	2,74	3,24	3,38
AVARAGE	1,90	2,45	2,83	3,00

Table 2: Test Results in MPa (OneShot Fiber-5 kg/m³)

Sample Code	Crack Mouth Opening Displacement (CMOD)			
	0.5 mm fr ₁	1.5 mm fr ₂	2.5 mm fr ₃	3.5 mm fr ₄
NO-1	2.93	3.82	4.36	4.71
NO-2	2.41	3.10	3.51	3.87
NO-3	2.65	3.59	4.07	4.38
NO-4	2.32	3.07	3.57	3.81
NO-5	2.83	3.79	4.29	4.54
NO-6	2.58	3.59	4.12	4.40
AVARAGE	2.62	3.49	3.99	4.28

Note: In addition to the results in Table 1 and 2. Load-CMOD graphs of the beam samples were obtained and given as an appendix to the report.


Research Assistant
Sidar Nihat BİÇAKÇI

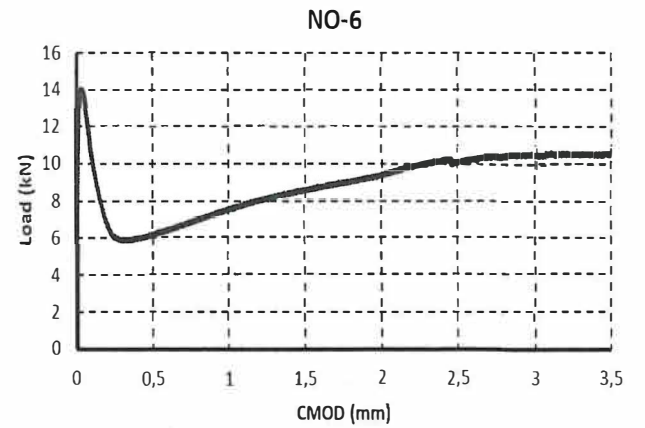
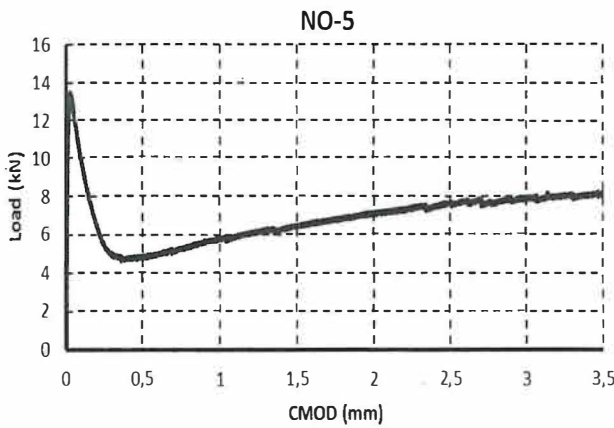
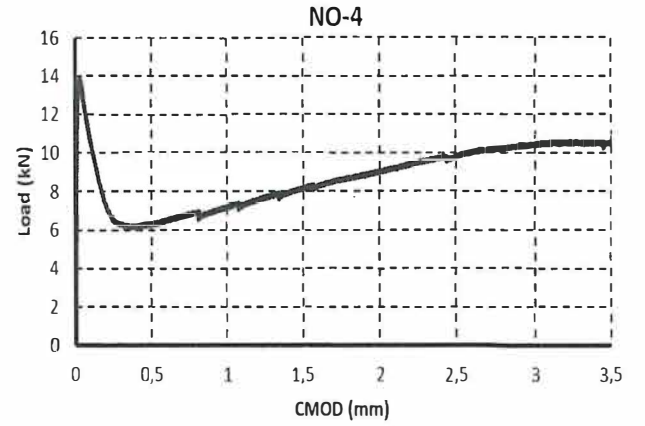
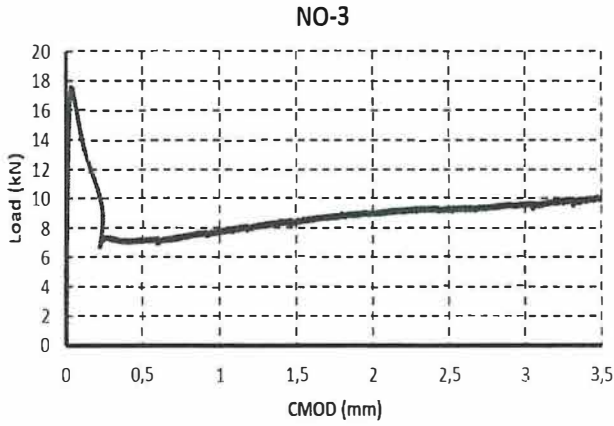
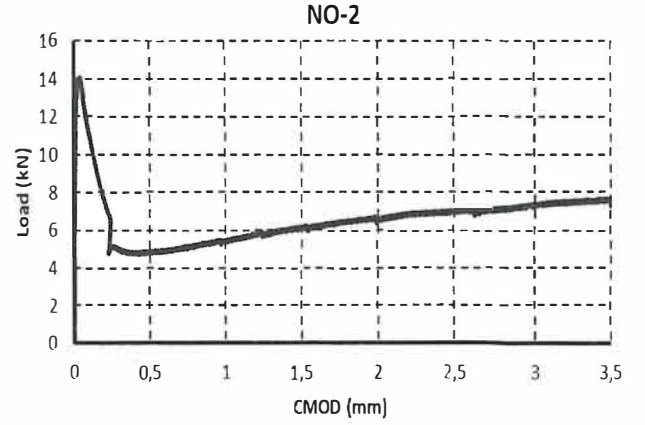
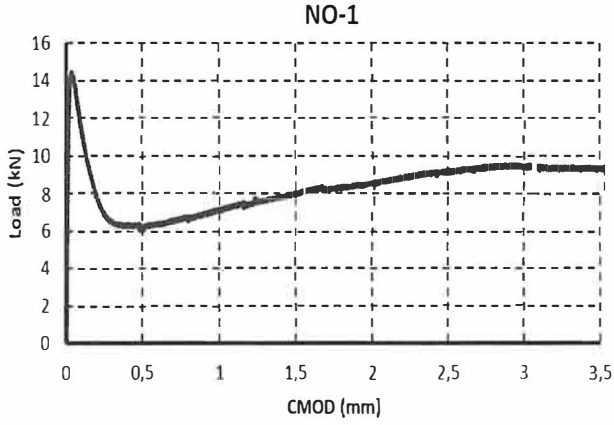

