

Version	DR. KNOELL Consult GmbH v.1	SUBSTANCE IDENTIFICATION PROFILE (SIP)
v.1	P-I236 SodAl REACH Consortium & SIEF	
[date]	22-10-17	

No	1.1. Chemical Name	1.2. EC Number	1.3. CAS Number	1.4. Composition Type
	Aluminium sodium tetrahydroxide	235-487-0	12251-53-5	Mono-Constituent Substance - + Additive

Identification requirements of REACH Annex VI and relevant Guidances for the purpose to identify the

Reference	SI Parameter	Value / Not necessary / Not for SIP	Remark / Justification
2.1.A	Name or other Identifiers of the substance		
2.1.1.a	IUPAC Name	Aluminium sodium tetrahydroxide	
2.1.1.b	Other International chemical name	Sodium aluminate solution	
2.1.2.a	Chemical Name	Aluminium sodium tetrahydroxide	
2.1.2.b	Abbreviation	-	
2.1.2.c	Other names	Sodium aluminate (PICCS), Aluminate (AIO21-), sodium (1:1) (TSCA); Aluminate (AIO21-), sodium (DSL, ENCS, SWISS, PICCS, ASIA-PAC, NZIoC); Aluminate, (AIO21-), sodium (AICS); NATRIUMALUMINAT (German) (SWISS); Sodium metaaluminate	
2.1.3.a	EC Number	235-487-0	
2.1.3.b	EC Name	Aluminium sodium tetrahydroxide	Al ⁺⁺⁺ Na ⁺ OH ⁻ OH ⁻ OH ⁻ OH ⁻
2.1.3.c	EC Description	-	
2.1.4.a	CAS Number	12251-53-5	
2.1.4.b	CAS Name	Aluminium sodium tetrahydroxide	
2.1.4.c	CAS Description	-	
2.1.5.a	IUBMB Number		
2.1.5.b	InChI	1/Al.Na.4H2O/h;;4*1H2/q+3;+1;;;/p-4	
2.1.5.c	Other Catalogue identifiers		
2.1.B	Substances (with core identifiers) also falling under this substance (with justification) (similar substance)		
2.1.6.a	Chemical Name	Aluminum sodium dioxide	Na ⁺ O=Al-O ⁻
2.1.6.b	EC Number	215-100-1	
2.1.6.c	CAS Number	1302-42-7	
2.1.7.a	Chemical Name	Aluminum sodium oxide	Na ⁺ O=Al-O ⁻
2.1.7.b	EC Number	234-391-6	
2.1.7.c	CAS Number	11138-49-1	
2.1.8.a	Chemical Name	Aluminum oxide (Al ₂ O ₃), reaction products with sodium hydroxide	
2.1.8.b	EC Number	296-715-2	
2.1.8.c	CAS Number	93028-24-1	
2.2	Information related to molecular and structural formula of the substance		
2.2.1.a	Molecular Formula	Al ⁺⁺⁺ Na ⁺ HO ⁻ OH ⁻ OH ⁻ OH ⁻	
2.2.1.b	Structural Formula	Al ⁺⁺⁺ Na ⁺ HO ⁻ OH ⁻ OH ⁻ OH ⁻	
2.2.1.c	Smiles notation	[OH-].[OH-].[OH-].[OH-].[Na+].[Al+3]	
2.2.2.a	Optical activity	not applicable	
2.2.2.b	Typical ratio of isomers	not applicable	
2.2.3.a	Molecular Weight	117.982267 g/mol	
2.2.3.b	Molecular Weight range		
2.3	Chemical Composition of the substance		
2.3.1	Main Constituent		
2.3.1.a	Name -Main Constituent	Aluminium sodium tetrahydroxide	
2.3.1.b	CAS Number -Main Constituent	12251-53-5	
2.3.1.c	EC Number -Main Constituent	235-487-0	
2.3.1.d	Concentration range -Main Constituent	> 80%	based on NaAl(OH) ₄
2.3.1.e	Concentration range -Main Constituent		
2.3.1.f	Typical concentration -Main Constituent (=		
2.3.2	Impurity / Impurities (above 1% or lower if contributing to the hazard or PTB profile)		

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2.3.2.a	Agreed strategy for Impurity profile on SIP	The substance is NOT included in this SIP, if there are impurities CMR cat 1 or 2, PBT or vPvB (in excess of 0.1%); Impurity classified as T+ or T (in excess of 0.1%); Impurity of heavy metals e.g. Ni, Hg, Cd, As, Cr, Pb, Se and Sb > 0.1%	
2.3.2.1.a	Name -Impurity (1)		
2.3.2.1.b	CAS Number -Impurity (1)		
2.3.2.1.c	EC Number -Impurity (1)		
2.3.2.1.d	Molecular Formular -Impurity (1)		
2.3.2.1.e	Concentration range -Impurity (1)		
2.3.2.1.f	Concentration range -Impurity (1)		
2.3.2.1.g	Typical concentration -Impurity (1)		
2.3.2.1.h	Hazard -Impurity (1)		
2.3.3	Additive(s) (above 1% or lower if contributing to the hazard)		
2.3.3.a	Agreed strategy for Additives profile on SIP		
2.3.3.1.a	Name -Additive (1)	Sodium hydroxide	
2.3.3.1.b	CAS Number -Additive (1)	1310-73-2	
2.3.3.1.c	EC Number -Additive (1)	215-185-5	
2.3.3.1.d	Molecular Formular -Additive (1)	NaOH	
2.3.3.1.e	Concentration range -Additive (1)		
2.3.3.1.f	Concentration range -Additive (1)		
2.3.3.1.g	Typical concentration -Additive (1)	about 30% (Concentration rage of additive is not specified)	based on NaOH
2.3.3.1.h	Hazard -Additive (1)	C; R35, Causes severe burns.	
2.4	Substance sameness checking procedure		
2.4.1	Agreed Spectral data to be used	Solid aluminium sodium tetrahydroxide can be characterised using XRD and IR; main elements aluminium and sodium, as well as inorganic impurities can be quantified using ICP or AAS. Liquid aluminum sodium dioxide can be characterised using IR, main elements aluminium and sodium, as well as impurities can analysed using ICP or AAS. The classic titration method is also well suitable to quantify the Al and NaOH at high concentration level.	
2.4.2	Agreed Analytical Methods to be used	The European Standards will be used as much as possible for analyzing macro and micro constituents (EN 1302:1999; Titrimetry; AA, ICP, MS); For quantification of heavy metals (micro elements) ICP is recommended (see EU standard 1302).	
2.4.3.a	Agreed Verification Method for sameness		
2.4.3.b	Agreed conditions for the Verification Method		
2.4.3.c	Agreed Verification Method for sameness		
2.4.3.d	Agreed conditions for the Verification Method		
2.4.4.a	Agreed role of the SIP in the SIEF		
2.4.4.b	Agreed person to be suggested as SIEF		

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2.5	Approval of the SIP		
2.5.1	Agreed approval method for the sameness		
2.5.2	Agreed approval method for the sameness		

By signing or otherwise approving this Substance Information Profile (SIP), the Company declares that he agrees with the content and He understands and agrees to be fully responsible for the proper linkage of the substance to the REACH Registration dossier and informing of