Statement regarding the background of MSL ratings and how they relate to Molex connectors:

As an electronic components supplier Molex is aware that certain housing materials used in the manufacturing of connectors are hygroscopic and as such may be sensitive to the elevated temperatures commonly seen in reflow soldering environments. A common connector defect found after reflow soldering, and in particular Pb free reflow soldering, is blistering found on the connector housing as absorbed moisture vaporizes and out-gasses.

Electronic assembly industry standards committees IPC and JEDEC have addressed the concern over the vaporizing and out-gassing from these hygroscopic sensitive materials during PCB assembly in the two specifications listed below:

A. IPC/JEDEC J-STD-020 "Moisture/Reflow Sensitivity Classification for Nonhermetic Solid State Surface Mount Devices"
B. IPC/JEDEC J-STD-033 "Handling, Packing, Shipping, and Use of Moisture/Reflow Sensitive Surface Mount Devices"

IPC/JEDEC J-STD-020 was not intended to address concerns regarding damages to connectors during a reflow soldering processes but rather to semiconductors as is evidenced in the failure criteria outlined in section 6.1 of IPC/JEDEC J-STD-020 listed below:

"A device is considered a failure if it exhibits any of the following"

A. External crack visible using 40X optical microscope.
B. Electrical test failure.
C. Internal crack that intersects a bond wire, ball bond, or wedge bond.
D. Internal crack extending from any lead finger to any other internal feature (lead finger, chip, die attach paddle).
E. Internal crack extending more than 2/3 the distance from any internal feature to the outside of the package.
F. Changes in package body flatness caused by warping, swelling, or bulging invisible to the naked eye per JESD-22-B101. If parts still meet co-planarity and standoff dimensions as measured at room temperature per JESD-22-B108, they **shall** be considered passing.

Since connectors were not included in the two above cited industry specifications Molex has not tested, packaged, or labeled our products as required per J-STD-020 and J-STD-033. However, Molex does understand that in some PCB assembly processes such as surface mount reflow soldering or pin in paste though hole reflow soldering certain housing materials may exhibit blistering due to absorbed moisture. As such Molex has taken steps to independently label some of our products as moisture sensitive to warn customers that care should be taken when storing and using these products.

Molex recommends that all parts are stored, packaged, and handled according to any special instructions outlined in their product specification.

Molex recommends that all parts are stored in their original packaging or if opened they should be re-packaged in the same way they were originally packaged.