Asst. Prof.
Unal Anil DOĞAN





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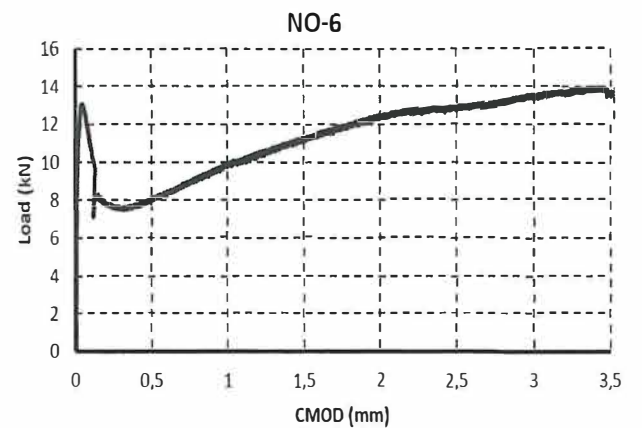
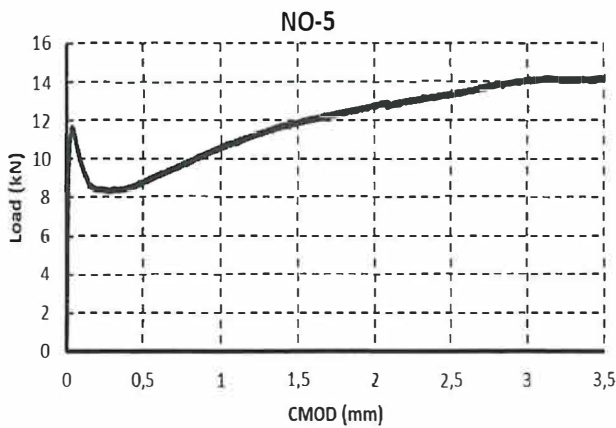
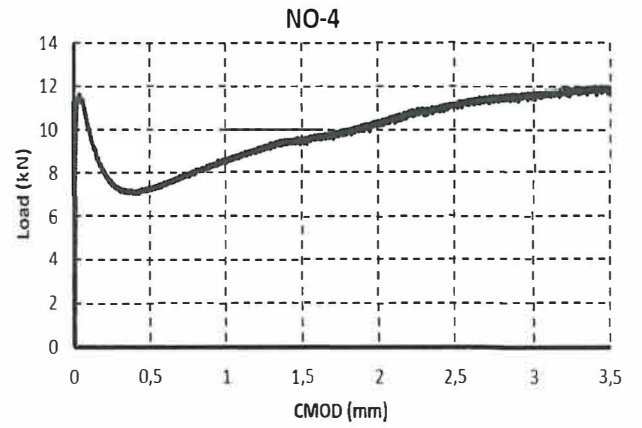
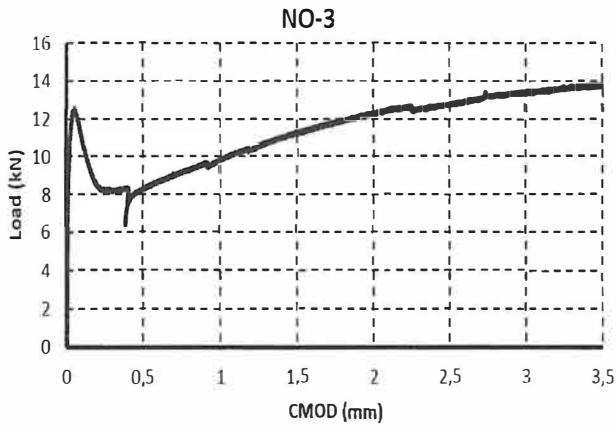
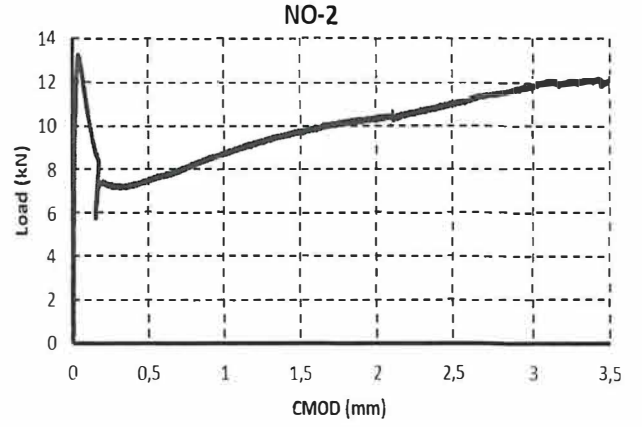
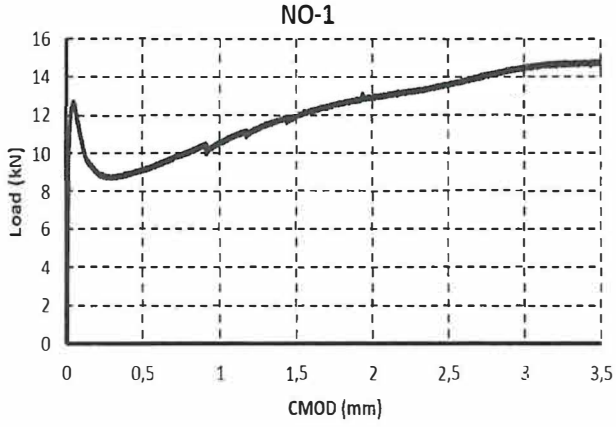
APPENDIX 1: Load-CMOD graphs of the beams containing 4 kg/m³





