

# LCI Review report (reviewed against "ILCD Data Network - entry-level requirements")

## Draft template

**Table 1: General review reporting items**

REVIEW REPORTING			
<b>General information</b>			
Data set name	SAN/AMSAN, ABS production mix, at gate		
Data set UUID and version number	To be determined		
Data set locator (e.g. Permanent URI, URL, contact point, or database name and version, etc.)			
Data set owner	PlasticsEurope		
Review commissioner(s)	PlasticsEurope		
Reviewer name(s) and affiliation(s), contact	Matthias Schulz DEKRA Assurance Services GmbH		
Review type applied	Independent external		
Date of review completion (DD/MM/YYYY)	04/02/2015		
Reviewed against / Compliance system name	ILCD Data Network - Entry-level requirements		
<b>Reviewer assessment:</b>			
Aspect	Yes	No	Comments
Quality compliance (aspects of ISO 14040 & 14044) fulfilled (see table 2)	X		
Method compliance (as in ISO 14040 & 14044) fulfilled and documented in data set	X		
Nomenclature compliance (see table 3) fulfilled	X		
Documentation compliance (see table 3) fulfilled	X		
Review compliance (Independent external review OR independent internal review + review report) fulfilled	X		
Overall compliance with ISO 14040 & 14044	X		
Overall compliance with "Compliance system"	X		
Date, location, reviewer signature	Stuttgart, 04/02/2015		



**Table 2: Specific/detailed review reporting items for LCI data set: Quality compliance (ISO 14040 & 14044). Please note that for aggregated LCI result data sets, this includes key processes in the background system.**

ITEMs	Comments
<p>Time-related coverage/representativeness:</p> <p>“age of data and the minimum length of time over which data should be collected”</p> <p>“qualitative assessment of the degree to which the data set reflects the true population of interest”</p>	<p><b>Very Good</b></p> <p>Foreground: 12 month averages representing the year 2013.</p> <p>Background: 2010—2012,</p> <p>Maximum temporal validity until end of 2023.</p> <p>(p.11)</p>
<p>Geographical coverage/representativeness:</p> <p>“geographical area from which data for unit processes should be collected to satisfy the goal of the study”</p> <p>“qualitative assessment of the degree to which the data set reflects the true population of interest”</p>	<p><b>Good</b></p> <p>European production average (data from 5 sites producing SAN in 4 different European countries, 5 sites producing ABS in 5 European countries).</p> <p>(p.11)</p>
<p>Technology coverage/representativeness:</p> <p>“specific technology or technology mix”</p> <p>“qualitative assessment of the degree to which the data set reflects the true population of interest”</p>	<p><b>Good</b></p> <p>Technology mix representing European production (see above).</p> <p>Estimated &gt;90% of European SAN and ABS production in 2013.</p> <p>The specific technologies of SAN and ABS production of the companies, (also including one site producing Alpha Methyl Styrene Acrylonitrile (AMSAN)) are considered.</p> <p>(p.10-11)</p>
<p>Precision:</p> <p>“measure of the variability of the data values for each data expressed (e.g. variance)”</p>	<p><b>Very Good</b></p> <p>Relevant foreground data is primary data, or modelled based on primary information sources of the owners of the technologies.</p> <p>(p. 13)</p>
<p>Completeness:</p> <p>“percentage of flow that is measured or estimated”; assessed on level of process</p>	<p><b>Good</b></p> <p>In general, the collected and applied data can be stated as complete, because no flows are omitted or substituted. However, in single cases additives used in the SAN and/or ABS foreground unit process (&lt;0.3% m/m of product output) are neglected. The contribution of transport of small material proportions is expected to be less than 1%; hence the transports for minor input amounts are excluded.</p> <p>(p.11-13)</p>

ITEMs	Comments
<p>Consistency:</p> <p>“qualitative assessment of whether the study methodology is applied uniformly to the various components of the analysis”</p>	<p><b>Very Good</b></p> <p>To ensure consistency only primary data of the same level of detail and background data from the databases mentioned under ‘data sources’ were used. While building up the model, cross-checks concerning the plausibility of mass and energy flows were continuously conducted. The methodological framework is consistent throughout the whole model as the same methodological principles are used both in foreground and background system.</p> <p>(p.12)</p>
<p>Sources of the data; Appropriateness of use primary/secondary data source</p>	<p>The main data source was a primary data collection from European SAN and ABS producers, providing site-specific gate-to-gate production data for processes under operational control of the participating companies. Data concerning the precursor products, i.e. styrene, acrylonitrile, butadiene (ABS) as well as other input and output processes were taken from the GaBi database.</p> <p>(p.11-12)</p>
<p>Uncertainty of the information (e.g. data, models and assumptions).</p>	<p>Variation of single data was not recorded. Variation of the model/dataset not applicable due to vertical average of production lines and technologies.</p> <p>Reliability of the collected primary data can be considered very high due to almost exclusively measured data across the entire sample. Furthermore, the background data can be considered very precise.</p> <p>(p.12)</p>
<p><b>Others</b></p>	

**Table 3: Specific/detailed review reporting items for LCI data set: Nomenclature and Documentation**

ITEMs	Comments
<b>Nomenclature</b>	
Correctness and consistency of applied nomenclature (Preferred use of ILCD flows etc.; Correct nomenclature of other flows; Exclusion of not permissible waste flows, sum indicator elementary flows etc.)	Yes – database format is aligned and compatible with ILCD requirements (consistent nomenclature) -- conducted spot checks on the LCI (xls and ILCD xml)
<b>Documentation</b>	
Appropriateness of documentation (see Document “Documentation of LCA data sets”)	Yes – meta-data completed and appropriate; documentation aligned with ILCD standards.
Appropriateness / correctness of documentation form (ILCD Format)	Yes – Database format is aligned and compatible with ILCD requirements (consistent format of meta-data and content) -- spot checks were conducted on dataset.