



FC40 Sealant

High Quality One-Part Polyurethane Sealant/Adhesive.

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Product Description

FC40 is a high quality one component polyurethane sealant with a high modulus for a wide range of sealing and bonding applications.

Characteristics

- Very good applicability
- Permanently elastic after curing
- Very good adhesion on many surfaces
- Excellent resistance to many chemicals

Applications

- Sealing and bonding in marine applications above and below water line.
- Sealing and bonding in caravans and motor homes.
- All sealing and bonding applications in the building and metal industry
- Structural bonding in vibration constructions

Application Examples

- Sealing and bonding in metal constructions
- Sealing of shrinkage joints in concrete floors
- Flexible bonding in container building
- Gluing of roof tiles

Packaging and Colours

Colours: White – Grey – Black (other colours on request)

Packaging: Aluminium cartridge of 310ml

Shelf life

12 months in unopened packaging in a cool and dry storage place at temperatures between +5°C and +25°C.

Technical Data

Base:	Polyurethane
Consistency:	Stable Paste
Curing System:	Moisture Cure
Skin Formation:	ca 15 min (20°C/65% relative humidity)
Curing Rate:	3mm/24h (20°C/65% R.H.)
Hardness:	40 ± Shore A
Shrink:	max. 4%
Specific Gravity:	1..26
Temperature Resistance:	-40°C until +90°C
Elastic Recovery:	> 80%
Elongated at break:	> 600%
Elasticity Modulus 100%:	0.60 N/mm ² (DIN 53504)
Breaking Strength:	> 1.50 N/mm ² (DIN 53504)
Max Allowed Distortion:	15%

Surfaces

Substrate:	Most of the usual building substrates, most metals, polyesters and many plastics. Not on glass.
State of surface:	Clean, dry and free from dust and grease.
Preparation:	Apply Primer 100 on porous surfaces.

Joint Size

Min. Width:	2mm in bonding applications 5mm in joints
Max. Width:	10mm in bonding applications 30mm in joints
Min. Depth:	5mm in joints
Recommendation:	Joint depth = Joint width

Application

Application method:	Manual or pneumatic caulking gun
Application temperature:	+1°C until 30°C
Cleaning:	Clean with white spirits immediately after application
Finishing:	Smoothen joint with a soapy solution before skin forming

Transport Information

Non hazardous for all means of transport.

Labelling

Symbol:	None
Risk phrases:	None
Safety phrases:	None
Contains:	Isocyanates

Information

When painted with oxidative drying paints, disturbances in the drying of the paints may occur.

Data contained in this document is for information only and is believed to be reliable. Delta Rubber Ltd cannot assume responsibility for results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability of the product for any specific purpose and Delta Rubber is pleased to provide a sample upon request.

Before using this product ensure that you have been supplied with and have read carefully the following information.

- The hazard label (complying with latest CDG/CPL regulations) applied to the container.
- Material Safety Data Sheet, I FC40.



Cert No. GB08/75575

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 30.04.2010

Revision: 23.04.2010

1 Identification of substance:**- Product details:****- Trade name:** FC40**- Article number:** PU40FC**- Application of the substance / the preparation**Adhesives
Sealant**- Informing department:**Abteilung: C-U Qualitäts- und Umweltmanagementcenter
(department: C-U Quality- and Environmentalmanagementcenter)
Tel.: +49 (0)6331/56-1119; Fax.: +49 (0)6331/56-1091**- Emergency information:**Bei Vergiftungen: (in case of poisoning:)
Giftnformationszentrum - Universitätsklinikum Mainz (Klinische Toxikologie)
Tel.(24h): +49 (0)6131/19240Bei Transportunfällen: (in case of transport accidents:)
Tel.(24h): +49 (0)621/60-43 333**2 Hazards identification****- Hazard designation:**

Xn Harmful

- Information pertaining to particular dangers for man and environmentR 42 May cause sensitisation by inhalation.
Contains isocyanates. See information supplied by the manufacturer**- GHS label elements****Danger**

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Contains isocyanates. May produce an allergic reaction.