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YAPI MALZEMELERİ LABORATUVARI
34469 MASLAK / İSTANBUL TEL: (0212) 285 3757-58 FAX: (0212) 285 6587

APPENDIX 2: Load-CMOD graphs of the beams containing 5 kg/m³



Appendix - 2

İTÜ



ISTANBUL TECHNICAL UNIVERSITY



EARTHQUAKE ENGINEERING AND DISASTER MANAGEMENT INSTITUTE

Evaluation of Beam Samples Containing 4.5 kg/m^3 ONESHOT Fiber Taken Within The Scope of “ESAN ECZACIBASI- BALIKESIR LEAD AND ZINC MINE”

TECHNICAL REPORT
(2023-558B)

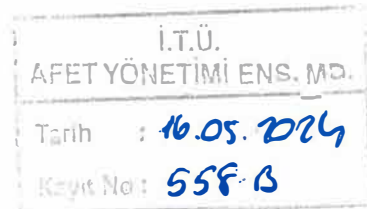
In preparation of this report, the regulation of ITU Research and Development Foundation has been followed.

Prepared by:

Professor Hasan YILDIRIM

Istanbul Technical University, Civil Engineering Faculty, Civil Engineering Department
34469 Maslak, İstanbul

MAY 2024
hasanyildirim@itu.edu.tr





Report No/Date:827B/16 May 2024

FİBER BETON KİMYA SAN. VE TİC. A. Ş.

1. THE SUBJECT:

Within the scope of application, the tests of 6 plate samples containing “OneShot” synthetic macro fiber (4.5 kg/m^3) were tested according to “EFNARC- European Specification for Sprayed Concrete: 10.4 Energy Absorption Class” and “BS EN 14488-5”. The evaluation report regarding the results is given in detail below.

2. TEST SETUP:

Plate samples with a side size of 600 mm and a height of 100 mm were used in the experiment, which was carried out in accordance with EFNARC and BS EN 14488-5 standards. The plate specimens were placed centered on a square steel support with a clear opening of 500 mm (with the casting surface at the top). After the plate sample was placed, two LVDTs (Linear Variable Differential Transformer) were placed under the sample, and a 100 mm $\times$ 100 mm steel square plate was placed in the center of the sample, and the load was applied. Then, the energy absorption capacities (Toughness values) of the samples were determined by examining the load-displacement relationship according to the obtained data.

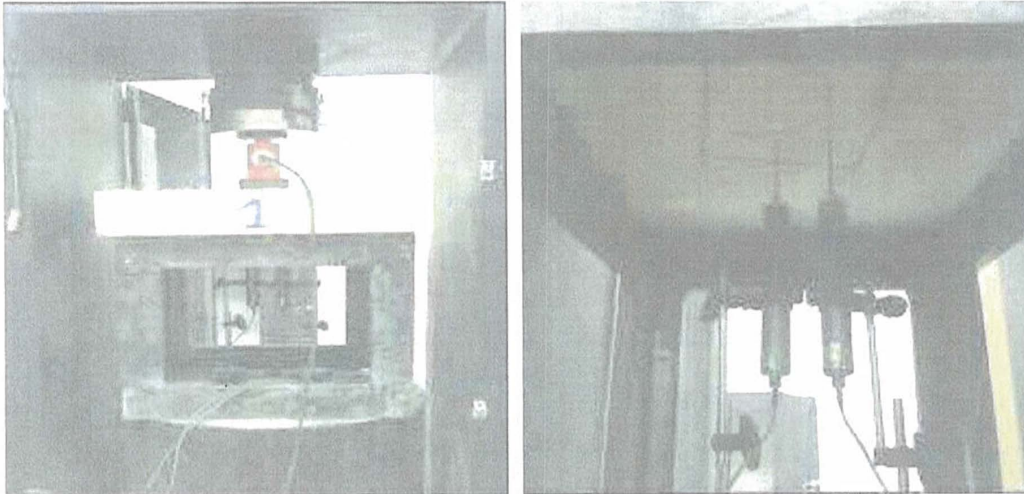


Figure 1 ve 2. Test setup of plate samples.

