

# Hax™ HFX 521

Polyolefin

Fainplast Compounds S.r.l

## Message:

GRAFTED HALOGEN FREE, FLAME RETARDANT, OIL RESISTANT AND LOW SMOKE EMISSION COMPOUND, CURABLE BY EXPOSURE TO MOISTURE FOR CABLE INSULATION AND SHEATING

This product is a LSFOH silane grafted compound for cable insulation and sheating, Cross-linkable by heat and moisture by previous addition of a suitable catalyst masterbatch (SIOPLAS method).

It is highly recommended to store separately the grafted compound and the catalyst, as prescorching may take place during the reactive extrusion.

The properties of this compound meet the requirements of EN 50363-0 type EI5, M2, G9 & G10, BS 7211 type EI5, EN 50363-6 type EM8, IEC 60092-359 type SHF2, EN50264-1 type EI 101-104 & EM 101-104, VDE 207-24 type HM3.

| General Information                            |                                       |                    |             |
|------------------------------------------------|---------------------------------------|--------------------|-------------|
| Additive                                       | Flame Retardant                       |                    |             |
| Features                                       | Crosslinkable                         |                    |             |
|                                                | Flame Retardant                       |                    |             |
|                                                | Halogen Free                          |                    |             |
|                                                | Low Smoke Emission                    |                    |             |
|                                                | Oil Resistant                         |                    |             |
| Uses                                           | Insulation                            |                    |             |
|                                                | Wire & Cable Applications             |                    |             |
| Agency Ratings                                 | BS 7211 EI5                           |                    |             |
|                                                | EN 50264 type EI 101-104 & EM 101-104 |                    |             |
|                                                | EN 50363-0 type EI5, M2, G9 & G10     |                    |             |
|                                                | EN 50363-6 type EM8                   |                    |             |
|                                                | IEC 60092 type SHF2                   |                    |             |
|                                                | VDE 0207-24 HM3                       |                    |             |
| Processing Method                              | Extrusion                             |                    |             |
| Physical                                       | Nominal Value                         | Unit               | Test Method |
| Density                                        | 1.46                                  | g/cm <sup>3</sup>  | ISO 1183    |
| Melt Mass-Flow Rate (MFR) (150°C/21.6 kg)      | 2.0                                   | g/10 min           | ISO 1133    |
| Water Absorption - 24 hrs (100°C) <sup>1</sup> | 1.50                                  | mg/cm <sup>2</sup> | IEC 60811   |
| Hot Set <sup>2</sup>                           |                                       |                    | IEC 60811   |
| Elongation under load : 200°C                  | 20                                    | %                  |             |
| Elongation under load : 250°C                  | 30                                    | %                  |             |
| Permanent elongation after cooling : 200°C     | 0.0                                   | %                  |             |
| Permanent elongation after cooling : 250°C     | 5.0                                   | %                  |             |

|                                        |                                                    |         |              |
|----------------------------------------|----------------------------------------------------|---------|--------------|
| Gas Evolved Acidity                    |                                                    |         |              |
| HCl & HBr                              | < 0.50                                             | %       | EN 50267-2-1 |
| HF                                     | < 0.10                                             | %       | EN 60684-2   |
| Knife Penetration (100°C) <sup>3</sup> | < 50                                               | %       | IEC 60811    |
| Head Temperature                       | 170 to 190                                         | °C      |              |
| Hardness                               | Nominal Value                                      | Unit    | Test Method  |
| Shore Hardness (Shore D, 15 sec)       | 50                                                 |         | ISO 868      |
| Mechanical                             | Nominal Value                                      | Unit    | Test Method  |
| Tensile Stress                         |                                                    |         | ISO 527-2    |
| Break <sup>4</sup>                     | 12.0                                               | MPa     |              |
| Break                                  | 11.5                                               | MPa     |              |
| Tensile Strain                         |                                                    |         | ISO 527-2    |
| Break <sup>5</sup>                     | 190                                                | %       |              |
| Break                                  | 200                                                | %       |              |
| Electrical                             | Nominal Value                                      | Unit    | Test Method  |
| Volume Resistivity                     |                                                    |         | ASTM D257    |
| 20°C <sup>6</sup>                      | 3.0E+15                                            | ohms·cm |              |
| 20°C                                   | 5.0E+15                                            | ohms·cm |              |
| Flammability                           | Nominal Value                                      | Unit    | Test Method  |
| Oxygen Index                           | 38                                                 | %       | ISO 4589-2   |
| Extrusion                              | Nominal Value                                      | Unit    |              |
| Cylinder Zone 1 Temp.                  | 140 to 160                                         | °C      |              |
| Cylinder Zone 2 Temp.                  | 150 to 170                                         | °C      |              |
| Cylinder Zone 3 Temp.                  | 150 to 170                                         | °C      |              |
| Cylinder Zone 4 Temp.                  | 160 to 180                                         | °C      |              |
| Adapter Temperature                    | 170 to 190                                         | °C      |              |
| Die Temperature                        | 170 to 200                                         | °C      |              |
| NOTE                                   |                                                    |         |              |
| 1.                                     | After Crosslinking                                 |         |              |
| 2.                                     | 15mins, 0.2 N/mm <sup>2</sup> , After Crosslinking |         |              |
| 3.                                     | k = 1.0, After Crosslinking                        |         |              |
| 4.                                     | After Crosslinking                                 |         |              |
| 5.                                     | After Crosslinking                                 |         |              |
| 6.                                     | After Crosslinking                                 |         |              |

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