

DEK STANDARD ENGINEERING INSTRUCTION

Title

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PAINT: "Dark Grey"

DSF240

PAINT TYPE: - PLASTILAC AE251

A high quality two pack air drying polyurethane coating to produce a spatter texture or, applied conventionally, to give a smooth surface finish. It has excellent hardness and resistance to mechanical damage.

Plastilac AE251	2 Pack Polyurethane
Finish	Smooth or Spatter (according to application method)
Gloss Level	1
Colour	Dark Grey

EXTERNAL AREAS

This specification relates to a spatter finish on External Surfaces. (A smooth finish on an external surface to be used only if specifically stated on the Engineering Drawing.)

INTERNAL AREAS

Apply Smooth finish only.

MANUFACTURER

Trimite. Trimite Reference : R24678

FLASH POINT

Flash point in range 21°C to 32°C tested to BS 3900 part A 8.

STORAGE

Recommended temperature range for storage is between 10°C - 15°C.

Shelf life six months. When not in use the can of curing agent must be kept sealed.

MIXING RATIO

Plastilac AE251 Two pack polyurethane Finish must be mixed with Curing agent J2511 in the ratio of 5 parts Finish to 1 part Curing Agent by volume. Mixture (Pot) life - 8 hours at 20°C

COVERAGE

Conventional spraying : 5 - 6 square metres per litre (55 - 65 square feet per litre).

For spatter coat, allow for a reduction of approximately 50% on the coverage figures.

PRIMER TYPE

Metals	SAP3 / BP18
Plastics and GRP	APF210 Primer - APF210 Primer Filler

EMC SHIELDING

Type	J2904
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ANTI STATIC CLEANER

Type	J131
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QUALITY ASSURANCE - PAINT CHIP SAMPLE:

The sample chip supplied shows the spatter concentration required. This standard of finish, consistently applied overall, will assure conformance to the instruction.

Contact DEK and quote instruction number DSF240 when requesting further chip samples.

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PLASTILAC AE251 - PROCESS

Ferrous metals, Aluminium and Light Alloys.

PREPARATION

Substrate must be thoroughly clean and free from contamination, corrosion and grease.
Conventional degreasing methods may be employed.

PRIMING

Primers	SAP3	Two-pack Self Etching Primer	See DSF 210 “DEK Primer”
	BP18	Two-pack Polyurethane Primer	See Page 12

FINISHING

AE251/1	See Page 4
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PLASTILAC AE251 - PROCESS

Plastic and GRP

PREPARATION

Substrate must be thoroughly clean and free from mould release agents and static charges.

Antistatic cleaner J131.

See Page 9

PRIMING

Noryl and rigid polyurethane foam do not normally require a primer provided the surface is clean. For poor surface finishes where extra filling of the surface is necessary, Plastilac APF210 two pack polyurethane Primer Filler is recommended. Other plastics may require an appropriate primer.

GRP Priming

	AP210	Primer	See Page 7
or	APF210	Primer Filler	See Page 5

EMC SHIELDING

Type J2904

See Page 10

FINISHING

AE251/1

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PLASTILAC AE251 - FINISHING

Plastilac AE251 Two pack polyurethane finish may be applied by the following method.

CONVENTIONAL SPRAYING

Smooth Finish

To the blend of mixed material (See Mixing Ratio) thinner PT 1002 may be added up to 20% by volume to obtain a viscosity of 25-30 seconds at application temperature using BS B4 viscosity cup.

Spatter Finish

- a) Apply the first coat normally and allow to flash-off for approximately 5 minutes
- b) Reduce air pressure to between 5-15 psi and apply spatter coat to the desired pattern. This application is made easier by the use of a pressure pot which permits control of the resultant pattern.

Note A higher profile may be achieved by using the material unthinned.

AIR DRYING

At an ambient temperature of 20°C, the drying time is approximately as follows:

Surface dry	10-20 minutes
Hard dry	2 -3 hours
Full Properties	7 days

FORCE DRYING

DEK recommend this as the preferred method. A "Flash-off period of approximately 5 minutes should follow the application to allow the solvents to evaporate.

Plastic

To accelerate the drying time, elevated temperatures may be used. This procedure must be carried out with care to avoid component deformation, temperatures up to 40°C, for up to 45mins are recommended, dependent upon the size and shape.

The type of plastic, conditions of moulding and post-mould time will determine the maximum temperature that can be employed.

Safe Handling Time :-Safe handling time 24 hours after force drying, or if possible, extend the Force Drying Time.

Metal

When it is required to accelerate the drying process, temperatures up to 100°C - 120°C, for up to an hour is normally recommended.

CLEANING

High Flash Gun Cleaning Solvent J113 is suitable for cleaning all equipment after use.

SAFETY

- Before use refer to Trimite's:
1. Good housekeeping guide
 2. Safety sheet S4 - Section 2
 3. Individual Safety Information Sheets.

