

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE PATENT TRIAL AND APPEAL BOARD**

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HS HYOSUNG ADVANCED MATERIALS CORP.,

Petitioner,

v.

KOLON INDUSTRIES, INC.,

Patent Owner.

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Case No. IPR2025-00662

U.S. Patent No. 9,617,731

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**PETITIONER'S SURREPLY TO PATENT OWNER'S REQUEST FOR  
DISCRETIONARY DENIAL OF INSTITUTION**

## EXHIBIT LIST

EX	Description
1001	U.S. Patent No. 9,789,731 (“the ’731 patent”)
1002	File History of the U.S. Patent No. 9,789,731
1003	Declaration of Jon Rust, Ph.D.
1004	<i>Curriculum Vitae</i> of Jon Rust, Ph.D.
1005	Japanese Patent No. 2009-68549 (“Tamura”)
1006	Certified Translation of Japanese Patent No. 2009-68549 (“Tamura”)
1007	U.S. Patent Pub. No. 2009/0090447 (“Baldwin”)
1008	Certified Translation of Korean Patent Disclosure No. 10-0245520 (“Baek”)
1009	U.S. Patent Pub. No. 2009/124149 (“Barnes”)
1010	European Patent Pub. No. 0405887A1 (“Buchanan”)
1011	U.S. Patent Pub. No. 2004/0108037 (“Osborne”)
1012	Certified Translation of Korean Patent Disclosure No. 10-2006-0126101 (“Chung”)
1013	Certified Translation of Japanese Patent Publication No. 2007-216778 (“Harikae”)
1014	U.S. Patent Pub. No. 2010/0071826 (“Yokokura”)
1015	U.S. Patent Pub. No. 2005/0249949 (“Rowan”)
1016	U.S. Patent No. 3,977,172 (“Kerawalla”)
1017	U.S. Patent No. 4,652,252 (“Westoff”)

1018	Certified Translation of Korean Patent Disclosure No. 10-0245520 (“Baek”)
1019	Korean Patent Disclosure No. 10-2006-0126101 (“Chung”)
1020	Japanese Patent Publication No. 2007-216778 (“Harikae”)
1021	Certified Translation of PCT Publication No. WO 2009/134063 (“Kwon”)
1022	Non-rubberized Cap-Ply Reinforcements, Angela Filipa Saraiva da Rocha, Continental (July 2014)
1023	U.S. Patent Pub. No. 2003/0159768 (“Fritsch”)
1024	<i>Intentionally Left Blank</i>
1025	Kolon Industries, Inc., v. Hyosung, Advanced Materials Corp. et al, No. 8:24-cv-00415-JVS-JDE (CDCA) (“Third Amended Complaint”)
1026	U.S. Patent No. 7,968,475 (“Carabajal”)
1027	ASTM International. <i>ASTM D885-01: Standard Test Methods for Tire Cords, Tire Cord Fabrics, and Industrial Filament Yarns Made from Man-Made Organic-Base Fibers</i> . ASTM International, 2001.
1028	ASTM International. <i>ASTM D885-02: Standard Test Methods for Tire Cords, Tire Cord Fabrics, and Industrial Filament Yarns Made from Man-Made Organic-Base Fibers</i> . ASTM International, 2002.
1029	ASTM International. <i>ASTM D885-03: Standard Test Methods for Tire Cords, Tire Cord Fabrics, and Industrial Filament Yarns Made from Man-Made Organic-Base Fibers</i> . ASTM International, 2003.
1030	ASTM International. <i>ASTM D885-04: Standard Test Methods for Tire Cords, Tire Cord Fabrics, and Industrial Filament Yarns Made from Man-Made Organic-Base Fibers</i> . ASTM International, 2004.

1031	ASTM International. <i>ASTM D885-06: Standard Test Methods for Tire Cords, Tire Cord Fabrics, and Industrial Filament Yarns Made from Man-Made Organic-Base Fibers</i> . ASTM International, 2006.
1032	ASTM International. <i>ASTM D885-07: Standard Test Methods for Tire Cords, Tire Cord Fabrics, and Industrial Filament Yarns Made from Man-Made Organic-Base Fibers</i> . ASTM International, 2007.
1033	<i>Aramid-Nylon 6.6 Hybrid Cords and Investigation of Their Properties</i> , Rubber Chemistry and Technology, Vol., 85, No. 2, pp. 180-194 (2012) (“Yilmaz”)
1034	<i>Intentionally Left Blank</i>
1035	PCT Publication No. WO 2009/134063 (“Kwon”)
1036	Japanese Industrial Standard JIS L 1017 (1995)
1037	Petition for <i>Inter Partes</i> Review of Claims 1-7 of U.S. Patent No. 9,789,731 (“Petition”)
1038	02.05.2021 Ltr. from Kolon Industries to Hyosung Advanced Materials
1039	Original Complaint, <i>Kolon Industries, Inc. v. HS Hyosung Advanced Materials Corp., et al.</i> , Case No. 8:24-cv-415-JVS-JDE, Dkt. 1.
1040	Order Granting Motions to Dismiss, <i>Kolon Industries, Inc. v. HS Hyosung Advanced Materials Corp., et al.</i> , Case No. 8:24-cv-415-JVS-JDE, Dkt. 65.
1041	Redacted Third Amended Complaint, <i>Kolon Industries, Inc. v. HS Hyosung Advanced Materials Corp., et al.</i> , Case No. 8:24-cv-415-JVS-JDE, Dkt. 85.
1042-1045	Intentionally left blank.