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3. TEST RESULTS

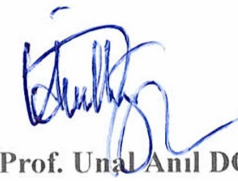
Plate samples containing 4.5 kg of fiber per 1 m³ were tested. The results obtained are given in the table below. In addition, in Table 1, the toughness values corresponding to 25 mm displacement and the maximum load values carried by the plate samples are given.

Table 1. Toughness and maximum load values.

Sample Code	Toughness up to 25 mm displacement (Joule)	Maximum Load (kN)
No-1	1262	66.6
No-2	1047	60.6
No-3	1270	68.1
No-4	1080	61.7
No-5	1055	55.7
No-6	1156	56.0
AVERAGE	1145	61.5

In addition to the table, the Load-Displacement graphs of the tested samples obtained in accordance with the BS EN 14488-5 standard are given as an appendix.

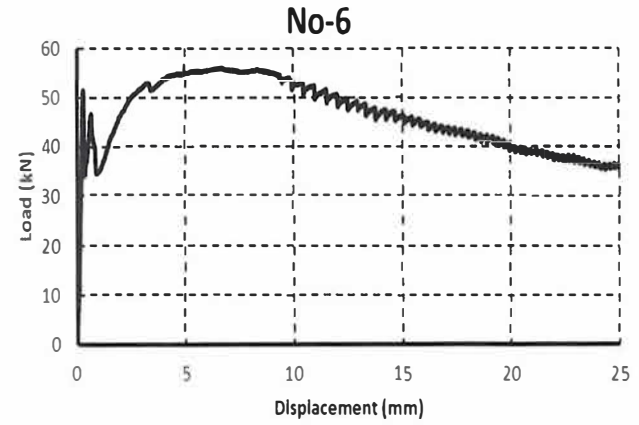
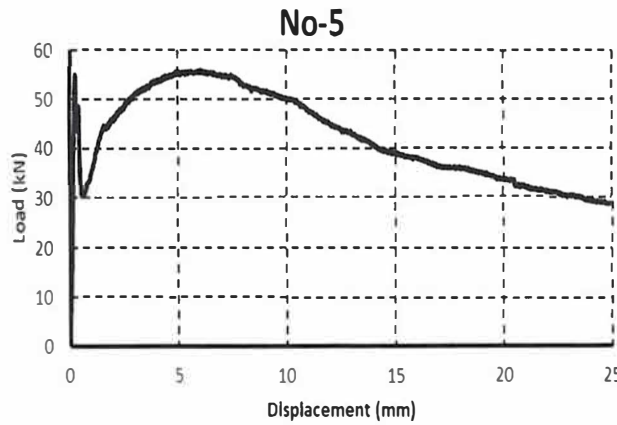
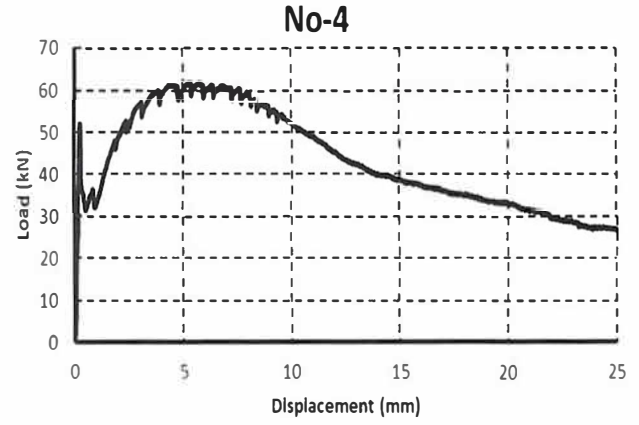
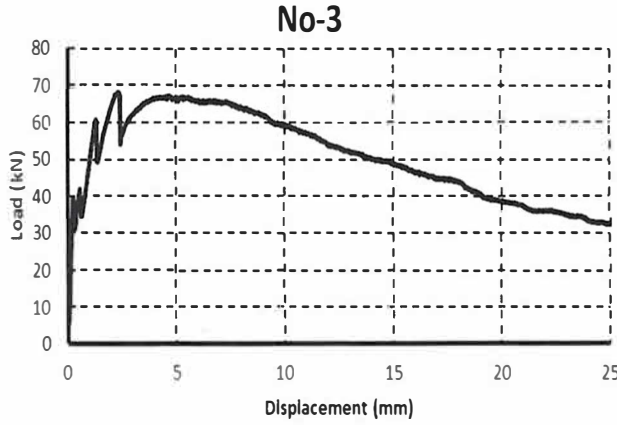
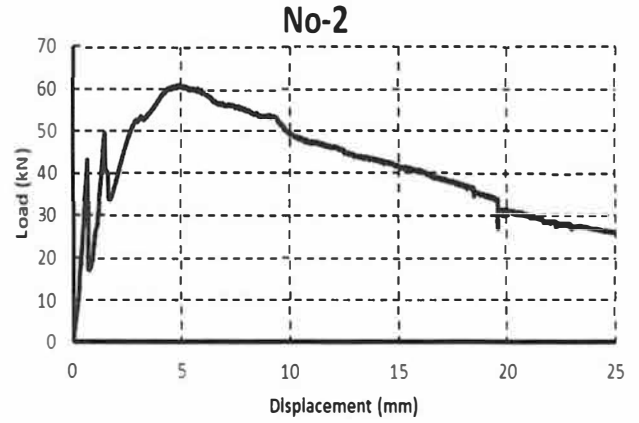
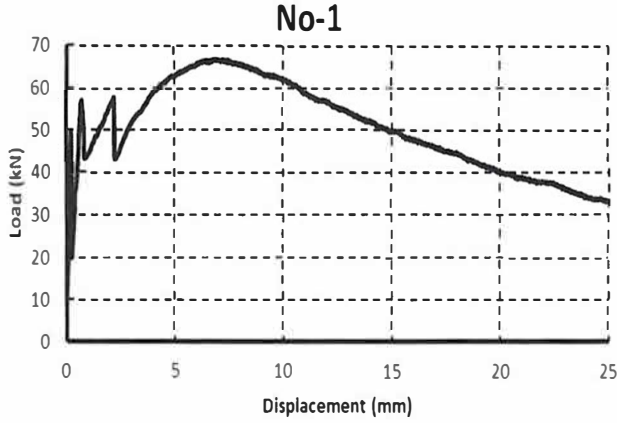