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POLYURETHANE PRIMER FILLER - APF210

TWO PACK PRIMER FILLER : APF210

FEATURES

This primer filler has a high solids content, providing excellent opacity and very good filling properties. It has very good adhesion to structural foam mouldings (including certain plated types) and is recommended for use in finishing systems for instrument cases, business machine housings and other items made from these materials. This primer filler is also recommended for use as a foundation coat in polyurethane based finishing systems and medium density fibreboard(MDF).

AVAILABILITY

Full details of the container sizes and prices may be obtained from TRIMITE sales offices.

The following colours are available as standard:

Black	8/APF210
Light Grey	40/APF210
White	90/APF210

FLASH POINT

Flash point in the range of 21°C - 32°C. Tested to BS 3900 Part A8

STORAGE

Recommended temperature range for storage is between 10°C - 15°C. It is not considered advisable to store this material outside this temperature range or to exceed a storage period of six months prior to use.

MIXING RATIO

Plastilac APF210 Two Pack Polyurethane Primer Filler must be mixed with Curing Agent J2511 in the ratio of 10 parts of Primer Filler to 1 part of Curing Agent, by volume.

NOTE : When not in use, the can of Curing Agent must be kept sealed.

Mixture Pot Life

The mixed material remains usable for a period of up to 8 hours at (20°C).

COVERAGE

Calculated on a dry film thickness of 60 microns.

Conventional Spraying: 6 - 7 Sq. metres per litre, (65 - 75 ft² per litre)

PREPARATION

Plastic:

The substrate must be thoroughly clean and free from mould release agents and static charges. Owing to the sensitivity of many plastics to certain solvents, Anti-static Cleaner J131 should be used.

Type J131

See Page 10

Note: It may be necessary to use a suitable electronic or radioactive source static eliminator immediately prior to painting.

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Medium Density Fibreboard (MDF):

To avoid any problems of differential drying when coating MDF, the board face should be sealed with MDF barrier coat J135.

Wood:

The substrate must be thoroughly clean and free from foreign matter. Sanding the surface or "de-nibbing" is recommended where applicable.

Metal:

In the absence of an aqueous pre-treatment the recommended primer is SAP3 Two pack Self etching Primer.

- **FINISHING**

Application:- APF210 Two Pack Polyurethane Filler may be applied by the following method:

Conventional Spraying

Conventional Spraying. The blend of mixed material (see MIXING RATIO) should be thinned by up to 10% by volume with thinner PT1002 to obtain a suitable viscosity at application temperature.

A wet film thickness of 100 microns will result in a dry film thickness of 60 microns.

Air Drying

At an ambient temperature of 20°C. the drying time is approximately as follows :

Surface Dry	10 - 20 minutes
Hard Dry	4 - 6 hours
Full Properties	7 days

Note 1: Low temperatures or high humidity will retard the drying time and could affect the resultant properties, application should only be carried out in a warm dry atmosphere.

Note 2: Flatting and the application of subsequent coats should only be carried out when the Primer Filler is HARD DRY.

Force Drying

When it is required to accelerate the drying process, a "flash-off" When it is required to accelerate the drying process, a "flash-off" of of approximately 10 minutes should follow the application to allow the solvents to evaporate. Temperatures up to 60°C may then be used.

EQUIPMENT CLEANING

High Flash Gun Cleaning Solvent J113 is suitable for cleaning of all equipment after use.

SAFETY

Before use, refer to :

1. TRIMITE Good Housekeeping Guide.
2. TRIMITE Safety Sheet S2 - Section 1.
3. TRIMITE Safety Sheet S4 - Section 2.
4. TRIMITE P.A. G/30/76.
5. TRIMITE Individual Safety Info. Sheets.

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PRIMER - AP210

TWO PACK PRIMER : AP210

Hardener : J2511

Mixing Ratio 20:1

FEATURES

General purpose, fast drying primer for GRP, Noryl and Polyurethane rigid foam. It is formulated with solvents that will not attack these plastics but this primer should not be used on polystyrene and similarly sensitive plastics. The primer effectively masks surface imperfections and when hard-dry exhibits very good flattening characteristics

AVAILABILITY

Full details of the container sizes and prices may be obtained from TRIMITE sales offices.

The following colours are available as standard:

Light Grey 40/AP210

White 90/AP210

FLASH POINT

Flash point in the range of 21°C - 32°C. Tested to BS 3900 Part A8

STORAGE

Recommended temperature range for storage is between 10°C - 15°C. It is not considered advisable to store this material outside this temperature range or to exceed a storage period of six months prior to use.

MIXING RATIO

Plastilac AP210 Two Pack Polyurethane Primer must be mixed with Curing Agent J2511 in the ratio of 20 parts of Primer to 1 part of Curing Agent, by volume.

