Nissin Chemical Industry Co., Ltd.
日信化学工业株式会社

For more information about OLFINE please contact:
如要了解有关OLFINE的更多信息，请联系：

Sales Headquarters
Uchikanda TK Building,1-5-13 Uchikanda, Chiyoda-ku, Tokyo, Japan ····· TEL: +81-3-3295-3931(main) FAX: +81-3-3295-3929
营业总部
邮编101-0047 日本国东京都千代田区内神田1丁目5番13号(内神田TK大厦) ····· 电话:+81-3-3295-3931（总机） 传真:+81-3-3295-3929

Main Office and Factory
2-17-33 Kitago, Echizen, Fukui Prefecture, Japan ····· TEL: +81-778-22-5100(main) FAX: +81-778-24-0657
总公司、工厂
邮编915-0802 日本国福井县越前市北府2丁目17番33号 ····· 电话:+81-778-22-5100（总机） 传真:+81-778-24-0657

Nissin Chemical Industry Shanghai Co., Ltd.〈100% owned subsidiary〉
Grand Cru Room 50, 5F GIFCⅡ,1438 Hongqiao Road, Shanghai 201103 P.R.China ····· TEL: +86-21-6197-6251 FAX: +86-21-6197-6210
霓信化学（上海）有限公司<全资子公司>
邮编201103 中华人民共和国上海市长宁区虹桥路1438号古北国际财富中心二期5楼 Grand Cru 50号室 ····· 电话:021-6197-6251 传真:021-6197-6210

Website https://www.nissin-chem.co.jp/english/
https://www.nissin-chem.co.jp/chinese/

OLFINE

Informational video about OLFINE:
您可观看OLFINE的产品介绍视频。

https://www.nissin-chem.co.jp/english/products_movie/

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OLFINE

Acetylenic Chemicals
乙炔类化学品

OLFINE

Acetylenic Chemicals
乙炔类化学品

OLFINE solves the issues of wetting and foaming in water-based systems.
在水系材料中同时解决润湿和泡沫问题

OLFINE is an acetylene-based surfactant with acetylene glycol as its basic backbone. It significantly reduces surface tension and has the ability to eliminate foam, making it widely applied as a "non-foaming wetting agent" and an "anti-foaming agent that minimizes surface defects such as pinholes." It finds applications in various water-based materials. With the increasing demand for water-based solutions due to solvent regulations and environmental considerations, this functionality has garnered attention, and it is being used as an additive to address wetting, foaming, and dispersion issues.

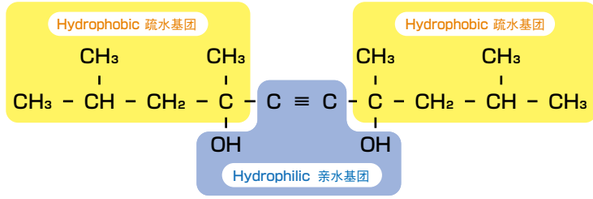
OLFINE是乙炔类表面活性剂，因兼具大幅度降低表面张力和消除泡沫的性能，作为“不起泡的润湿剂”“不损害缩孔等表面缺陷的消泡剂”被广泛应用于各种水系材料。随着溶剂限制和环保措施对水性产品的需求增加，这种性能备受关注，成为解决润湿、泡沫和分散问题不可缺少的添加剂。

ShinEtsu
Nissin Chemical Industry Co.,Ltd.

What is Acetylene Glycol?
什么是乙炔二醇

Acetylene glycol (2,4,7,9-tetramethyl-5-decyne-4,7-diol = TMDD) is a non-ionic surfactant with acetylene linkage at its center and hydrophobic groups symmetrically positioned on both sides. It possesses a highly stable molecular structure and serves as a compact framework for low-molecular-weight compounds. It rapidly orients from the liquid phase to the interface and quickly reduces surface tension. Moreover, due to its small hydrophilic group and larger hydrophobic group, it exhibits excellent defoaming properties. Additionally, even in small quantities, it imparts desirable performance, allowing for its usage without compromising water resistance. We offer products that make acetylene glycol, which is sparingly soluble in water, more easily usable.

乙炔二醇（2,4,7,9-四甲基-5-癸炔-4,7-二醇=TMDD）是一种非离子表面活性剂，具有中心乙炔键和对称疏水基团。它是小型低分子量骨架结构，分子结构非常稳定，能从液体中高速定向到界面，快速降低液体表面张力。同时由于其亲水基团小，疏水基团大，具有良好的消泡性能，即使少量添加也能赋予基材性能，因此可以在不损害耐水性的情况下使用。我司正在开发一种新产品，可以更轻松地使用难溶于水的乙炔二醇。



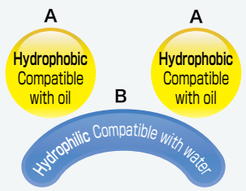
Chemical Name: 2,4,7,9-Tetramethyl-5-decyne-4,7-diol (TMDD)
Physical State: Solid (25℃)

化学名：2,4,7,9-四甲基-5-癸炔-4,7-二醇（TMDD）
性质：固体（25℃）

Differences From Typical Surfactants
与普通表面活性剂的区别

OLFINE is a surfactant with an ABA structure, where it has two hydrophobic groups for every one hydrophilic group. This is in contrast to typical AB structure surfactants, which have one hydrophobic group for every one hydrophilic group. Due to this unique structure, OLFINE exhibits characteristics such as reduced surface tension and contact angle even in dynamic environments. Additionally, it has low foaming properties.

