

Technical Data (Jan-2021)

## MICROSET 101 THIXOTROPIC REPLICATING COMPOUNDS

Microset 101 Thixotropic Compounds are high resolution, two-part silicone polymers designed for replication of metal surfaces. The thixotropic nature of these compounds allows them to be applied on vertical and overhead surfaces without the compound dripping or flowing away from the area of interest.

Technical Specification:

Resolution: 0.1 microns

Shelf Life: 15 months

Cured hardness: 28-30 Shore A

Shrinkage: Less than 0.1%

Color: Black or Grey

Useable temperature range: -10C to +180C

Specific Gravity: 1.1g/cm<sup>3</sup>

Linear Expansion Coefficient: 280 x 10<sup>-6</sup> / °C

Packaging: Twin pack cartridge in three sizes – 50ml, 265ml, 495ml

Microset Grade	*Working Life 25°C (mins)	* Cure Time 25°C (mins)	Key Features	Typical Applications
101RT	0.5	5	Fast curing thixotropic material	Replication of vertical or overhead surfaces. Use in low temperature conditions or where rapid results are required.
101TH	3	20	General purpose thixotropic material	Replication of vertical or overhead surfaces. Use in normal or high temperature conditions.
101THS	7	30	Specialist purpose thixotropic material	Replication of vertical or overhead surfaces.
101XFT	15	60	Specialist purpose thixotropic material	Replication of vertical or overhead surfaces.

\*Working life and curing times vary with temperature – higher temperatures decrease working life and cure, lower temperatures increase working life and cure.

\*Quoted times may vary up to +/- 15% between batches.

For additional information, contact manufacturer:



Unit 1 Marina Court, Maple Drive, Tungsten Park, Hinckley, Leicestershire, LE10 3BF

Tel: +44 (0) 1455 634508

Fax: +44 (0) 1455 613287

info@microset.co.uk

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## MICROSET 101 FLUID REPLICATING COMPOUNDS

Microset 101 Fluid Compounds are high resolution, two-part silicone polymers designed for replication of metal surfaces. The free-flowing nature of these compounds minimizes the risk of air entrapment in the replica, and makes them easy to apply over large areas. They are suitable for replicating rough surfaces, cavities, tubes, threaded holes etc.

Technical Specifications:

Resolution: 0.1 microns

Shelf Life: 24 months

Cured hardness: 28-30 Shore A

Shrinkage: Less than 0.1%

Color: Black or Grey

Useable temperature range: -10C to +180C

Specific Gravity: 1.1g/cm<sup>3</sup>

Linear Expansion Coefficient:  $280 \times 10^{-6} / ^\circ\text{C}$

Packaging: Twin pack cartridge in three sizes – 50ml, 265ml, 495ml

Microset Grade	*Working Life 25°C (mins)	* Cure Time 25°C (mins)	Key Features	Typical Applications
101RF	0.5	5	Fast curing fluid material	Replication of vertical or overhead surfaces. Use in low temperature conditions or where rapid results are required.
101FF	4	20	General purpose fluid material	Replication of vertical or overhead surfaces. Use in normal or high temperature conditions.
101XF	15	60	Specialist purpose fluid material	Replication of vertical or overhead surfaces.
101FS	50	210	Specialist purpose fluid material	Replication of vertical or overhead surfaces.

\*Working life and curing times vary with temperature – higher temperatures decrease working life and cure, lower temperatures increase working life and cure.

\*Quoted times may vary up to +/- 15% between batches.

For additional information, contact manufacturer:



Unit 1 Marina Court, Maple Drive, Tungsten Park, Hinckley, Leicestershire, LE10 3BF

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# SAFETY DATA SHEET



## Microset Silicone Polymer Compound

This Safety Data Sheet contains information concerning the potential risks to those involved in handling, transporting and working with the material, as well as describing potential risks to the consumer and the environment. This information must be made available to those who may come into contact with the material or are responsible for the use of the material. This Safety Data Sheet is provided voluntarily and is prepared in accordance with formatting described in the REACH Regulation (EC) No 1907/2006, and described in CLP Regulation (EC) No 1272/2008.

