

NEW PRODUCTS AND PRICES 2017

(valid from February 15th, 2017)



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IoLiTec: the company

IoLiTec is an award-winning, dynamic and goal-oriented company. The main activities of IoLiTec concern the production and sale of ionic liquids and nanomaterials as well as R&D services dealing with the use of these innovative materials in new applications.

On its site in Heilbronn, IoLiTec operates 700 m² of laboratory and office space with well-equipped research

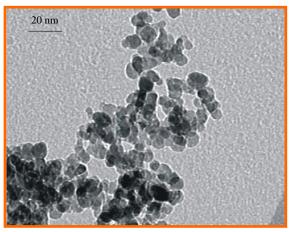


and production facilities. With solid experience in project management and its skilled management team of eight PhD chemists with different professional backgrounds, IoLiTec is in the strong position to give scientifically sound answers and to deal with customer requests from many different sectors in a professional, efficient and goal-oriented way. IoLiTec's services include consulting and feasibility studies as well as the development of marketable products and applications based on ionic liquids, nanomaterials or the combination of both in new technologies. The use of ionic liquids in nanomaterial technologies has already shown important advantages in the last years and is still being investigated by universities and industry.

As an innovative company, IoLiTec is also active in this field.

Among the possible applications in nanotechnology, ionic liquids are known to act as a template for the synthesis of porous nanomaterials through their preorganized structure. Ionic liquids can also be used as a solvent and stabilizer for the preparation of inorganic nanoparticles, enabling the control of particles size growth. They can also be utilized as dispersion media for nanoparticles or as solvent for electrodeposition of nanocrystalline films of a wide range of metals that cannot be electrodeposited from aqueous solutions. IoLiTec pursues internal and external R&D projects concerning these subjects. The expertise of IoLiTec is complemented by the company's close collaborations with various institutes of the Fraunhofer Gesellschaft and a number of leading research groups at universities in Germany and abroad.





Next to R&D services, IoLiTec offers high quality nanomaterials at very competitive prices. The available products can be classified in metals, metal oxides, metal nitrides and carbides as well as carbon based nanoparticles as listed in the present catalogue. Our R&D services also include the study and preparation of nanoparticle dispersions.



Trading units

IoLiTec offers its products in <u>standard quantities</u>. Trading units other than those given in this publication are not available. If you wish to purchase any product in <u>bulk quantity</u>, please feel free to contact us for a quotation.

Prices

All prices listed in this publication are <u>net prices</u> and given in Euro (\in). Shipping and handling charges are to be added to your account (see below). Any additional taxes and duties are payable by the customer.

Prices are subject to change. Please contact us for a firm quotation. All previously published price information will become void after Februar 15th, 2017.

Shipping and handling charges

Germany:

Shipments are routinely made by **trans-o-flex** (www.trans-o-flex.de). A handling charge of € 10.00 applies for all orders under € 100.00. Orders over € 100.00 are free of charge.

All other destinations:

Shipments are routinely made by **FedEx** (www.fedex.com). Shipping and handling charges apply. These depend on the destination as well as on the actual gross weight of the shipment and therefore have to be determined individually. Alternatively, shipment can be arranged through any other courier service of your choice. Please provide your account number with your preferred courier service when ordering.

Please note that not all products listed in this publication are on-stock items and may therefore have longer delivery times.

According to export regulations several products are undeliverable in several countries.

Payment

Payment is possible by <u>bank transfer or cheque only</u>. Credit cards are not accepted. Terms of payment are stated on your quotation and/or purchase order confirmation. All deliveries are subject to our *General Terms and Conditions* which can be found on our website (www.nanomaterials.iolitec.de).

Can't find the product you need?

If you wish to purchase a product that is not listed in this publication please do not hesitate to contact us. We offer <u>custom synthesis</u> of many nano particles at very competitive prices.

Your suggestions for new products are always welcome!



How to place an order

Orders should state clearly the <u>name</u>, <u>number</u> and <u>quantity</u> of each product you wish to purchase as well as your <u>VAT-ID</u> <u>number</u>. Please send you orders by email to

order@nanomaterials.iolitec.de order@nanomaterials.iolitec.com

or by fax to

+49-(0)7131-89839-109

<u>Orders by email are preferred</u>. You will receive a purchase order confirmation by email or fax within 48 hours of receipt of your order. Please let us know if you do not receive a purchase order confirmation within this time.



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Abbreviations

APS Average Particle Size

L Length

OD Outer Diameter

PM Particle Morphology

SSA Specific Surface Area

GS Grain Size

SWCNT Single-Walled Carbon Nanotubes

DWCNT Double-Walled Carbon Nanotubes

MWCNT Multi-Walled Carbon Nanotubes

TG Technical Grade (≤ 90%)

SG Standard Grade (90% - 99%)

HP Higher Purity (≥ 99%)UP Upper Purity (> 99.5%)



α-Aluminium oxide powder, 99+%			
NO-0003-HP [1344-28-1]	Al_2O_3	MW 101.96	
APS: 80 nm SSA: > 15 m ² /g PM: nearly spherical Appearance: white powder	25 g 100 g 500 g 1 kg	29.00 € 49.00 € 155.00 € 239.00 €	
Warning			
Packaging: Powder in PE bottle			

a-Aluminium oxide powder, 99.9%			
NO-0050-UP [1344-28-1]	Al_2O_3	MW 101.96	
APS: 200 nm SSA: 3.9 m²/g PM: spherical Appearance: white powder	25 g 100 g 500 g 1 kg	29.00 € 49.00 € 155.00 € 229.00 €	
Warning			
Packaging: Powder in PE bottle			

γ-Aluminium oxide powder, 99.9%			
NO-0005-UP [1344-28-1]	AI_2O_3	MW 101.96	
APS: < 50 nm SSA: >200 m²/g PM: needles Appearance: white powder	25 g 100 g 500 g 1 kg	29.00 € 49.00 € 159.00 € 279.00 €	
Warning			
Packaging: Powder in PE bottle			

γ-Aluminium oxide powder, 99.9%			
NO-0057-UP	[1344-28-1]	Al_2O_3	MW 101.96
APS: 5 nm SSA: >300 m ² , PM: fibrous Appearance: w	•	25 g 50 g 100 g 500 g	39.00 € 65.00 € 109.00 € 369.00 €
(Warning		
Packaging: Powder in PE bottle			

a-Aluminium	oxide powder,	99.85%	
NO-0008-HP	[1344-28-1]	AI_2O_3	MW 101.96
GS: 40 nm SSA: 10 m²/g PM: - Appearance: w	APS: 150 nm	25 g 100 g 500 g 1 kg	19.00 € 29.00 € 109.00 € 159.00 €
(1)	Warning		
Packaging: Pov	wder in PE bottle		

a-Aluminium oxide powder, 99.5%			
NO-0072-HP	[1344-28-1]	Al_2O_3	MW 101.96
APS: 40 nm SSA: - PM: nearly sph Appearance: w		25 g 100 g 500 g 1 kg	39.00 € 69.00 € 199.00 € 375.00 €
(1)	Warning		
Packaging: Powder in PE bottle			

γ-Aluminium oxide powder, 99-	+% ,	
NO-0036-HP [1344-28-1]	Al_2O_3	MW 101.96
APS: 20 nm SSA: < 200 m²/g PM: spherical Appearance: white powder	25 g 100 g 500 g 1 kg	25.00 € 49.00 € 159.00 € 249.00 €
Warning		
Packaging: Powder in PE bottle		

Antimony(III	I)oxide powder, 9	99.5%	
NO-0010-HP	[1309-64-4]	Sb ₂ O ₃	MW 291.52
APS: 90-210 ni SSA: 15.6 m²/g PM: spherical Appearance: w	3	25 g 100 g 500 g 1 kg	35.00 € 99.00 € 319.00 € 589.00 €
Warning, UN1549, 6.1, PG III			
Packaging: Powder in PE bottle			



ATO (Antimony Tin Oxide), 99.95%			
NO-0047-UP	[1309-64-4]/ [18282-10-5]	Sb ₂ O ₃ :SnO ₂ 1:9	MW~164.79
APS: 100 nm SSA: - Sb ₂ O ₃ :SnO ₂ (1: Appearance: -	9 in weight)	25 g 100 g 500 g 1 kg	39.00 € 59.00 € 229.00 € 349.00 €
Warning, UN1549, 6.1, PG III			
Packaging: Powder in PE bottle			

Barium titanate powder, 99.95	5%	
NO-0073-UP [12047-27-7]	BaTiO₃	MW 233.19
APS: 50 nm SSA: ~20 m²/g PM: cubic Appearance: white powder	25 g 100 g 500 g 1 kg	29.00 € 59.00 € 159.00 € 349.00 €
Warning		
Packaging: Powder in PE bottle		

ATO (Antimo	ny Tin Oxide), 99	.95%	
NO-0060-UP	[1309-64-4]/ [18282-10-5]	АТО	MW~164.79
APS: 10-20 nn SSA: - Sb ₂ O ₃ :SnO ₂ (10 Appearance: -	n D:90 in weight)	25 g 100 g 500 g 1 kg	39.00 € 79.00 € 299.00 € 459.00 €
	Warning, UN1549,	6.1, PG III	
Packaging: Powder in PE bottle			

Cerium(IV)oxide powder, 99.9%				
NO-0029-UP	[1306-38-3]	CeO ₂	MW 172.12	
APS: 15-30 nm SSA: 30-50 m ² / ₅ PM: spherical Appearance: pa	3 le yellow powder	Price availal	ble on request	
Warning				
Packaging: Powder in PE bottle				

Aluminium-doped Zinc oxide, 99.9%				
NO-0061-UP	[37275-76-6]	AZO	MW~81.80	
APS: 20-40 nm (ZnO >98% Al2 Appearance: wl	,	25 g 100 g 500 g 1 kg	69.00 € 199.00 € 699.00 € 1199.00 €	
Warning, UN3077, 9, PG III				
Packaging: Powder in PE bottle				

Chromium(III)oxide powder, 99+%				
NO-0018-HP [1308-38-9]	Cr ₂ O ₃	MW 151.99		
APS: 60 nm SSA: - PM: ~ spherical Appearance: green powder Warning	25 g 50 g 100 g 500 g	45.00 € 59.00 € 125.00 € 449.00 €		
Packaging: Powder in PE bottle				

Barium titanate powder, 99.95%				
NO-0041-UP	[12047-27-7]	BaTiO ₃	MW 233.19	
PM: cubic	SSA: $> 10 \text{ m}^2/\text{g}$		29.00 € 45.00 € 119.00 € 229.00 €	
(!)	Warning			
Packaging: Pov	vder in PE bottle			

Cobalt(II,III)oxide powder, 99.8%				
NO-0002-UP	[1308-06-1]	Co ₃ O ₄	MW 240.80	
APS: ~30 nm SSA: >40 m²/g PM: - Appearance: bl		25 g 100 g 500 g 1 kg	25.00 € 49.00 € 239.00 € 399.00 €	
Warning, UN3288, 6, PG II				
Packaging: Powder in PE bottle				