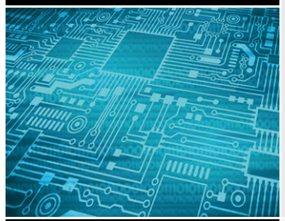
OLFINE是一种ABA结构的表面活性剂，具有两个疏水基团和一个亲水基团。与具有一个亲水基团和一个疏水基团的普通AB结构表面活性剂相比，即便在动态环境中，也具有降低表面张力和接触角、起泡小的特点。

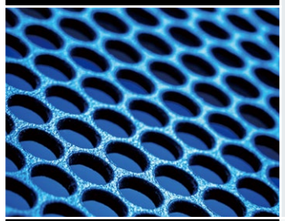
		OLFINE	Common Surfactants 普通表面活性剂
Structure 结构			Fluorine, silicone, other high-level alcohol-based chemicals, etc. 氟、硅、其他高级醇等 
Surface Tension / Contact Angle 表面张力/接触角	Static 静止的	○ Low 低的	○ Low 低的
	Dynamic 动态的	○ Low 低的	× High 高的
Foaming Property 起泡性		○ Small 小的	× Large 大的

OLFINE

List of Applications | 用途一览表

Nissin Chemical Industry Co.,Ltd.

Field 领域	Examples of Use 使用示例	Main Improvement Effects 主要的改善效果
Inks 墨水 	Various water-based inks such as inkjet ink, screen ink, dye ink, flexo ink, metal ink, dampening solution, overprint varnish, and gravure ink. 喷墨油墨、丝网油墨、纺织油墨、柔印油墨、金属油墨、润版水、套印清漆、凹印油墨等各种水性油墨。	Stable dispensing, high-speed printing, fast coating, pigment dispersion, dye dispersion, viscosity reduction during dispersion, delayed re-agglomeration, color intensity, penetration, prevention of color separation, and reduction of printing waste 喷射稳定性、高速印刷性、高速涂布性、各种颜料分散、染料分散、分散过程中降低粘度、延迟再凝结、显色性、渗透性、防止分色、减少印刷损失
Electronics 电子产品 	CMP slurry, resist developer, etching solution, wafer substrate, polishing agent, cleaning agent, aluminum electrolytic capacitor, multilayer ceramic capacitor CMP浆料、抗蚀剂显影液、蚀刻剂、切片材料、抛光材料、清洗剂、铝电解电容器、叠层陶瓷电容器	Water drainage, improvement of surface defects, permeability, leveling property, dispersibility 排水性、改善表面缺陷、渗透性等、均化性、分散性
Coatings 涂层 	Coating on paper, fabric, films (PVC, PE, PET), metal, and various types of plastics 纸张、布料、薄膜（PVC、PE、PET）、金属、塑料类涂层	Wettability shrinkage prevention, pinhole removal, leveling property, thin film coating 润湿性、防收缩、去除针孔、均化性、薄膜涂布
Paints 涂料 	Architectural paint, automotive paint, automotive touch-up paint, electrodeposition paint, coil coating, plastic paint, wood paint, concrete paint, can coating, electronic component paint, anti-corrosion paint, aircraft paint, road marking paint, DIY (home) paint, paint primer, leather paint, fluorescent paint, heat-insulating paint, floor polish (wax, stripper) 建筑涂料、汽车涂料、汽车修补涂料、电泳涂料、线圈涂料、塑料涂料、木器涂料、混凝土涂料、罐头涂料、电子元件涂料、防腐涂料、飞机涂料、道路涂料、DIY（家用）涂料、涂料基础处理（底漆）、皮革涂料、荧光涂料、隔热涂料、地板抛光剂（蜡、脱模剂）	Improvement of surface defects such as popping, pigment dispersion, leveling property, viscosity stability, reduction of agglomerates, colorability, hiding power, prevention of curtain effect, re-coatability 缩孔等表面缺陷改善、颜料分散性、均化性、粘度稳定性、减少聚集物、着色性、隐蔽性、防止帘裂、重涂性
Adhesives 粘合剂 	Adhesives for construction materials, pressure-sensitive adhesives, laminating adhesives for flexible packaging, carpet adhesives, wood adhesive, adhesive (tape, label), filler dispersion, various water-based adhesives 建筑材料粘合剂、压敏粘合剂、软包装层压板粘合剂、地毯和木工用粘合剂、粘合剂（胶带、标签）、填料分散、各种水性粘合剂	Wettability, high-speed coating,dispersion stability, prevention of settling, prevention of popping,improved tack, peel prevention 润湿性、高速涂布性、分散稳定性、防沉降、防排斥、改善皱褶、防剥离

