



**Technofinechem Co., Ltd.**  
**TFC Co., Ltd.**

## Introduction

### Technology develops Fine Chemical

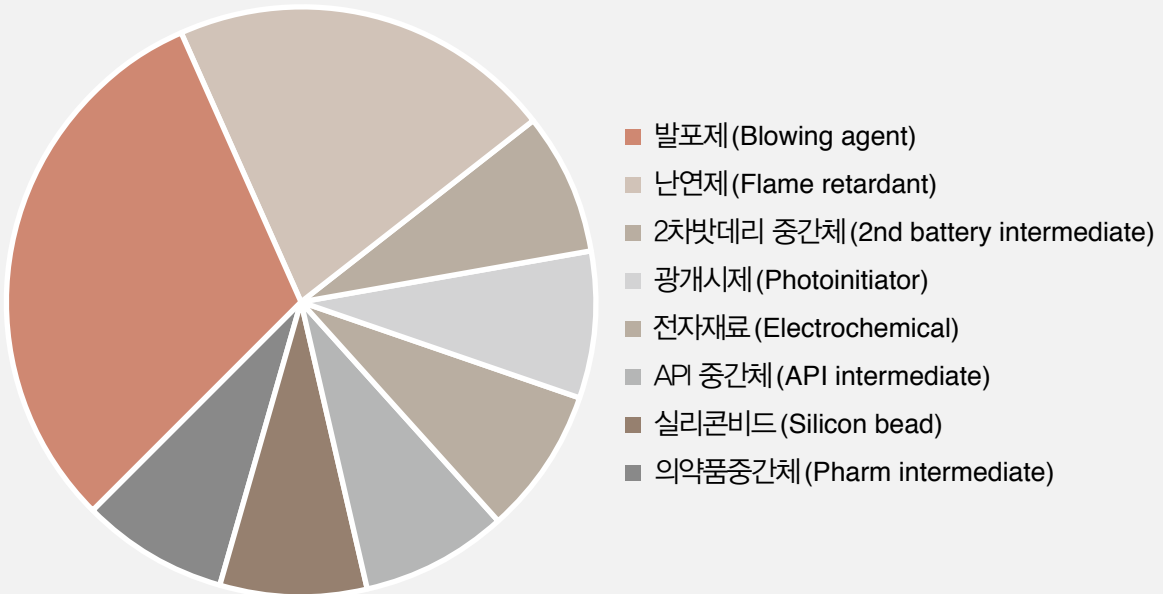
Founded in 2003, as an outsourcing provider of engineering plastics additives, Technofinechem Co., Ltd. is a leading manufacturer of formulated chemical additive/ foaming agents with years of technical expertise. From 2009, Technofinechem Co., Ltd. began to manufacture its own customized Azodicarbonamide chemical foaming agents for local and international plastics processors suiting to customers' increasing demands and expectations. Main products include blowing agent, flame retardant, electronic chemical, and API intermediate.

As a leading company of fast-changing chemical materials, we are devoting significant time and resources to developing new products that meet customers need and look forward to have chance to serve your new chemical materials business.

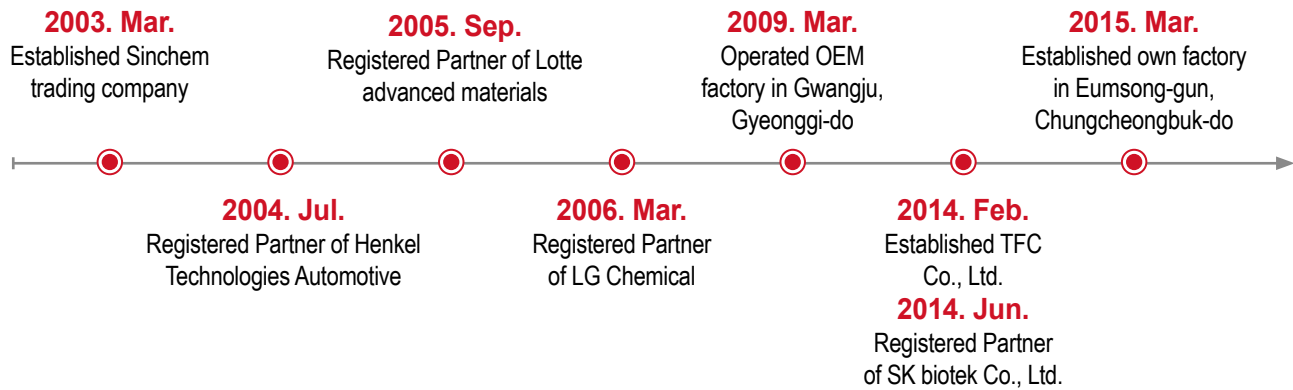
Thank you very much.