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METAL OXIDES



Copper(II)oxide powder, 99.9%

NO-0031-UP [1317-38-0] CuO MW 79.55

APS: 40-80 nm 39.00 € 25 g 100 g 69.00€ SSA: -PM: -500 g 239.00 € 389.00 € Appearance: black powder 1 ka



Warning, UN3077, 9, PG III

Packaging: Powder in PE bottle

Gadolinium(III)oxide powder, 99.9%

NO-0022-UP [12064-62-9] MW 362.50

APS: 20-80 nm SSA: 10-40 m²/a

PM: ~ spherical Price available on request

Appearance: white powder



Warning

Packaging: Powder in PE bottle

Dysprosium(III)oxide powder, 99.9%

NO-0019-UP Γ1308-87-81 MW 373.00 Dy_2O_3

APS: 55 nm SSA: $\sim 20 \text{ m}^2/\text{g}$

PM: spherical Price available on request

Appearance: white powder

Packaging: Powder in PE bottle

Gadolinium(III)oxide powder, 99.9%

NO-0044-UP Г12064-62-91 Gd₂O₃ MW 362.50

APS: 15-30 nm SSA: 30-50 m²/g

PM: -Price available on request

Appearance: white powder



Warning

Packaging: Powder in PE bottle

Erbium(III)oxide powder, 99.9%

NO-0020-UP [12061-16-4] Er₂O₃ MW 382.52

APS: 43 nm SSA: 16 m²/g

PM: ~ spherical Price available on request

Appearance: pink powder



Warning

Packaging: Powder in PE bottle

Hafnium(IV)oxide powder, 99.9%

NO-0062-UP [12055-23-1] HfO₂ MW 210.49

APS: 61-80 nm

SSA: -

PM: nearly spherical Price available on request

Appearance: white powder



Warning

Packaging: Powder in PE bottle

Europium(III)oxide powder, 99.99%

NO-0021-UP [1308-96-9] MW 351.93 Eu₂O₃

APS: 45 - 58 nm SSA: $14 - 18 \text{ m}^2/\text{g}$ PM: spherical

Price available on request

Appearance: white powder



Warning

Packaging: Powder in PE bottle

Indium(III)oxide powder, 99.99%

[1312-43-2]

APS: 30-70 nm 10 g 55.00€ SSA: 10-20 m²/g 25 g 119.00 € 199.00 €

 In_2O_3

50 g Appearance: pale yellow powder 100 g 299.00 €



NO-0023-UP

Warning

Packaging: Powder in PE bottle

MW 277.63



Iron(II,III)oxide powder, 98+%, Magnetite					
NO-0049-SG	[1317-61-9]	Fe ₃ O ₄	MW 231.53		
APS: 20-30 nm SSA: 40-60 m²/g PM: spherical Appearance: brown powder		25 g 100 g 500 g 1 kg	49.00 € 119.00 € 489.00 € 699.00 €		
(!) Warning					
Packaging: Powder in PE bottle					

α-Iron(III)oxide powder, 99.5%, Hämatite				
NO-0055-HP	[1309-37-1]	Fe ₂ O ₃	MW 159.69	
APS: 20-40 nm SSA: 40-60 m²/g Appearance: red powder		25 g 100 g 500 g 1 kg	39.00 € 89.00 € 329.00 € 549.00 €	
Warning				
Packaging: Powder in PE bottle				

Iron(II,III)oxide powder, 98+%, Magnetite				
CS	[1317-61-9]	Fe ₃ O ₄	MW 231.53	
APS: 38-44 nm SSA: ~60 m²/g PM: spherical Appearance: brown powder				
! Warning				
Packaging: Powder in PE bottle				

γ-Iron(III)oxide powder, 99%, Maghemite				
NO-0053-HP	[1309-37-1]	Fe ₂ O ₃	MW 159.69	
APS: 20-40 nm SSA: 40-60 m²/g PM: spherical Appearance: red brown powder		25 g 100 g 500 g 1 kg	39.00 € 79.00 € 259.00 € 429.00 €	
Warning				
Packaging: Powder in PE bottle				

Iron(II,III)oxide powder, 98+%, Magnetite coated with SiO ₂					
CS	[1317-61-9]	Fe ₃ O ₄	MW 231.53		
APS: 38-44 nm (Magnetit core) SSA: 40-60 m ² /g PM: spherical Appearance: brown powder		Price available on request			
Warning					
Packaging: Powder in PE bottle					

ITO Indium Tin Oxide, 99.99%					
NO-0045-UP	[50926-11-9]	In ₂ O ₃ :SnO ₂	MW~264.94		
APS: 30-70 nm In_2O_3 :Sn O_2 (9:1 SSA: 20-25 m ² /Q Appearance: wh]	10 g 25 g 50 g 100 g	59.00 € 119.00 € 199.00 € 299.00 €		
Warning					
Packaging: Powder in PE bottle					

Iron(II,III)oxide powder, 98+%, Magnetite coated with SiO ₂ and functionalized					
CS	[1317-61-9]	Fe ₃ O ₄	MW 231.53		
APS: 38-44 nm (Magnetit core) SSA: 40-60 m²/g PM: spherical Appearance: brown powder		Price avail	able on request		
Warning					
Packaging: Powder in PE bottle					

Lanthanum ox	ide powder, 99.9	9%	
NO-0042-UP	[1312-81-8]	La ₂ O ₃	MW 325.81
APS: 15 – 30 nn SSA: 20 – 40 m ² Appearance: wh	² /g	Price availa	ble on request
<u>(!</u>)	Varning		
Packaging: Powder in PE bottle			



Magnesium ox	ide powder, 99.9	%	
NO-0012-UP	[1309-48-4]	MgO	MW 40.30
APS: 35 nm SSA: >50 m²/g Appearance: wh	ite powder	25 g 100 g 500 g 1 kg	29.00 € 49.00 € 149.00 € 239.00 €
Packaging: Power	der in PE bottle		

Nickel(II)oxide, 99.5%			
NO-0026-HP [1313-99-1]	NiO	MW 74.69	
APS: ~ 20 nm SSA: >50 m²/g Appearance: black powder	25 g 100 g 500 g 1 kg	35.00 € 89.00 € 349.00 € 589.00 €	
Danger			
Packaging: Powder in PE bottle			

Magnesium o	• ′	99.9%+Stearic Acid MgO+C ₁₈ H ₃₆ O ₂	
APS: 10-30 nm SSA: >20 m²/g Appearance: w	1	25 g 50 g 100 g 500 g 1 kg	39.00 € 65.00 € 119.00 € 439.00 € 699.00 €
Packaging: Pov	vder in PE bottle		

Samarium(III) NO-0028-UP	10xide, 99.9% [12060-58-1]	Sm ₂ O ₃	MW 348.72
NO-0028-UP [12060-58-1] APS: 30-50 nm SSA: 12-20 m²/g Appearance: white/pale yellow powder		25 g 100 g 500 g	29.00 € 69.00 € 259.00 €
Packaging: Powc	ler in PE bottle		

Manganese oxide powder, 98 NO-0070-HP [1317-34-6]	8+% Mn ₂ O ₃	MW 157.87
APS: 40-60 nm SSA: - m²/g Appearance: black powder	10 g 25 g 50 g 100 g	55.00 € 99.00 € 189.00 € 269.00 €
Packaging: Powder in PE bottle		

Silicon oxide, 99.9% (amorphous)			
NO-0034-UP [7631-86-9]	SiO ₂	MW 60.08	
APS: 20-60 nm SSA: 400-600 m ² /g PM: spherical Appearance: white powder	25 g 100 g 500 g 1 kg	29.00 € 55.00 € 209.00 € 349.00 €	
Warning			
Packaging: Powder in PE bottle			

Neodymium(III)oxi	de, 99.9%	
NO-0025-UP [131	3-97-9] Nd ₂ (O ₃ MW 336.48
APS: ~80 nm SSA: 8-12 m²/g Appearance: light blue		25 g 49.00 € 100 g 119.00 € 500 g 499.00 € 1 kg 759.00 €
! Warning	ng	
Packaging: Powder in I	PE bottle	

Silicon oxide, 99+% NO-0040-HP [7631-86-9]	SiO ₂	MW 60.08
APS: 10-20 nm SSA: 600 m ² /g Appearance: white powder	25 g 100 g 500 g 1 kg	29.00 € 49.00 € 189.00 € 329.00 €
Warning		
Packaging: Powder in PE bottle		



Silicon oxide, 99.5% (non porous)			
NO-0071-HP [7631-86-9]	SiO ₂	MW 60.08	
APS: 15-20 nm SSA: 160 m²/g PM: spherical Appearance: white powder Warning	25 g 50 g 100 g 500 g 1 kg	29.00 € 55.00 € 80.00 € 329.00 € 599.00 €	
Packaging: Powder in PE bottle			

Silicon oxide + double bond, 99.8%			
CS	[7631-86-9]	SiO ₂	
APS: 10-20 SSA: 90-10 Appearance	· ·····_	Price available on request	
(Warning		
Packaging	: Powder in PE bottle		

Silicon oxide, 99.5% (porous)				
CS	[7631-86-9]	SiO ₂	MW 60.08	
APS: 15-20 nm SSA: >600 m²/g PM: spherical Appearance: white powder Warning		Price avai	lable on request	
Packaging	: Powder in PE bottle			

Silicon oxide + methacrylate group, 99.8%			
CS	[7631-86-9]	SiO ₂	
APS: 20 nn SSA: 90-13 Appearance	· ·	Price available on request	
(1)	Warning		
Packaging: Powder in PE bottle			

Silicon oxide + amino group, (6:1), 99.8%			
NO-0056-HP [7631-86-9]	SiO ₂ +NH ₂		
APS: 10-20 nm SSA: 90-130 m ² /g Appearance: white powder	10 g 25 g 50 g 100 g 500 g	29.00 € 65.00 € 105.00 € 169.00 € 559.00 €	
Warning			
Packaging: Powder in PE bottle			

Strontium titanate powder, 99.9%				
NO-0043-UP [12060-59-2]	SrTiO ₃	MW 183.50		
APS: ~100 nm SSA: > 10 m²/g PM: ~spherical Appearance: white grey	25 g 100 g 500 g 1 kg	25.00 € 45.00 € 169.00 € 219.00 €		
Packaging: Powder in PE bottle				

Silicon oxide + epoxid group, 99.8%			
CS	[7631-86-9]	SiO ₂ +NH ₂	
APS: 10-20 nm SSA: 90-130 m²/g Appearance: white powder		Price available on request	
(! >	Warning		
Packaging: Powder in PE bottle			

Tin(IV)oxide, 99.9% NO-0009-UP [18282-10-5]	SnO ₂	MW 150.71
APS: ~100 nm SSA: ~11 m²/g Appearance: white powder	25 g 50 g 100 g 500 g 1 kg	29.00 € 49.00 € 79.00 € 275.00 € 449.00 €
Packaging: Powder in PE bottle		