Field 领域	Examples of Use 使用示例	Main Improvement Effects 主要的改善效果
Recording Media 记录媒介 	Thermal paper, carbonless paper, inkjet paper, and other recording papers, art paper, delicate coating paper, non-woven fabric, PVA defoamer, fabric 热敏纸、压敏纸、喷墨纸等记录用纸、铜版纸、微涂布纸、无纺布、聚乙烯醇消泡、布	Leveling property, high-speed coating, prevention of curtain effect, viscosity reduction and defoaming during dispersion of colorants and silica, permeability 均化性、高速涂布性、防止帘裂、显色剂以及二氧化硅分散时的粘度降低、消泡性和渗透性
Metal Surface Treatments 金属表面处理 	Various plating solutions, plating chemicals, corrosion inhibitors 各种电镀液、电镀化学物、防腐剂	Leveling property, glossiness, corrosion resistance through surface coating 流平性、光泽度、表面涂层防腐性
Emulsions 乳液 	Resin emulsions such as acrylic, styrene-acrylic, urethane, vinyl acetate, silicone, acrylic latex dipping, EVA, SBR, NBR, etc. 丙烯酸、苯乙烯、丙烯酸类、聚氨酯、醋酸乙烯、有机硅、烯酸类等树脂乳胶、乳胶浸胶、EVA、SBR、NBR等	Leveling property, defoaming properties, mechanical stability, scale reduction, emulsifiers, surface tension adjustment, reaction stabilization, maintaining water resistance, viscosity stability 流平性、消泡性、机械稳定性、缩减规模、乳化剂、调节表面张力、稳定反应、保持耐水性、粘度稳定性
Agricultural Chemicals 农药 	Herbicides (flowable formulations, granular wettable powders, jumbo formulations), insecticides 除草剂（流动剂、水分散性颗粒剂、巨形剂）、杀虫剂	Water spreading ability, adhesion, defoaming properties, permeability 水面扩展性、延合性、消泡性、渗透性
Other 其他 	Detergents, cutting fluids, concrete admixtures, textile processing agents, silicone reaction control agents, synthetic intermediate materials 洗涤剂、切削加工油、混凝土混合剂、纤维处理剂、硅反应控制剂、中间原料的合成	Efficiency improvement in reactions, reaction control, filterability, labor saving, control of bubbles, high-speed cutting, impregnation capability 高效反应、反应控制、过滤性、省力、控制气泡、高速切割、含浸性

OLFINE

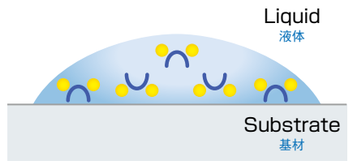
Product Features | 产品特点

Shin-Etsu
Nissin Chemical Industry Co.,Ltd.

Wettability
润湿性

OLFINE rapidly orients to the interface, enabling wetting, leveling, and permeability to the substrate. It also performs well in dynamic environments such as inkjet printing and high-speed coating.

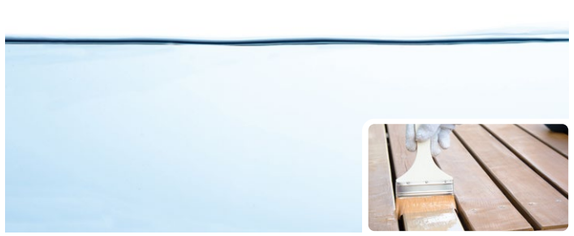
OLFINE可以快速定向到界面，从而赋予基材润湿性、均化性和渗透性。此外，它还可以在喷墨和高速涂布等动态环境中发挥性能。

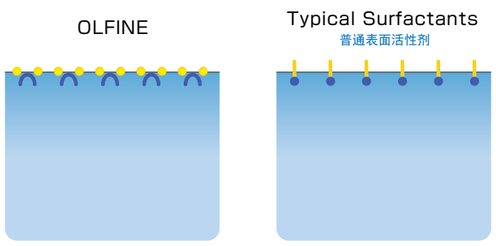


Static and Dynamic Environments
静态、动态环境

A solution is referred to as "static" when it is at rest, and "dynamic" when it is in motion.
将表面活性剂溶液静止的状态表示为“静态”，将其运动的状态表示为“动态”。

Static Environment 静态环境

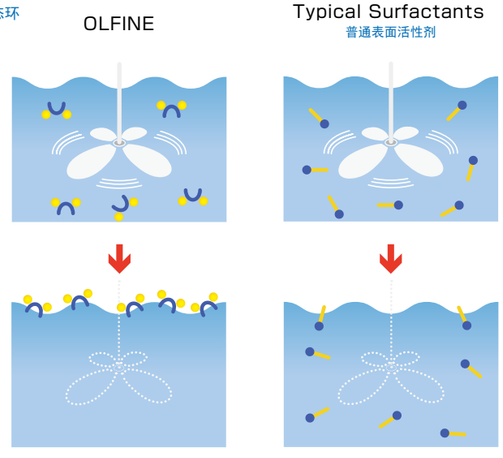




Dynamic Environment 动态环境

OLFINE quickly orients to the interface and exhibits wetting properties in dynamic environments. In contrast, typical surfactants struggle to orient to the interface in dynamic environments, making it difficult to achieve wetting effects and desired performance.

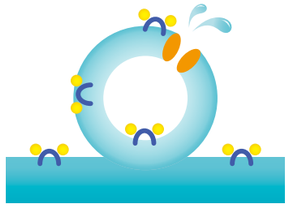
OLFINE即使在动态环境中也能立即定向到界面并发挥润湿性，但普通表面活性剂不能在动态环境中定向到界面且难以发挥润湿性，达不到良好效果。



Defoaming Properties
消泡

OLFINE excels as a defoaming agent. It not only removes foam on the liquid surface but also effectively removes fine-entrapped bubbles from the system.