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

**Product name:** Microset Silicone Polymer Compound  
**Synonyms, Trade Names:** MICROSET 101 BLACK, MICROSET 202, MICROSET 101 GREY (Including: "MICROSET 101SS", "MICROSET 101FF", "MICROSET 101TH" "MICROSET 101TH(s)", "MICROSET 101RF", "MICROSET 101RT" "MICROSET 101XF", "MICROSET 101XFT", "MICROSET 101FS" "MICROSET 101XF SLOW", "MICROSET 101XF30", "MICROSET 202RF" "MICROSET 202")

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Moulding of metal surfaces. No known uses advised against.

#### 1.3 Details of the supplier of the safety data sheet

Microset Products Ltd,  
Unit 1 Marina Court, Tungsten Park,  
Maple Drive,  
Hinckley, Leicestershire,  
LE10 3BF, UK  
Phone: +44 (0)1455 634508  
Fax: +44(0) 1455 613287  
Email: info@microset.co.uk

#### 1.4 Emergency telephone number

In case of emergency Tel. +44 (0)1455 634508 (8.30am to 5.30pm, Monday to Friday)

### SECTION 2: Hazards Identification

#### 2.1 Classification of the substance or mixture

Not classified as hazardous according to the CLP Regulation (EC) No 1272/2008

#### 2.2 Label elements

No label required according to the CLP Regulation (EC) No 1272/2008

#### 2.3 Other hazards

**Physical hazards:** Not classified as flammable, but will burn if involved in a fire.

**Health hazards:** No specific symptoms noted by any route of exposure.

**Environmental hazards:** Not regarded as dangerous for the environment. None of the components are known to be PBT/vPvB.

### SECTION 3: Composition

**3.1 Substances**

Not applicable, the product is a mixture.

**3.2 Mixtures**

MICROSET products are formulated as mixtures of the following non-hazardous components:

Siloxanes:- Polymethylvinyl-, Polymethoxyvinyl-, Polyorgano-, Polymethylhydrogeno-.

Organic Compounds:- Silicone/alcoylene polyoxide, polyoxyalcoyleneglycol acetate.

Inorganic Compounds:- Silica, Carbon, Titanium Dioxide, Platinum (complexed).

(A trace of chloroplatanic acid impurity may also be present)

**SECTION 4: First Aid Measures****4.1 Description of first aid measures**

EYE CONTACT: Wash thoroughly with water and obtain medical attention if signs of discomfort.

INHALATION: Remove from exposure. If breathing becomes difficult call a doctor.

SKIN CONTACT: Wash off with soap and water. Seek medical attention.

INGESTION: If swallowed, rinse mouth with water.

**4.2 Most important symptoms and effects, both acute and delayed**

No specific symptoms identified

**4.3 Indication of any immediate medical attention and special treatments needed**

Symptomatic treatment as required

**SECTION 5: Firefighting Measures****5.1 Extinguishing media**

Suitable extinguishing media: Foam. Powder. Carbon dioxide (CO<sub>2</sub>).

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire. Alkaline powders.

**5.2 Special hazards arising from the substance or mixture**

Will burn if involved in a fire. Use water spray to cool containers. Polymerisation of components may occur at elevated temperatures, resulting in potential bursting of sealed containers. Keep containers cool. Fires involving large numbers of cartridges may evolve irritating fumes. Prevent run-off from fire from entering water courses and sewers.

**5.3 Advice for fire fighters**

Self-contained breathing apparatus and thermal protective clothing must be worn in case of fire

**SECTION 6: Accidental Release Measures****6.1 Personal precautions, protective equipment and emergency procedures**

Remove ignition sources. Wear suitable protective clothing including gloves and eye protection to avoid unnecessary skin or eye contact. Spillages may be slippery.

**6.2 Environmental precautions**

Prevent entry into sewers and watercourses. If large quantities of product enters sewers or watercourses, inform the appropriate environmental authorities.

**6.3 Methods and materials for containment and clearing up**

Small spills: Wipe up with paper towels and place in a suitable container for disposal. Wash the spill area with detergent and water.

Large spills: Mix spillage with a suitable non-combustible absorbent, e.g. sand or earth, and scrape up and place in a suitable container for disposal. Do not use absorbents that are basic (alkaline). Wash the spill area with detergent and water.