Titanium(IV)oxide (rutile), 99%				
NO-0051-HP [1317-80-2]	TiO ₂	MW 79.87		
APS: 200 nm SSA: 8m²/g PM: nearly spherical Appearance: white powder	25 g 100 g 500 g 1 kg	19.00 € 39.00 € 69.00 € 99.00 €		
Warning				
Packaging: Powder in PE bottle				

Titanium(IV)oxide (rutile), coated with Silicon Oil, 99%			
NO-0065-HP [1317-80-2]	TiO ₂	MW 79.87	
APS: 20-40 nm SSA: 40 m ² /g Appearance: white powder	25 g 100 g 500 g 1 kg	49.00 € 119.00 € 359.00 € 599.00 €	
Warning			
Packaging: Powder in PE bottle			

Titanium(IV)oxide (anatase), 99.5%				
NO-0038-HP [1317-70-0]	TiO ₂	MW 79.87		
APS: 20 nm SSA: >120 m ² /g Appearance: white powder	25 g 100 g 500 g 1 kg	29.00 € 49.00 € 195.00 € 275.00 €		
Warning				
Packaging: Powder in PE bottle				

Titanium(IV)oxide (rutile), coated with SiO2, 99%, hydrophopbic			
NO-0066-HP [1317-80-2]	TiO ₂	MW 79.87	
APS: 20-40 nm SSA: >40 m²/g Appearance: white powder	25 g 100 g 500 g 1 kg	49.00 € 109.00 € 399.00 € 659.00 €	
Warning			
Packaging: Powder in PE bottle			

Titanium(IV)oxide (rutile), 99.5%			
NO-0046-HP [1317-80-2]	TiO ₂	MW 79.87	
APS: 10-30 nm SSA: ~ 50 m²/g Appearance: white powder	25 g 100 g 500 g 1 kg	29.00 € 59.00 € 229.00 € 355.00 €	
Warning			
Packaging: Powder in PE bottle			

Yttrium(III)oxide, 99.95%				
NO-0030-UP [1314-36-9]	Y_2O_3	MW 225.81		
APS: 30-50 nm SSA: 30-50 m ² /g Appearance: white powder	25 g 100 g 500 g 1 kg	35.00 € 59.00 € 269.00 € 429.00 €		
Warning				
Packaging: Powder in PE bottle				

Titanium(IV)oxide (anatase), 99.5%			
NO-0058-HP [1317-70-0]	TiO ₂	MW 79.87	
APS: 10-25 nm SSA: 50-150 m ² /g Appearance: white powder	25 g 100 g 500 g 1 kg	29.00 € 59.00 € 219.00 € 345.00 €	
Warning			
Packaging: Powder in PE bottle			

Zinc oxide, 99	.5%		
NO-0011-HP	[1314-13-2]	ZnO	MW 81.39
APS: 20 nm SSA: 50 m²/g PM: nearly sper Appearance: wh		25 g 50 g 100 g 500 g 1 kg	39.00 € 59.00 € 95.00 € 309.00 € 529.00 €
Warning, UN3077, 9, PG III			
Packaging: Powder in PE bottle			



Zinc oxide, 99.9%			
NO-0039-UP [1314-13-2]	ZnO	MW 81.39	
APS: 90-210 nm SSA: 5-7 m²/g PM: irregular Appearance: white powder	25 g 100 g 500 g 1 kg	29.00 € 59.00 € 249.00 € 349.00 €	
Warning, UN3077,	, 9, PG III		
Packaging: Powder in PE bottle			

Zirconium(IV)oxide, 99.9%		
NO-0013-UP [1314-23-4]	ZrO ₂	MW 123.22
APS: 20-30nm SSA: >35 m2/g PM: sperical Appearance: white powder	25 g 100 g 500 g 1 kg	29.00 € 99.00 € 335.00 € 569.00 €
Warning		
Packaging: Powder in PE bottle		

Neodymium(III)oxide, 99.9%	6	
RE-0001-UP	[1313-97-9]	Nd_2O_3	MW 336.48
APS: µm-powd SSA: - Appearance: lig		25 g 100 g 500 g 1 kg	45.00 € 129.00 € 499.00 € 759.00 €
(!)	Warning		
Packaging: Pov	vder in PE bottle		

Products and prices 2016 METAL NITRIDES AND CARBIDES



Aluminium(I	II)nitride, 99%		
NC-0001-HP	[24304-00-5]	AIN	MW 40.99
APS: 40-50 nm SSA: 78 m²/g PM: spherical Appearance: w		10 g 25 g 50 g 100 g 500 g	35.00 € 69.00 € 109.00 € 179.00 € 659.00 €
Packaging: Powder in PE bottle			

Boron carbide, 99% NC-0015-HP [12069-32-8]	B₄C	MW 55.26
APS: <50 nm SSA: >75 m²/g PM: Monocrystalline Appearance: Grey Black	5 g 10 g 25 g 50 g 100 g	49.00 € 79.00 € 159.00 € 245.00 € 459.00 €
Packaging: Powder in PE bottle		

Aluminium(III)	nitride, 99%		
NC-0010-HP	[24304-00-5]	AIN	MW 40.99
APS: 50 nm SSA: 75 m²/g PM : spherical Appearance: whit	e powder Warning, UN2813	10 g 25 g 50 g 100 g 500 g	29.00 € 55.00 € 89.00 € 149.00 € 479.00 €
Packaging: Powd	er in PE bottle		

Molybdenum	(IV)disulfide, 99%		
NC-0017-HP	[1317-33-5]	MoS2	MW 160.07
APS: 90 nm SSA: 35 m ² /g PM: nearly spe Appearance: b		10 g 25 g 50 g 100 g	109.00 € 185.00 € 345.00 € 599.00 €
(!)	Warning		
Packaging: Powder in PE bottle			

Boron nitride, 99%		
NC-0007-HP [10043-11-5]	BN	MW 24.82
APS: 137 nm SSA: 19.4 m²/g Crystalline form: hexagonal Appearance: white powder	5 g 10 g 25 g	49.00 € 79.00 € 179.00 €
Warning		
Packaging: Powder in PE bottle		

Silicon(IV)carbide (beta), 99%		
NC-0002-HP [409-21-2]	SiC	MW 40.10
APS: 60 nm SSA: 30 m²/g PM: spherical Appearance: grey powder	10 g 25 g 50 g 100 g 500 g	29.00 € 45.00 € 89.00 € 139.00 € 549.00 €
Packaging: Powder in PE bottle		

Boron nitride, 99%		
NC-0018-HP [10043-11-5]	BN	MW 24.82
APS: 70 nm SSA: 19.4 m²/g Crystalline form: hexagonal Appearance: white powder Warning	5 g 10 g 25 g 50 g 100 g	19.00 € 25.00 € 49.00 € 75.00 € 129.00 €
Packaging: Powder in PE bottle		

Silicon(IV)carbide (beta), 99%		
NC-0008-HP [409-21-2]	SiC	MW 40.10
APS: 50-60 nm SSA: >90 m²/g PM: spherical Appearance: greyish powder Warning	10 g 25 g 50 g 100 g 500 g	29.00 € 49.00 € 79.00 € 139.00 € 479.00 €
Packaging: Powder in PE bottle		

Products and prices 2016 METAL NITRIDES AND CARBIDES



Silicon(IV)nitride (amorphous), 99%				
NC-0009-HP	[12033-89-5]	Si ₃ N ₄	MW 140.28	
APS: 15-20 nm SSA: 103-123 m PM: spherical Appearance: whi powder	, 3	25 g 50 g 100 g 500 g	39.00 € 69.00 € 109.00 € 429.00 €	
Packaging: Powder in PE bottle				

Titanium(III)nitride, 97% NC-0005-SG [25583-20-4]	TiN	MW 61.87	
APS: 20 nm SSA: 48 m²/g PM: spherical Appearance: black powder	10 g 25 g 50 g 100 g 500 g	29.00 € 65.00 € 109.00 € 179.00 € 699.00 €	
Danger, UN317	8; 4.1; PG III		
Packaging: Powder in PE bottle			

Silicon(IV)nitride (amorphous), 99%			
NC-0003-HP [12033-89-5]	Si ₃ N ₄	MW 140.28	
APS: 20 nm SSA: 50 m ² /g PM: spherical Appearance: white powder	25 g 50 g 100 g 500 g	29.00 € 49.00 € 75.00 € 289.00 €	
Warning			
Packaging: Powder in PE bottle			

Titanium(III)nitride, 99%			
NC-0012-HP [25583-20-4]	TiN	MW 61.87	
APS: 14 nm SSA: > 80 m²/g PM: spherical Appearance: black powder	10 g 25 g 50 g 100 g 500 g	39.00 € 85.00 € 139.00 € 209.00 € 839.00 €	
Packaging: Powder in PE bottle			

Titanium(IV)carbide, 99% NC-0004-HP [12070-08-5]	TiC	MW 59.88	
APS: 50 nm SSA: ~23 m²/g PM: spherical Appearance: black powder	10 g 25 g 50 g 100 g 500 g	29.00 € 59.00 € 79.00 € 139.00 €	
Danger, UN3178 ;	4.1; PG III		
Packaging: Powder in PE bottle			

Titanium(III)nitride, 97+% NC-0019-SG [25583-20-4]	TiN	MW 61.87
APS: 100 nm SSA: >70 m²/g PM: spherical Appearance: black powder	10 g 25 g 50 g 100 g 500 g	29.00 € 55.00 € 89.00 € 159.00 € 499.00 €
Danger, UN3178 ; 4	4.1; PG III	
Packaging: Powder in PE bottle		

Titanium(IV)carbide, 99 NC-0011-HP [12070-08-		MW 59.88	
APS: 40 nm SSA: > 50 m²/g PM: spherical Appearance: black powder	10 g 25 g 50 g 100 g 500 g 3178; 4.1; PG III	39.00 € 79.00 € 129.00 € 219.00 € 779.00 €	
Packaging: Powder in PE bottle			

Tungsten (IV)carbide, 99.95%				
NC-0014-UP [12070-12-1]	WC	MW 195.85		
APS: 150-200 nm SSA: - PM: - Appearance: black powder	10 g 25 g 50 g 100 g 500 g	25.00 € 35.00 € 45.00 € 65.00 € 249.00 €		
Packaging: Powder in PE bottle				

Products and prices 2016 METAL NITRIDES AND CARBIDES



Tungsten(IV)disulfide, 99%		
NC-0016-HP [12138-09-9]	WS ₂	MW 247.97
APS: 90 nm SSA: 30 m²/g PM: Hexagonal Lamellar Appearance: grey powder	10 g 25 g 50 g 100 g	109.00 € 229.00 € 379.00 € 659.00 €
Warning		
Packaging: Powder in PE bottle		