President **Park Wan Su**

## Items



## History



## Location

### Head Office

(06349) 2017 Hyundai VentureVill, 713 Suseo-dong, Kangnam-gu, Seoul, Korea  
Tel. +82-2-6203-4284 ymc@technofinechem.co.kr, dasongkim@technofine.co.kr




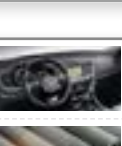
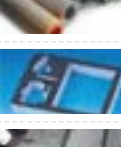
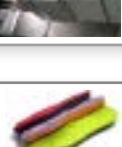





### Production Location

(27653) 188-20, Daeseong-ro, 380 beon-gil, Samseong-myeon, Eumseong-gun, Chungcheongbuk-do, Korea  
Tel. +82-43-882-4283 Fax. +82-70-8250-0600 guni91@technofine.co.kr













# Product

## Foaming Agent

| Chemical Description                          | Appearance                 | Decomposition temp.(°C) | Gas volume ml/g(STP) | Gas volume ml/g(IN AIR) | Particle Size(um) | Application                              | IMAGE   |
|---|----------------------------|-------------------------|----------------------|-------------------------|-------------------|--|---|
| <b>Azodicarbonamide</b>                       | Organge yellow fine powder | 200-210                 | 215-225              | 290-300                 | 3~22              | PVC,PE,EVA, RUBBER ETC                   |    |
| TFC-AZP1619                                   | Organge yellow fine powder | 200-210                 | 215-225              | 290-300                 | 15~20             | PVC,PE,EVA, RUBBER ETC                   |    |
| TFC-AZP1012                                   | Organge yellow fine powder | 200-210                 | 215-225              | 290-300                 | 10~14             | PVC,PE,EVA, RUBBER ETC                   |   |
| TFC-AZP0810                                   | Organge yellow fine powder | 200-210                 | 215-225              | 290-300                 | 9~11              | PVC,PE,EVA, RUBBER ETC                   |  |
| TFC-AZP0607                                   | Organge yellow fine powder | 200-210                 | 215-225              | 290-300                 | 6~9               | PVC,PE,EVA, RUBBER ETC                   |  |
| TFC-AZP0305                                   | Organge yellow fine powder | 200-210                 | 215-225              | 290-300                 | 3~6               | PVC,PE,EVA, RUBBER ETC                   |  |
| <b>Modified Azodicarbonamide</b>              | Organge yellow fine powder | 185-200                 | 210-230              | 280-290                 | 18-20             | Chemical cross-linked polyethylene foams |  |
| TFC-ACPE                                      | Organge yellow fine powder | 193-197                 | 210-230              | 280-290                 | 18-20             | Chemical cross-linked polyethylene foams |  |
| TFC-ACPE(H)                                   | Organge yellow fine powder | 195-200                 | 210-230              | 280-290                 | 18-20             | Chemical cross-linked polyethylene foams |  |
| TFC-ACPE(HQ)                                  | Organge yellow fine powder | 175-180                 | 174-188              | 260-270                 | 18-20             | Chemical cross-linked polyethylene foams |  |
| <b>N,N'-Dinitrosopentamethylenetetraamine</b> | Pale yellow fine powder    | 167-171                 | 191-200              | 210-220                 |                   | Rubber foams                             |  |
| <b>DNPT, DPT 80%</b>                          |                            |                         |                      |                         |                   |  |   |
| <b>Surface Treated Urea HHBK</b>              | Light White fine powder    | 110-115(M.P)            | -                    | -                       | 10~15             | Activator of DNPT(DPT)                   |  |
| <b>Modified DPT AND HHBK</b>                  | Light Yellow fine powder   | 130-170                 | 130-150              | -                       | 8~10              | EVA,Rubber foams                         |  |
| TFC-ERB200                                    | Light Yellow fine powder   | 133-137                 | 135-145              | -                       | 8~10              | EVA,Rubber foams                         |  |
| TFC-ERB300                                    | Light Yellow fine powder   | 145-150                 | 135-145              | -                       | 8~10              | EVA,Rubber foams                         |  |
| TFC-ME6000                                    | Light Yellow fine powder   | 135-145                 | 140-145              | 165-175                 | 8~10              | EVA,Rubber foams                         |  |
| TFC-ME6001                                    | Light Yellow fine powder   | 150-160                 | 130-145              | 165-175                 | 8~10              | EVA,Rubber foams                         |  |