OLFINE作为消泡剂具有优异的性能，不仅能去除液体表面形成的气泡，还能将系统中包含的细微泡沫迅速排出系统之外。

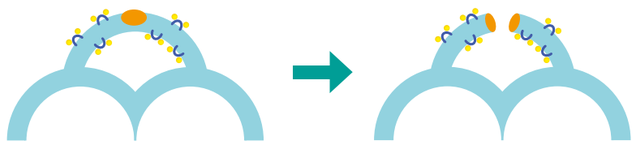


Defoaming Image by OLFINE
OLFINE的消泡图像

Defoaming Effect by OLFINE
OLFINE的消泡效果

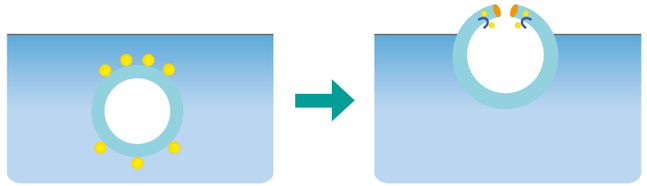
Foam Breaking 破泡

Contacting the foam film with a defoaming agent to break the foam.
消泡剂与泡沫膜接触，使泡沫破裂。



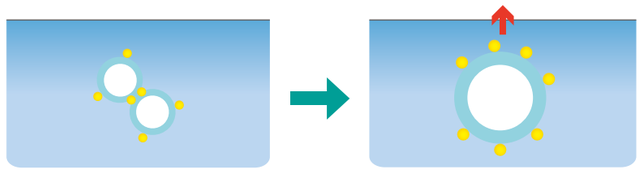
Foam Inhibition 抑泡

Adding a defoaming agent to the foaming solution beforehand to suppress foam formation.
提前添加到发泡液中抑制发泡。



Deaeration 消泡

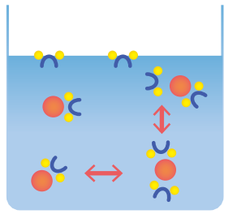
Coalescing the bubbles in the liquid to enhance their rise velocity.
聚合液体中的气泡并提高漂浮速度。



Dispersion Properties
分散性

By swiftly aligning at the interface between pigments/dyes and solvents, OLFINE facilitates the rapid wetting of pigment/dye surfaces by solvents. This leads to enhanced dispersion properties, reduced dispersion time, and various other advantages.

用于快速定向颜料/染料和溶剂之间的界面，使溶剂能快速润湿颜料/染料的表面，在缩短分散时间等分散性提高方面具有显著效果。



OLFINE

Product Types | 产品种类

Shin-Etsu
Nissin Chemical Industry Co.,Ltd.

OLFINE Grade Lineup
OLFINE等级系统

We offer a lineup of products that cater to various applications by leveraging the unique properties of OLFINE. Based on acetylene glycol, we blend it with solvents and other surfactants to create distinctive characteristics.
以乙炔二醇为基础，与溶剂及其他表面活性剂混合，创造出可用于各种用途的产品阵容。

Solvent Dilution Type
溶剂稀释型

A product series where acetylene glycol is dissolved in solvents to form solutions.
将乙炔二醇溶解在溶剂中的产品系列。

EO Addition Type
EO添加型

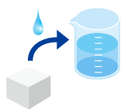
A product series where water solubility is improved by adding ethylene oxide.
通过添加环氧乙烷提高水溶性的产品系列。

Self-emulsifying Type
自乳化型

A product series where water solubility, wetting, defoaming, and dispersion properties are enhanced through the mixture of acetylene glycol and other surfactants.
通过乙炔二醇与其他表面活性剂混合，提高水溶性、润湿性、消泡性、分散性的产品系列。

Solvent Dilution Type
溶剂稀释型

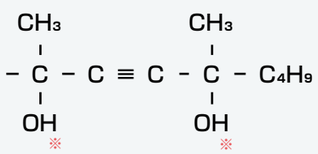
D-10 Series
D-10系列



Improved handling properties!
改善操控性!

OLFINE

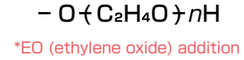
TMDD



EO Addition Type
EO添加型

E Series
E系列

Enhanced water solubility!
提高水溶性!



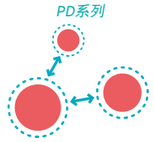
*EO (ethylene oxide) addition
*EO（环氧乙烷）加成

Self-emulsifying Type
自乳化型

EXP Series
EXP系列

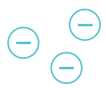
Improved wetting properties!
增强润湿性!

PD Series
PD系列



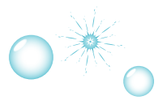
Improved dispersion properties!
提高分散性!

WE Series
WE系列



Anionic compatibility!
赋予阴离子!

Defoaming Series
消泡系列



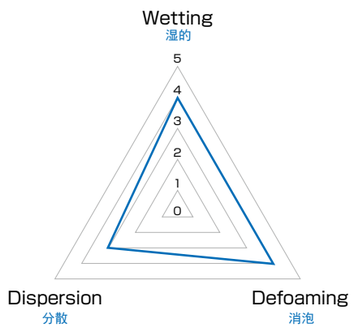
Enhanced defoaming properties!
提高消泡性!

OLFINE D-10 Series
OLFINE D-10系列

Solvent Dilution Type
溶剂稀释型

This product series involves the solution of acetylene glycol at room temperature with various solvents such as propylene glycol and ethylene glycol. It is the fundamental product of OLFINE, combining wetting and defoaming functionalities.
常温固体的乙炔二醇溶解在各种溶剂（丙二醇、乙二醇等）中的产品系列。
OLFINE基础产品兼具润湿和消泡功能。

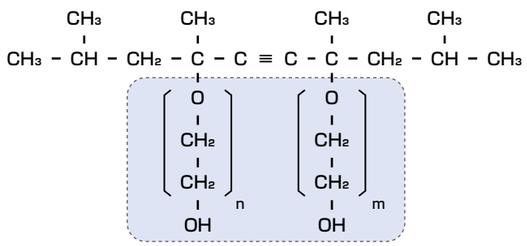
Product Code Examples 产品编号示例	Solvent Content 所含溶剂	Active Ingredient 有效成分
D-10PG	Propylene Glycol 50% 丙二醇 50%	Active Ingredient 50% 有效成分50%
D-10H	Ethylene Glycol 25% 乙二醇25%	Active Ingredient 75% 有效成分75%



