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## DIAMOND TYPE CLASSIFICATION FOR GIA DIAMOND GRADING REPORT #2145864026

Scientists classify diamonds into two main "types" - type I and type II - based on the presence or absence of nitrogen which can replace carbon atoms in a diamond's atomic structure. These two diamond types can be distinguished on the basis of differences in their chemical and physical properties. Type II diamonds contain little if any nitrogen and they are subdivided into two groups (IIa and IIb) both of which are quite rare (less than 2% of all gem diamonds).

According to the records of the GIA Laboratory, the 7.53 carat Round Brilliant diamond described in GIA Diamond Grading Report #2145864026 has been determined to be a **type IIa** diamond. Type IIa diamonds are the most chemically pure type of diamond and often have exceptional optical transparency. Type IIa diamonds were first identified as originating from India (particularly from the Golconda region) but have since been recovered in all major diamond-producing regions of the world.

Among famous gem diamonds, the 530.20 carat Cullinan I and the 105.60 carat Koh-i-noor are examples of type IIa.