1046	United States District Courts' National Judicial Caseload Profile from 2025
1047	Screenshot of Docket Navigator's Analysis of Judge James V. Selna
1048	Order Granting Hyosung Advanced's Motion to Stay Pending <i>Inter Partes</i> Review, <i>Kolon Industries, Inc. v. HS Hyosung Advanced Materials Corp., et al.</i> , Case No. 8:24-cv-415-JVS-JDE, Dkt. 149.
1049	English and Korean Copy of the Korean high court's invalidity ruling. <sup>1</sup>
1050	Order Granting Motions to Dismiss, <i>Kolon Industries, Inc. v. HS Hyosung Advanced Materials Corp., et al.</i> , Case No. 8:24-cv-415-JVS-JDE, Dkt. 82.

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<sup>1</sup> Patent Owner argues that Exhibit 1049 does not comply with 37 C.F.R. § 42.63(b) because a certified translation was not provided. Petitioner intends to rely on a certified translation post-institution but can provide it now to the Director if needed. Regardless, Patent Owner does not dispute the outcome of the judgment.

Although Patent Owner requested a reply specifically to address the Korean High Court’s invalidity judgment, it largely rehashes the same flawed arguments made in the Request. DD Reply, 1; DD Request, 26–27. Patent Owner’s only new argument—i.e., that the age of the ’731 patent settled expectations—was previously forfeited (DD Opposition, 37–38) and has nothing to do with the Korean judgment that Patent Owner claimed it needed a reply to address. *See* PO’s Reply Request. This improper attempt to backdoor a forfeited argument disguised as a response to the Korean judgment circumvents the procedural rules and violates the Director’s clear instruction that the reply must be limited to the Korean judgment. Ex. 3101.

In any event, the ’731 patent was only about 7.5 years old when the Petition was filed and, to the extent minimal settled expectations arose during that time, they are outweighed by the Examiner’s material error. *See* DD Opposition, 38; *Anthony Inc. v. ControlTec, LLC*, IPR2025-00559, Paper 12 at 2 (July 16, 2025) (“Although the challenged patents have been in force for approximately eighteen and seventeen years, Petitioner appears to show a material error by the Office, and it is an appropriate use of Office resources to review the potential error.”). As Petitioner explained in its Opposition, the Examiner materially erred by allowing the claims despite certain references cited in the IDS (e.g., Tamura and Chung) and by failing to locate others (e.g., Yokokura). *See* DD Opposition, 20–21.

Further, as explained in the Opposition, the Korean Court’s ruling dissolved

any semblance of settled expectations as to validity. *See* DD Opposition, 5, 23. Petitioner’s immediate challenge to the Korean counterpart and the Korean Court’s subsequent invalidation of the substantially similar claims in the Korean counterpart evinces the Office’s error and, at a minimum, demonstrates that reviewing the error and reconsidering the ’731 patent’s validity is an efficient use of Office resources.

Patent Owner argues that because Petitioner challenged the validity of the Korean counterpart rather than the ’731 patent itself, Petitioner must have had settled expectations about the validity of the ’731 patent. DD Reply, 3. Not so. The now-invalidated Korean counterpart and the ’731 patent share substantially-similar claims, and Petitioner has always considered them equally invalid. Petitioner refrained from challenging the ’731 patent because it did not believe that it could be reasonably sued for patent infringement in the United States given the absence of any domestic importation or sales. *See* DD Opposition, 36. The repeated dismissals of Patent Owner’s district court complaints have confirmed this belief. *Id.*, 36–37.

Patent Owner’s misplaced focus on *Petitioner’s* actions fails to address *Patent Owner’s* own expectations, particularly in view of the prior art and the invalidation of the Korean counterpart. Tellingly, Patent Owner’s actions reflect a lack of settled expectations. As explained in the Opposition, Patent Owner has never asserted the ’731 patent before, *Intel Corp. v. Proxense LLC*, IPR2025-00327, Paper 12 at 3 (June 26, 2025), and silently sat on its purported patent rights for three years after sending

Petitioner a list of miscellaneous patent numbers, including the '731 patent. Following the prolonged silence, Patent Owner began repeatedly filing complaints lacking any viable claims for relief, and then agreed to stay the district court litigation pending a fourth motion to dismiss. These are not the actions of a patent owner that truly believes it is asserting a valid patent against an alleged infringer. Rather, they reflect a disgruntled competitor.

Despite Patent Owner's last-ditch effort to detract from the relevant inquiry by attempting to reframe the Korean Court's reasons for invalidation (DD Reply, 2–3), the fact remains that Korean counterpart was invalidated based on the same prior art presented in the Petition. That the Korean Court found the claims indefinite *alternatively* and *in addition to* lacking an inventive step (i.e., obvious), does not help Patent Owner. *See* Ex. 1049, 29 (“Even assuming that the meaning of the term ‘same structure’ of Claim 1 is definite, the claimed invention lacks an inventive step.”). Nor does the Korean Court's agreement with the Examiner's view that the “strength retention rate” limitation is inherent in the prior art support discretionary denial. Contrary to Patent Owner's mischaracterizations, Petitioner's arguments fully comport with the Korean Court's view. Indeed, Petitioner similarly argued that “the claimed characteristics and measurement ranges ... are obvious result-effective variables obtained through routine optimization.” Petition, 13.

For the foregoing reasons, the Director should not deny institution.

Date: July 31, 2025

Respectfully submitted,

*By: /s/ James M. Glass*

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**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that on July 31, 2025, true and correct copies of the foregoing document were served via electronic mail to Patent Owner's counsel of record:

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Date: July 31, 2025

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