Containers with collected spillage must be properly labelled with correct contents.

**6.4 References to other sections**

See section 8 for further advice on PPE and section 13 for further advice on disposal.

**SECTION 7: Handling and Storage****7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Use in well ventilated areas.

**7.2 Conditions for safe storage, including any incompatibilities**

Store in a cool, dry place with adequate ventilation. Keep away from incompatible materials, open flames, and high temperatures. Store in closed original container.

**7.3 Specific end uses(s)**

No specific industry guidelines available.

**SECTION 8. Exposure Controls/Personal Protection****8.1 Control parameters**

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Carbon Black, amorphous	1333-86-4	TWA (Inhalable fraction.)	3.5 mg/m <sup>3</sup>	EH40 WEL
Carbon Black, amorphous	1333-86-4	STEL (Inhalable fraction.)	7.0 mg/m <sup>3</sup>	EH40 WEL
Silica, amorphous		inhalable dust	6.0 mg/m <sup>3</sup>	EH40 WEL
Silica, amorphous		respirable dust	2.4 mg/m <sup>3</sup>	EH40 WEL

Derived No Effect Level (DNEL):Carbon black

End Use: Worker

Exposure routes: inhalation (inhalable fraction)

Value: 2 mg/m<sup>3</sup>

Exposure routes: inhalation (respirable fraction)

Value: 0.5 mg/m<sup>3</sup>

**8.2 Exposure controls****Engineering controls**

Not normally required. If sprays, mists, etc are likely to be formed use local exhaust ventilation to minimise exposure.

**Respiratory protection**

Not normally required.

**Hand Protection**

Under normal usage the MICROSET application system will allow the material to be dispensed safely and cleanly to the appropriate location without the need for protective gloves or goggles, however, these may be worn as a precaution especially in confined or difficult working conditions. Gloves made of Nitrile, Polyvinyl chloride (PVC), Rubber or plastic may be suitable, but manufacturer recommendations should always be consulted. Change gloves in accordance with manufacturer recommendations. If gloves are damaged during use, remove immediately and wash hands before replacing with new gloves.

**Eye protection**

Not normally required, but if contact with eyes is likely wear suitable eye protection to protect from splashes, meeting the requirements of BS EN166 3, when handling this product.

**Skin protection**

Aprons or coveralls are recommended. These should be changed after use or if contaminated. Wash before re-use.

#### Environmental Exposure Controls

Take suitable measures to prevent entry into drains, sewers and watercourses.

### SECTION 9: Physical and Chemical Properties

#### 9.1 Information on basic physical and chemical properties

<b>Appearance:</b>	Black, grey or translucent viscous liquid
<b>Odour:</b>	Slight
<b>Odour threshold:</b>	Not available
<b>pH:</b>	Not applicable
<b>Melting point:</b>	Not available
<b>Boiling point:</b>	Not available
<b>Flashpoint:</b>	> 150 °C (Closed cup according to method Afnor T 60103.)
<b>Evaporation rate:</b>	Not available
<b>Flammability:</b>	Not applicable
<b>Upper/lower flammability limits:</b>	Not available
<b>Vapour pressure:</b>	Not available
<b>Vapour density:</b>	Not available
<b>Relative density:</b>	Approximately 1.12 (20 °C)
<b>Solubility in water:</b>	Practically insoluble
<b>Solubility in other solvents:</b>	Acetone.: Practically Insoluble, Alcohol: Practically Insoluble, Diethylether.: Dispersible, Aliphatic hydrocarbons.: Dispersible, Aromatic hydrocarbons.: Dispersible, Chlorinated solvents.: Dispersible
<b>Partition coefficient (log Kow):</b>	Not available
<b>Autoignition temperature:</b>	400°C
<b>Decomposition temperature:</b>	> 200°C
<b>Viscosity:</b>	18 000 mm <sup>2</sup> /s (25 °C)
<b>Explosive properties:</b>	Contains no components classified as explosive
<b>Oxidising properties:</b>	Contains no components classified as oxidising

#### 9.2 Other information

None available

### SECTION 10: Stability and Reactivity

#### 10.1 Reactivity

Not considered to be a reactive material

#### 10.2 Chemical stability

Stable under normal conditions of use and storage

#### 10.3 Possibility of hazardous reactions

During Storage, This product may generate hydrogen gas. Quantity of hydrogen potentially released (l/kg of product): < 4

#### 10.4 Conditions to avoid

None noted.