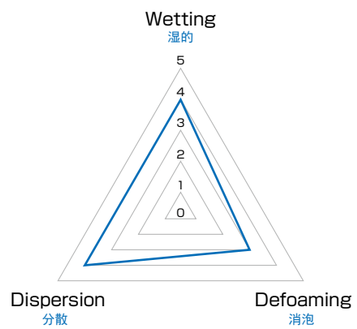
OLFINE E Series
OLFINE E系列

EO Addition Type
EO添加型

A product series where ethylene oxide is added to acetylene glycol.
The amount of ethylene oxide addition affects the HLB value and alters the water solubility.
乙炔二醇附加环氧乙烷的产品系列。
HLB值根据环氧乙烷的添加量而变化，在水中的溶解度也由此变化。



Product Code Examples 产品编号示例	Average EO Addition Mol Number EO平均附加摩尔系数	Water Solubility 水溶性
E1004	4 mol 4 mol	Slightly Soluble 微溶
E1010	10 mol 10 mol	Freely Soluble 易溶



*The radar chart is a reference image based on our perspective. For other product grades, please refer to page 11 (product list).
*雷+C46达图是基于我司见解基础上绘制而成的参考图像。其他产品等级请参见P11（产品列表）。

OLFINE

Product Types | 产品种类

Nissin Chemical Industry Co.,Ltd.

OLFINE EXP Series

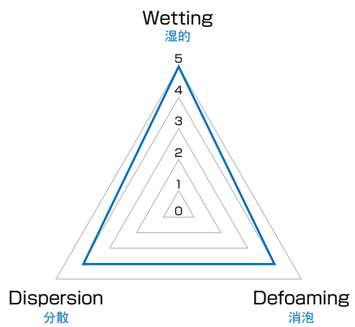
OLFINE EXP 系列

Self-emulsifying Type
自乳化型

A product series that significantly improves the wetting properties on substrates. This surfactant offers surface tension reduction comparable to fluorine-based or silicone-based wetting agents with a low addition amount.

可大幅提高基材润湿性的产品系列。
少量添加即可达到与氟系和硅系润湿剂相同的降低表面张力的效果。

Product Code Examples 产品编号示例	Features 特征
EXP.4200	Low foaming, low dynamic surface tension 低发泡、低动态表面张力
EXP.4300	Permeability, low contact angle, low dynamic surface tension 渗透性、低接触角、低动态表面张力



OLFINE PD Series

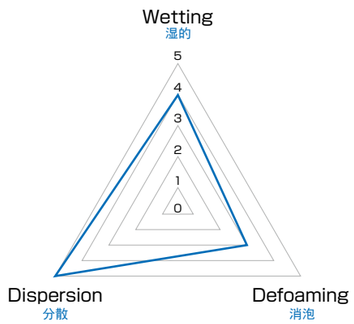
OLFINE PD系列

Self-emulsifying Type
自乳化型

An excellent dispersion product series that can be used independently or as a dispersing aid, regardless of inorganic or organic materials. By enhancing dispersion performance, it enables viscosity reduction, improvement in the dispersion process, and coating process in solutions.

分散性优异的产品系列。无论是无机还是有机，它既可以单独作为产品使用，也可以作为分散助剂使用。
通过提高分散性能，从而降低溶液粘度，改善分散工艺和涂漆工艺。

Product Code Examples 产品编号示例	Ionic Type 离子	Intended Use 使用目的
PD-002W	Nonionic 非离子	Wetting agent, dispersing aid 润湿剂、分散剂
PD-301A	Anionic 负离子	Dispersant, dispersing aid 分散剂、分散助剂



OLFINE WE Series

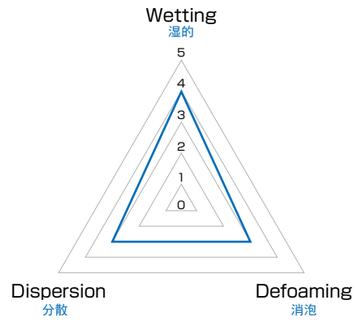
OLFINE WE系列

Self-emulsifying Type
自乳化型

A product series of anionic type.
By incorporating ionization, it is possible to further enhance the wetting properties.

负离子型产品系列。
通过赋予离子性，可以进一步提高润湿性。

Product Code Examples 产品编号示例	Ionic Type 离子	Features 特征
WE-002	Anionic 负离子	Improved wetting properties 改善润湿性
WE-003	Anionic 负离子	Coating suitability, improved water solubility 适用于涂布机，提高水溶性



OLFINE Defoaming Series

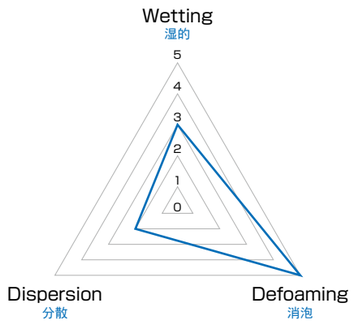
OLFINE消泡系列

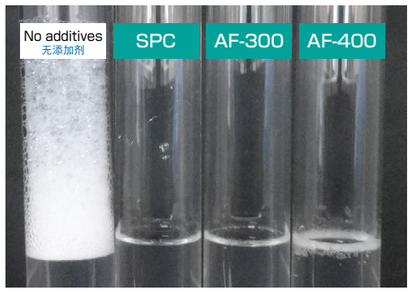
Self-emulsifying Type
自乳化型

A product series with excellent defoaming performance. In addition to the defoaming capability of acetylene glycol, it also imparts foam-rupturing properties to physically eliminate foam formed at the interface.