NOTE : When not in use, the can of Curing Agent must be kept sealed.

Pot Life

The mixed material remains usable for a period of up to 8 hours at (20°C).

COVERAGE

Calculated on a dry film thickness of 25 microns.

Conventional Spraying: 8 - 9 Sq. metres per litre, (85 - 95 ft² per litre)

PREPARATION

The smooth surface of the GRP material must be sanded to give a surface roughness of 80 grit/square inch using Dry Production abrasive paper. This is to provide a key for the paint.

The substrate must be thoroughly clean and free from mould release agents and static charges. Owing to the sensitivity of many plastics to certain solvents, Anti-static Cleaner J131 should be used.

Type J131

See Page 10

Note: It may be necessary to use a suitable electronic or radioactive source static eliminator immediately prior to painting.

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PAINT: "Dark Grey"**DSF240****FINISHING****Primer Application**

Plastilac AP210 Two Pack Polyurethane Primer may be applied by the following method.

Conventional Spraying

The blend of the mixed material (see Mixing Ratio) is normally ready for use. If necessary, Thinner PT1002 may be added up to 5% by volume.

Note:- Some mouldings may require two applications of primer to cover surface imperfections. In such cases, the first coat, when Hard Dry should be flatted with 320 or 440 grade of abrasive paper before applying the subsequent coat.

Air Drying

At an ambient temperature of 20°C. the drying time is approximately as follows :

Surface Dry	10 - 15 minutes
Hard Dry	4 - 6 hours
Full Properties	7 days

Note: The recommended finish may be applied when the primer is Hard Dry

Force Drying

Increased temperatures may be used to reduce the drying time.

This procedure must be carried out with care to avoid component deformation. The type of plastic, conditions of moulding and post-mould time will determine the maximum temperature that can be employed.

EQUIPMENT CLEANING

High Flash Gun Cleaning Solvent J113 is suitable for cleaning of all equipment after use.

SAFETY

Before use, refer to :

1. TRIMITE Good Housekeeping Guide.
2. TRIMITE Safety Sheet S2 - Section 1.
3. TRIMITE Safety Sheet S4 - Section 2.
4. TRIMITE P.A. G/30/76.
5. TRIMITE Individual Safety Info. Sheets.

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PAINT: "Dark Grey"**DSF240****ANTI-STATIC CLEANER - J131**

Before attempting to apply a finishing system to a plastic substrate, the surface must be thoroughly clean and free from contaminants. Anti-static Cleaner J131 effectively cleans the surface and removes release agents without attacking sensitive plastics. It can also reduce surface static, a magnet for dust which could mar the appearance of the finish.

AVAILABILITY

Full details of the container sizes and prices may be obtained from TRIMITE sales offices.

FLASH POINT

Flash point below 21°C. Tested to BS 3900 Part A8

STORAGE

Recommended temperature range for storage is between 10°C - 15°C. It is not considered advisable to store this material outside this temperature range or to exceed a storage period of twelve months prior to use.

APPLICATION

Using a brush or clean cloth, Anti-static Cleaner J131 should be applied liberally to the substrate. It is important to change the cloth regularly to avoid returning contaminants to the surfaces.

Clean gloves should be worn when handling surfaces which have been treated.

SAFETY

This product is not formulated as a skin cleaning material nor should it be used for cleaning clothing or any protective equipment. Do not use on electrical equipment or cables.

Before use, refer to :
1. - TRIMITE Good Housekeeping Guide.
2. - TRIMITE Individual Safety Info. Sheet.

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PAINT: "Dark Grey"**DSF240****EMC SHIELDING - J2904**

ELECTROMAGNETIC SHIELD J2904 - THINNER PT1002 (up to 50% by volume)

FEATURES

Electromagnetic Shield Coating J2904 has been manufactured to meet the strictest control of electrical interference. It is formulated utilising specially prepared metallic nickel to provide electromagnetic compatibility (EMC) on plastic housings for a wide range of electronic equipment. This highly conductive coating when applied correctly provides an effective shielding against radiated electromagnetic interference (EMI) and protection against electrostatic discharge.(ESD)

This product provides a cost effective and efficient way of complying with

The United States Federal Communications Commission (F.C.C) Docket 20780

German Regulations V.D.E 0871 - 0879. (Assoc. of German Electrotechnical Engineers.)

Electromagnetic Shield Coating J2904 air-dries rapidly to a pleasing metallic grey finish. It is suitable for application, without priming, to most plastic substrates used in the manufacture of electronic housings. It is formulated to minimise settlement both in the can and in the supply lines of the spray equipment.

AVAILABILITY

Full details of the container sizes and prices may be obtained from TRIMITE sales offices.

