NAZBEL FIREPROOFING

COMPANY PROFILE

2025

AT A GLANCE

Nazbel Engineering & Technology Ltd. is a leading engineering firm specializing in passive fire safety solutions. As the first Passive Fire Protection (PFP) contracting company in Bangladesh, we are committed to safeguarding people and property through innovative engineering and technology. We collaborate with global partners to provide a wide array of services including fireproofing, fire stopping, and other engineering solutions, ensuring a safer future for every industry.

info@nazbel.com || +880 1711-871696 || www.nazbelfireproofing.com

Fireproofing Projects
(SYNOPSIS)

Nazbel Engineering & Technology Ltd. is the first Passive fire (PFP) contracting company in Bangladesh. We always think that how to protect people and country's property. Nazbel Group is a conglomerate company for Engineering Activities & Working Fireproofing Sector since 2012.We have Global Collaboration with KDone (Escoat-UL)-Korea, Hensel-Germany, SVT International-Germany.

* Fireproofing Project in Bangladesh by- NAZBEL GROUP:

Sl. No.	Project Name	Area	Nature of Fireproofing	RSC Approval	Year of Completion
01	Ratool Apparels Ltd. (Ratool Group)	8,321 SFT	Cementitious	Approved (Design)	Work Complete. Year-2023
02	P.N. Composite Ltd.	2,664 SFT	Cementitious	Approved (Design)	Work Complete. Year-2023
03	4A Yarn Dyeing Ltd. (Team Group)	75,273 SFT	Cementitious	Approved (Design)	Work Complete. Year-2024
04	AZM Style Wear Ltd. (Birds Group)	61,395 SFT	Cementitious	Approved (Design)	Year- 2021
05	Dekko Garments Ltd. (Dekko Group)	1,46,706 SFT	Cementitious	Approved (Design)	Work Ongoing
06	Dayeau Fashion Ltd.	122,000 SFT	Cementitious	Approved (Design)	N/A
07	Cutting EDGE Industries Ltd. (MBM Group)	1,23,000 SFT	Cementitious	Approved (Final)	Work Complete. Year- 2018
08	Nafa Apparels Ltd. (Palmal Group)	1,380 SFT	Cementitious	Under Review	Work Complete. Year-2023
09	Good Bags and Accessories Ltd. (Bay Group)	15,885 SFT	Cementitious	Under Review	Work Complete. Year-2023
10	Mega Denim Ltd.	186,000 SFT	Calcium Board	Under Review	Design Ongoing
11	Euro Jeans Ltd. (Islam Group)	34,000 SFT	Cementitious	Under Review	Design Ongoing
12	AKH Knitting & Dyeing Ltd. (AKH Group)	78,000 SFT	Cementitious	Under Review	Work Complete. Year- 2019
13	Universal Menswear Ltd. (Ananta Group)	4,62,000 SFT	Cementitious &Intumescent	Under Review	Work Complete. Year- 2019
14	British American Tobacco	33,000 SFT	Intumescent	N/A	Work Complete. Year- 2019
15	Jashore HI-Tech Park	1,44,000 SFT	Intumescent	N/A	Work Complete. Year- 2016
16	Brac University New Campus	26,000 SFT	Intumescent	N/A	Work Complete. Year- 2023
17	Terminal-3, Dhaka International Airport	500,000 SFT	Cementitious	N/A	Year- 2023. Only Material Supply of KD One.
18	Intimate Apparels Ltd.	5,016 SFT	Cementitious	Under Review	Work Ongoing
19	Ayesha Fashion Ltd. (Palmal Group)	255,868 SFT	Cementitious	Under Review	Work Completed Year-2024
20	Arbella Fashion Ltd. (Avant Group)	60,740 SFT	Cementitious	Under Review	Work Ongoing.
21	Standard Group	175,000 SFT	Cementitious	Under Review	Work Ongoing

* Our Products with Density:

Sl. No	Company Name	Country of Origin	Nature	Certified by	Density
01	KD One	South Korea	Cementitious	UL	Medium
02	Mercor Tecresa	Spain	Cementitious	EN	Medium & High
03	Hensel	Germany	Intumescent	UL	Standard
04	Albi	Germany	Mineral	UL	Standard
05	SVT International	Germany	Calcium Board	UL	Standard

