

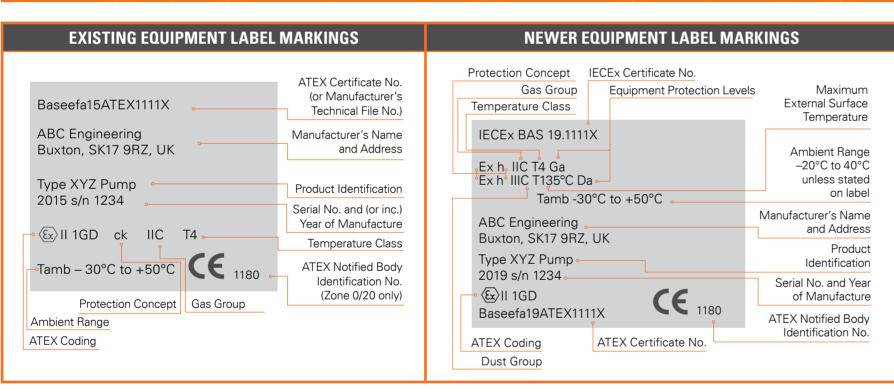
NON-ELECTRICAL EQUIPMENT: GUIDANCE FOR MANUFACTURERS AND END USERS



TO BE USED IN CONJUNCTION WITH WALLCHART 1

ATEX RESPONSIBILITY NB – Notified Body M – Manufacturer		ATEX EQUIPMENT	HAZARDOUS AREA ZONE		EQUIPMENT PROTECTION LEVEL (EPL)		IECEx RESPONSIBILITY CB – Certification Body	
TYPE EXAMINATION	PRODUCTION	CATEGORY	GAS	DUST	GAS	DUST	TYPE EXAMINATION	PRODUCTION
NB	NB	1	0	20	Ga	Da	СВ	СВ
M Technical File stored with NB	М	2	1	21	Gb	Db	СВ	СВ
М	М	3	2	22	Gc	Dc	СВ	СВ

NON-ELECTRICAL PROTECTION CONCEPTS												
SUPERSEDED EUROPEAN STANDARDS					DS	NEW ISO/IEC/EUROPEAN STANDARDS						
STANDARD EN		CODE		ZONE		PROTECTION CONCEPT	STANDARD ISO/IEC/EN		CODE		ZONE	
Gas	Dust	Gas	Dust	Gas	Dust	0011021 1	Gas	Dust	Gas	Dust	Gas	Dust
13463-1						General requirements	80079-36		Ex h	Ex h		
13463-2		fr	fr	2	22	Flow restriction	Not applicable					
13463-3		d	ما	1	21	Flormanzaaf	60079-1	Ex db		1		
13463-3		a	d	2	22	Flameproof	60079-1		Ex dc		2	
13463-7 (never published)						Pressurized	60079-2		Ex pxb	Ex pxb	1	21
									Ex pyb	Ex pyb	1	21
(never pe	abilistica,								Ex pzc	Ex pzc	2	22
										Ex ta		20
					Pro	Protection by enclosure		60079-31		Ex tb		21
										Ex tc		22
10.100 5				1	21	Constructional anfatus	80079-37		Ex h	Ex h	1	21
13463-5		С	С	2	22	Constructional safety	80079-37		EXII	EXII	2	22
10.400.0		b	b	1	21	Control of ignition sources	80079-37		Ex h Ex h	1	21	
13463-6	2			22	80079-37			EX N	Ex h	2	22	
10.100.0	L	k	1	21	Liquid immersion	80079-37		Ex h Ex h	Fv b	1	21	
13463-8			k	2					22	Exn	2	22
						Mining equipment	80079-38		Ex h	Ex h	(EPL	Mb)



POSSIBLE IGNITION SOURCES (LIST FROM EN 1127-1)						
Hot surfaces	Lightning					
Mechanical sparks	Electromagnetic waves					
Flames and hot gases	lonizing radiation					
Electrical sparks	High frequency radiation					
Stray electric currents	Ultrasonics					
and cathodic protection	Adiabatic compression					
Static electricity	Chemical reaction					

TECHNICAL FILE CONTENTS						
General description						
Ignition risk assessment						
Design and manufacturing drawings						
Description and explanation necessary to understand operation of product						
Standards assessment (or other solutions to meet EHSRs for ATEX)						
Calculations and examinations						
Test results						

SGS BASEEFA SERVICES

- ATEX and IECEx equipment/component certification
- IECEx certificate of personnel competence
- IEC 61508 certification
- Quality system approval
- Assistance with DSEAR (ATEX user directive) implementation
- Training and technical advice
- IECEx service facility certification • Technical file storage
- Testing

IGNITION HAZARD ASSESSMENT IDENTIFY ALL POTENTIAL IGNITION SOURCES (SEE TABLE BELOW LEFT) WHICH APPLY TO YOUR PRODUCT **DO THEY OCCUR DURING:** NORMAL **EXPECTED RARE EPL** OPERATION MALFUNCTION MALFUNCTION Ga/Da Gb/Db N/A Gc/Dc N/A N/A

- * Describe the single measure applied to prevent the ignition source from becoming effective. Where appropriate refer to standards used and test reports that substantiate compliance with the standards.
- ** Describe two independent measures used to prevent ignition source from becoming effective. Again refer to relevant standards and test reports.

N/A - need not be considered for this EPL.

SINGLE IMPACT ENERGY LIMITS (Nm)								
	EXPLOSION GROUP	NON- SPARKING METALS	OTHER MATERIALS (*)					
GAS								
Ga	IIC	60	5 (Hydrogen) 3 (Hydrocarbons including acetylene)					
	IIB	125	10					
	IIA	125	20					
	IIC	125	10					
Gb	IIB	250	20					
	IIA	500	40					
	IIC	250	20					
Gc	IIB	500	40					
	IIA	500	80					
DUST								
Da	IIIA to IIIC	125	20					
Db Dc	IIIA to IIIC	500	80					
(*) excluding materials specified in cl.6.4.2.1 a) of ISO 80079-36								

SGS BASEEFA LIMITED

Rockhead Business Park, Staden Lane, Buxton, SK17 9RZ tel. +44 (0)1298 766600 fax. +44 (0)1298 766601 e-mail: baseefa@sgs.com www.sgs.co.uk/sgsbaseefa

