FLEXITUFF® DM-8

Direct to Prepared Metal Polyurea Elastomer — PC 392

FEATURES
- EXCELLENT ABRASION RESISTANCE
- FAST CURE
- CAN BE APPLIED DIRECT TO CORRECTLY PREPARED STEEL
- 100% SOLIDS – LOW VOC

USES

FLEXITUFF® DM-8 is a two-component polyurea elastomer formulated for protection against abrasion and corrosion. FLEXITUFF® DM-8 offers a seamless finish that absorbs impact and is extremely difficult to tear.

FLEXITUFF® DM-8 is designed specifically for use directly onto correctly prepared steel without the use of a primer. FLEXITUFF® DM-8 cures almost immediately on contact with the surface.

FLEXITUFF® DM-8 applications include its use as a highly resilient lining for hopper cars, conveyors, tanks, slurry systems and various equipment parts that are subject to abrasion in mining and process industries. It is also suitable for use in water treatment plants on walls, clarifiers and filters.

SPECIFICATIONS

AS/NZS 4020:2018 - compliant for use in potable water when used in conjunction with a certified coating system. Refer to a Dulux Protective Coatings Consultant for details of the system.

RESISTANCE GUIDE*

WEATHERABILITY	Will discolour when exposed to sunlight. Colour change will not detract from the protective properties of the coating.	**SOLVENTS**	Poor, not recommended for areas subject to splash and spillage of aromatic hydrocarbon solvents, esters, ketones, or alcohols
HEAT RESISTANCE	Up to 120°C dry heat	**WATER**	Excellent resistance to immersion in fresh and saltwater
SALTS	Unaffected by splash and spillage of neutral and alkaline salt solutions	**ALKALIS**	Suitable for splash and spillage of strong alkalis
ACIDS	Suitable for splash and spillage of mild inorganic acids	**ABRASION**	Excellent abrasion resistance

*Refer to the end of the technical data sheet for the chemical resistance guide.

TYPICAL PROPERTIES AND APPLICATION DATA

CLASSIFICATION	Pure polyurea elastomer coating
FINISH	Semi-Gloss
COLOUR	Natural Cream
COMPONENTS	Two
VOLUME SOLIDS	100%
VOC LEVEL	Zero
FLASH POINT	>100°C
POT LIFE	Plural Component Only
MIXING RATIO V/V	Part A: 1 Part B: 1
THINNER	Do not thin
PRODUCT CODE	499-H0172 Part A 976-H0173 Part B

APPLICATION CONDITIONS

	Min	Max
Air Temp.	5°C	50°C
Substrate Temp.	2°C	50°C
Relative Humidity		85%

COATING THICKNESS (MICRONS)

	Min	Max	Recommended
Wet film per coat (µm)	1,000	>10,000	2,000
Dry film per coat (µm)	1,000	>10,000	2,000

SUITABLE SUBSTRATES	Direct to suitably prepared steel. Suitably primed aluminium or concrete
PRIMERS	Durepon® 66
TOPCOATS	Not applicable
APPLICATION METHODS	Heated plural component airless spray

DRYING CHARACTERISTICS AT 2,000 µm DRY FILM THICKNESS

					OVERCOAT	
Temperature	**Humidity**	**Touch**	**Handle***	**Full Cure****	**Min**	**Max**
25° C	50%	30-60 Seconds	1 Hour	24 Hours	See Page 3	See Page 3

These figures are a guide only, as ventilation, film thickness, humidity, thinning and other factors will influence the rate of drying.

***** The product can be quite brittle in the first 15-30 minutes after application and should not be subject to impact, abrasion, elongation, or other mechanical movement during this period.

****** At this time the product can be put into service, however, it will continue to cure and will reach full performance in 7 – 10 days.

SPREADING RATE
ASSUMING NO LOSSES

0.5 square metres per litre equals 2,000 µm dry film thickness
NOTE: Practical spreading rates will vary depending on such factors as application method, ambient conditions, surface porosity and roughness.

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TYPICAL SYSTEMS

This is a guide only and is not to be used as a specification. Your specific project needs must be discussed with a Dulux® Protective Coatings Consultant.