* Our Expert Team:

Sl. No.	Name	Designation	Year of Experience	Working Area
01	A.K.M. Monoarul Huda	Technical Advisor	19 Year's	Bangladesh, Ex-Accord & RSC
02	Md. Akhter Hossain	Fire Safety Advisor	15 Year's	Australia & Bangladesh, Master's in Fire Safety Engineering (UK, Belgium & Sweden)
03	Engr. Nazrul Islam	Managing director	15 Year's	Middle East & Bangladesh
04	Jesmin Akter	Deputy Managing Director	10 Year's	Bangladesh
05	Md. Mazharul Islam	Project Director	30 Year's	Bangladesh
06	Md. Rafiul Islam	Manager (Accounts & Finance)	8 Year's	Bangladesh
07	Engr. Nayon Roy	Executive Engineer	9 Year's	Bangladesh
08	Md. Rezaul Karim	Executive Engineer	8 Year's	Bangladesh
09	Engr. Arman Khan	Fire Safety Engineer	5 Year's	Bangladesh
10	Md. Atiqul Haque	Executive Engineer	15 Year's	Bangladesh
11	Bikhash Vadraj	Fire Safety Engineer	7 Year's	India, Middle East
12	Tamanna Tasnim	Fire Safety Engineer	1 Year's	Bangladesh
13	Saiful Islam Bappy	Assistant Engineer (QA/QC)	2 Year's	Bangladesh
14	Md Parves Hasan	Assistant Engineer (Structural)	2 Year's	Bangladesh
15	Farhan Shahariar	Assistant Engineer (Geotechnical)	4 Year's	Bangladesh
16	Ummay Hani Mazumdar	Junior Assistant Engineer	1 Year's	Bangladesh
17	Md. Rifat Ahmed	Junior Assistant Engineer	2 Year's	Bangladesh
18	Md Hedayatul Islam Rumon	Junior Assistant Engineer	3 Year's	Bangladesh
19	Nisrat Jahan Nishi	Junior Assistant Engineer	1 Year's	Bangladesh
20	Swarnali Ahmed	Junior Assistant Engineer	2 Year's	Bangladesh
21	Md. Mamun or Rashid	Supervisor	10 Year's	Middle East & Bangladesh
22	Md. Jahedul Islam	Supervisor	10 Year's	Bangladesh
23	Muhit Khan	Software Engineer	2 Years's	Bangladesh & India

ENGR. NAZRUL ISLAM

B.Sc in Civil (KUET), Elected Member, CED-IEB

Managing Director

Nazbel Group Of Companies

INTRODUCTION

Nazbel Engineering & Technology Ltd. is serving the purpose of engineering activities. Now, We are working various types of Engineering like Fire Safety Engineering, Aviation, UAV, Construction, Public Safety & Security, IoT, Robotics, Medical Equipment etc. But Fire safety engineerring is our mother part of them.

Nazbel Engineering & Technology Ltd. is the first Passive fire (PFP) contracting company in Bangladesh. Nazbel always thinks that how to protect people and country's properly.

Nazbel Group is a conglomerate company for engineering activities.

Our Vision

To be create a safe environment for every industry with science and technology.

Our Mission

Collaborate with reputed global partners, innovate products and quality services.

GLOBAL PRATNERS

Nazbel Fire

Nazbel Fire conducted Business in fire safty & security sector in two major part such as Passive fire protection & Active fire protection.

Passive Fire Protection:

Passive fire protection (PFP) is components or systems of a building or structure that slows or impedes the spread the effects of fire or smoke without system activation, and usually without movement.

Examples of passive systems include floor-ceilings and roofs, fire doors, windows, and wall assemblies, fire-resistant coatings, and other fire and smoke control assemblies. Passive fire protection systems can include active components such as fire dampers.

Passive Fire Protection divided in two division such as

- Fireproofing
- Firestopping

Fireproofing: Fireproofing mainly required for non rated steel structure some special cases fireproofing, using RCC concrete structure.

