

Environmental Footprint Declaration

Aurubis PGM Solution



This document presents an environmental footprint declaration of the results of a life cycle assessment (LCA) of PGM solution, developed in accordance with ISO 14040 and ISO 14044 standards and the principles of ISO 14025. No applicable Product Category Rules (PCR) were available at the time of publication.

1. General information

Product name	PGM solution
Declared unit	1 kg of PGM solution
Manufacturer	Aurubis
Site(s) of production	Aurubis plant in Hamburg, Germany
LCA	Aurubis supported by Sphera
Date of publication	19/10/2026
Time coverage	Reference calendar year 2025
Independent verifier	TÜV NORD CERT Prüf- und Umweltgutachtergesellschaft mbH
Review type	Critical review per ISO 14044 (Clause 6)

2. Methodology and scope

Applied standards/guidelines: The study was conducted in accordance with the ISO 14040 (ISO 14040:2021 Environmental management — Life cycle assessment — Principles and framework) and ISO 14044 (ISO 14044:2021 Environmental management — Life cycle assessment — Requirements and guidelines) LCA standards and the Environmental Footprint impact assessment method (3.1).

Functional unit: 1 kg of PGM solution

System boundaries: Cradle-to-gate life cycle inventory from the extraction of raw materials to the production of PGM solution, based on allocated inputs from copper electrolysis and lead refining. Excludes packaging, downstream use, and end-of-life.

Allocation procedures: Economic allocation was applied in the life cycle inventory of precious metals to fairly account for the wide range of co-products.

3. Product

Product description: PGM solution is an intermediate product that is further processed to recover platinum group metals such as platinum, palladium and rhodium.

Technical properties/applications: Intermediate product further processed for the recovery of platinum group metals such as platinum, palladium and rhodium. PGM group metals have unique properties such as high conductivity, high melting points, physical and chemical resistance, the ability to catalyze chemical reactions, and optical qualities. They are used in jewelry, catalytic converters, electronics, coatings for optic fibers, and optical mirrors.

Expected service life: 50+ years (dependent on downstream application, e.g., in electronics, renewable energy systems, or industrial)

4. Environmental performance — impact results (per 1 kg PGM solution)

Impact category	Unit	Result
Climate change	kg CO ₂ eq	449
Ozone depletion	kg CFC-11 eq	0.000000019
Human toxicity, cancer effects ¹	CTUh	0.00000144
Human toxicity, non-cancer effects ¹	CTUh	0.0000273
Particulate matter	Disease incidences	0.000033
Ionizing radiation	kBq U235 eq	26.8
Photochemical ozone formation	kg NMVOC eq	3.73
Acidification	mol H+ eq	4.05
Eutrophication (terrestrial)	mol N eq	15.74
Eutrophication (freshwater)	kg P eq	0.004
Eutrophication (marine)	kg N eq	1.53
Ecotoxicity (freshwater) ¹	CTUe	2106
Land use ¹	Pt	39439
Water use	m ³ world eq	1341
Resource use, fossils	MJ	2734
Resource use, minerals and metals ¹	kg Sb eq	0.1

¹ Impacts are not sufficiently robust and accurate to be used for metals.

5. Environmental performance improvement and comparison with global average

The environmental performance of PGM solution was assessed for the first time in ref. year 2025. A year-on-year comparison cannot be provided since no previous life cycle assessment data is available. The results represent the baseline environmental footprint against which future improvements will be measured and reported in subsequent updates.

No industry average data is available for comparison.

6. Additional environmental information

Recycled content: The product is an intermediate used for the recovery of valuable metals in downstream processing. The recycled content of the intermediate product was not quantified.

Environmental labels/Certifications: Aurubis Hamburg, the PGM producing site, is certified to ISO 14001 and ISO 50001.

7. Interpretation and conclusions

The environmental impact of Aurubis PGM solution is primarily driven by anode slime, with minor contributions from lead bullion, purchased materials, and energy use.

8. Verification

Verification type	Critical review in accordance with ISO 14040 (2021) and ISO 14044 (2021)
Verifier name & organization	Michael Sommer Dennis Nowroth TÜV NORD CERT Prüf- und Umweltgutachtergesellschaft mbH Am TÜV 1, 30519 Hannover, Germany Phone +49 (0) 511 986-1172 Email micsommer@tuev-nord.de; dnowroth@tuev-nord.de
Date of verification	1/10/2026

The review confirmed that the LCA complies with the applicable standards and is scientifically and technically valid.

9. Disclaimer

This declaration has not been issued under a program operator and has not been verified in accordance with a PCR because none is available. The information is provided for transparency and B2B communication purposes.

10. Annexes

A. LCA Report

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