Res. Asst. Sıdır Nihat BIÇAKÇI


Asst. Prof. Unal Anil DOGAN





APPENDIX. Load-Displacement graphs of the tested samples



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KGS

TÜRKİYE HAZIR BETON BİRLİĞİ
KALİTE GÜVENCE SİSTEMİ
İKTİSADİ İŞLETMESİ

FİBER BETON KİMYA SAN. VE TİC. A.Ş.
MERKEZEFENDİ PRODUCTION PLANT
INITIAL TYPE TEST REPORT

Date of Report : 24.06.2024

Date of Sampling : 5.04.2024

Address of Production : Akçeşme Mahallesi 2016 Sokak No:18 Merkezefendi / DENİZLİ
Plant

Auditor (Sampler) : ÇAĞLAR ŞAŞMAZ

Scope : Initial type test report of polymer fibres under Construction
Products Regulation (305/2011/EU) due to EN 14889-2
Standard

Laboratories : 1) THBB Laboratory
2) ROYALTEST Laboratory



CE
Onaylanmış Kuruluş
No: 2055



Türkiye Hazır Beton Birliği
KGS İktisadi İşletmesi:

Rüzgarlıbahçe Mah. Feriğat Sok.
No:3 Demir Plaza Kat:5
Beykoz / İstanbul - TURKEY

Tel : +90 (216) 322 99 45
Faks : +90 (216) 322 85 29

e-posta: info@kgsii.com.tr
www.kgsii.com.tr



KGS

TÜRKİYE HAZIR BETON BİRLİĞİ
KALİTE GÜVENCE SİSTEMİ
İKTİSADİ İŞLETMESİ

RESULTS:

Trade Mark of Fibre : ONESHOT FİBER 54 mm
Type of Fibre : CLASS II
Polymer Type : Polypropylene

Essential Characteristics	Declared Value	Test Result	Standard Limit / Tolerance	Assessment
Tensile Strength (MPa)	600	684,46	±%7,5 of Declared Value	✓
Modulus of Elasticity (GPa)	7	8 (%10-%30 TS)	±%7,5 of Declared Value	✓
Effect on Consistence of Concrete (Vebe time)	4 kg/m3 Dosage	Ref. Concrete: 9s Concrete w Fibres: 19s	-	✓
Effect on Strength of Concrete (MPa)	4 kg/m3 Dosage	Mean: 1,97 MPa at 0,5 mm CMOD Mean: 2,39 MPa at 3,5 mm CMOD	≥ 1,5 MPa at 0,5 mm CMOD ≥ 1 MPa at 3,5 mm CMOD	✓


PREPARED BY
HÜSEYİN AKYILDIRIM


APPROVED BY
ÇAĞLAR ŞAŞMAZ



CE
Onaylanmış Kuruluş
No: 2055

➔ **Türkiye Hazır Beton Birliği**
KGS İktisadi İşletmesi:
Rüzgarlıbahçe Mah. Ferahat Sok.
No:3 Demir Plaza Kat:5
Beykoz / İstanbul - TURKEY

Tel : +90 (216) 322 99 45
Faks: +90 (216) 322 85 29

e-posta: info@kgsii.com.tr
www.kgsii.com.tr





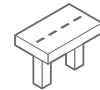
OneShot Macro Fiber 54

Macro Structural Fiber Reinforcement for Shotcrete

OneShot 54 are macro synthetic fibers with high energy absorption capacity, specially designed to improve the ductility and mechanical properties of shotcrete. OneShot 54 fiber reinforcement is an excellent alternative to steel wire and traditional rebar, especially in underground applications.

Technical Specifications

Raw Material	Polypropylene
Length	54 mm
Tensile Strength	550 - 750 Mpa
Elasticity Modulus	8 Gpa
Density	0,90 - 0,92 gr/cm ³
Melting Point	168 °C
Water Absorption	None
Alkali Resistance	High
Dosage	1 - 7 kg/m ³
Fiber Quantity / kg	45.000+
Surface Texture	Embossed



Bridge
Construction



Tunnel and Mine
Applications



Shotcrete
Applications

OneShot 54 Usage Areas

- In the tunneling industry
- Under-rail and invert concrete in subway constructions
- Shotcrete applications in mines
- In shotcrete applications for precasts
- In concrete castings for final coatings
- Highway toll and concrete roads
- It can be used in various applications such as safety barriers.