消泡性优异的产品系列。
在乙炔二醇的抑泡性能基础上，还添加了破泡性能，从物理性上消除界面处产生的泡沫。

Product Code Examples 产品编号示例	Content 含有成分
AF-300	Containing silica, mineral oil, silicone 含有二氧化硅、矿物油和硅酮
SPC	Containing high-boiling point solvent 含有高沸点溶剂





●The chart shows the appearance after shaking the test samples for 1 minute and standing for 5 minutes in a shaker, which was prepared by adjusting PVA aqueous solution and using various additives.
调节PVA水溶液并使用各种添加剂制成测试样品，将样品放入摇床，摇动1分钟后静置5分钟。
图为静置后的状态。

*The radar chart is a reference image based on our perspective. For other product grades, please refer to page 11 (product list).
*雷达图是基于我司见解基础上绘制而成的参考图像。其他产品等级请参见P11（产品列表）。

OLFINE

Product List | 产品一览

Shin-Etsu
Nissin Chemical Industry Co.,Ltd.

★ Slightly Effective 有一定效果　★★ Effective 有效　★★★ Recommended 推荐

Product Type 产品类别	Product Name 产品名	Features 特征		Active Ingredient (%) 有效成分（%）	Ionic Type 离子性	Package Size (kg can) 包装（kg罐）	Solubility in Water (wt%) 水溶性（wt%）	Solution Properties (0.1% aqueous solution) 水溶液性质（0.1wt%水溶液） Dynamic Surface Tension(mN/m) 动态表面张力 1Hz	10Hz	Expected Performance 预期表现 Wetting 湿润	Defoaming 消泡	Dispersion 分散	Product Name 产品名
Solvent Dilution 溶剂稀释 ❶	D-10	Acetylene Glycol	乙炔二醇	100	Nonionic 非离子	15	<0.1	33	35	★★★	★★	★★	D-10
	D-10A	Acetylene Glycol with 2-ethylhexanol	乙炔二醇混合2-乙基己醇	50	Nonionic 非离子	15	<0.1	35	37	★★★	★★	★	D-10A
	D-10E	Acetylene Glycol with Ethylene Glycol	乙炔二醇混合乙二醇	50	Nonionic 非离子	15	<0.5	38	42	★★★	★★	★	D-10E
	D-10H	Acetylene Glycol with Ethylene Glycol	乙炔二醇混合乙二醇	75	Nonionic 非离子	15	<0.5	35	37	★★★	★★	★	D-10H
	D-10PG	Acetylene Glycol with Propylene Glycol	乙炔二醇混合丙二醇	50	Nonionic 非离子	15	<0.5	38	41	★★★	★★	★	D-10PG
EO Addition EO添加 ❷	E1004C	Acetylene Glycol with added EO(Average 3.5 moL)	乙炔二醇 EO 加合物 EO 数均 3.5 mol	100	Nonionic 非离子	18	<0.5	35	38	★★★	★★	★	E1004C
	E1004	Acetylene Glycol with added EO(Average 4 moL)	乙炔二醇 EO 加合物 EO 数均 4 mol	100	Nonionic 非离子	18	<0.5	35	39	★★★	★★	★	E1004
	E1006	Acetylene Glycol with added EO(Average 6 moL)	乙炔二醇 EO 加合物 EO 数均 6 mol	100	Nonionic 非离子	18	<0.5	37	40	★★★	★★	★	E1006
	E1010	Acetylene Glycol with added EO(Average 10 moL)	乙炔二醇 EO 加合物 EO 数均 10 mol	100	Nonionic 非离子	18	3.0<	39	43	★★★	★	★★	E1010
	E1020	Acetylene Glycol with added EO(Average 20 moL)	乙炔二醇 EO 加合物 EO 数均 20 mol	100	Nonionic 非离子	18	3.0<	51	54	★★	★	★★	E1020
	E1030W	Acetylene Glycol with added EO(Average 30 moL)	乙炔二醇 EO 加合物 EO 数均 30 mol	75	Nonionic 非离子	15	3.0<	53	56	★	★	★★★	E1030W
	E1204C	Acetylene Glycol with added EO(Average 4 moL)	乙炔二醇 EO 加合物 EO 数均 4 mol	100	Nonionic 非离子	18	<0.1	29	39	★★★	★★★	★	E1204C
Self-Emulsifying 自乳化 ❸	EXP.4001	Acetylene Glycol with EO additions	乙炔二醇 EO 加合物混合	80	Nonionic 非离子	15	<0.1	27	35	★★★	★★	★★	EXP.4001
	EXP.4200	Acetylene Glycol with EO additions, improved water solubility from EXP.4001	乙炔二醇EO加合物混合，提高EXP.4001的水溶性	80	Nonionic 非离子	15	<3.0	32	42	★★★	★★	★★★	EXP.4200
	EXP.4123	Acetylene Glycol with EO additions, improved water solubility from EXP.4001 &EXP.4200	乙炔二醇EO加合物混合，提高EXP.4001和EXP.4200的水溶性	40	Nonionic 非离子	15	3.0<	39	54	★★★	★★	★★★	EXP.4123
	EXP.4300	Acetylene Glycol formulation	乙炔二醇混合	80	Nonionic 非离子	15	<0.5	28	43	★★★	★	★	EXP.4300
	WE-002	Acetylene Glycol with EO Addition, imparting ion characteristics	乙炔二醇 EO 加合物混合，赋予离子特性	90	Anionic 负离子	15	3.0<	37	43	★★	★	★★	WE-002
	WE-003	Acetylene Glycol formulation, imparting ion characteristics	乙炔二醇混合，赋予离子特性	65	Anionic 负离子	15	3.0<	40	46	★★	★	★★	WE-003
	PD-001	Acetylene Glycol formulation, dispersing aid	乙炔二醇混合、分散助剂	80	Nonionic 非离子	15	<1.0	37	44	★★	★	★★★	PD-001
	PD-002W	Acetylene Glycol formulation, dispersing aid	乙炔二醇混合、分散助剂	80	Nonionic 非离子	15	<0.5	35	41	★★	★	★★★	PD-002W
	PD-005	Acetylene Glycol formulation, PD-001 for improved cloud point, dispersing aid	乙炔二醇混合、改善PD-001昙点、分散剂	90	Nonionic 非离子	15	<1.0	40	45	★★	★	★★★	PD-005