## Foaming Agent

| Chemical Description                                | Appearance               | Decomposition temp.(°C) | Gas volume ml/g(STP) | Gas volume ml/g(IN AIR) | Particle Size(um) | Application                          | IMAGE   |
|---|--------------------------|-------------------------|----------------------|-------------------------|-------------------|--------------------------------------|---|
| <b>4,4'-Oxybis(benzene sulfonyl hydrazide</b>       | White fine powder        | 158-164                 | 125-140              |                         | 6~10              | PVC wall paper or CR Rubber etc.     |    |
| <b>OBSH</b>   |                          |                         |                      |                         |                   |                                      |   |
| <b>Modified OBSH AND Azodicarbonamide</b>           | Light Yellow fine powder | 140-170                 | 180-210              |                         | 3~5               | PVC wall paper                       |    |
| TFC-W1039   | Light Yellow fine powder | 140-148                 | 190-198              |                         | 3~5               | PVC wall paper                       |   |
| TFC-W1017   | Light Yellow fine powder | 140-146                 | 190-198              |                         | 3~5               | PVC wall paper                       |   |
| TFC-W1011   | Light Yellow fine powder | 150-158                 | 190-195              |                         | 3~5               | PVC wall paper                       |   |
| TFC-W1015   | Light Yellow fine powder | 160-168                 | 198-200              |                         | 3~5               | PVC wall paper                       |  |
| TFC-W1016   | Light Yellow fine powder | 160-165                 | 198-200              |                         | 3~5               | PVC wall paper                       |   |
| TFC-W1013   | Light Yellow fine powder | 150-155                 | 195-195              |                         | 3~5               | PVC wall paper                       |  |
| TFC-W020  | Light Yellow fine powder | 148-155                 | 180-190              |                         | 3~5               | PVC wall paper                       |   |
| <b>P-Toluenesulfonyl hydrazide(TSH)</b>             | White fine powder        | 100-110(M.P)            | 120-130              |                         | -                 | PVC wall paper, Rubber foams         |  |
| <b>P-Toluenesulfonyl semicarbazide(PTSS)</b>        | White fine powder        | 227-235                 | 135-145              |                         | -                 | PVC wall paper, PVC extrusion        |   |
| <b>Sodium Bicarbonate (Inorganic foaming agent)</b> | White fine powder        | 150~200                 | 110-150              |                         | 200 mesh pass     | PE(LDPE,HDPE),PP, PS(GPPS,HIPS) etc. |  |
| TFC-PY600   | White fine powder        | 150~200                 | 135-140              |                         | 200 mesh pass     | PE(LDPE,HDPE),PP, PS(GPPS,HIPS) etc. |   |
| TFC-PY635   | White fine powder        | 150~200                 | 115-120              |                         | 200 mesh pass     | PE(LDPE,HDPE),PP, PS(GPPS,HIPS) etc. |   |
| TFC-PY660N  | White fine powder        | 150-200                 | 110-115              |                         | 200 mesh pass     | PE(LDPE,HDPE),PP, PS(GPPS,HIPS) etc. |  |
| TFC-LMB660N (Master Batch 20%)                      | White Pellet             | 150~200                 | 60-70                |                         | -                 | PE(LDPE,HDPE),PP, PS(GPPS,HIPS) etc. |  |
| TFC-LMB330N (Master Batch 30%)                      | White Pellet             | 150-200                 | 65-75                |                         | -                 | PE(LDPE,HDPE),PP, PS(GPPS,HIPS) etc. |  |
| TFC-LMB550N (Master Batch 50%)                      | White Pellet             | 150~200                 | 80-90                |                         | -                 | PE(LDPE,HDPE),PP, PS(GPPS,HIPS) etc. |   |