In Global practice in steel fire proofing by

1) Intumescent Fire Coating
2) Cementitious Coating (Fire Proofing)
3) Calcium Silicate/Gypsum Board rating

0 to 240 minuties fire protection

Certified by- Approved by-

Fireproofing

▸ Intumescent Coating

Ⓐ Steel Structure Fireproofing.
Ⓑ Wood Structure Fireproofing.
Ⓒ Concrete Structure Fireproofing.

Steel Structure Fireproofing.

Properties:

- Water & Solvent base fireproofing intamescent coating up to 240 minutes.
- UL/EXOVA Warrington Certire Certified intumescent coating.
- European, British & American Standard.

Wood Structure Fireproofing.

Properties:

- Specifia Quality = 1.38
- Volume Solids = 69%
- VOC = 0.5 g/l
- Shelf Life = 6 month
- C_1 & C_2 Environment Satisfied
- Critial Temperature = 350, 400, 450, 500, 550, 600, 650, 700, 750° C

Concrete Structure Fireproofing.

Properties:

- Water based, White thin film intumescent coating.
- Contain very low volatile organic compound (VOC).
- Fire rating up to 120 minutes.

Fireproofing

▸ Cementitious Coating

1) Indoor Cementitious Coating
2) Outdoor Cementitious Coating

1) Indoor Cementitious Coating

Properties:

- Gypsum and perlite based Cementitious non conbustible fireproofing coating.
- Intended for application to steel structural Colums and Beams rating up to 240 minutes.
- UL Certified and tasted cementitious coating.
- Shelf Life= 1 year.

2) Outdoor Cementitious Coating

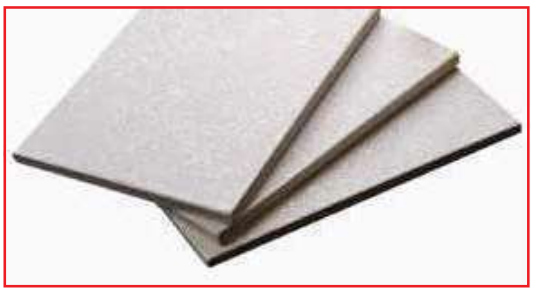
Properties:

- Water based formulated with the materials such as cement, Vermiculite, Fibre and Special in organic fire proofing material.
- Light but tough Excellent Compact, Compression and base resistance.
- Ability to bear up to 180 minitus of burning without chalking softtening.
- UL tested according to ASTM.

Fireproofing

▸ Fire rated Board

1) Calcium Silicate fireproofing



1) Gypsum Board fireproofing

FIRE PROTECTION COATING FOR STRUCTURAL STEEL SECTIONS

TECHNICAL DATA SHEET HENSOTHERM® 370 KS

- Solvent-based 1C system
- Free from borates and silicones
- Approved according to BS 476, Certifire No. CF 700
- Fire resistance rates: R 30 – R 120 for open and hollow profiles
- Suitable for shop application

HENSOTHERM® 370 KS
BENEFITS

Environmental Benefits
- Solvent-based 1C system
- Free from borates and silicones

Technical Performance
- Optimal surface appearance by application with airless spraying achievable; long fire resistance rates with low layer thicknesses; maintenance-free
- Approved also for the use on galvanized profiles
- Top coat in RAL/NCS or individual colour shades available
- Suitable for shop application (fast-drying)
- Physical life according to ETAG No. 018-1 up to 25 years, can be prolonged for special projects
- Open profiles up to Hp/A 330 m^{-1} and hollow profiles up to Hp/A 330 m^{-1} (Tcrit. 520 °C)
- Specific gravity: 1,29 kg/l, volume solids: 74 % ± 3 % (measured acc. to ISO 3233)

Additionals
- High efficiency due to low material consumption/low coverage rates and fast drying times
- Monitored by independent third party institutes

Our **HENSOTHERM®** and **HENSOMASTIK®** fire protection coating systems are developed and manufactured exclusively at our company base in Börnsen near Hamburg.

