

CRESTABOND[®]

Primerless MMA Structural Adhesives



 **ADHESIVES** by
SCOTT BADER

CRESTABOND®

Primerless MMA Structural Adhesives

Scott Bader is a global company with over 40 years experience in designing and manufacturing high quality adhesives.

Scott Bader benefits from an industry leading technical support team available to assist customers with technical advice.

Scott Bader also boasts in house laboratory testing facilities allowing for a rapid response to customer requests.

The Crestabond® range of M7 / PP (1:1) and M1 (10:1) structural adhesives are unique to the market due to the incorporation of our novel tougheners.

The Crestabond® range of adhesives benefits from a range of working times to suit different applications.



Market Applications



Marine
from kayaks to super yachts



Land & transportation
buses, coaches, cars, trains and trucks



Building & construction
doors, windows and cladding



Wind energy
blades, housing and nacelles



Recreational vehicles
motorhomes and caravans



Agricultural vehicles
tractors, diggers, off-road and combine harvesters

Guide To Bonding

Check first

- ▶ Product is within shelf life
- ▶ Cartridge has been stored correctly
- ▶ No obvious defect or damage to cartridge
- ▶ No blockages at the cartridge outlet
- ▶ Correct static mixing nozzle is being used

Key points

- ▶ Higher or lower working temperatures will cause the working time to decrease or increase
- ▶ Static mixers must always be discarded after use
- ▶ Operating temperature of Crestabond® is from -40°C up to 100°C

3 main groups of substrates to bond to:

Metals

- ▶ Some surface cleaning is required – remove any obvious dirt, grease, oxidation and other contaminants with either acetone, MEK or IPA
- ▶ Galvanised or zinc coated metals should be bonded using the Crestabond® M7 (1:1) range
- ▶ When bonding cold rolled steel (CRS), ensure that the substrate has been cleaned, abraded and then cleaned once more in order to achieve the best results

Composites

- ▶ Some surface cleaning is required – remove any obvious dirt, grease and other contaminants with either acetone, MEK or IPA
- ▶ Gelcoat substrates need to be cleaned and may require a light abrasion with a 100-140 grit sandpaper and a further clean
- ▶ All composites can be bonded with Crestabond®

Plastics

- ▶ Some surface cleaning is required – remove any obvious dirt, grease and other contaminants with either acetone, MEK or IPA
- ▶ For bonding low surface energy plastics such as Polypropylene (PP), Polyethylene (PE) and other Polyolefins, Crestabond® PP-04 must be used

Crestabond® Features & Customer Benefits

Crestabond® features

- Primerless adhesives
- Minimal surface preparation
- Excellent fatigue and impact resistance
- Range of working and fixture times
- Good gap filling capability
- Bonds dissimilar substrates

Customer benefits

- ▶ Dramatically enhances production efficiency and reduces consumable costs
- ▶ Reduces dust emissions and preparation time
- ▶ Confidence in the longevity of the finished product
- ▶ Optimises production cycles to reduce manufacturing costs
- ▶ Adhesive can be used in multiple applications
- ▶ Provides flexibility in structural designs

Crestabond® Dispensing Equipment

- ▶ The Crestabond® cartridges can be used with a manual or pneumatic gun. Suitable dispense guns and static mixers are available from Scott Bader
- ▶ Crestabond® adhesives can be dispensed directly from pails and drums using an automated 1:1 or 10:1 dispensing machine
- ▶ Scott Bader technical support can provide advice on appropriate dispensing equipment



Adhesive Selection Guide

Selection of the appropriate product is essential for long-term adhesion and durability.

Crestabond® Product	Description	Colour	Mix ratio by volume	Viscosity (cP)	Working Time (mins)	*Fixture Time (mins)	Tensile Strength (MPa)	Tensile Modulus (MPa)	Elongation at break (%)	Gap Fill (mm)
M1-02	Universal Bonder	Grey	10:1	100,000 - 140,000	1 - 2	2 - 3	12 - 16	600 - 1000	80 - 100	1 - 15
M1-04	Universal Bonder	Grey	10:1	100,000 - 140,000	3 - 5	8 - 10	16 - 20	600 - 1000	80 - 100	1 - 15
M1-05	Universal Bonder	White, Grey or Black	10:1	100,000 - 140,000	4 - 7	12 - 18	16 - 20	600 - 1000	80 - 100	1 - 15
M1-10	Universal Bonder	White, Grey or Black	10:1	100,000 - 140,000	8 - 12	16 - 23	16 - 20	600 - 1000	80 - 100	1 - 15
M1-20	Universal Bonder	White, Grey or Black	10:1	100,000 - 140,000	16 - 22	25 - 35	16 - 20	600 - 1000	80 - 100	1 - 25
M1-30	Universal Bonder	White, Grey or Black	10:1	200,000 - 240,000	25 - 35	60 - 80	18 - 22	600 - 1000	100 - 130	1 - 50
M1-60HV	Universal Bonder	Green	10:1	340,000 - 380,000	50 - 70	150 - 180	22 - 26	1200 - 1600	50 - 70	1 - 50
M1-90HV	Universal Bonder	Green	10:1	340,000 - 380,000	80 - 100	210 - 240	22 - 26	1200 - 1600	50 - 70	1 - 50
M7-04	Universal Bonder	Off White or Black	1:1	30,000 - 70,000	3 - 5	12 - 15	22 - 25	1200 - 1700	6 - 10	1 - 5
M7-05	Universal Bonder	Off White or Black	1:1	30,000 - 70,000	4 - 7	18 - 22	22 - 25	1200 - 1700	25 - 30	1 - 5
M7-15	Universal Bonder	Off White or Black	1:1	30,000 - 70,000	10 - 20	30 - 45	22 - 25	1200 - 1700	25 - 30	1 - 5
PP-04	Low surface energy Bonder	Off White	1:1	70,000 - 140,000	3 - 5	165 - 180	12 - 17	800 - 1200	2 - 5	0.5 - 5