- Prevention:P285 In case of inadequate ventilation wear respiratory protection.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.**- Response:**P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

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- Disposal:

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

3 Composition/information on ingredients

- Chemical characterization

- Description: preparation

- Dangerous components:

CAS: 28553-12-0 EINECS: 249-079-5	di-"isononyl" phthalate	< 10%
CAS: 1330-20-7 EINECS: 215-535-7	xylene, mixed isomers, pure Xn, Xi; R 10-20/21-38 Warning: flame 2.6/3; exclamation mark 3.1.D/4, 3.1.I/4, 3.2/2	< 5.0%
CAS: 90622-57-4 EINECS: 292-459-0	mixture of isoparaffins Xn; R 53-65-66 Danger: health hazard 3.10/1 4.1.C/4	< 2.0%
CAS: 101-68-8 EINECS: 202-966-0	diphenylmethane-4,4'-diisocyanate Xn, Xi; R 20-36/37/38-40-42/43-48/20 Danger: health hazard 3.4.R/1 Warning: exclamation mark 3.1.I/4, 3.8/3; 3.2/2, 3.3/2, 3.4.S/1	< 1.0%
CAS: 26447-40-5 EINECS: 247-714-0	methylenediphenyl diisocyanate, mixture of isomers (CAS-Nrn.: 101-68-8 / 5873-54-1 / 2536-05-2) Xn, Xi; R 20-36/37/38-40-42/43-48/20 Danger: health hazard 3.4.R/1 Warning: exclamation mark 3.1.I/4, 3.8/3; 3.2/2, 3.3/2, 3.4.S/1	< 0.5%

- Additional information For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- After inhalation

Supply fresh air; consult doctor in case of complaints.

In case of unconsciousness bring patient into a stable side position for transport.

- After skin contact

Treat affected skin with cotton wool or cellulose. Then wash and rinse thoroughly with water and a mild cleaning agent.

- After eye contact Rinse opened eye for several minutes under running water. Then consult doctor.

- After swallowing Do not induce vomiting; call for medical help immediately.

5 Fire fighting measures

- Suitable extinguishing agents

Water spray

Alcohol-resistant foam

Fire-extinguishing powder

Carbon dioxide

- For safety reasons unsuitable extinguishing agents Water with full jet.

- Special hazards caused by the material, its products of combustion or resulting gases:

Formation of toxic gases is possible during heating or in case of fire.

- Protective equipment: Wear self-contained respiratory protective device.

6 Accidental release measures

- Person-related safety precautions: Ensure adequate ventilation

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- **Measures for environmental protection:** Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:** Pick up mechanically.

7 Handling and storage

- Handling

- **Information for safe handling:** Ensure good ventilation/exhaustion at the workplace.

- Information about protection against explosions and fires:

The product contains small quantities of organic solvents. The possibility of an ignitable vapour / air mixture forming is very slight but, under certain local conditions, this should not be overlooked
Keep ignition sources away - Do not smoke.

- Storage

- **Requirements to be met by storerooms and receptacles:** Prevent any seepage into the ground.

- **Information about storage in one common storage facility:** Store away from foodstuffs.

- Further information about storage conditions:

Protect from frost.

Keep receptacle tightly sealed.

Protect from heat and direct sunlight.

Store receptacle in a well ventilated area.

Store in dry conditions.

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- Components with limit values that require monitoring at the workplace:

28553-12-0 di-"isononyl" phthalate

WEL (Great Britain)	Long-term value: 5 mg/m ³
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1330-20-7 xylene, mixed isomers, pure

WEL (Great Britain)	Short-term value: 441 mg/m ³ , 100 ppm Long-term value: 220 mg/m ³ , 50 ppm Sk; BMGV
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IOELV (European Union)	Short-term value: 442 mg/m ³ , 100 ppm Long-term value: 221 mg/m ³ , 50 ppm Skin
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101-68-8 diphenylmethane-4,4'-diisocyanate

WEL (Great Britain)	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO
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26447-40-5 methylenediphenyl diisocyanate, mixture of isomers (CAS-Nrn.: 101-68-8 / 5873-54-1 / 2536-05-2)

WEL (Great Britain)	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³
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- Personal protective equipment

- General protective and hygienic measures

The usual precautionary measures should be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of the work.

