

IC10

ContraFlame® IC10 (formerly FlexiChar® Q55 EV) is an intumescent coating that protects lightweight and thin components from the effects of fire or lithium-ion cell thermal runaway. When exposed to high temperatures, the material rapidly expands to form a tough, insulating char that protects the substrate.

ContraFlame® IC10 has been formulated for application to high volume components in a continuous production environment. It is a reactive material suitable for spray application, and cures at an elevated temperature to allow rapid completion and further assembly.

This coating is highly durable and is intended for use in vehicle underbody conditions. It is resistant to wetting, salt spray and cycles of heat and humidity. It is normally used as a single coating, without a primer or topcoat, and will adhere to metallic or polymeric substrates.

Product characteristics

Extreme event performance

- Reduces back face temperature and rate of heat absorption of the substrate
- Protects against temperatures of 1200 °C, resistant to flame erosion and provides insulation
- Rapid char formation in a fire event.

In-service performance

- High continuous in-service temperatures of 80 °C, cyclical testing from -52 °C to 180 °C
- A flexible film with excellent adhesion, suited for structures and elements undergoing vibration
- Will maintain flexibility at temperatures of -40 °C
- Resistant to water and durable in vehicle underbody conditions
- Electrically insulative.

Storage

12 months when stored as recommended in original, unopened containers. Store in secure, dry warehouse conditions between 5 °C and 30 °C.

Typical applications

Protection against extreme one-off events such as hydrocarbon and battery fires. ContraFlame® IC10 is spray applied to form a dry film of between 0.4 mm and 1.2 mm. The degree of fire protection will increase with coating thickness.

- Insulating battery compartments from external fires to delay or prevent thermal runaway
- Upgrading fire resistance of compartments within battery packs to delay and limit the extent of propagation
- Protects materials such as aluminium, composites or sheet moulding compound by providing a thermally insulating char
- 2k reactive material suitable for airless spraying.

Performance and properties

Property	Standard	Value		Units	
Bond strength	BS EN ISO 4624:2016	1.5		MPa	
Density, wet		1450		kg/m ³	
Viscosity	Brookfield				
• Part A		210,000		cP	
• Part B		2,800		cP	
• Part A + Part B		76,000		cP	
Flash point					
• Part A	ISO 3679	33		°C	
• Part B	ISO 3679	82		°C	
VOC*	VOC Solvents Directive				
• Part A	1999/13/EC	135	(9.16)	g/l	(%)
• Part B		76	(7.68)	g/l	(%)
Volume solids		90 ±3		%	
Mix ratio (by volume)		2.43:1			
Mix ratio (by weight)		3.75:1			
Mix ratio tolerance (by volume)		±10%			
Cure time in 80 °C oven					
• To vacuum lift		10 minutes (excluding ramp up)			
• Full cure		Additional 1 hour at ambient			

* Actual release to atmosphere will be only 6.2 % of mixed product as materials react into the film and cease to be volatile.

Disclaimer

Exclusion of liability Generic information contained in this publication relates to our product ContraFlame® IC10 and represents its technical performance appropriately. Any information or advice obtained from AIS (whether verbal or in writing) relating to AIS' products or other materials, and in particular this publication, is given in good faith but it is not a full technical specification nor a representation as to the fitness for purpose of our product for the customer's purposes. At all times it remains the responsibility of the customer to ensure that AIS' products are suitable for the particular purpose intended and AIS expressly excludes all liability for any loss or damages suffered by the customer based on the customer reliance placed on generic information provided in this publication or any other materials or verbal representations.

Insofar as products not manufactured or supplied by AIS are used in conjunction with or instead of AIS' products, the customer should ensure that they have received from the manufacturer or supplier all technical data and other information relating to such materials and have satisfied themselves that such products will perform when used in conjunction with, or instead of, AIS products. The customer shall bear all risk and liability arising from the customer's choice of products and materials and the combination of different products with others and AIS expressly excludes all liability for any loss or damage arising to the customer from their choice of products or materials.



For further details about AIS and our products or services, please contact us:

Quedgeley West Business Park, Bristol Road, Gloucester, GL2 4PA, UK

t: +44 1452 880880

e: info@aisltd.com

w: aisltd.com

© Copyright 2025 Advanced Innergy Limited

ContraFlame® is a registered trademark of Advanced Innergy Limited. Company registered in England and Wales, registration number 06416439