Zirconium(IV)carbide, 97%; Hf-content ~3%				
NC-0006-SG	[12070-14-3]	ZrC	MW 103.24	
APS: 40 nm SSA: 70 m²/g PM: spherical Appearance: b	lack powder Warning, UN3178	10 g 25 g 50 g 100 g 500 g	39.00 € 79.00 € 129.00 € 199.00 € 789.00 €	
Packaging: Powder in PE bottle				

Zirconium(IV)carbide, 97%; Hf-content ~3%				
NC-0013-SG	[12070-14-3]	ZrC	MW 103.24	
APS: < 60 nm SSA: > 70 m ² / ₂ PM: spherical Appearance: bla	•	10 g 25 g 50 g 100 g 500 g	39.00 € 75.00 € 119.00 € 189.00 € 659.00 €	
Packaging: Powder in PE bottle				



Aluminium powder, 99.9%				
NM-0015-UP	[7429-90-5]	Al	MW 26.98	
APS: 18 nm SSA: 40-60 m ² /g				
PM: spherical Product is discontinued Appearance: black powder				
Appearance: bia	ck powder	Delivery whi	le stock last	
Danger, UN1396 ; 4.3 ; PG II				
Packaging: Partially passivated powder in PE bottle under Argon				

Copper powde	er, 99.5%		
NM-0016-HP	[7440-50-8]	Cu	MW 63.55
APS: 25 nm SSA: 30-50 m²/g PM: spherical Appearance: bla		5 g 10 g 25 g 50 g 100 g 39; 4.1; PG II	69.00 € 89.00 € 149.00 € 229.00 € 449.00 €
Packaging: Partially passivated powder in PE bottle under Argon			

Aluminium powder, 99.9%			
NM-0039-UP [7429-90-5]	Al	MW 26.98	
APS: 40-60 nm SSA: 20-48 m²/g PM: spherical Appearance: black powder	5 g 10 g 25 g 50 g 100 g	49.00 € 79.00 € 139.00 € 229.00 € 379.00 €	
Packaging: Partially passivated powder in PE bottle under Argon			

NM-0044-UP	[7440-50-8]	Cu	MW 63.55
			1111 03133
APS: 60-80 nm SSA: 6-8 m²/g PM: spherical Appearance: black	k powder Danger, UN308	5 g 10 g 25 g 50 g 100 g	29.00 € 45.00 € 89.00 € 135.00 € 219.00 €

Chromium pow	der, coated with o	leic acid, 99.	5%
NM-0006-HP	[7440-47-3]	Cr	MW 52.00
APS: 50 nm SSA: - PM: ~ spherical Appearance: grey powder	and black	5 g 10 g 25 g 50 g	95.00 € 159.00 € 319.00 € 589.00 €
	Danger, UN3089;	4.1; PG II	
Packaging: Powder coated with oleic acid in glass bottle			

Gold powder, 99.99%				
NM-0002-UP	[7440-57-5]	Au	MW 196.97	
APS: 50-100 nm SSA: 3.3 m²/g PM: spherical Appearance: dark brown powder		Price availa	able on request	
Packaging: Powe	der in PE bottle			

Cobalt powder	, 99.8% [7440-48-4]	Co	MW 58.93
APS: 28 nm SSA: 40-60 m²/g PM: spherical Appearance: gre powder		5 g 10 g 25 g 50 g 100 g	45.00 € 65.00 € 129.00 € 209.00 € 339.00 €
Packaging: Partially passivated powder in PE bottle under Argon			

Gold powder, 99.9%		
NM-0032-UP [7440-57-5]	Au	MW 196.97
APS: <100 nm SSA: 1.3-2.2 m²/g PM: ~ spherical Appearance: black powder	Product is	ole on request discontinued uile stock last
Packaging: Powder in PE bottle		



Iron powder, 99.9%	6			
NM-0029-UP [743	9-89-6]	Fe	MW 55.85	
APS: 60 - 80 nm SSA: 7 m²/g PM: spherical Appearance: black pov	wder er, UN3089; 4.1; F	5 g 10 g 25 g 50 g 100 g	25.00 € 39.00 € 75.00 € 125.00 € 199.00 €	
Packaging: Powder in PE bottle under Argon				

Nickel powder, 9	9.8%			
NM-0028-HP	[7440-02-0]	Ni	MW 58.69	
APS: 20 nm SSA: 40-60 m²/g PM: spherical Appearance: blue a powder	nd black Danger, UN30	5 g 10 g 25 g 50 g 100 g 89; 4.1; PG II	39.00 € 69.00 € 149.00 € 249.00 € 389.00 €	
Packaging: Powder in PE bottle under Argon				

Iron powder, 99.9%				
NM-0019-UP [7439-89-6]	Fe	MW 55.85		
APS: 25 nm SSA: 40-60 m²/g PM: spherical Appearance: black powder	5 g 10 g 25 g 50 g 100 g 89; 4.1; PG III	39.00 € 55.00 € 139.00 € 229.00 € 349.00 €		
Packaging: Partially passivated	Packaging: Partially passivated powder in PE bottle under Argon			

Palladium pov	vder, 99.9%		
NM-0041-UP	[7440-05-3]	Pd	MW 106.42
APS: 80 nm SSA: 40 m²/g PM: Appearance: bla	ack powder	Price ava	ilable on request
♦	Danger, UN3089	; 4.1; PG III	
Packaging: Powder in PE bottle under Argon			

Molybdenum powder, 99+	%			
NM-0010-HP [7439-98-7]	Мо	MW 95.94		
APS: 80 nm SSA: 4-10 m²/g PM: ~ spherical Appearance: black powder	5 g 10 g 25 g 50 g 100 g 89; 4.1; PG II	45.00 € 65.00 € 149.00 € 259.00 € 399.00 €		
Packaging: Powder in PE bottle under Argon				

Platinum pow	der, 99.9%			
NM-0042-UP	[7440-06-4]	Pt	MW 195.08	
APS: 100 nm SSA: 20 m²/g PM: Appearance: bla	ick powder	Price ava	ailable on request	
	Danger, UN3089); 4.1; PG III	ī	
Packaging: Powder in PE bottle under Argon				

Nickel powder, 99.8	Nickel powder, 99.8%				
NM-0030-HP	[7440-02-0]	Ni	MW 58.69		
APS: 60 - 80 nm SSA: 8-10 m²/g PM: spherical Appearance: black po	wder Danger, UN308	5 g 10 g 25 g 50 g 100 g 9; 4.1; PG II	25.00 € 39.00 € 79.00 € 125.00 € 199.00 €		
Packaging: Powder in PE bottle under Argon					

Silicon powder, 99+%				
NM-0020-HP	[7440-21-3]	Si	MW 28.09	
APS: <100 nm SSA: 80 m²/g PM: spherical Appearance: ye powder	ellow or brown Danger, UN1346; 4	5 g 10 g 25 g 50 g 100 g	39.00 € 65.00 € 129.00 € 229.00 € 349.00 €	
Packaging: Partially passivated powder in PE bottle under Argon				



Stainless steel powder 316L, 99.9%				
NM-0035-UP [65997-19-5]	Fe	MW 55.85		
APS: 60-80 nm SSA: - PM: spherical Appearance: black powder	5 g 10 g 25 g 50 g 100 g	65.00 € 115.00 € 229.00 € 345.00 € 559.00 €		
Packaging: Powder in PE bottle under Argon				

Silver powder, coated with fatty acids, 99+%				
NM-0037-HP [7440-22-4]	Ag	MW 107.87		
APS: 20 nm SSA: 15-20 m²/g PM: spherical Appearance: greenish	5 g 10 g 25 g 50 g 100 g	59.00 € 99.00 € 209.00 € 339.00 € 609.00 €		
Warning	100 g	003100 C		
Packaging: Powder in PE bottle				

Silver powder, 99.95%)	
NM-0001-UP [7440-:	22-4] Ag	MW 107.87
APS: ~150 nm SSA: - PM: nearly spherical Appearance: grey powder	10 25	5 g 55.00 € 0 g 85.00 € 5 g 169.00 € 0 g 279.00 € 0 g 449.00 €
Packaging: Powder in PE	bottle	

Tin powder, 9	9.7%		
NM-0040-UP	[7440-31-5]	Sn	MW118.71
APS: <100 nm SSA: ~7 m²/g PM: spherical Appearance: bl	ack powder Danger, UN3089	5 g 10 g 25 g 50 g 100 g ; 4.1; PG II	25.00 € 39.00 € 79.00 € 125.00 € 199.00 €
Packaging: Powder in PE bottle under Argon			

Silver powder, 99.5%		
NM-0023-HP [7440-22-4]	Ag	MW 107.87
APS: 35 nm SSA: 20-30 m²/g PM: spherical Appearance: grey powder	5 g 10 g 25 g 50 g 100 g	59.00 € 99.00 € 199.00 € 299.00 € 499.00 €
Packaging: Powder in PE bottle		

Tantalum powder, 99+%					
NM-0036-HP	[7440-25-7]	Та	MW 180.95		
APS: 50-80 nm SSA: - PM: - Appearance: lig	ıht grey	5 g 10 g 25 g 50 g	45.00 € 79.00 € 169.00 € 239.00 €		
(1)	Danger, UN3089;	4.1; PG II			
Packaging: Powder in PE bottle under Argon					

Silver powder, 99.9%		
NM-0038-UP [7440-22-4]	Ag	MW 107.87
APS: 50-60 nm SSA: ~12 m²/g PM: spherical Appearance: black powder	5 g 10 g 25 g 50 g 100 g	39.00 € 59.00 € 129.00 € 199.00 € 339.00 €
Packaging: Powder in PE bottle		

Titanium pov NM-0031-UP	vder, 99.9% [7440-32-6]	Τi	MW 47.87
APS: 60 - 80 m SSA: 13.8 m ² /g PM: spherical Appearance: bl	I	5 g 10 g 25 g 50 g 100 g	39.00 € 69.00 € 145.00 € 225.00 € 375.00 €
	Danger, UN2545 ;	4.2; PG II	
Packaging: Partially passivated powder in PE bottle under Argon			



Tungsten pov	wder, 99.9%		
NM-0033-UP	[7440-33-7]	W	MW 183.84
APS: 50 nm SSA: ~8 m²/g PM: spherical Appearance: b	ack powder	5 g 10 g 25 g 50 g	49.00 € 79.00 € 175.00 € 299.00 €
Danger, UN3089 ; 4.1 ; PG II			
Packaging: Powder in PE bottle under Argon			

Tungsten powder, 99%				
NM-0034-HP [7440-33-7]	W	MW 183.84		
APS: 80-120 nm SSA: 4-8 m²/g PM: nearly spherical Appearance: black powder	5 g 10 g 25 g 50 g 100 g	29.00 € 49.00 € 99.00 € 199.00 € 249.00 €		
Danger, UN3089 ; 4.1 ; PG II				
Packaging: Powder coated with oleic acid in glass bottle				

