

Certificate of Compliance

Certificate Number:

20240401-MH15184

Report Reference:

MH15184-20110812

Issue Date:

2024-04-01

Issued to:

**YKK (U.S.A.) INC
3340 CHESTNEY RD
MACON GA, 31217-5502
US**

This certificate confirms that representative samples of:

Component – Zippers for Use on Protective Clothing**Refer to Addendum Pages of this Certificate for UL Recognized Products**

Have been evaluated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.

Refer to Page 4 of this Certificate for Applicable Standards.

Additional Information:

See UL Product iQ® at <https://iq.ulprospector.com> for additional information.

This Certificate of Compliance indicates that representative samples of the product described in the certification report have met the requirements for UL certification. It does not provide authorization to apply the UL Recognized Component Mark. Only the Authorization Page that references the Follow-Up Services Procedure for ongoing surveillance provides authorization to apply the UL Mark.

Only those products bearing the UL Recognized Component Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Recognized Component Mark on the product.



David Piecuch
UL Mark Certification Program Owner

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This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Certified Zippers:

STYLE	TYPE	C O N S T R A I N T S T S		
		FEATURE	CODE	DESIGNATION/DESCRIPTION
Any conforming to constraints. See following page for style designation information.	Zipper	Chain Type	A	"5YGM", "5MG", "5MGM", "5RGM", or "5RG"
		Chain Material	N/A	Brass (G)
		Chain Size	D	5
		Tape Material	K	Nomex, "NMX-HR" or "NMX-D", Aramid, "NMX-HR", "NMX-D", "NMX-NS", or "FR/HR" ARAMID
	Zipper	Chain Type	A	"10MGM"
		Chain Material	N/A	Brass (G)
		Chain Size	D	8
		Tape Material	K	Nomex, "NMX-HR", "NMX-D", or "NMX-NS"
	Zipper	Chain Type	A	"45YGR"
		Chain Material	N/A	Brass (G)
		Chain Size	D	4.5
		Tape Material	K	Nomex, "NMX-HR" or "NMX-D"
	Zipper	Chain Type	A	"5VSHR"
		Chain Material	N/A	High Temperature Nylon Resin
		Chain Size	D	4
		Tape Material	K	Nomex, "NMX-HR" or "NMX-D"
		Stops, Box and Pins Material	N/A	High Temperature Nylon Resin, Zinc, Brass, or Aluminum
	Zipper	Slider Material	N/A	Zinc or Plastic PAZ
		Chain Type	A	"10VFHR"
		Chain Material	N/A	High Temperature Nylon Resin
		Chain Size	D	9
		Tape Material	K	Nomex, "NMX-HR" or "NMX-D"
		Stops, Box and Pins Material	N/A	Zinc, Brass, or Aluminum
		Slider Material	N/A	Zinc or Plastic PAZ

NOTES: For the above zippers, unless specified, the material for sliders will be zinc or brass and the material for top stops, bottom stops, and box & pins will be zinc, brass, or aluminum.

All zipper tapes will have clear or red PTFE reinforcement material or Polyester/Nylon reinforcement material (Applied to Nomex tape only) applied to the bottom of the zipper.

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NOTES (CONT'D):

The general zipper style designation is constructed using the following formula where A through K designate construction features, as described in the table below.

General Style Designation: A B C – D E F G H I J K

CODE	FEATURE
A	Chain type: See Page 2-3 of Certificate of Compliance
B	Chain finish: K, KB, TF, TH, TX, or none
C	Zipper type: closed (C), open (O, OL, OR, M)
D	Chain size: See Page 2 of Certificate of Compliance
E	Zipper function: free-lock (1), auto-lock (6), etc.
F	Slider material
G	Slider function: Free-lock, Auto-lock, Semi-auto
H	Pull tab: regular, long, etc.
I	Slider finish: G, J, O, V, X6, etc
J	Tape width
K	Special features: special tape material, etc.

As an example, Zipper Style: MGOL-59 GS J 9/16 NMX-D

Chain Type, Code A is "MG";

Chain Finish, Code B has nothing, meaning regular finish;

Zipper Type, Code C is "OL" (for open left);

Chain Size, Code D is "5";

Zipper Function, Code E is "9" (for semi-auto); and

Tape Material, Code K is "NMX-D".

The 5VSHR and the 10VFHR zippers do not have Code D in the style designation.

Finished zippers can be assembled at YKK or at customer facilities with training on authorized equipment.

- For zipper chain and tape prior to assembly into zippers, the package labels read chain size first followed by the chain type, the tape width, and any special feature.
- As an example, Chain Style: 5MG 9/16 NMX-D CHAIN
- This chain style is used to make the MGOL-59 GS J 9/16 NMX-D zipper, among others.
- In addition, slider pull tabs may have Nomex tape extensions.

Unless specified as a constraint in the table on page 2, additional zipper construction features are acceptable for use.

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These products described in this report are UL Certified to the following Standards:

Standard	Title	Edition
NFPA 1951	Standard on Protective Ensembles for Technical Rescue Incidents	2020
NFPA 1971	Standard on Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting	2018
NFPA 1975	Standard on Emergency Services Work Apparel	2019
NFPA 1977	Standard on Protective Clothing and Equipment for Wildland Fire Fighting and Urban Interface Fire Fighting	2022
NFPA 1999	Standard on Protective Clothing for Emergency Medical Operations	2018
NFPA 2112	Standard on Flame-Resistant Clothing for Protection of Industrial Personnel Against Short-Duration Thermal Exposures from Fire	2023
ASTM F1506	Standard Performance Specification for Flame Resistant and Electric Arc Rated Protective Clothing Worn by Workers Exposed to Flames and Electric Arcs	2022
CAN/CGSB 155.20	Standard on Workwear for Protection Against Hydrocarbon Flash Fire and Optionally Steam and Hot Fluids	2017