FLASH POINT

Flash point in the range of 21°C - 32°C. Tested to BS 3900 Part A8

STORAGE

The recommended temperature range for storage is between 10°C - 15°C. It is not considered advisable to store this material outside this temperature range or to exceed a storage period of six months prior to use.

COVERAGE

Calculated on a dry film thickness of 50 microns.

Conventional Spraying

4 - 5 Sq. metres per litre. (45 - 55 ft² per litre)

The coverage figures shown are approximate and will vary with the type of equipment used and the shape of the component.

PREPARATION

The substrate must be thoroughly clean and free from mould release agents and static charges. Owing to the sensitivity of many plastics to certain solvents, Anti-static Cleaner J131 should be used.

Type J131

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PRIMING

Electromagnetic Shield Coating J2904 is suitable for direct application to thermoplastics. Priming is necessary on the thermoset range of plastics (ie Glass Reinforced Polyesters, Glass Reinforced Phenolics, SMC, DMC & Polyurethane Foam Moulding) and AP210 Two Pack Polyurethane Primer or AP262 Two Pack Acrylic Primer should be used.

FINISHING

Application

Electromagnetic Shield Coating J2904 may be applied by the following method.

Conventional Spraying

Thinner PT1002 may be added up to 50% by volume to obtain a viscosity of 45 - 50 seconds at application temperature, using a BS B4 viscosity cup.

Film Thickness

To achieve the full shielding properties, the coating J2904 should be applied in several passes to achieve a wet film thickness of 100 microns which will result in a dry film thickness of approximately 50 microns.

Overcoating

It is not usual to overcoat Electromagnetic Shield Coating J2904, but this is dependent upon the finishing coat requirement. TRIMITE Product Advisory Department should be consulted for a suitable recommendation.

Air Drying

At an ambient temperature of 20°C, the drying time is approximately as follows :

Surface dry : 10 - 15 minutes

Hard dry : 1/2 - 1 hour

Full properties : 24 hours

NOTE : Properly painted parts should attain a conductivity of less than 1 ohm/square inch in one hour. Maximum conductivity is normally achieved in 12 hours.

Equipment Cleaning

High Flash Gun Cleaning Solvent J113 is suitable for cleaning all equipment after use.

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PAINT: "Dark Grey"**DSF240****BP 18 TWO PACK POLYURETHANE PRIMER**

Complements B18 Two pack Polyurethane Finish for sprayed systems, this primer has excellent opacity and filling properties.

AVAILABILITY

Mid-Grey - 41/BP18

White - 90/BP18

FLASH POINT

Flash Point below 21°

STORAGE

Recommended storage temperature range 10° 15°. It is not considered advisable to store this material outside this temperature range or to exceed a storage period of six months prior to use.

MIXING RATIO

BP18 Two pack polyurethane Primer must be mixed with B18 two pack polyurethane (Spraying) Hardener J1801 in the ratio of 4 parts Primer to 1 part Hardener by volume.

Mixture Pot life

The mixed material will remain usable for a period of 12 hours under normal working conditions (20°)

Note When not in use, the can of hardener must be kept sealed.

COVERAGE

Calculated on a dry film thickness of 50 microns (2.0 thou)

Conventional spraying: 5 - 6 square metres per litre (55 - 65 square feet per litre).

PREPARATION**Mild Steel**

The substrate must be thoroughly clean and free from contaminants, corrosion and grease. Conventional degreasing methods may be employed but for maximum efficiency vapour degreasing with Genklene LV is recommended.

Aluminium and Light Alloys

The use of the correct primer is essential before finishing and where optimum adhesion is required SAP3 two Pack Self Etching Primer should be used.

Wood

The surface must be thoroughly clean dry and free from foreign matter. Sanding the surface or "de-nibbing" is recommended prior to priming.

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PRIMING

Application

BP18 two pack polyurethane primer is not considered suitable for hot spray application.

Conventional spraying

To the blend of mixed material (see Mixing Ratio) Thinner BT18 may be added up to 10% by volume, to obtain a viscosity of 40-50 seconds at application temperature using BS B4 viscosity cup

Film thickness

A wet film thickness of 88 microns (3.5 thou) will result in a dry film thickness of approximately 50 microns (2.0 thou)

AIR DRYING

At ambient temperature of 20°C the drying time is approximately as follows:-

Surface Dry	20 - 30 minutes
Hard Dry	2 - 3 hours
Full Properties	7 days

Note subsequent finishing coats should only be applied when the primer is Hard Dry.

FORCE DRYING

A "flash-off" period of approximately 10 minutes should follow the application to allow the solvents to evaporate. temperatures of up to 120°C are normally suitable.

CLEANING

Gun cleaning solvent J103 is suitable for cleaning all equipment after use.

Before use refer to Trimite's :	1.	Good housekeeping guide
	2.	Safety sheet S4 - Section 2
	3.	Individual Safety Information Sheets.

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