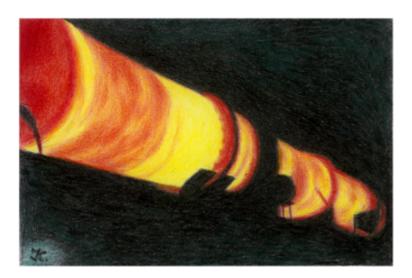
# **1.A.2.f - Stationary Combustion in Manufacturing Industries and Construction: Non-Metallic Minerals**

# **Short Description**

Sub-category 1.A.2.f - Non Ferrous Metals refers to emissions from fuel consumption for burning processes in energy-intensive mineral industries.

Category Code			Meth	hod				AD				EF		
1.A.2.f			T1	L				NS				CS		
Key Category	<b>SO</b> 2	NO×	NH₃	NMVOC	CO	BC	Pb Hg	Cd	PCDD/F	PAH	HCB	STSP	PM10	PM2 5
1.A.2.f	-/-	-/-	-/-	-/-	L/-	-		-	-	-	-	-/-	-	-
Method(s) app	lied													
D			C	Default										
T1			Т	ïer 1 / Sir	nple	Me	thodo	ogy	*					
T2			Т	ïer 2*										
Т3			T	ïer 3 / De	taile	d N	1ethod	olog	у *					
C			C	ORINAIR										
CS			C	Country S	pecif	ïc								
M				lodel										
* as described in				A Emissio	n Inv	/en	tory Gu	uide	book - 20	)19, ir	n cate	egory	chap	ters.
(source for) Ac	tivit	ty Da												
NS				lational S										
RS				Regional S										
IS				nternatio		tat	istics							
PS				lant Spec										
As				ssociatio				-						
Q				pecific Q		_	naires	(or s	urveys)					
M				1odel / Mo		ed								
C				Confidenti	al									
(source for) En	nissi	on F				<u> </u>	- I - I	1.3						
D				Default (E			laepoo	K)						
CS			_	Country S										
PS				Plant Spec		1								
M				1odel / Mo		ed								
C			C	Confidenti	al									



In order of significance relating energy use and emissions, the covered industries are:

- burning of cement clinker,
- burning of quicklime,
- melting of glass,
- burning of ceramics.

### Method

Regarding the burning processes emissions can allocated to the use of fuels or to the production process. Current allocation is regarding the main importance of the production process.

#### Activity data

The key source of all conventional fuel data is the national energy balance. Moreover the use of additional statistical data is necessary in order to disaggregate data. Data source for fuel inputs for energy-related process combustion in cement industry are manufacturing-sector statistics (Statistik des produzierenden Gewerbes); reporting number (Melde-Nr.) 23.51, Cement production. Furthermore the cement industry uses significant amounts of substitute fuels that do not appear in national statistics and in the Energy Balance. Relevant production figures and fuel-use amounts have been taken from statistics of the VDZ cement-industry association. The fuel-input data for ceramics production has also been taken from manufacturing industry statistics (Statistik des produzierenden Gewerbes); reporting no. (Melde-Nr.) 23.32, brickworks (Ziegelei), production of other construction ceramics. The same statistic is also used as source for fuel input of glass ( reporting number: 23.1, Production of glass and glassware) and lime production (reporting number: 23.52, Lime).

#### Emissions

Due to allocating emissions to process part we have removed most of time series inconsistencies. The current situation is the following:

Table 1: relevance of emission	sources regarding the fuel	use due to burning processes in 1.A.2.f
	5 5	<u> </u>

	SO,	NOx	со	NMVOC	NH₃	TSP	BC
cement	IE1	IE1	medium	IE <sup>1</sup>	IE <sup>1</sup>	IE <sup>2</sup>	NE
lime	IE1	IE1	IE1	IE <sup>1</sup>	low	IE <sup>2</sup>	NE
glass	IE <sup>2</sup>	IE1	IE1	IE <sup>1</sup>	$IE^1$	IE <sup>2</sup>	NE
ceramics	IE <sup>3</sup>	IE <sup>3</sup>	low	IE <sup>1</sup>	IE <sup>1</sup>	IE1	NE

<sup>1</sup> Included in process related emissions, in all cases it is the link to complementary source category.

<sup>2</sup> Some artifacts occur for 1990 emissions that cannot be shifted.

<sup>3</sup> Inclusion in process related emissions occurs from different time points onwards.

The entire appraisal of the emissions situation succeeds only in connection with the process related emissions. Especially further relevant pollutants as heavy metals or persistent organics are shown as process related generally.

### Recalculations

Due to recommendation during NEC-Review 2021 the calculation of CO emissions from lime production is allocated to process emissions based on default-EF. Additionally the calculation of CO emissions from glass production is allocated to process emissions too, but as a result of new research of industry. Both changes are explaned in process chapters.



For specific information on recalculated emission estimates for Base Year and 2019, please see the pollutant specific recalculation tables following



# **Planned improvements**

At the moment, no category-specific improvements are planned.