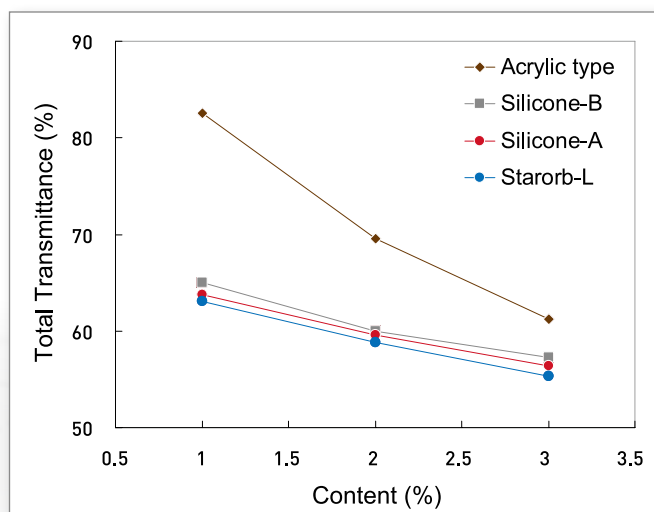
## Foaming Agent

| Chemical Description              | Appearance               | Decomposition temp.(°C) | Gas volume ml/g(STP) | Gas volume ml/g(IN AIR) | Particle Size(um) | Application  | IMAGE   |
|-----------------------------------|--------------------------|-------------------------|----------------------|-------------------------|-------------------|--------------|---|
| <b>Endothermic and Exothermic</b> | Light Yellow fine powder | 150-200                 | 150-220              |                         |                   | PS,PE,PP ETC |  |
| TFC-PY1000                        | Light Yellow fine powder | 150-200                 | 150-160              |                         |                   | PS,PE,PP ETC |   |
| TFC-PY2000                        | Light Yellow fine powder | 150-200                 | 166-170              |                         |                   | PS,PE,PP ETC |   |
| TFC-PY3000                        | Light Yellow fine powder | 150-200                 | 175-185              |                         |                   | PS,PE,PP ETC |  |
| TFC-PY4000                        | Light Yellow fine powder | 150-200                 | 185-190              |                         |                   | PS,PE,PP ETC |   |
| TFC-PY5000                        | Light Yellow fine powder | 150-200                 | 190-200              |                         |                   | PS,PE,PP ETC |   |

## Silicon Bead\_SL-200M

### High performance light diffusing agent

- Low RI and small particle size
- Good thermal stability and optimum surface property



| Property         | Unit               | SL-200M     |
|------------------|--------------------|-------------|
| Mean diameter    | µm                 | 2           |
| C.V.             | %                  | 15 - 20     |
| Decomp. Temp.    | °C                 | 400↑        |
| Moisture content | %                  | 1↓          |
| True Density     | g/ml               | 1.32        |
| Bulk Density     | g/ml               | ~ 0.40      |
| Refractive Index | a. u.              | ~1.43       |
| Oil absorption   | ml/100g            | 50 - 60     |
| 10% K-value      | kg/mm <sup>2</sup> | 580         |
| Angle of Repose  | deg.               | 40 - 45     |
| Heavy metals     | ppm                | N.D.        |
| Surface property |                    | Hydrophobic |