Zinc powder, 99.5%			
NM-0004-HP [7440-66-6]	Zn	MW 65.39	
APS: 130 nm SSA: 6-8 m²/g PM: spherical Appearance: grey powder	5 g 10 g 25 g 50 g 100 g 4.3, PG II	19.00 € 29.00 € 59.00 € 99.00 € 149.00 €	
Packaging: Powder in PE bottle under Argon			

Zinc powder, 99.9%			
NM-0045-UP [7440-66-6]	Zn	MW 65.39	
APS: 40-60 nm SSA: ~12 m²/g PM: spherical Appearance: grey powder	5 g 10 g 25 g 50 g 100 g	45.00 € 69.00 € 139.00 € 225.00 € 349.00 €	
Packaging: Partially passivated powder in PE bottle under Argon			

Zinc powder, 99.9%	7	MW CE 20	
NM-0025-UP [7440-66-6]	Zn	MW 65.39	
APS: 35 nm SSA: ~12 m²/g PM: spherical Product discontinued Appearance: grey powder Delivery while stock last Danger, UN 1436, 4.3, PG II			
Packaging: Partially passivated powder in PE bottle under Argon			



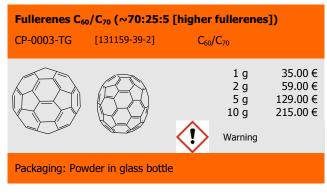




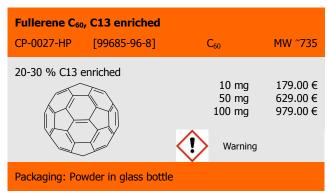




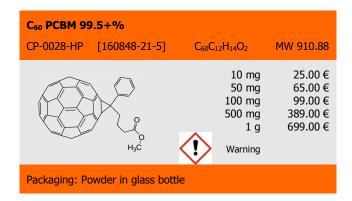


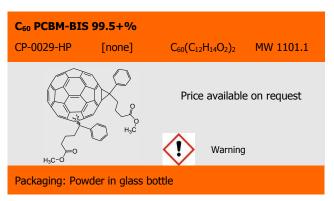


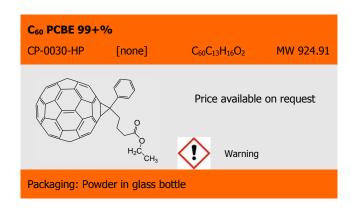


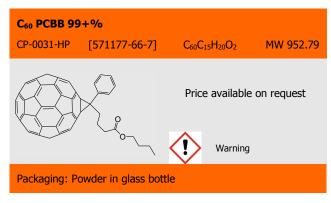


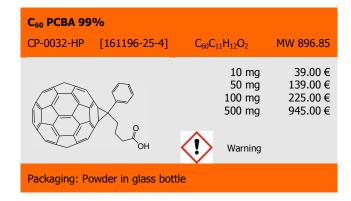


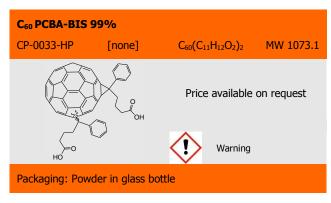


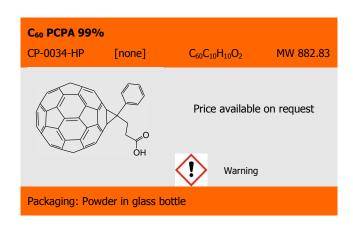


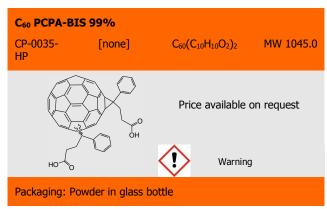




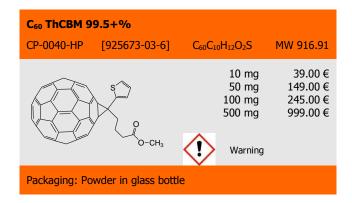


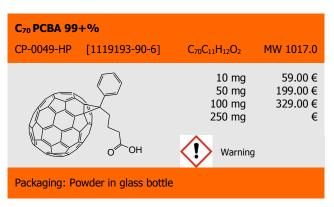


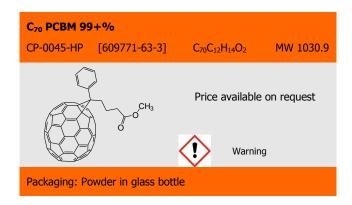


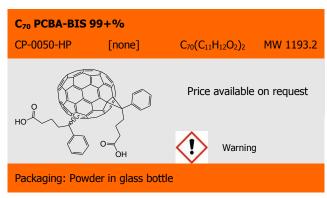


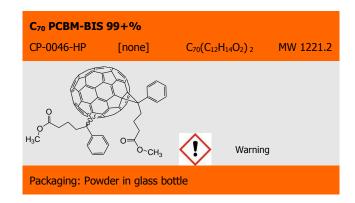


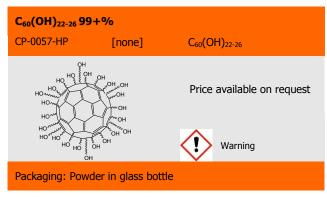


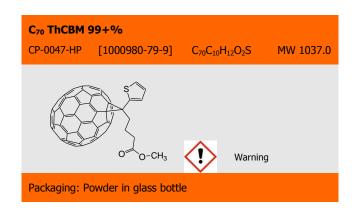


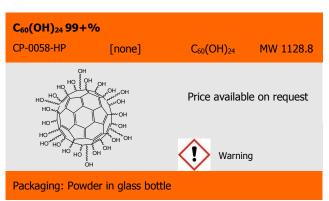






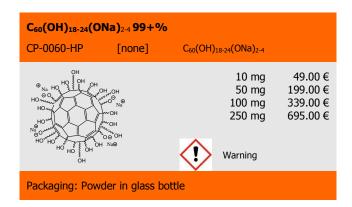


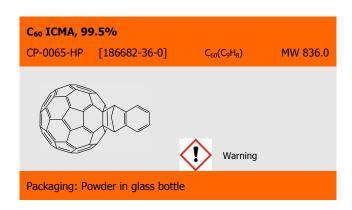


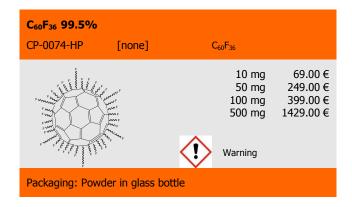


Products and prices 2016









Products and prices 2016 CARBON-BASED NANOPARTICLES



Single-Walled Carbon Nanotubes, 90%			
CP-0011-SG [308068-56-6]	С	MW 12.01	
OD: 1-2 nm L: 5-30 µm SSA: > 380 m ² /g	0.5 g 1 g 2 g 5 g	89.00 € 159.00 € 259.00 € 479.00 €	
Warning			
Packaging: Powder in PE bottle			

Multi-Walled Carbon Nanotubes, 97+%				
CP-0017-SG	[308068-56-6]	С	MW 12.01	
OD: 10-20 nm L: >5 µm SSA: 160-200		5 g 10 g 25 g 50 g 100 g	39.00 € 49.00 € 109.00 € 189.00 € 309.00 €	
<u>(1)</u>	Warning	-00 g		
Packaging: Po	owder in PE bottle			

Double-Walled Carbon Nanotubes, 60%				
CP-0013-SG [308068-56-6]	С	MW 12.01		
OD: 2-4 nm L: ~50 µm SSA: > 350 m ² /g	0.5 g 1 g 2 g 5 g	69.00 € 115.00 € 189.00 € 399.00 €		
Warning				
Packaging: Powder in PE bottle				

Multi-Walled Carbon Nanotubes, 97+%				
CP-0004-SG	[308068-56-6]	С	MW 12.01	
OD: 10-20 nm L: >2 µm SSA: 100-160		5 g 10 g 25 g 50 g 100 g	45.00 € 69.00 € 119.00 € 219.00 € 369.00 €	
(1)	Warning			
Packaging: Po	owder in PE bottle			

Multi-Walled Carbon Nanotubes, 95+%				
CP-0005-SG [308068-56-6]	С	MW 12.01		
OD: < 8 nm L: 10-30 µm SSA: >350 m ² /g	5 g 10 g 25 g 50 g 100 g	59.00 € 99.00 € 199.00 € 299.00 € 499.00 €		
Warning				
Packaging: Powder in PE bottle				

Multi-Walled Carbon Nanotubes, 95+%				
CP-0006-SG	[308068-56-6]	С	MW 12.01	
OD: 10-30 nn L: 5-15 µm SSA: 40-300 n	m²/g	5 g 10 g 25 g 50 g 100 g	49.00 € 69.00 € 119.00 € 199.00 € 329.00 €	
Warning; Discontinued Delivery whil stock last Packaging: Powder in PE bottle				

Multi-Walle	d Carbon Nanotul	oes, 95+%	
CP-0014-SG	[308068-56-6]	С	MW 12.01
OD: > 50 nm L: 0.5-2 μm SSA: 40-300 ι		5 g 10 g 25 g 50 g 100 g	55.00 € 79.00 € 129.00 € 229.00 € 389.00 €
(1)	Warning; Discontin	ued Delivery while s	stock last
Packaging: Po	owder in PE bottle		

Multi-Walled Carbon Nanotubes, 95+%				
CP-0008-SG	[308068-56-6]	С	MW 12.01	
OD: 10-30 nn L: 1-2 μm SSA: 40-300 ι		5 g 10 g 25 g 50 g 100 g	39.00 € 59.00 € 99.00 € 189.00 € 309.00 €	
Warning; Discontinued Delivery while stock last				
Packaging: Powder in PE bottle				

Products and prices 2016 CARBON-BASED NANOPARTICLES



Multi-Walled Carbon Nanotubes, 97+%			
CP-0009-SG [308068-56-6]	С	MW 12.01	
OD: 20-40 nm L: >5 µm SSA: 80-140 m ² /g	5 g 10 g 25 g 50 g 100 g	39.00 € 59.00 € 99.00 € 189.00 € 309.00 €	
! Warning			
Packaging: Powder in PE bottle			

Multi-Walled Carbon Nanotubes, 97+%			
CP-0010-SG	[308068-56-6]	С	MW 12.01
OD: 60-100 ni L: > 5 µm SSA: 40-70 m ²		5 g 10 g 25 g 50 g	39.00 € 59.00 € 99.00 € 189.00 €
(!)	Warning	100 g	309.00 €
Packaging: Po	wder in PE bottle		

Multi-Walled Carbon Nanotubes, 97+%			
CP-0012-SG [308068-56-6]	С	MW 12.01	
OD: 20-40 nm L: <2 μm	5 g 10 g	45.00 € 69.00 €	
SSA: 70-150 m ² /g	25 g 50 g	119.00 € 219.00 €	
\triangle	100 g	369.00 €	
Warning			
Packaging: Powder in PE bottle			