QUALITY MARKS

European Organisation for Technical Assessment

certifire

TECHNICAL INFORMATION

Approval / Classification

- Approved according to BS 476
- Certifire Certificate No. CF 700

Application Area

- Focused mainly on R 30 – R 120
- For outdoor and indoor use
- Open steel profiles: R 30 – R 120 for columns, beams and tension members (utilization factor in cold condition ≤ 78%)
- Hollow profiles: R 30 – R 120 for columns
- Assessed also for use on galvanized profiles
- According to ETAG 018-2 durability class X/Y/Z1/Z2
- Structural steel according to EN 10025-1 (class S, not S185) machine-building steel (class E) is not permitted
- Excluded are steel constructions permanently stressed by ponding water due to rainfall, condensation or aggressive gases
- Standing moisture is to be constructively excluded. We don't recommend the application for balcony systems, staircases and arcades.
- Coated steel components shall not be receive coverings or miscellaneous jackets which prevent the intumescent fire protection coating from foaming/expanding! Only those components may be connected force-fit, which comply with the same fire resistance rate.

Instructions for Application

- The coating system consists of the primer HENSOGRUND*, the fire protection coating HENSOTHERM® 370 KS and the top coat HENSOTOP SB*
- The coating system should only be applied by trained staff!
- The coating system shall be protected against weather effects until it is fully dried/completed! By housing for example.
- System should be preferably applied and dried at a temperature above +5 °C and at a relative humidity below 80 %
- Surface temperature should be at least +3 °C above dew point during application, see Corrosion Protection Standard EN ISO 12944-7
- Steel surfaces should not be warmer than +35 °C during application and drying time
- **The ambient conditions during application must be documented in a report according to EN ISO 12944-7 and -8**

Surface Preparation / Primer

Bare Profiles

- Sandblasting Sa 2.5 according to EN ISO 12944-4, then application of primer HENSOGRUND 1966 E* or HENSOGRUND 2K EP* recommended for cast steel
- Manual cleaning possible, PSt 2 according to EN ISO 12944-4, after manual cleaning application of HENSOGRUND 1K AK*

Primed Profiles

- HENSOTHERM® 370 KS is designed to be applied over suitable-prepared and primed substrate
- The compatibility between HENSOTHERM® 370 KS and unknown already applied primers need to be checked; any damage (corrosion, impact e.g.) must be repaired carefully e.g. with HENSOGRUND 1966 E*, HENSOGRUND 1K AK* or other compatible primers

Before the application of HENSOTHERM® 370 KS already primed surfaces must be checked for damages and dry film thickness if they have been exposed to the weather for longer. If necessary, repair work is needed! For further information see Technical Data Sheets for HENSOGRUND primers.

Galvanized Profiles

- Surface has to be cleaned to remove contamination and to ensure adhesion, then priming with HENSOGRUND 2K*
- Galvanized components must be tempered (heated) before coating with HENSOGRUND 2K (Blistering!)

Application

Before application stir up thoroughly with slow speed!
Immediate cleaning of the equipment after use by means of thinner HENSOTHERM® V 45

Airless Spraying

- A material temperature of about +20 °C is recommended for achieving an optimal spraying behaviour and result
- If needed thinning with max. 5 % thinner HENSOTHERM® V 45*
- Recommended operation pressure 200 – 250 bar
- Nozzle size 0.017" – 0.025"; flow rate > 4l/min
- All filters should be removed
- Recommended coverage rate for the 1st layer on a primed surface 500 g/m² (approx. 280 µm dry film thickness)
- Up to 1.000 g/m² (approx. 560 µm dry film thickness) can be applied in one layer
- Typical coverage rate of HENSOTHERM® 370 KS applied in one layer depends on the type of steel profile and the position within construction

Brushing and Rolling

- Brushing with long-bristled brushes, resistant to solvents
- Rolling by lambskin or mohair roller, resistant to solvents

Drying Time

- The drying time depends on temperature and relative humidity
- At a temperature of approx. +20 °C and a relative humidity of approx. 65 % the drying time of each layer (up to 1,000 g/m²) is at least 24 hours till next application
- Each layer must be dried through (fingernail test positive) before the next application
- Lower temperatures, higher relative humidity and insufficient air movement can prolong drying time

Note: Due to thermoplasticity of the product the mechanical resistance is reduced in temperature ranges above +40 °C!
With temperature decrease the original mechanical resistance will be achieved.

* Please consult the respective technical data sheet!