Technical Advantages

- It provides high absorption capacity thanks to first class raw material and optimum length of 54mm.
- Thanks to its ideal slenderness and elasticity, it does not clog the nozzle and provides easy pumpability.
- It is easy to transport, store and use thanks to its low mass in harsh underground conditions.
- It has high chemical and alkali resistance.
- Since it does not corrode, it can be used safely in areas with water flow.
- It significantly reduces labor and transportation costs compared to steel mesh.
- It increases the toughness and energy absorption capacity of concrete.
- It protects the concrete by not losing its properties in extreme underground ambient conditions (high/low temperature).
- Thanks to the feature that does not affect the magnetic fields, underground cable channels etc. Ideal for applications.



Highway Toll Constructions

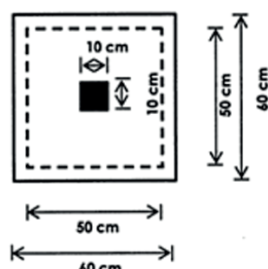
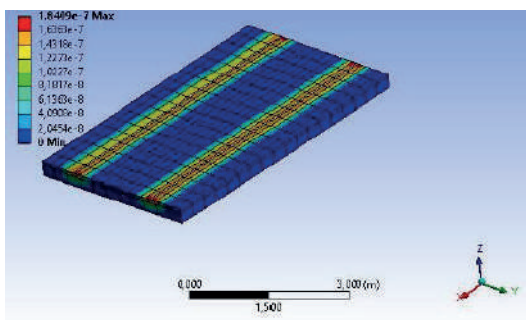


Shotcrete Application in Mines

OneShot Makro Fiber 54 is specially designed for all underground shotcrete applications.

ITU Building Materials Laboratory Test Results

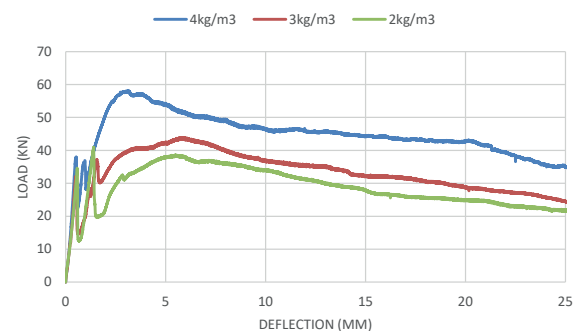
OneShot 54 Macro On slab samples for synthetic fiber shotcrete; According to the data obtained as a result of the test performed in accordance with EFNARC and BS EN 14488-5 standards, the energy absorption capacity (Toughness values) of the samples is determined by examining the load-deflection relationship.



Plaque Sample Dimensions



Appearance After Plaque Fracture Test





Safety data sheet

This SDS is an English translation of COMMISSION REGULATION (EU) 2020/878, without any country-specific legislation

Oneshot Macro Fiber Polypropylene Concrete Reinforcement

Date of compilation: 13/05/2025

Version: 1

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier: Oneshot Macro Fiber Polypropylene Concrete Reinforcement

Other means of identification:

Not relevant

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

Relevant uses (Professional users): For Professional users/Industrial user only.

Uses advised against: All uses not specified in this section or in section 7.3

1.3 Details of the supplier of the safety data sheet:

FIBER BETON KIMYA SANAYI VE TICARET ANONIM SİRKETİ

MERKEZ MAH. ATIS SK. A BLOK NO: 6 A IÇ KAPI NO: 1

ÇEKMEKÖY/ İSTANBUL

1.4 Emergency telephone number: 114

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

CLP Regulation (EC) No 1272/2008:

The product is not classified as hazardous according to CLP Regulation (EC) No 1272/2008.

2.2 Label elements:

CLP Regulation (EC) No 1272/2008:

None

2.3 Other hazards:

Product does not meet PBT/vPvB criteria

Endocrine-disrupting properties: The product does not meet the criteria.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:

Not relevant

3.2 Mixture:

Chemical description: Mixture composed of chemical products

Components:

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

Identification	Chemical name/Classification	Concentration
CAS: 9003-07-0 EC: Not relevant Index: Not relevant REACH: Not relevant	Polypropylene⁽¹⁾ Not classified	99 %
	Regulation 1272/2008	
CAS: Not relevant EC: Not relevant Index: Not relevant REACH: Not relevant	Dye⁽¹⁾ Not classified	1 %
	Regulation 1272/2008	

⁽¹⁾ Voluntarily-listed substance failing to meet any of the criteria set out in Regulation (EU) No. 2020/878

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

SECTION 4: FIRST AID MEASURES

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SECTION 4: FIRST AID MEASURES (continued)**4.1 Description of first aid measures:**

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

By inhalation:

This product does not contain substances classified as hazardous for inhalation, however, in case of symptoms of intoxication remove the person affected from the exposure area and provide with fresh air. Seek medical attention if the symptoms get worse or persist.

By skin contact:

In case of contact it is recommended to clean the affected area thoroughly with water and neutral soap. In case of changes to the skin (stinging, redness, rashes, blisters,...), seek medical advice with this Safety Data Sheet

By eye contact:

This product does not contain substances classified as hazardous for eye contact. Rinse eyes thoroughly for at least 15 minutes with lukewarm water, ensuring that the person affected does not rub or close their eyes.

By ingestion/aspiration:

In case of consumption, seek immediate medical assistance showing the SDS for the product.

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

Acute and delayed effects are indicated in sections 2 and 11.

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

Not relevant

SECTION 5: FIREFIGHTING MEASURES**5.1 Extinguishing media:****Suitable extinguishing media:**

Product is non-flammable under normal conditions of storage, handling and use. In the case of combustion as a result of improper handling, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems.