SURFACE	ENVIRONMENT	PREPARATION GUIDE	SYSTEM		DFT (µm)
STEEL – NEW	Immersion or Chemical	Abrasive blast clean AS1627.4 Class 3.0, 75-100 microns profile	1st Coat	Flexituff® DM-8	>2000 µm
STEEL – NEW	Abrasion	Abrasive blast clean AS1627.4 Class 3.0, 75-100 microns profile	1st Coat	Flexituff® DM-8	>3000 µm

SURFACE PREPARATION	Specifiers should follow the surface preparation guidelines from the datasheet for the primer or first coat selected. The surface must be clean, sound and free from moisture, grease, oil, dirt, rust, old/existing paint, and other deleterious contaminants. If the maximum recoat window (refer to data sheet) then the entire surface MUST be abraded. **When applied directly to steel**: Round off all rough welds, sharp edges and remove weld spatter. Remove grease, oil and other contaminants in accordance with AS1627.1. Degrease with Gamlen CA 1 (a free-rinsing, alkaline detergent) according to the manufacturer's written instructions and all safety warnings. Abrasive blast clean to a minimum of AS1627.4 Class 3 with a blast profile of 75 – 100 microns. **Immersed steel**: Abrasive blast clean to AS1627.4 Class 3 with a blast profile of 75 – 100 microns. Remove all dust by brushing or vacuum cleaning.
APPLICATION	**Heated plural component airless equipment only**. Please refer to the Flexituff® DM-8 Application Guide for recommendations. For any questions after reviewing the guide, please contact Dulux® Protective Coatings Technical Service.
PRECAUTIONS	Flexituff® DM-8 is an industrial product designed for use by experienced protective coatings applicators. Where conditions may require variation from the recommendations on this Product Data Sheet contact your nearest Dulux® Protective Coatings representative for advice before painting. Do not apply in conditions outside the parameters stated in this document without the written consent of Dulux® Protective Coatings Australia. The rate of cure is dependent upon temperature. Do not apply at temperatures below 1°C. Do not apply at relative humidity above 85% or when the surface is less than 3°C above the dewpoint. The coating MUST be fully cured before being placed under immersion conditions. DO NOT THIN Flexituff® DM-8. Before introducing Flexituff® DM-8, plasticizers/conditioning fluids such as Mesamoll must be flushed out of the system. The system must be free of moisture-containing solutions/solvents to avoid any potential foaming. The resin has a nominal storage life of 12 months at a recommended temperature of 20-25°C. The isocyanate should be kept properly closed and stored indoors in a well-ventilated area under normal factory conditions. Storage at 20-25°C also provides a convenient viscosity for handling. Storage at low temperatures (below 10°C) is not recommended because it may lead to crystallisation; therefore, protect this material from frost. Storage temperatures above about 50°C are not recommended since they can accelerate the formation of insoluble solids and increase the viscosity on extended storage. Under the recommended storage conditions and in properly sealed containers, the isocyanate has a nominal storage life of 12 months. If either component is opened and partially used, it should be purged with nitrogen or desiccated air and resealed or refilled into smaller containers to their maximum volume.
SAFETY PRECAUTIONS	**Read Data Sheet, SAFETY DATA SHEET, Application Guide and any precautions on container labels. SAFETY DATA SHEET is available from Customer Service (13 23 77) or www.duluxprotectivecoatings.com.au**
STORAGE	Store as required for a flammable liquid Class 3 in a bunded area under cover. Store in a well-ventilated area away from sources of heat or ignition. Keep containers closed at all times.
HANDLING	As with any chemical, ingestion, inhalation and prolonged or repeated skin contact should be avoided by good occupational work practice. Eye protection approved to AS1337 should be worn where there is a risk of splashes entering the eyes. Always wash hands before smoking, eating, drinking, or using the toilet.
USING	Use with good ventilation and avoid inhalation of spray mists and fumes. If the risk of inhalation of spray mists exists, wear a combined organic vapour/particulate respirator. When spraying, users must comply with their respective State Spray Painting Regulations.
FLAMMABILITY	This product is flammable. All sources of ignition must be eliminated in, or near the working area. DO NOT SMOKE. Fight fire with foam, CO_2 or dry chemical powder. On burning will emit toxic fumes.
WELDING	Avoid inhalation of fumes if welding surfaces coated with this paint. Grind off the coating before welding.