TECHNICAL INFORMATION

Top Coats

HENSOTOP top coats offer the possibility of colored design, protection against moisture and should be applied when the surfaces, during the usage, are exposed to environmental influences, regular cleaning and similar external influences. Do not apply the top coat before the HENSOTHERM® fire protection coating is fully dried! At the earliest after 24 hours and after a positive fingernail test. Usage without top coat is possible, but only in dry indoor conditions without condensation. If steel surfaces are regularly exposed to intense heat/high temperatures, do not use dark colours as a top coating. HENSOTOP top coats are available in RAL or NCS colour shades and on request in individual colour shades.

For HENSOTHERM® 370 KS the following top coat* is compatible:
HENSOTOP SB

Storage and Transport

- Storage and Transport free from frost!
  Preferably at a minimum of +5 °C to a maximum of +30 °C
- Shelf life of unopened pails: 12 months
- Opened pails must be sealed carefully after use!

Packaging

25 kg tinplate pails

Precautions for Safety Use

Use HENSOTHERM® 370 KS in accordance with all applicable local and national regulations.
Giscode: BS60

Environment, Health and Safety

As regulations are often revised please request for the actual Material Safety Data Sheet before using the product.

* Please consult the respective technical data sheet!

In case of any questions please contact our technical support team!
For full product documentation and other information to download please visit our website **www.rudolf-hensel.de**

RUDOLF HENSEL GMBH
Lack- und Farbenfabrik

Lauenburger Landstraße 11
21039 Börnsen | Germany

"Spray Applied Fire Resistive Materials"

Product Data

KD ONE

ESSCOAT

Fireproofing systems

Selection & Specification Data

Description

ESSCOAT is a Perlite based, medium density, cementitious, noncombustible, inorganic fireproofing supplied as a single powder component that is mixed with clean, portable water prior to application. It is intended for application to steel structural columns and beams. It is tested and certified for fire resistance ratings up to 4 hours. ESSCOAT is used in areas which may be subject to water and higher levels of elevated humidity such as parking garages, mechanical and electrical rooms, etc.

Features

- Easily applied by spray or trowel
- Perfect fireproofing in one application
- Excellent physical properties – hard and durable
- Nonflammable – during or after application
- Asbestos free – complies with EPA regulations
- Mineral Wool free – no airborne fibers
- Perlite based – enhance fireproofing ability by using hollow sphere shape expanded perlite
- Economical – ESSCOAT offers the lowest installed cost when compared to products with similar density and performance characteristics
- Single package – mixed with clean, potable water at the job site
- Quality Manufactured – under strict KD ONE quality standards
- UL factory inspection service

Primers

Do not need primer.

Topcoats

Not required.

Thickness

Required thickness depends on desired rating and assembly to be fireproofed.

Physical Data (Typical Values)

Color	Light gray
ASTM E1042	Class : a Category : A Type : Type – I (cementitious)
Fungi Resistance ASTM G21	Rating ' 0'
Surface Burning Characteristics ASTM E84	Rating ' 0'
Density, ASTM E605	Minimum average density of 368.4 kg/㎥ (23.0 pcf)
Cohesion/Adhesion ASTM E736	34.47 kPa Standard : Over 24.5 kPa
Deflection ASTM E759	No delamination or cracking
Bond Impact ASTM E760	No delamination or cracking
Compressive strength ASTM E761	257.8 kPa
Air erosion ASTM E859	0.019 g/㎡
Corrosion ASTM E937	Passed

* Note : These are laboratory results and not intended for specification purposes.

UL Fire rating

unit : mm

Member	Size		W/D	Rating(Minutes)						
				60	90	120	150	180	210	240
Beam	Min. W8*28	Unrestrained		9	15	20	26	31	36	44
		Restrained		9	13	18	23	27	32	36
Column	W6*9		0.34	22	30	37	45	52	59	66
	W6*12		0.44	21	28	35	42	49	57	64
	W6*16		0.58	19	26	33	39	46	53	59
	W8*28		0.68	19	25	31	38	44	50	57
	W10*49		0.84	17	23	29	35	41	47	53
	W21*73		0.98	16	22	27	33	38	44	50
	W12*106		1.47	14	18	23	27	32	37	41
	W14*233		2.55	3	13	17	20	23	27	30
	W14*730		6.76	3	5	5	5	8	10	11

* Refer to UL design Y736 for the thickness of different column sizes.