Unsuitable extinguishing media:

Non-applicable

5.2 Special hazards arising from the substance or mixture:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

5.3 Advice for firefighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and Self Contained Breathing Apparatus. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...)

Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

SECTION 6: ACCIDENTAL RELEASE MEASURES**6.1 Personal precautions, protective equipment and emergency procedures:****For non-emergency personnel:**

Sweep up and shovel product or collect by other means and place in container for reuse (preferred) or disposal

For emergency responders:

Wear protective equipment. Keep unprotected persons away. See section 8.

6.2 Environmental precautions:

This product is not classified as hazardous to the environment. Keep product away from drains, surface and ground water.

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SECTION 6: ACCIDENTAL RELEASE MEASURES (continued)**6.3 Methods and material for containment and cleaning up:**

It is recommended:

Sweep up and shovel product or collect by other means and place in container for reuse (preferred) or disposal

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE**7.1 Precautions for safe handling:****A.- General precautions for safe use**

Comply with the current legislation concerning the prevention of industrial risks with regards manually handling weights. Maintain order, cleanliness and dispose of using safe methods (section 6).

B.- Technical recommendations for the prevention of fires and explosions

Due to its non-inflammable nature, the product does not present a fire risk under normal conditions of storage, handling and use.

C.- Technical recommendations on general occupational hygiene

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

7.2 Conditions for safe storage, including any incompatibilities:**A.- Specific storage requirements**

Minimum Temp.: -

Maximum Temp.: -

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Control parameters:**

Substances whose occupational exposure limits have to be monitored in the workplace (European OEL, not country-specific legislation):

Nuisance dust: Inhalable dust 10 mg/m³ // Respirable dust 4 mg/m³**DNEL (Workers):**

Not relevant

DNEL (General population):

Not relevant

PNEC:

Not relevant

8.2 Exposure controls:

A.- Individual protection measures, such as personal protective equipment

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Regulation (EU) 2016/425. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1. All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection

If the working conditions and/or safety measures adopted do not allow keeping the airborne concentration of the product below the exposure limits (if any) or at acceptable levels (if no exposure limits exist), suitable respiratory protection equipment chosen by a qualified professional should be used.

C.- Specific protection for the hands

Not relevant

D.- Eye and face protection

Not relevant

E.- Body protection

Not relevant

F.- Additional emergency measures

It is advised to implement additional emergency equipments in workplaces that are particularly exposed to the product or in situations where risk assessments highlight the necessity of such equipments.

It is not necessary to take additional emergency measures.

Environmental exposure controls:

To comply with environmental protection regulations, it is recommended to prevent any spillage of the product and its container. For more detailed information, please refer to subsection 7.1.D.

Volatile organic compounds:

With regard to Directive 2010/75/EU, this product has the following characteristics:

V.O.C. (Supply):	0 % weight
V.O.C. density at 20 °C:	0 kg/m ³ (0 g/L)
Average carbon number:	Not relevant
Average molecular weight:	Not relevant

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties:**

For complete information see the product datasheet.

Appearance:

Physical state at 20 °C:	Solid
Appearance:	Not relevant *
Colour:	 Light Grey
Odour:	Odourless
Odour threshold:	Not relevant *

Volatility:

Boiling point at atmospheric pressure:	Not relevant *
Vapour pressure at 20 °C:	Not relevant *
Vapour pressure at 50 °C:	Not relevant *
Evaporation rate at 20 °C:	Not relevant *

Product description:

Density at 20 °C:	Not relevant *
Relative density at 20 °C:	Not relevant *

*Not relevant due to the nature of the product, not providing information property of its hazards.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Dynamic viscosity at 20 °C:	Not relevant *
Kinematic viscosity at 20 °C:	Not relevant *
Kinematic viscosity at 40 °C:	Not relevant *
Concentration:	Not relevant *
pH:	Not relevant *
Vapour density at 20 °C:	Not relevant *
Partition coefficient n-octanol/water 20 °C:	Not relevant *
Solubility in water at 20 °C:	Not relevant *
Solubility properties:	Insoluble
Decomposition temperature:	Not relevant *
Melting point/freezing point:	Not relevant *
Flammability:	
Flash Point:	Not relevant *
Flammability (solid, gas):	Not relevant *
Autoignition temperature:	Not relevant *
Lower flammability limit:	Not relevant *
Upper flammability limit:	Not relevant *
Explosive (Solid):	
Lower explosive limit:	Not relevant *
Upper explosive limit:	Not relevant *
Particle characteristics:	
Median equivalent diameter:	Not relevant *

9.2 Other information:

Information with regard to physical hazard classes:

Explosive properties:	Not relevant *
Oxidising properties:	Not relevant *
Corrosive to metals:	Not relevant *
Heat of combustion:	Not relevant *
Aerosols-total percentage (by mass) of flammable components:	Not relevant *

Other safety characteristics:

Surface tension at 20 °C:	Not relevant *
Refraction index:	Not relevant *

*Not relevant due to the nature of the product, not providing information property of its hazards.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7 from Safety Data Sheet.