#### 10.5 Incompatible materials

Strong oxidizing agents. Alkalis and caustic products. Chemical compounds with mobile hydrogen, in the presence of metal salts and complexes.

#### 10.6 Hazardous decomposition products

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Amorphous silica.

**SECTION 11: Toxicological Information****11.1 Information on toxicological effects**

This product has not been tested. Judgements on the expected toxicity of this product have been made based upon consideration of its major components.

- (a) **acute toxicity** No effects expected (assessment based on ingredients).  
 (b) **skin corrosion/irritation** No effects expected (assessment based on ingredients).  
 (c) **serious eye damage/irritation** No effects expected (assessment based on ingredients).  
 (d) **respiratory/skin sensitisation** No effects expected (assessment based on ingredients).  
 (e) **germ cell mutagenicity** No effects expected (assessment based on ingredients).  
 (f) **carcinogenicity** No effects expected (assessment based on ingredients).  
 (g) **reproductive toxicity** No effects expected (assessment based on ingredients).  
 (h) **STOT-single exposure** No effects expected (assessment based on ingredients).  
 (i) **STOT-repeated exposure** No effects expected (assessment based on ingredients).  
 (j) **aspiration hazard** No effects expected (assessment based on ingredients).

**SECTION 12: Ecological Information****12.1 Toxicity**

No effects expected on aquatic organisms (assessment based on ingredients).

**12.2 Persistence and degradability**

The organic components in this product are expected to degrade very slowly.

**12.3 Bioaccumulative potential**

The polymer substances and inorganic materials in this product are not expected to bioaccumulate.

**12.4 Mobility in soil**

Once cured, this product is not expected to be mobile in the environment.

**12.5 Results of PBT and vPvB assessment**

None of the components are known to be PBT or vPvB.

**12.6 Other adverse effects**

None known.

**SECTION 13: Disposal Considerations****13.1 Waste treatment methods**

Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. Incinerate in suitable combustion chamber is suggested.

Contaminated packages should be as empty as possible. Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. Recycle following cleaning or dispose of at an authorised site.

European Waste Codes: Unused product: 07 02 17

**SECTION 14: Transport Information**

Not classified as dangerous goods

	ADR	IMDG	ICAO
14.1 UN Number	None	None	None

14.2 UN Proper shipping name	None	None	None
14.3 Transport hazard class(es)	None	None	None
14.4 Packing group	None	None	None
14.5 Environmental hazards	None	None	None
14.6 Special precautions for user	None	None	None
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable	Not applicable	Not applicable

## SECTION 15: Regulatory Information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### Inventory Status

Australia AICS: On or in compliance with the inventory

Canada DSL Inventory List: On or in compliance with the inventory

EU EINECS List: On or in compliance with the inventory

Japan (ENCS) List: On or in compliance with the inventory

China Inv. Existing Chemical Substances: On or in compliance with the inventory

Korea Existing Chemicals Inv. (KECI): On or in compliance with the inventory

Philippines PICCS: On or in compliance with the inventory

US TSCA Inventory: On or in compliance with the inventory

New Zealand Inventory of Chemicals: On or in compliance with the inventory

### 15.2 Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out for this product.

## SECTION 16: Other Information

**Revision information:** Reformatted in compliance with Regulation (EC) No 1907/2006, as amended by Regulation (EU) 2015/830

### List of Abbreviations used in this SDS:

CAS Chemical Abstracts Service

CLP Classification, Labelling and Packaging Regulation (EC) no 1272/2008

DSD Dangerous Substances Directive 67/548/EEC

DPD Dangerous Preparations Directive 1999/45/EC

EC European Community/Commission

PBT Persistent, Bioaccumulative and Toxic

REACH Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) no 1907/2006

vPvB very Persistent, very Bioaccumulative

### References:

ECHA CHEM database

Suppliers' SDSs for component substances

### Method used for classification of mixtures:

Ingredient based approaches

### H Statements used in Section 3

None

### Training requirements for workers

No special requirements