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What Is the Condition for Conservation of Momentum?

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When teaching the law of conservation of linear momentum to first-year university or senior high school students, it is quite popular to use the term “isolated system” to describe the condition of the conservation law. That is, the law of conservation of momentum is stated as that the momentum of an isolated system is constant. Our investigation suggests that the term isolated system, though useful if properly defined, can cause confusion, and furthermore may create a conceptual barrier in understanding and applying the law of conservation of momentum.

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