Product Type 产品类别	Product Name 产品名	Features 特征		Active Ingredient (%) 有效成分（%）	Ionic Type 离子性	Package Size (kg can) 包装（kg罐）	Solubility in Water (wt%) 水溶性（wt%）	Dispersion Target 分散目标 Pigments (organic, inorganic) 颜料（有机、无机）	Dyes 染料	Expected Performance 预期表现 Wetting 湿润	Defoaming 消泡	Dispersion 分散	Product Name 产品名
Self-Emulsifying 自乳化 ❸	PD-003	Acetylene Glycol formulation, pigment dispersion	乙炔二醇混合、颜料分散	70	Nonionic 非离子	15	3.0<	●		★	★	★★★	PD-003
	PD-201	Acetylene Glycol with EO Addition, pigment dispersion	乙炔二醇EO加合物混合、颜料分散体	60	Anionic 负离子	15	3.0<	●		★	★	★★★	PD-201
	PD-301A	Acetylene Glycol formulation, pigment dispersion	乙炔二醇混合、颜料分散	30	Anionic 负离子	15	3.0<	●		★	★	★★★	PD-301A

Product Type 产品类别	Product Name 产品名	Features 特征		Active Ingredient (%) 有效成分（%）	Ionic Type 离子性	Package Size (kg can) 包装（kg罐）	Solubility in Water (wt%) 水溶性（wt%）	Defoaming Effect 消泡效果 PVA aqueous solution (PVA 2wt% added) PVA水溶液(添加2wt%PVA)	Expected Performance 预期表现 Wetting 湿润	Defoaming 消泡	Dispersion 分散	Product Name 产品名
Self-Emulsifying 自乳化 ❸	SPC	Acetylene Glycol formulation, containing high-boiling point solvent	乙炔二醇混合、含有高沸点溶剂	100	Nonionic 非离子	15	<0.01	● EXCELLENT	★	★★★	★	SPC
	AF-300	Acetylene Glycol with EO Addition, containing silica, mineral oil, silicone	乙炔二醇EO加合物混合、二氧化硅、矿物油、有机硅含有	90	Nonionic 非离子	15	<0.01	● EXCELLENT	★	★★★	★	AF-300
	AF-400	Acetylene Glycol formulation, containing silica, mineral oil, silicone	乙炔二醇混合、二氧化硅、矿物油、硅酮含有	100	Nonionic 非离子	15	<0.01	● EXCELLENT	★	★★★	★	AF-400
	SK-14	Acetylene Glycol formulation, containing silica, mineral oil, silicone	乙炔二醇混合、二氧化硅、矿物油、硅酮含有	100	Nonionic 非离子	15	<0.01	▲ GOOD	★	★★★	★	SK-14
	AK-02	Acetylene Glycol formulation, containing silica, mineral oil, silicone	乙炔二醇混合、二氧化硅、矿物油、硅酮含有	100	Nonionic 非离子	15	<0.01	▲ GOOD	★	★★★	★	AK-02

【Structure Type】 【结构类型】
❶ Solvent Dilution Type 溶剂稀释型
❷ EO Addition Type EO添加型
❸ Self-Emulsifying Type 自乳化型

The above expression provides reference data for solution properties.
If you are considering exportation, please contact our company for confirmation.
上述物性参数为水溶液数据的参考值。如考虑出口，请联系我司进行咨询确认。

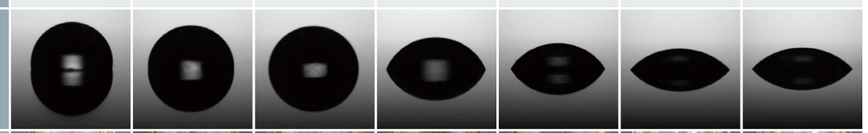
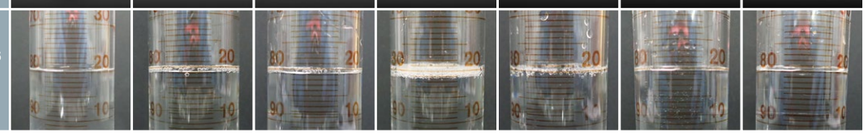
OLFINE

Reference Information | 参考信息

Nissin Chemical Industry Co.,Ltd.