10.2 Chemical stability:

Chemically stable under the indicated conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

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SECTION 10: STABILITY AND REACTIVITY (continued)

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

10.5 Incompatible materials:

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Not applicable	Not applicable	Avoid alkalis or strong bases

10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO₂), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

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

The experimental information related to the toxicological properties of the product itself is not available

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for consumption. For more information see section 3
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

B- Inhalation (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for skin contact. For more information see section 3.
- Contact with the eyes: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for the effects mentioned. For more information see section 3.
IARC: Polypropylene (3)
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

E- Sensitizing effects:

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous with sensitising effects. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

F- Specific target organ toxicity (STOT) - single exposure:

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

G- Specific target organ toxicity (STOT)-repeated exposure:

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

H- Aspiration hazard:

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

Other information:

Not relevant

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
Polypropylene CAS: 9003-07-0 EC: Not relevant	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation dust	>5 mg/L	
Filler CAS: Not relevant EC: Not relevant	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation dust	>5 mg/L	

Acute Toxicity Estimate (ATE mix):

ATE mix		Ingredient(s) of unknown toxicity
Oral	>2000 mg/kg (Calculation method)	0 %
Dermal	>2000 mg/kg (Calculation method)	0 %
LC50 inhalation dust	>5 mg/L (4 h) (Calculation method)	0 %

11.2 Information on other hazards:

Endocrine disrupting properties

Endocrine-disrupting properties: The product does not meet the criteria.

Other information

Not relevant

SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

12.1 Toxicity:

Not relevant

12.2 Persistence and degradability:

Not relevant

12.3 Bioaccumulative potential:

Not relevant

12.4 Mobility in soil:

Not relevant

12.5 Results of PBT and vPvB assessment:

Product does not meet PBT/vPvB criteria

12.6 Endocrine disrupting properties:

Endocrine-disrupting properties: The product does not meet the criteria.

12.7 Other adverse effects:

Not described

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SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Code	Description	Waste class (Regulation (EU) No 1357/2014)
	It is not possible to assign a specific code, as it depends on the intended use by the user	Non-hazardous

Type of waste (Regulation (EU) No 1357/2014):

Not relevant

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-hazardous residue. Waste should not be disposed of to drains. See paragraph 6.2.

Regulations related to waste management:

In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land:

With regard to ADR 2023 and RID 2023:

- | | |
|--|---------------|
| 14.1 UN number or ID number: | Not relevant |
| 14.2 UN proper shipping name: | Not relevant |
| 14.3 Transport hazard class(es): | Not relevant |
| Labels: | Not relevant |
| 14.4 Packing group: | Not relevant |
| 14.5 Environmental hazards: | No |
| 14.6 Special precautions for user | |
| Special regulations: | Not relevant |
| Tunnel restriction code: | Not relevant |
| Physico-Chemical properties: | see section 9 |
| Limited quantities: | Not relevant |
| 14.7 Maritime transport in bulk according to IMO instruments: | Not relevant |

Transport of dangerous goods by sea:

With regard to IMDG 41-22:

- | | |
|--|---------------|
| 14.1 UN number or ID number: | Not relevant |
| 14.2 UN proper shipping name: | Not relevant |
| 14.3 Transport hazard class(es): | Not relevant |
| Labels: | Not relevant |
| 14.4 Packing group: | Not relevant |
| 14.5 Marine pollutant: | No |
| 14.6 Special precautions for user | |
| Special regulations: | Not relevant |
| EmS Codes: | |
| Physico-Chemical properties: | see section 9 |
| Limited quantities: | Not relevant |
| Segregation group: | Not relevant |
| 14.7 Maritime transport in bulk according to IMO instruments: | Not relevant |

Transport of dangerous goods by air:

With regard to IATA/ICAO 2025:

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SECTION 14: TRANSPORT INFORMATION (continued)

14.1 UN number or ID number:	Not relevant
14.2 UN proper shipping name:	Not relevant
14.3 Transport hazard class(es):	Not relevant
Labels:	Not relevant
14.4 Packing group:	Not relevant
14.5 Environmental hazards:	No
14.6 Special precautions for user	
Physico-Chemical properties:	see section 9
14.7 Maritime transport in bulk according to IMO instruments:	Not relevant

SECTION 15: REGULATORY INFORMATION

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

- Article 95, REGULATION (EU) No 528/2012: Not relevant
- Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Not relevant
- REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Not relevant
- Regulation (EU) 2019/1021 on persistent organic pollutants: Not relevant
- Regulation (EU) No 2024/590, about substances that deplete the ozone layer: Not relevant
- Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Not relevant

Seveso III:

Not relevant

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc):

Not relevant

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

Other legislation:

The product could be affected by sectorial legislation

15.2 Chemical safety assessment:

The supplier has not carried out evaluation of chemical safety.

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

The SDS shall be supplied in an official language of the country where the product is placed on the market. This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (COMMISSION REGULATION (EU) 2020/878).

Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:

Not relevant

Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

CLP Regulation (EC) No 1272/2008:

Not relevant

Classification procedure:

Not relevant

Advice related to training:

Training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

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Safety data sheet

This SDS is an English translation of COMMISSION REGULATION (EU) 2020/878, without any country-specific legislation

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SECTION 16: OTHER INFORMATION (continued)

<http://echa.europa.eu>
<http://eur-lex.europa.eu>

Abbreviations and acronyms:

ADR: European agreement concerning the international carriage of dangerous goods by road
IMDG: International maritime dangerous goods code
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
COD: Chemical Oxygen Demand
BOD5: 5day biochemical oxygen demand
BCF: Bioconcentration factor
LD50: Lethal Dose 50
LC50: Lethal Concentration 50
EC50: Effective concentration 50
LogPOW: Octanolwater partition coefficient
Koc: Partition coefficient of organic carbon
UFI: unique formula identifier
IARC: International Agency for Research on Cancer

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