Based on laboratory results *Time taken at 23oC to achieve 1.4MPa strength in lap shear tests according to BS ISO 4587

Pack sizes

Cartridges

- M1 (10:1) range**
- ▶ 50ml side-by-side
 - ▶ 400ml coaxial
 - ▶ 825ml side-by-side

M7 and PP (1:1) Range

- ▶ 50ml side-by-side
- ▶ 400ml side-by-side

Bulk

- ▶ 20 Litre/ 18kg pails
- ▶ 200 Litre/ 180kg drums

▶ Step 1 Choose the adhesive with optimal working and fixture times

How to order bulk packed materials

Product	Adhesive	Activator
M1-02	M1-02 Adhesive	Activator 4
M1-04	M1-05 Adhesive	Activator 4
M1-05	M1-05 Adhesive	Activator 1*
M1-10	M1-10 Adhesive	Activator 1*
M1-20	M1-20 Adhesive	Activator 1*
M1-30	M1-30 Adhesive	Activator 1*
M1-60HV	M1-60HV Adhesive	Activator 2 Green
M1-90HV	M1-90HV Adhesive	Activator 2 Green
M7-04	M7-05 Adhesive or M7-05 Adhesive Black	M7-04 Activator
M7-05	M7-05 Adhesive or M7-05 Adhesive Black	M7-05 Activator
M7-15	M7-15 Adhesive or M7-15 Adhesive Black	M7-15 Activator

*Activator 1 gives a standard grey mix. Also available in black or white.

Product	Composites		Metals				Plastics				
	GRP	Stainless Steel	Aluminium	Powder Coated Steel	Cold Rolled Steel	Galvanised	ABS	Acrylic	Polycarbonate	PVC	PP/PE & TPO
M1-02	✓	✓	✓	✓	✓		✓	✓	✓	✓	
M1-04	✓	✓	✓	✓	✓		✓	✓	✓	✓	
M1-05	✓	✓	✓	✓	✓		✓	✓	✓	✓	
M1-10	✓	✓	✓	✓	✓		✓	✓	✓	✓	
M1-20	✓	✓	✓	✓	✓		✓	✓	✓	✓	
M1-30	✓	✓	✓	✓	✓		✓	✓	✓	✓	
M1-60HV	✓	✓	✓	✓	✓		✓	✓	✓	✓	
M1-90HV	✓	✓	✓		✓		✓	✓	✓	✓	
M7 range	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
PP-04	✓	✓	✓		✓		✓	✓	✓	✓	✓

▶ Step 2 Check the adhesive bonds the required substrates:

- ▶ Composites
- ▶ Metals
- ▶ Plastics
- ▶ Galvanised

▶ Step 3 Arrange a demonstration or trial by contacting your local Scott Bader representative or email enquiries@scottbader.com





Making a **positive** difference

Scott Bader Commonwealth Ltd - A common trusteeship company

Scott Bader Group Companies

Head Office

Scott Bader Company Limited

Wollaston, England

Tel: +44 (0)1933 663100

Fax: +44 (0)1933 666139

Email: enquiries@scottbader.com

Scott Bader France

Amiens, France

Tel: +33 3 22 66 27 89

Fax: +33 3 22 66 27 80

Email: info_distribution@scottbader.fr

Scott Bader Spain

Barcelona, Spain

Tel: +34 93 553 1162

Fax: +34 93 553 1163

Email: diazs@scottbader.es

Scott Bader Germany

Weiden, Germany

Tel: +49 961 401 84474

Fax: +49 961 401 84476

Email: composites@scottbader.de

Scott Bader Ireland

Dublin, Ireland

Tel: +353 1801 5656

Fax: +353 1801 5657

Email: composites@scottbader.ie

Scott Bader Scandinavia AB

Falkenberg, Sweden

Tel: +46 346 10100

Fax: +46 346 59226

Email: composites@scottbader.se

SB Eastern Europe s.r.o

Mimon II, Czech Republic

Tel: +420 (0) 487 863 880

Fax: +420 (0) 485 111 254

Email: miro@sbee.cz

Scott Bader Croatia

Zagreb, Croatia

Tel: +385 1 240 6440

Fax: +385 1 240 4573

Email: info@scottbader.hr

Scott Bader North America

Stow, OH,

USA

Tel: +1 330 920 4410

Fax: +1 330 920 4415

Email: info@scottbader-na.com

Scott Bader South Africa

Hammarsdale, South Africa

Tel: +27 31 736 8500

Fax: +27 31 736 8511

Email: composites@scottbader.co.za

Scott Bader Middle East Limited

Dubai, United Arab Emirates

Tel: +971 481 50 222

Fax: +971 488 35319

Email: info@scottbader.ae

Scott Bader Asia Pacific

Shanghai, China

Tel: +86 (21) 5298 7778

Fax: +86 (21) 5298 8889

Email: info@scottbader.cn

Satyen Scott Bader Pvt. Ltd

Mumbai, India

Tel: + 91 22 4220 1555

Fax: + 91 22 2491 1262

Email: info@satyenpolymers.com

NovaScott Especialidades Químicas Ltda

Civit II, Serra,

ES 29165-973,

Brazil

Tel: +55 27 3298-1100

Email: info@novascott.com.br

Scott Bader Japan KK

Yokohama, Japan

Tel: +81 (0)90-5530-4427

Email: enquiries@scottbader.com



+44 (0)1933 663100

enquiries@scottbader.com

scottbader.com



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