Multi-Walled Carbon Nanotubes, 95+%			
CP-0084-SG	[308068-56-6]	С	MW 12.01
OD: 8-15 nm L: ~50 μm		Price availab	le on request
(! >	Warning		
Packaging: Po	owder in PE bottle		

Multi-Walled Carbon Nanotubes, 95+%			
CP-0015-SG [308068-56-6]	С	MW 12.01	
OD: 40-60 nm L: >5 µm SSA: 40-70 m²/g	5 g 10 g 25 g 50 g 100 g	39.00 € 59.00 € 99.00 € 189.00 € 309.00 €	
Packaging: Powder in PE bottle			

Multi-Walled Carbon Nanotubes, 90%			
CP-0086-SG	[308068-56-6]	С	MW 12.01
OD: 10 nm L: ~1.5 µm SSA: 250-300	m²/g	100 g 200 g 500 g 1 kg	49.00 € 79.00 € 169.00 € 269.00 €
(!)	Warning		
Packaging: Powder in PE bottle			

Multi-Walled Carbon Nanotubes, 95+%			
CP-0016-SG [308068-56-6]	С	MW 12.01	
OD: 40-60 nm L: <2 μm SSA: 60-160 m²/g	5 g 10 g 25 g 50 g 100 g	45.00 € 59.00 € 119.00 € 219.00 € 369.00 €	
Packaging: Powder in PE bottle			

Now available **Dispersions of Carbon Nanotubes** on page 27

Products and prices 2016 CARBON-BASED NANOPARTICLES



Graphene, 0.55 -3.74 nm, >98wt	:%	
CP-0080-HP [1034343-98-0]	С	MW 12.01
Thickness: 0.55 - 3.74 nm SSA: 500 - 1000 m2/g Size: 0.5 - 3 µm Layer: 1-10 Appearance: black powder Warning	250 mg 500 mg 1 g 2 g	149.00 € 249.00 € 399.00 € 699.00 €
Packaging: Powder in PE bottle		

Graphite powder, 93% CP-0018-SG [7782-42-5]	С	MW 12.01
APS: 3-4 nm SSA: 540-650 m²/g PM: spherical Appearance: black powder	5 g 10 g 25 g 50 g 100 g	45.00 € 69.00 € 149.00 € 249.00 € 449.00 €
Packaging: Powder in PE bottle		

Graphene platelets, ~2 nm, 99.5% CP-0081-HP [1034343-98-0]	С	MW 12.01
Thickness: ~2 nm SSA: 750 m²/g PM: - Appearance: black powder	25 g 50 g 100 g 500 g 1 kg	29.00 € 49.00 € 79.00 € 259.00 € 459.00 €
Packaging: Powder in PE bottle		

Graphite powder, 99.9% CP-0019-UP [7782-42-5]	С	MW 12.01
APS: 400 nm SSA: - PM: flaky Appearance: black powder	10 g 25 g 50 g 100 g 500 g	49.00 € 89.00 € 129.00 € 195.00 € 599.00 €
Packaging: Powder in PE bottle		

Graphene platelets, 6-8 nm, 99.5%			
CP-0067-HP [1034343-98-0]	С	MW 12.01	
Thickness: 6-8 nm SSA: 120-150 m²/g PM: - Appearance: black powder	25 g 50 g 100 g 500 g 1 kg	39.00 € 65.00 € 109.00 € 355.00 € 639.00 €	
Packaging: Powder in PE bottle			

Multi-Walled Carbon Nanotubes, -COOH functionalized, 95+%, (-cooH > 1%)			
CP-0020-SG [308068-56-6]			
OD: 20-30 nm L: 10-30 μm SSA: 110 m²/g	1 g 2 g 5 g 10 g 25 g	45.00 € 69.00 € 135.00 € 229.00 € 429.00 €	
Warning			
Packaging: Powder in glass bottle			

Graphene platelets, 11-15 nm, 99.5%			
CP-0068-HP [1034343-98-0]	С	MW 12.01	
Thickness: 11-15 nm SSA: 50-80 m²/g PM: - Appearance: black powder	25 g 50 g 100 g 500 g 1 kg	29.00 € 49.00 € 79.00 € 259.00 € 479.00 €	
Packaging: Powder in PE bottle			
rackaging. Fowder in FL bottle			

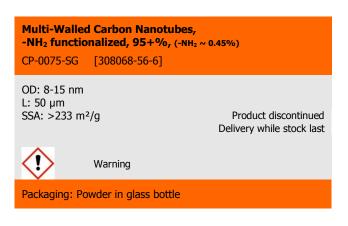
Multi-Walled Carbon Nanotubes, -OH functionalized, 95+%, (-OH > 1.5% CP-0021-SG [308068-56-6])		
OD: 20-30 nm L: 10-30 μm SSA: 110 m²/g	1 g 2 g 5 g 10 g 25 g	45.00 € 69.00 € 139.00 € 219.00 €	
Warning			
Packaging: Powder in glass bottle			

Packaging: Powder in glass bottle

CARBON-BASED NANOPARTICLES



Single-Walled Carbon Nanotubes, -COOH functionalised (~5%, 60% SWCNT, 90% CNT) CP-0022-SG [308068-56-6] 0.25 g 99.00€ OD: 1-2 nm 0.5 g 155.00 € L: 5-20 µm SSA: >400 m²/g 239.00 € 1 g 2 g 5 g 349.00 € 659.00 € Warning



Single-Walled Carbon Nanotubes, -OH functionalized (~4%, 60% SWCNT, 90% CNT)			
CP-0023-SG [308068-56-6]			
OD: 1-2nm L: 5-20 µm SSA: >400 m²/g	0.25 g 0.5 g 1 g 2 g 5 g	95.00 € 149.00 € 229.00 € 339.00 € 559.00 €	
Warning			
Packaging: Powder in glass bott	de		

Multi-Walled Carbon Nanotubes, -OH functionalized, 95+%, (short) CP-0085-SG [308068-56-6]		
OD: 10-20 nm L: 0.5-2 μm SSA: > 200m ² /g	1 g 2 g 5 g 10 g	59.00 € 99.00 € 189.00 € 269.00 €
! Warning		
Packaging: Powder in glass bottle		

Multi-Walled Carbon Nanotubes, - functionalised, 95+%, (-соон ~ 2.5		
CP-0024-SG [308068-56-6]		
OD: 8-15 nm L: ~50 μm SSA: ~230 m²/g	1 g 2 g 5 g 10 g 25 g	59.00 € 79.00 € 165.00 € 219.00 € 429.00 €
Warning		
Packaging: Powder in glass bottle		

Multi-Walled Carbon Nanotubes, -OH functionalized, 95+%, (-OH ~ 3%) CP-0077-SG [308068-56-6]			
OD: 30-50 nm L: 10-20 µm SSA: > 100 m ² /g	1 g 2 g 5 g 10 g	39.00 € 59.00 € 79.00 € 119.00 €	
Warning	25 g	219.00 €	
Packaging: Powder in glass bottle			

Multi-Walled Carbon Nanotubes, -OH functionalized, 95+% CP-0069-SG [308068-56-6]		
OD: 8-15 nm L: 10-50 μm SSA: > 225 m²/g	1 g 2 g 5 g 10 g 25 g	49.00 € 69.00 € 139.00 € 219.00 € 419.00 €
Warning	J	
Packaging: Powder in glass bottle		

Multi-Walled Carbon Nanotubes, -COOH functionalized, 95+%, (-соон ~ 2%)			
CP-0078-SG [308068-56-6]			
OD: 10-20 nm L: 10-30 µm SSA: > 200 m ² /g	1 g 2 g 5 g 10 g 25 g	39.00 € 59.00 € 79.00 € 109.00 € 209.00 €	
Warning			
Packaging: Powder in glass bottle			



Titanium Oxide (rutile, 40 wt%, 30-50 nm) in water				
DP-0001-HP	[1317-80-2] [7732-18-5]	TiO ₂ /H ₂ O		
APS: 30-50 nm SSA: - pH: 6-8 Appearance: m		25 g 100 g 500 g 1 kg	29.00 € 69.00 € 259.00 € 419.00 €	
(!)	Warning			
Packaging in glass bottle				

Titanium Oxide (anatase, 15 wt%, 5-30 nm) in water				
DP-0006-HP	[1317-70-0] [7732-18-5]	TiO ₂ /H ₂ O		
APS: 5-30 nm SSA: - pH: 6-8 Appearance: n	nilky liquid	25 g 100 g 500 g 1 kg	19.00 € 49.00 € 179.00 € 299.00 €	
(!)	Warning			
Packaging in glass bottle				

Titanium Oxid	Titanium Oxide (anatase, 20 wt%, 15 nm) in 2-propanol			
DP-0002-HP	[1317-70-0] [67-63-0]	TiO ₂ /C ₃ H ₈ O		
APS: 15 nm SSA: - pH: - Appearance: m	lky liquid	25 g 50 g 100 g 500 g	29.00 € 45.00 € 69.00 € 239.00 €	
Danger, UN1219; 3; PG II				
Packaging in glass bottle				

Zinc Oxide (20 wt%, 40 nm) in water			
DP-0007-HP	[1314-13-2] [7732-18-5]	ZnO/H₂O	
APS: 40 nm SSA: 50-~70 r pH: - Appearance: p	, 3	25 g 100 g 500 g	25.00 € 75.00 € 235.00 €
*	Warning		
Packaging in g	lass bottle		

1wt% MWCNT in water		
DP-0003-HP [308068-56-6] [7732-18-5]		
Available with all our Mulit-Walled Carbon Nanotubes. Do not store longer than two month	20 g 50 g 100 g 500 g	35.00 € 49.00 € 69.00 € 179.00 €
Warning		
Packaging in glass bottle		

Zinc Oxide (40	wt%, 20 nm) in	1-Methoxy-2-prop	yl acetate
DP-0008-HP	[1314-13-2] [108-65-6]	ZnO/C ₆ H ₁₂ O ₃	
APS: 20 nm SSA: - pH: Appearance: mil	ky liquid	25 g 50 g 100 g 500 g	85.00 € 129.00 € 219.00 € 799.00 €
	Danger, UN19	93; 3; PG II	
Packaging in gla	ss bottle		

0.5wt% SWCNT in water		
DP-0004-HP [308068-56-6] [7732-18-5]		
Dispersion of CP-0011 in water Do not store longer than two month	20 g 50 g 100 g 500 g	39.00 € 69.00 € 99.00 € 349.00 €
! Warning		
Packaging in glass bottle		

γ-Aluminium Oxide (10 wt%, 15 nm) in 2-propanol			
DP-0009-HP	[1344-28-1] [67-63-0]	Al_2O_3/C_3H_8O	
APS: 15 nm SSA: - pH: 6-8 Appearance: mil	ky liquid	25 g 50 g 100 g 500 g	59.00 € 99.00 € 179.00 € 715.00 €
(A) (!)	Danger, UN1 2	219; 3; PG II	
Packaging in glass bottle			