Aqueous Solution Data by Concentration
水溶液数据（按浓度）

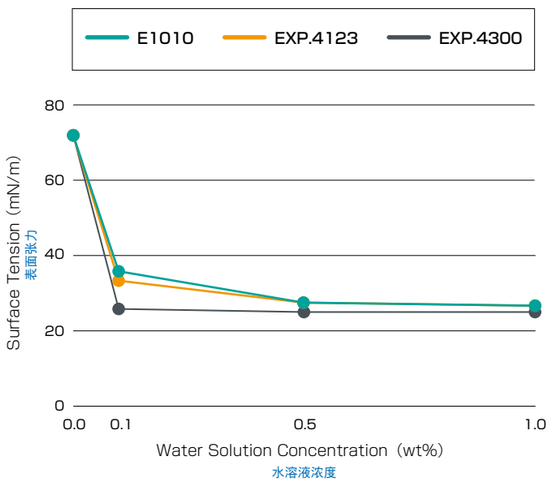
Solvent : Pure water　Additive : OLFINE D-10 (2,4,7,9-Tetramethyl-5-decyne-4,7-diol)
溶剂：纯水　添加剂：OLFINE D-10（2,4,7,9-四甲基-5-癸炔-4,7-二醇）

Additive Concentration [wt%] 添加浓度[wt%]	Not Added 未添加	0.005	0.01	0.05	0.1	0.5	1.0
Solubility 溶解度	Transparent 透明的	Transparent 透明的	Transparent 透明的	Transparent 透明的	Transparent 透明的	Transparent/ Insoluble 透明/不溶	Transparent/ Insoluble 透明/不溶
Static Surface Tension [mN/m] 静态表面张力 [mN/m]	72	50	45	36	33	31	29
Contact Angle after 10 seconds 10秒后接触角							
Foaming (Defoaming)※ Appearance after 5 minutes of static standing 起泡（消泡）* 静置5分钟后							

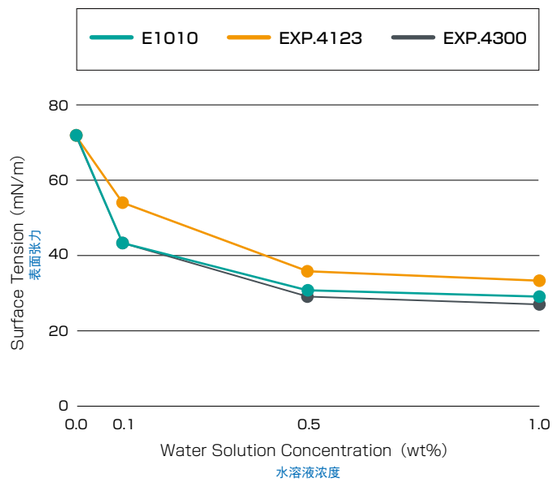
※The sample was measured using a measuring cylinder (20 mL), shaken for 1 minute and standed for 5 minutes.
*量取20mL样品至量筒，摇晃5分钟。

Relationship between Water Solution Concentration and Surface Tension
水溶液浓度与表面张力的关系

Static Surface Tension
静态表面张力



Dynamic Surface Tension at 10Hz
动态表面张力10Hz



*The above graph data is an expression based on water solution p roperty values and may change due to compatibility with other agents. For detailed information, please refer to our company's website or contact our representative.
*上述图表数值根据水溶液物性参数得出，与其他试剂相容时会产生变化。详细信息请查询我司网站或联系相关负责人。

General Usage of OLFINE　OLFINE的常见用途

- Always stir well before use and ensure uniformity.
  使用前须充分搅拌，请确认均匀后再使用。
- If the product solidifies when stored at low temperatures, dissolve it by immersing it in a water bath at around 30-40°C and stir well to achieve uniformity.
  尤其是在低温保管的情况下，产品可能会凝固。此时，请将其放入约30～40℃的热水中融化，并充分搅拌均匀。
- The effective dosage generally ranges from 0.01% to 1% in terms of active ingredient content, but in systems with solvents or fine particles, increase the dosage accordingly.
  产生效果的添加量以活性成分计算，一般为0.01%～1%左右，但在有溶剂和微粒子等存在的系统中，需增加添加量。
- During addition, use a stirrer or similar equipment, gradually add the product while stirring well.
  添加时，用搅拌器等，少量增加搅拌均匀。

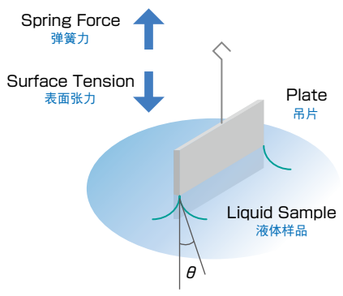
Measurement Methods
测量方法

Static Surface Tension
静态表面张力

Wilhelmy Plate Method
威廉米吊片法

When a plate touches the liquid surface, the liquid wets the plate, and surface tension acts along the plate's periphery, attempting to draw the plate into it. Measure this drawing force as the surface tension.

当吊片接触到液体表面时，液体上升润湿吊片，表面张力会沿着吊片周边作用，将其下拉。测量该拉力，即可得出液体的表面张力。



Static Surface Tension
动态表面张力

Bubble Pressure Method
气泡压力法

Introduce gas into a capillary inserted into the liquid and generate bubbles, then measure the maximum pressure (bubble pressure) at the time of bubble generation to calculate the surface tension. The surface tension is influenced by the surfactant adsorbed on the bubble formed at the tip of the capillary.

将气体注入插在液体中的毛细血管，测量其产生气泡时最大压力（气泡压力），从而算出液体表面张力。液体表面张力受毛细管尖端气泡吸附的表面活性剂的影响。