PHYSICAL PROPERTIES

TEST	TEST METHOD	RESULT
Tensile Strength	ASTM D412-92	22.5 MPa
Elongation @ 24°C	ASTM D412-92	165%
Tear Strength	ASTM D624-86	120 N/mm
Hardness	ASTM D2240-91	62 Shore D
Abrasion Resistance	ASTM D4060	160mg, H18 wheel, 1,000 rev, 1,000g
Cathodic Disbondment	ASTM G8-96 (2003)	Cathodic disbonded radius 0 mm (28 days)

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CHEMICAL RESISTANCE

The resistance table below is a guide to the performance of fully cured (7-days) Flexituff® DM-8 when applied according to specifications.

	INTENDED USE (Maximum cargo temperature at 38°C unless otherwise stated)				
CHEMICAL	OCCASIONAL CONTACT	FREQUENT CONTACT	SECONDARY CONTAINMENT	CARGO IMMERSION	IMMERSION SERVICE
Acetic Acid 10%	R	R	R	NR	NR
Ammonia 10%	R	R	R	NR	NR
Ammonia 21%	R	R	R	NR	NR
Ammonium Nitrate 30%	R	R	R	R	R
Butyl Acetate	NR	NR	NR	NR	NR
Citric Acid 50%	R	R	R	NR	NR
Concentrated Hydrochloric Acid	R	R	R	PC	PC
Diesel	R, 50°C	R, 50°C	R, 50°C	R, 50°C	R, 50°C
Ethanol 200 Proof	R	PC	NR	NR	NR
Ethylene Glycol	R	R	R	R	PC
Gasoline Unleaded	R, 50°C	R, 50°C	R, 50°C	NR	NR
Glycerin	R	R	R	R	R
Hydrochloric Acid 10%	R	R	R	NR	NR
Kerosene	R, 50°C	R, 50°C	R, 50°C	R, 50°C	R, 50°C
MEK	NR	NR	NR	NR	NR
MIBK	NR	NR	NR	NR	NR
Nitric Acid 10%	R	R	PC	NR	NR
Phosphoric Acid 5%	R	R	R	R	R
Skydrol 500B	R	NR	NR	NR	NR
Skydrol LD-4	R	NR	NR	NR	NR
Sodium Hydroxide 20%	R	R	R	R	R
Sodium Hydroxide 5%	R	R	R	R	R
Sodium Hydroxide 50%	R	R	R	R	R
Sodium Hypochlorite 12%	R	R	R	NR	NR
Sodium Hypochlorite 5%	R	R	R	NR	NR
Sulfuric Acid 10%	R	R	R	PC	PC
Sulfuric Acid 30%	R	NR	NR	NR	NR
Sulfuric Acid 50%	R	R	PC	NR	NR
Sulfuric Acid 98%	NR	NR	NR	NR	NR
Water Deionised	R, 60°C	R, 60°C	R, 60°C	R, 60°C	R, 60°C
Xylene	NR	NR	NR	NR	NR

IMMERSION SERVICE (Most Severe): Suitable for continuous contact with chemical exposure up to specified temperature.

CARGO IMMERSION: Suitable for continuous contact with chemical exposure up to specified temperature. The coating will show no effect except slight softening or colour change after 2 months or less continuous immersion (may also be used in transport and hauling situations).

SECONDARY CONTAINMENT: Suitable for continuous contact with a chemical for up to 72 hours. EPA regulations require removal within 48 hours or in as timely a manner as possible. Softening or discolouration may occur during the exposure.

FREQUENT CONTACT: Suitable for frequent splash or up to 72 hours of exposure to concentrated vapour. The coating will show no effects except a slight softening or colour change after eight hours of continuous immersion in the liquid chemical or 72 hours of exposure to vapour.

OCCASIONAL CONTACT (Least Severe): Suitable for occasional splash and spillage or occasional exposure to concentrated vapour. The coating shows no effects, except slight softening colour changes, following short exposure to splash or spillage which evaporates, is hosed off, or dried overnight or, 24 hours exposure to vapour.

R Recommended

NR Not Recommended

PC Contact a Dulux® Protective Coatings Consultant

COMPANY INFORMATION

Dulux® Protective Coatings is a division of:

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PACKAGING, TRANSPORT AND STORAGE

PACKAGING	Available in 425 litre kits
TRANSPORTATION WEIGHT	1.06 kg/litre (Average of components)
DANGEROUS GOODS	Part A: Non-Dangerous Good Part B: Class 8 UN 2735

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