Copper (14 wt%, 5-7 nm) in organic media			
DP-0011-HP [7440-50-8]	Cu		
APS: 5-7 nm SSA: - Viscosity: 1.15-1.18 Pa·s Appearance: brown to black	25 g 50 g 100 g 500 g 1 kg	39.00 € 69.00 € 119.00 € 449.00 € 749.00 €	
Packaging in glass bottle			

Magnetit, highly uniform Nanospheres (1mg/mL in Chloroform)			
DP-1111-HP	[1309-38-2]	Fe3O4/CHCl3	
APS: 12 nm PM: nanospheres Appearance: blac		1 mL 5 mL 10 mL 20 mL	49.00 € 149.00 € 239.00 € 399.00 €
	Danger		
Packaging in glass bottle			

3wt% MWCNT in NMP DP-0012-HP [308068-56-6] [872-50-4]		
OD: 10-40 nm L: 5-30 µm Appearance: black	25 g 50 g 100 g 500 g	59.00 € 99.00 € 149.00 € 449.00 €
Danger		
Packaging in glass bottle		

Magnetit, highly uniform Nanocubes (1mg/mL in Chloroform)			
DP-1112-HP	[1309-38-2]	Fe3O4/CHCl3	
APS: 12 nm PM: cubes Appearance: bla	ack	1 mL 5 mL 10 mL 20 mL	49.00 € 149.00 € 239.00 € 399.00 €
	Danger		
Packaging in glass bottle			

Silicon oxide (40wt%, 20 nm) in water			
DP-0013-HP [7631-86-9] [7732-18-5]	TiO ₂ /C ₃ H ₈ O		
APS: 20 nm pH: 10 Viscosity: 13 cps	25 g 100 g 500 g 1 kg	25.00 € 59.00 € 189.00 € 295.00 €	
Warning			
Packaging in glass bottle			

Magnetit, highly uniform Nanospheres + amino groupes (1mg/mL in Water)			
DP-1113-HP	[1309-38-2]	Fe3O4/H2O	
APS: 12 nm PM: nanospher Appearance: bl		1 mL 5 mL 10 mL 20 mL	139.00 € 399.00 € 699.00 € 1199.00 €
(1)	Danger		
Packaging in glass bottle			

Magnetit, hig (1mg/mL in V	•	nocubes + amino	groupes
DP-1114-HP	[1309-38-2]	Fe3O4/H2O	
APS: 12 nm PM: cubes Appearance: bl	ack	1 mL 5 mL 10 mL 20 mL	139.00 € 399.00 € 699.00 € 1199.00 €
	Danger		
Packaging in glass bottle			

Products and prices 2016

Dispersions



Conjugation Kits, Magnetit (1mg/mL in Water) + various ligands, i.e. proteins, peptides, small molecules, polymers and DNA on surface DP-1115-HP [1309-38-2] Fe3O4/H2O APS: 12 nm 1 mL 139.00 € Appearance: black 399.00€ 5 mL 699.00€ 10 mL 20 mL 1199.00 € Danger Packaging in glass bottle

Magnetit Nanopowdo DP-1116-HP [1309	er -38-2] Fe3O4			
APS: 12 nm Appearance: black	1 r 5 r 10 r 20 r	ng 139.00 € ng 229.00 €		
Dan	ger			
Packaging in glass bottle				

Further dispersions of specific nanoparticles are available on request

Dangerous Goods



Hazardous symbol	Identification	Description
	GHS01	Danger : Materials, which can explode under certain conditions.
1	(EN) Explosive	
	(D) Explosionsgefährlich	Handling : Avoid impact, shock, friction, sparking and heat.
2300	(FR) Explosif	
	(IT) Esplosivo	
	(ES) Explosivo	
	GHS02	Danger : Selfinflammable materials, easy-inflammable gaseous materials,
	(EN) Extremely flammable (D) Hochentzündlich	moisture-sensitive materials or combustible liquid Handling : Avoid contact with ignition source/sources of danger (air,
^	(FR) Extrêmement inflammable	water).
	(IT) Estremamente infiammabile	water j.
	(ES) Extremadamente inflamable	
マッ/	(EN) Highly flammable	Danger : Selfinflammable materials, easy-inflammable gaseous materials,
	(D) Leichtentzündlich	moisture-sensitive materials or combustible liquid
	(FR) Facilement inflammable	Handling : Avoid contact with ignition source/sources of danger (air,
	(IT) Facilmente infiammabile	water).
	(ES) Fácilimente inflamable	,
	GHS03	Danger : Materials, that are able to ignite inflammable materials or to
	(EN) Oxidizing	promote broken out fires and thus making fire fighting measures more
**** **	(D) Brandfördernd	difficult.
	(FR) Comburant	Handling : Avoid every contact with inflammable materials.
	(IT) Comburente	
	(ES) Comburente GHS06	Danger : After inhalation, swallowing or admission by the skin usually
	(EN) Very toxic	health damage of substantial extent or death occurs. Already less than 25
	(D) Sehr giftig	mg per kilogram body weight can lead to death.
	(FR) Très toxique	Handling: Avoid any contact with the human body avoid; in case of
	(IT) Molto tossico	indisposition the immediately visit a physician.
	(ES) Muy tóxico	
	(EN) Toxic	Danger : After inhalation, swallowing or admission by the skin usually
V	(D) Giftig	health damage of substantial extent or death occurs. Already less than 25
	(FR) Toxique	mg per kilogram body weight can lead to death.
•	(IT) Tossico	Handling : Avoid any contact with the human body avoid; in case of
	(ES) Tóxico	indisposition the immediately visit a physician.
	GHS08	Danger: With admission into the body these materials may cause health
	(EN) Harmful	damage.
	(D) Gesundheitsschädlich	Handling : Avoid contact with the human body, also inhalation of vapors; in
	(FR) Nocif (IT) Nocivo	case of indisposition visit a physician.
	(ES) Nocivo	
i 👗	GHS07	Danger : Materials with irritation on skin, eyes and respiratory organs that
	(EN) Irritant	may cause inflammations.
	(D) Reizend	Handling : Do not inhale vapors and avoid contact with skin and eyes.
	(FR) Irritant	
	(IT) Irritante	
Y	(ES) Irritante	
	GHS05	Danger : Living tissue and many materials are destroyed by contact with
PO	(EN) Corrosive	this chemical.
<u> </u>	(D) Ätzend	Handling : Do not inhale vapors and avoid contact with skin, eyes and
	(FR) Corrosit	clothes.
	(IT) Corrosivo (ES) Corrosivo	
	GHS09	Danger : Release into the environment may cause damage of the ecological
VV	(EN) Dangerous for the environment	system.
1	(D) Umweltgefährlich	Handling: Do not dispose in drains, soil or environment depending upon
	(FR) Dangereux pour l'environnement	hazard potential. Consider special disposal regulations!
	(IT) Pericoloso per l'ambiente	
	(ES) Peligroso para el medio ambiente	
_	1 (-) : 3 ·	I .

Products and prices 2016

Dangerous Goods



D: :		
Physic	aı Ha	zards

H200: Unstable explosive

H201: Explosive; mass explosion hazard

H202: Explosive; severe projection hazard H203: Explosive; fire, blast or projection hazard

H204: Fire or projection hazard H205: May mass explode in fire

H220: Extremely flammable gas H221: Flammable gas

H222: Extremely flammable material H223: Flammable material

H224: Extremely flammable liquid and vapour H225: Highly flammable liquid and vapour H226: Flammable liquid and vapour

H227: Combustible liquid

H228: Flammable solid

H240: Heating may cause an explosion H241: Heating may cause a fire or explosion H242: Heating may cause a fire H250: Catches fire spontaneously if exposed to air

H251: Self-heating; may catch fire H252: Self-heating in large quantities; may catch fire

H260 In contact with water releases flammable gases which may ignite spontaneously
H261: In contact with water releases flammable gas

H270: May cause or intensify fire; oxidizer
H271: May cause fire or explosion; strong oxidizer

H272: May cause lie of explication, storing challed H272: May intensify fire; oxidizer H280: Contains gas under pressure; may explode if heated H281: Contains refrigerated gas; may cause cryogenic burns or injury H290: May be corrosive to metals

Health Hazards

H300: Fatal if swallowed H301: Toxic if swallowed H302: Harmful if swallowed

H303: May be harmful if swallowed H304: May be fatal if swallowed and enters airways

H305: May be harmful if swallowed and enters airways H310: Fatal in contact with skin

H310: Fatal in contact with skin
H311: Toxic in contact with skin
H312: Harmful in contact with skin
H313: May be harmful in contact with skin
H314: Causes severe skin burns and eye damage

H314: Causes severe skin burns and eye of H315: Causes skin irritation H316: Causes mild skin irritation H317: May cause an allergic skin reaction H318: Causes serious eye damage H319: Causes serious eye irritation H320: Causes eye irritation H320: Fatal if inhaled H321: Toxic if inhaled

H331: Toxic if inhaled H332: Harmful if inhaled

H333: May be harmful if inhaled H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled

H335: May cause respiratory irritation H336: May cause drowsiness or dizziness

H340: May cause genetic defects
H341: Suspected of causing genetic defects

H350: May cause cancer H351: Suspected of causing cancer

H301: Suspected or causing cancer H360: May damage fertility or the unborn child H361: Suspected of damaging fertility or the unborn child H362: May cause harm to breast-fed children H370: Causes damage to organs

H371: May cause damage to organs H372: Causes damage to organs through prolonged or repeated exposure

H373: May cause damage to organs through prolonged or repeated

exposure **Environmental hazards**

H400: Very toxic to aquatic life
H401: Toxic to aquatic life
H402: Harmful to aquatic life
H402: Harmful to aquatic life
H410: Very toxic to aquatic life with long lasting effects
H411: Toxic to aquatic life with long lasting effects
H412: Harmful to aquatic life with long lasting effects

H413: May cause long lasting harmful effects to aquatic life

European Union Hazard statements

EUH001: Explosive when dry
EUH006: Explosive with or without contact with air
EUH014: Reacts violently with water
EUH018: In use may form flammable/explosive vapour-air mixture
EUH019: May form explosive peroxides
EUH044: Risk of explosion if heated under confinement
EUH029: Contact with water liberates toxic gas
EUH031: Contact with acids liberates toxic gas
EUH031: Contact with acids liberates toxic gas

EUH032: Contact with acids liberates very toxic gas
EUH066: Repeated exposure may cause skin dryness or cracking

EUH070: Toxic by eye contact EUH071: Corrosive to the respiratory tract

EUH059: Hazardous to the ozone layer

EUH201: Contains lead. Should not be used on surfaces liable to be

chewed or sucked by children EUH201A: Warning! Contains lead

EUH2012 Oyanoacylate J Danger. Bonds skin and eyes in seconds.

Keep out of the reach ofchildren.

EUH203: Contains chromium(VI). May produce an allergic reaction.

EUH204: Contains isocyanates. May produce an allergic reaction.

