

June 15th, 2023

**DECLARATION OF SUBSTANCES FOR A TYPICAL GLOBALFOUNDRIES PRODUCT
200mm (8 INCH) AND 300mm (12 INCH) WAFER BASIS IN DIE FORM**

The following substances are generally present in the final wafer deliverables built at GlobalFoundries fabs worldwide.

ELEMENT OR CHEMICAL	CAS NUMBER	CONTENT (PPM)	USE
SILICON (Si)	7440-21-3	>980000	SUBSTRATE
COPPER (Cu)	7440-50-8	<10000	CIRCUITRY
SILICON DIOXIDE (SiO ₂)	7631-86-9	<5000	INSULATING LAYER
ALUMINUM (Al)	7429-90-5	<2500	CIRCUITRY
SILICON NITRIDE (Si ₃ N ₄)	12033-89-5	<1200	INSULATING LAYER
TANTALUM (Ta)	7440-25-7	<1000	CIRCUITRY
NICKEL (Ni)	7440-02-0	<30	CIRCUITRY
TUNGSTEN (W)	7440-33-7	<30	CIRCUITRY
TITANIUM (Ti)	7440-32-6	<20	BARRIER
COBALT(Co)	7440-48-4	<5	CIRCUITRY

The following substances may also be present in some GlobalFoundries wafer deliverables.

ELEMENT OR CHEMICAL	CAS NUMBER	CONTENT (PPM)	USE
BORON (B)	7440-42-8	<1	DOPANT
INDIUM (In)	7440-74-6	<1	DOPANT
ANTIMONY (Sb)	7440-36-0	<1	DOPANT
ARSENIC (As)	7440-38-2	<1	DOPANT
PHOSPHORUS (P)	7723-14-0	<1	DOPANT
GERMANIUM (Ge)	7440-56-4	<1	DOPANT
CARBON (C)	7440-44-0	<1	DOPANT
MANGANESE (Mn)	7439-96-5	<1	DOPANT

The data represented in the tables above are based on an average 200mm wafer weighing 53 grams and an average 300mm wafer weighing 135 grams. For this summary, the silicon wafer thickness is assumed to be 725 µm for 200mm wafer and 775 µm for 300mm wafers results are calculated from the technology specification documents and test results and are expressed in ppm (mg/kg) using actual densities or density estimates.

These calculations are meant to be conservative and are an attempt to represent maximums for the 200mm and 300mm wafer built at GlobalFoundries Fabs worldwide.

COMPLIANCE INFORMATION

Product meets RoHS specifications:

Concentration of Pb/Cr6+/Hg/PBB/ PBDE <1000 ppm and Cd <100 ppm concentration of Phthalates DEHP, BBP, DBP and DIBP <1000 ppm

Declaration of Non-Presence of SVHC in Finished Die Patterned Wafers according to Article 33 of REACH (REGULATION (EC) No 1907/2006):

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) entered into force on 1st June 2007. REACH establishes a candidate list for Substances of Very High Concern (SVHC).

Product does not contain substances classified as Substances of Very High Concern (SVHC) above the threshold of 0.1% w/w according to the SVHC candidate list in its edition of Jan 17th, 2023 (<https://echa.europa.eu/en/candidate-list-table>).

Halogens:

Product meets halogen content specifications as follows:

- Bromine is less than 900 ppm by weight.
- Chlorine is less than 900 ppm by weight.
- Bromine + Chlorine is less than 1500 ppm by weight.

Conflict Minerals:

In the complex, multi-step silicon wafer manufacturing process, tantalum, tungsten—and in some cases, cobalt or gold—are added to achieve the desired functionalities of integrated circuits. We routinely provide due diligence information such as Conflict Minerals Reporting Templates (CMRTs) and Extended Minerals Reporting Templates (EMRTs) to support our customers' reporting needs.

GlobalFoundries Reserves the right to change this document without notice at any time.