Immediately remove all soiled and contaminated clothing

- Breathing equipment:

Not required with good ventilation and/or adequate extractor facilities

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Short term filter device:

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Filter AX (DIN EN 371 [DIN EN 141])

- Protection of hands:

Protective gloves made of the following material:

Fluorocarbon rubber (Viton)- (0,7mm)

The named material refers only to the chemical resistance to the product.

Another important factor in the selection of the right gloves is their resistance to mechanical wear and tear. This, however, can differ completely from company to company which is why we recommend that users contact glove manufacturers in order to establish compliance with their own individual operating needs. Attention is also to be paid to an adequate penetration time (> 240min / EN374) of the glove material which complies with the strength and duration of exposure to the product.

- Eye protection: Safety glasses

9 Physical and chemical properties:

- General Information

Form:	Pasty
Colour:	White
Odour:	Solvent-like

- Change in condition

Boiling point/Boiling range: Not applicable

- Flash point: Not applicable

- Ignition temperature: > 200°C

- Explosion limits:

Lower:	0.4 Vol %
Upper:	7.6 Vol %

- Vapour pressure at 20°C: < 100 hPa

- Specific gravity at 20°C: 1.175 g/cm³

- Solubility in / Miscibility with

Water: Insoluble
reacts with water

- Solvent content:

Organic solvents:	5.9 %
VOC (EU):	69.3 g/l
VOC (EU):	5.90 %
VOC (CH):	5.90 %

10 Stability and reactivity

- Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

- Materials to be avoided:

- Dangerous reactions

Reacts with alcohols, amines, aqueous acids and alkalis.

Reacts with water forming carbon dioxide. In closed containers there is a danger of bursting, due to build up of pressure.

- Dangerous products of decomposition:

In case of fire, the following substance(s) may occur:

Hydrogen chloride (HCl)

Nitrogen oxides

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Sulphur oxides (SOx)

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11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Prolonged or repeated contact with the skin may cause skin irritation
- **Sensitisation** May cause sensitisation by inhalation.

12 Ecological information:

- **Additional ecological information:**
- **General notes:** Do not allow product to reach ground water, water course or sewage system.

13 Disposal considerations

- **Product:**
- **Recommendation** Disposal in accordance with official regulations
- **EWC-Code(s):**
No waste code number pursuant to the European Waste Catalogue can be stipulated for this product since only the intended application by the consumer allows an assignment to be made. The waste code number must be stipulated by agreement with the producer (or the responsible public authority).
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -

- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No

- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -

- **UN "Model Regulation":** -
- **Transport/Additional information:** Protect from moisture

15 Regulations

- **Markings according to EC guidelines:**
- **Code letter and hazard designation of product:**



Xn Harmful

- **Hazard-determining components of labelling:**
methylenediphenyl diisocyanate, mixture of isomers
(CAS-Nrn.: 101-68-8 / 5873-54-1 / 2536-05-2)

- **Risk phrases:**
42 May cause sensitisation by inhalation.

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- Safety phrases:

23 Do not breathe vapour/aerosol.

45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

- Special designation of certain preparations:

Contains isocyanates. See information supplied by the manufacturer

16 Other information:

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

For industrial use only.

- Legend of R-phrases, concerning the in chapter 3 mentioned substances (marking of product please see chapter 15) :

10 Flammable.

20 Harmful by inhalation.

20/21 Harmful by inhalation and in contact with skin.

36/37/38 Irritating to eyes, respiratory system and skin.

38 Irritating to skin.

40 Limited evidence of a carcinogenic effect.

42/43 May cause sensitisation by inhalation and skin contact.

48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

53 May cause long-term adverse effects in the aquatic environment.

65 Harmful: may cause lung damage if swallowed.

66 Repeated exposure may cause skin dryness or cracking.

- Department issuing MSDS:

Abteilung: C-U Qualitäts- und Umweltmanagementcenter
(department: C-U Quality- and Environmentalmanagementcenter)

- Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

VOCV: Lenkungsabgabe auf flüchtigen organischen Verbindungen, Schweiz (Swiss Ordinance on volatile organic compounds)

VOC: Volatile Organic Compounds (USA, EU)

- * Data compared to the previous version altered.

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