



RoHS (Restriction of Hazardous Substances)

Certificate of Compliance

MKS Instruments, Inc. hereby certifies that the products listed in the attached table are compliant with the European Union's RoHS directive 2011/65/EU (including Delegated Directive 2015/863 effective 22 July 2021) regarding the restriction of the use of certain hazardous substances in electrical and electronic equipment. The products listed below are compliant to RoHS requirements for concentration limitations, by weight of homogeneous material, of the ten substances shown on the following page.

<u>Product</u>	<u>RoHS Compliant Part Numbers</u>
500MM RAIL, X48 SERIES	X48-0.5

The thresholds shown below are not in place for any legally allowable exemptions per Annex III of the aforementioned directive. If such exemptions are in use, they are noted on the attached table. If no exemptions are in use, then no further information is provided.

All information provided in this Certificate of Compliance is accurate to MKS' knowledge as of the date of this certification. This confirmation is made based our internal engineering risk analysis of the individual items possibly being present along with the best technical information made available to MKS from its material suppliers.

Gwen Briens
Vice-President and General Manager
Photonics Business Unit

06/17/2020

Date

LIST OF SUBSTANCES BANNED BY ROHS2 – JULY 2021

(Item cannot exceed 0.1% of homogeneous material – except as noted)

- Lead (Pb)
- Mercury (Hg)
- Cadmium (Cd) – 0.01% limit
- Hexavalent chromium (Cr6+)
- Polybrominated biphenyls (PBB)
- Polybrominated diphenyl ether (PBDE)
- Diisobutyl phthalate (DIBP)
- Bis (2-ethylhexyl) phthalate (DEHP)
- Butyl benzyl phthalate (BBP)
- Dibutylphthalate (DBP)

MKS RoHS2 PRODUCT EXEMPTION LISTING

MKS Product Number	MKS Product Description	Annex III Exemption #	Annex III Exemption Description