July 2017

ESSCOAT

unit : mm

Member	A/P	Rating(Minutes)						
		60	90	120	150	180	210	240
Tube or Pipe Column	0.166	20	29	38	47	56	65	74
	0.25	15	21	28	34	48	65	74
	0.5	8	11	14	17	24	34	43
	0.75	5	7	10	12	16	23	29
	1	4	6	7	9	12	17	22
	1.25	3	5	6	7	10	14	17
	1.50	3	4	5	6	8	12	15
	1.75	3	3	4	5	7	10	13
	2.11	3	3	3	4	6	8	11

* Refer to UL design Y736 for the thickness of different Tube or Pipe column sizes.

Application instructions

Preparation

- Time of application : In principle, ESSCOAT shall be applied after all basic work is completed, including anchor and hanger work in all duct and pipe work.
- Temperature : The temperature of the location of application and surface of application shall be maintained at 4–40℃ during application and curing. When applying in temperatures under 4℃ , necessary insulating measures, including heating, should be taken to maintain a temperature of at least 4℃ . This temperature should be maintained for the standard curing time after application.
- Cleaning : The substrate shall be clean, dry and free from dust, loose mill scale, loose rust, oil and any other condition preventing good adhesion. No primer is needed for primed/unprimed steel while applying ESSCOAT. ESSCOAT is compatible with listed industrial paints : Alkyd base and Acrylic base coatings
  – In case of Polyurethane based coatings, the surface should be scratched for removing the gloss of Polyurethane.
  – In case Epoxy based primer is used, use tie coat before spraying ESSCOAT.
  – Other than listed bases are used for primer, it is required to check with manufacturer for application.

Application

- The mixing ratio of ESSCOAT with water should be 1:1.1–1.4 by weight and mixed 2–4 minutes when the mixer is used.
- Regardless of the size of beams or columns, there is no need to install pin or wire mesh or metal lath while applying Esscoat.
- The distance between the nozzle and surface should be 30–60cm, with the angle set at 90 degrees. Do not spray at an angle below 70 degrees.
- ESSCOAT can be sprayed up to 20mm for an initial application and more than 20mm up to target thickness for a second application.

Curing

- Curing shall be performed in well ventilated environment, and rapid drying should be avoided. The curing periods are as shown in the table below.

Use	Column		
	14mm	23mm	32mm
Under 40℃	5–6days	7–8days	10–11days
10℃ – 20℃	6–7days	8–9days	11–13days
Over 4℃	7–8days	10–11days	13–15days

Use	Beam		
	9mm	18mm	27mm
Under 40℃	4–5days	6–7days	9–10days
10℃ – 20℃	5–6days	7–8days	10–12days
Over 4℃	6–7days	9–10days	12–14days

Packaging, Handling & Storage

Packaging (Approximate)	18±1 kg bags
Storage (General)	Store indoors in a dry environment
Shelf Life	1 year

* Shelf Life : (actual stated shelf life) When stored indoors in a dry place and in original unopened containers.
* Storage : Stored material must be kept dry or clumping of the material may occur.

KD ONE Co., Ltd.
7F, KOAMI Bldg., 22, Gukhoe-daero 76-gil,
Yeongdeungpo-gu, Seoul, 150-729, South Korea
Homepage : http://www.kdone.net/

July 2017

Nazbel Equipment

Nazbel Team

Ensure Fire Safey

Save Life, Save Property.

NAZBEL Fireproofing

With a focus on innovation and quality, Nazbel Engineering & Technology Ltd. provides comprehensive engineering services, including fire safety, construction, and advanced technological solutions such as UAVs and robotics. We are dedicated to maintaining the highest standards of excellence and ethical practices. Our solutions include passive fire protection, with a range of fireproofing options for steel, wood, and concrete structures. Contact us today to explore how we can help with your project.

GET IN TOUCH

CONTACT US :

+880 1711-871696

info@nazbel.com

www.nazbelfireproofing.com, www.nazbelgroup.com

BA-73/1, Paradise Lake View Nibash, Lake Dr Road, South Badda, Dhaka - 1212