## Foaming Agent\_ACPE

### Feature

Specially formulated chemical blowing agent for cross-linked LDPE foam with chemical crosslinking by extrusion and continuous oven foaming process. Well dispersible in polymer compound, makes fine & uniform cell structure and smoother skin in the sponge. Uniform and fine cells, in spite of variant LDPE grades by different resin manufacturers. As decomposes at a faster rate, suitable for lower-temperature processing without any special kickers or additives compared to normal Azodicarbonamide. Odorless fine powder, a wetted type to reduce the powered dusts, with special additives.

### Application

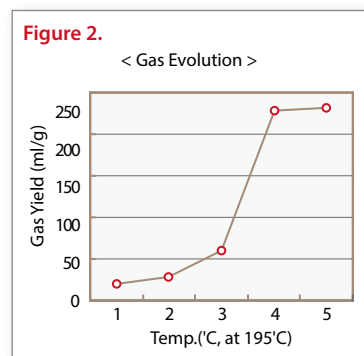
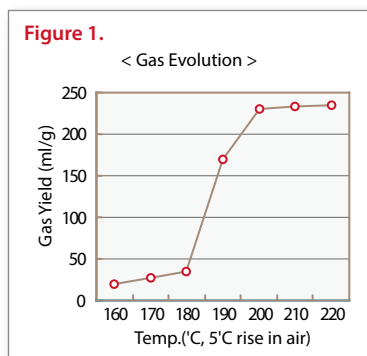
Most effective blowing agent for chemically crosslinked LDPE foams for Thermal insulation, Cushioning and Packaging material for equipment, Sports/ Leisure goods, and Floating materials.

### Product Description / Specification

| Product name                   | TFC-ACPE(LHQ)             | TFC-ACPE,ACPE(H),ACPE(T)  |
|--------------------------------|---------------------------|---------------------------|
| Appearance                     | Orange yellow fine powder | Orange yellow fine powder |
| Decom. temp.(°C)               | 179 ~ 189                 | 195 ~ 200                 |
| Gas volume (ml/g)              | 200 ~ 220                 | 225 ~ 245                 |
| Average particle size (micron) | 12~ 15                    | 16 ~ 22                   |
| Moisture (%)                   | 0.3 max.                  | 0.3 max.                  |
| pH                             | 6.5 ~ 7.5                 | 6.5 ~ 7.5                 |

### Formulation& Operation Conditions

| Product name  | TFC-ACPE(LHQ)   | TFC-ACPE,ACPE(H),ACPE(T)   |
|---|---|--|
| Basic Formulation                                   | LDPE (MI=0.8) 100 PHR,<br>DCP 0.6 ~ 0.8 PHR,<br>TFC-ACPE 23 PHR | LDPE (MI=0.8) 100 PHR,<br>DCP 0.6 ~ 0.8 PHR,<br>TFC-ACPE(LHQ) 23 PHR |
| Kneader mixing and extrusion temperature for pellet | 105~115°C   | 105~115°C  |
| Extrusion temperature for sheeting                  | 105~125°C (T-die: 125°C)  | 105~125°C (T-die: 125°C)   |
| Cross-linking and foaming temperature               | 160~170°C and 210~220°C   | 160~170°C and 210~220°C  |





**Technofinechem Co., Ltd.**

(06349) 2017 Hyundai VentureVill, 713 Suseo-dong, Kangnam-gu, Seoul, Korea  
Tel. +82-2-6203-4284 Fax. +82-2-6203-4285 ymc@technofine.co.kr

**TFC Co., Ltd.**

(27653) 188-20, Daeseong-ro, 380 beon-gil, Samseong-myeon, Eumseong-gun,  
Chungcheongbuk-do, Korea  
Tel. +82-43-882-4283 Fax. +82-70-8250-0600 guni91@technofine.co.kr