

ASI Content Index Metallurgy Business Unit

The Aluminum Stewardship Initiative (ASI) is an international standardization and certification body that encourages and aligns companies in the aluminum industry with a view to sustainable development and responsible manufacturing. The acquisition of the ASI Performance Standard is related to the creation and maintenance of responsible environmental and social standards as well as Governance criteria, in order to ensure the responsible production and rational use of aluminum. In this context, the performance of the activities that fall within the scope of the standard for the Metallurgy Business Unit is presented. **ASI**

Environmental Metrics	AoG Aluminium Plant	DELPHI-DISTOMON
Direct GHG emissions (Scope 1 - CO ₂ e thousand tons) ¹	1,275.2	4.5
Fuels (CO ₂ 100%)	887.9	4.4
Processes (CO ₂ : 74% - PFCs: 26%)	383.7	0.0
Transport (CO ₂ : 100%)	3.6	0.1
Indirect emissions (Scope 2 - CO ₂ e thousand tons) ²	1,321.5	2.8
Indirect emissions (Scope 3 - t CO ₂ / t Al ingot) ³	0.358	-
Total NOx emissions (t)	709.6	0.0
Total SOx emissions (t)	3,214.3	0.0
Particulate emissions (t)	41.6	0.0
Fluorine emissions (t)	210.8	0.0
CF ₄ emissions (t)	10.8	0.0
C ₂ F ₆ emissions (t)	1.3	0.0
Total energy consumption (TJ)	26,226.2	81.6
Energy consumption from non-renewable sources (TJ)	15,872.0	59.6
Natural Gas	15,490.8	0.0
Mazut	332.1	0.0
Gas Oil	46.7	57.1
Heating Oil	2.4	1.8
Gasoline	0.0	0.7
Energy purchased (Electric Power) (TJ)	10,354.2	22.1
Non-Renewable sources	7,130.6	15.2
Renewable Energy Sources (RES)	3,223.6	6.9
Total water withdrawals (ML)	168,541.5	238.1
Total water withdrawal from surface waters (ML)	159,820.0	10.1
Total water withdrawal from groundwater (ML)	8,578.3	12.1
Total water withdrawal from mining operations (ML)	-	216.0
Total water withdrawal from public water supply companies (ML)	143.2	0.0
Water discharges (ML)	161,660.6	238.1
Water consumption (ML) ⁴	6,880.9	0.0
Water consumption (m³ / ton of hydrated alumina production)	3.37	-

Environmental Metrics	AoG Aluminium Plant	DELPHI-DISTOMON
Water consumption (m³ / ton of primary aluminium production)	1.29	-
Non-hazardous solid waste (t)	793,410.5	13.2
Controlled Landfill (Accumulation site for Bauxite Residues)	669,683.9	0.0
Controlled Landfills for Non-Hazardous Waste	3,340.4	4.4
Recycling / Reuse internally and at third-party facilities	108,221.0	8.8
Storage for recovery	12,165.2	0.0
Storage in third-party facilities	0.0	0.0
Recovery / Exchange	0.0	0.0
Incineration	0.0	0.0
Hazardous solid waste (t)	19,281.9	27.5
Controlled Landfills for Hazardous Waste	13,887.2	0.0
Recycling / Reuse internally and at third-party facilities	5,047.1	3.3
Recovery / Exchange	0.0	9.3
Storage for recovery	347.6	0.0
Incineration	0.0	14.9
Storage in third-party facilities	0.0	0.0
Solid waste reused or recycled (% of total waste produced)	13.9%	29.7%
Total volume of spills (lt)	-	10,308
Incidents of non-compliance with environmental or social laws and regulations	0	0
Significant fines and number of non-financial sanctions for non-compliance with environmental or social laws and regulations	0	0
Payments to Government (€)	44,133,123.9	1,005,422.8
Political contributions	Not allowed	Not allowed

1.

The calculation of direct greenhouse gas emissions (Scope 1) is performed using energy conversion factors from fuel consumption (in TJ) to carbon dioxide equivalents (CO₂e). The numbers at the end of the reference period (year 2021) are used. The NIR 2021 methodology has been used for the values of the conversion factors.

2.

The calculation of indirect greenhouse gas emissions (Scope 2) is performed using conversion factors of energy from consumption electricity, heating, cooling, and steam (in TJ) to carbon dioxide equivalents (CO₂e_{eq}). The numbers at the end of the reference period (year 2021) are used. The European Residual Mix 2020 methodology has been used for the values of the conversion factors.

3.

A preliminary estimation of the scope 3 according to EIB Project Carbon Footprint Methodologies (July 2020) from the LCA study is at the level of 0.358 t CO₂/t Al ingot.

4.

The difference between the total amount of water withdrawals and the total amount of water discharges.