EUH205: Contains epoxy constituents. May produce an allergic reaction.

EUH206: Warping ID a part use treather with other products. May

EUH206: Warning! Do not use together with other products. May release dangerous gases (chlorine).

release dangerous gases (chlonne).

EUH207: Warning! Contains cadmium. Dangerous fumes are formed during use. See information supplied by the manufacturer Comply with the safety instructions.

EUH208: Contains **Came of sensitising substance**. May produce an

allergic reaction.

EUH209: Can become highly flammable in use.

EUH209A: Can become flammable in use.

EUH210: Safety data sheet available on request. EUH401: To avoid risks to human health and the environment, comply with the instructions for use

Precautionary Statements
P101: If medical advice is needed, have product container or label at

P102: Keep out of reach of children

P103: Read label before use
P201: Obtain special instructions before use
P202: Do not handle until all safety precautions have been read and understood

understood
P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking
P211: Do not spray on an open flame or other igntion source
P220: Keep/Store away from clothing/.../combustible materials
P221: Take any precaustion to avoid mixinn with combustibles
P222: Do not allow contact with air
P223: Keep away from any possible contact with water, because of violent reaction and possibleflash fire
P230: Keep wetted with ...
P231: Handle under inert gas
P232: Protect from moisture
P233: Keep container tightly closed
P234: Keep ontial or original container
P235: Keep cool

P235: Keep cool
P240: Ground/bond container and receiving equipment
P241: Use explosion-proof electrical/ventilating/light/.../equipment

P241: Use only non-sparking tools
P243: Take precautionary measures against static discharge
P244: Keep reduction valves free from grease and oil
P250: Do not subject to grinding/shock/.../friction

P251: Pressurized container – Do not pierce or burn, even after use P260: Do not breathe dust/fume/gas/mist/vapours/spray

P261: Avoid breathing dust/fume/gas/mist/vapours/spray P262: Do not get in eyes, on skin, or on clothing

P263: Avoid contact during pregnancy/while nursing P264: Wash ... thoroughly after handling P270: Do not eat, drink or smoke when using this product

P271: Use only outdoors or in a well-ventilated area
P272: Contaminated work clothing should not be allowed out of the

workplace P273: Avoid release to the environment

P280: Wear protective gloves/protective clothing/eye protection/face

protection

P281: Use personal protective equipment as required

P282: Wear cold insulating gloves/face shield/eye protection

P283: Wear fire/flame resistant/retardant clothing

P284: Wear respiratory protection

P285: In case of inadequate ventilation wear respiratory protection

P285: In case of inadequate ventilation wear respiratory p
P231+232: Handle under inert gas. Protect from moisture
P235+410: Keep cool. Protect from sunlight
P301: IF SWALLOWED:
P302: IF ON SKIN:
P303: IF ON SKIN (or hair):
P304: IF INHALED:
P305: IF IN EYES:
P306: IF ON CLOTHING:
P307: IF exposed:

P307: IF exposed: P308: IF exposed or concerned:

P309: IF exposed or you feel unwell: P310: Immediately call a POISON CENTER or doctor/physician P311: Call a POISON CENTER or doctor/physician

P312: Call a POISON CENTER or doctor/physician if you feel unwell P313: Get medical advice/attention

P314: Get Medical advice/attention if you feel unwell P315: Get immediate medical advice/attention

P313. Get illimediate medical advice/attention P320: Specific treatment is urgent (see ... on this label) P321: Specific treatment (see ... on this label) P322: Specific measures (see ... on this label) P330: Rinse mouth P331: Do NOT induce vomiting

P332: If skin irritation occurs: P333: If skin irritation or a rash occurs:

P334: Immerse in cool water/wrap in wet bandages P335: Brush off loose particles from skin

P336: Thaw frosted parts with lukewarm water. Do not rub affected

P337: If eye irritation persists: P338: Remove contact lenses if present and easy to do. continue rinsing

P340: Remove victim to fresh air and keep at rest in a position

comfortable for breathing P341: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortablefor breathing

P342: If experiencing respiratory symptoms P350: Gently wash with soap and water

P351: Rinse continuously with water for several minutes P352: Wash with soap and water

P353: Rinse skin with water/shower P360: Rinse immediately contaminated clothing and skin with plenty of

P300: Kinse immediately contaminated clothing and skin with water before removingclothes
P361: Remove/Take off immediately all contaminated clothing
P362: Take off contaminated clothing and wash before reuse
P363: Wash contaminated clothing before reuse
P370: In case of fire:

P370: In case of fire: P371: In case of major fire and large quantities: P372: Explosion risk in case of fire

P373: DO NOT fight fire when fire reaches explosives P374: Fight fire with normal precautions from a reasonable distance

P375: Fight fire remotely due to the risk of explosion P376: Stop leak if safe to do so P377: Leaking gas fire – do not extinguish unless leak can be stopped

P371: Leaking yas in e – uo not extiniquish unless leak can be stopped safely
P378: Use ... for extinction
P381: Eliminate all ignition sources if safe to do so
P301+310: IF SWALLOWED: Immediately call a POISON CENTER or

doctor/physician
P301+312: IF SWALLOWED: Call a POISON CENTER or

doctor/physician if you feel unwell P301+330+331: IF SWALLOWED: Rinse mouth. Do NOT induce

vomiting P302+334: IF ON SKIN: Immerse in cool water/wrap in wet bandages P302+350: IF ON SKIN: Gently wash with soap and water P302+352: IF ON SKIN: Wash with soap and water P303+361+353: IF ON SKIN (or hair): Remove/Take off immediately all

P303+351+353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing.
Rinse skin with water/shower
P304+312: IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P304+341: IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+351+338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do continue rinsing
P306+360: IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes

P307+311: IF exposed: Call a POISON CENTER or doctor/physician P308+313: IF exposed or concerned: Get medical advice/attention P309+311: IF exposed or you feel unwell: Call a POISON CENTER or

doctor/physician P332+313: If skin irritation occurs: Get medical advice/attention P333+313: If skin irritation or a rash occurs: Get medical

advice/attention
P335+334: Brush off loose particles from skin. Immerse in cool

P337-394. Bitish oil toose particles from skill. Illiminerse in water/wap in wet bandages P337+313: Get medical advice/attention P342+311: Call a P0ISON CENTER or doctor/physician P370-376: In case of fire: Stop leak if safe to do so P370+378: In case of fire: Evacuate area P370-380: In case of fire: Evacuate area P370-380-373: In case of fire: Evacuate area

P370+380+375: In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion
P371+380+375: In case of major fire and large quantities: Evacuate

area. Fight fire remotely due to the risk of explosion P401: Store ..

P402: Store in a dry place P403: Store in a well ventilated place

P404: Store in a closed container P405: Store locked up

P405: Store in a corrosive resistant/... container with a resistant inner liner
P407: Maintain air gap between stacks/pallets
P410: Protect from sunlight

P411: Store at temperatures not exceeding ... °C/... °F P412: Do not expose to temperatures exceeding 50 °C/122 °F P420: Store away from other materials

P422: Store contents under ...
P402+404: Store in a dry place. Store in a closed container P403+233: Store in a well ventilated place. Keep container tightly closed

closed
P403+235. Store in a well ventilated place. Keep cool
P410-403: Protect from sunlight. Store in a well ventilated place
P410+412: Protect from sunlight. Do not expose to temperatures
exceeding 50 °C/122 °F
P411+235: Store at temperatures not exceeding ... °C/... °F, Keep cool
P501: Dispose of contents/container to ...

Products and prices 2015

GENERAL TERMS & CONDITIONS



These General Conditions of Sale and Delivery shall be an integral part of the contract of purchase. Conflicting or deviating conditions of purchase or other reservations made by the Buyer shall not be effective unless the Seller has expressly accepted them in writing for a particular order.

No release of chemicals to private persons, business of stomers and research institutions only

II. Offers. Orders

In. The Seller's offers shall not be binding with respect to price, quantity, delivery time and availability. 2. The Buyer's orders shall become binding on the Seller upon receipt by the Buyer of the Seller's written order acknowledgment (or invoice or delivery note)

- The prices invoiced shall be the Seller's prices effective at the time of delivery plus statutory sales tax.
 Should the Seller, in the interval between conclusion of the contract and delivery, effect a general price increase, the Buyer shall have the right to withdraw from the contract within two weeks of having been informed thereof, unless the price increase is exclusively due to an increase in freight rates. The right of withdrawal shall not apply to long-term supply contracts (contracts for the performance of a continuing obligation).

 3. The weight of the goods on which the invoiced amount is to be calculated shall be ascertained in the
- dispatch department of the Seller's plant from which the goods are supplied unless the Buyer wishes them to be weighted, at his expense, by the railway authorities at the station of dispatch.

- IV. Payment

 1. The handing in of bills of exchange shall be subject to the Seller's prior consent and shall not constitute payment. The maturity of bills shall not exceed 90 days from the invoice date. Discount expenses, bill charges, bill tax and similar expenses incurred in the period beginning 30 days after the invoice data shall be for the Buver's account.
- Where the Seller has reason to doubt the Buyer's solvency or credit worthiness and the Buyer is not prepared to effect advance cash payment or provide the Seller with security as requested, the Seller shall have the right to cancel that portion of the contract which he has not yet performed 3. Deposits and advance payments shall be made inclusive of sales tax.
- 4. Payment shall not be deemed to have been effected until the amount has been cleared into one of the Seller's accounts.
- 5. The Seller reserves the right to use payments for the settlement of the invoices which have been outstanding longest, plus any interest on arrears and costs accrued thereon, in the following order: costs, interest principal claim
- 6. The Buyer shall not have the right to withhold payments. Counterclaims may only be offset if they are uncontested or have become res judicata.

- V. Delivery

 1. The Seller shall make every effort to effect delivery as early as possible. There shall be no fixed periods for
- delivery.

 2. Should, notwithstanding the preceding paragraph, a fixed period for delivery have been agreed, and should the Seller default with the supply, the Buyer shall grant the Seller a reasonable respite, normally of four
- Delivery shall be subject to punctual delivery of the appropriate goods by the Seller's own suppliers.
 The day of delivery shall be the day on which the goods leave the Seller's plant or warehouse or, if that day
- cannot be ascertained, the day on which the goods are put at the Buyer's disposal.

 5. The provision of packaging including tankers and tank containers by the Seller shall be subject to special

VI. Force Majeure, Impediments to Performance

Force majeure of any kind, unforeseeable production, traffic or shipping disturbances, fire, floods, unforeseeable shortages of labor, utilities or raw materials and supplies, strikes, lockouts, acts of government, and any other hindrances beyond the control of the party obliged to perform which diminish, delay or prevent production, shipment, acceptance or use of the goods, or make it an unreasonable proposition, s hall relieve the party from its obligation to supply or take delivery, as the case may be, as long as and to the extent that the hindrance prevails. If, as a result of the hindrance, supply and/or acceptance is delayed by more than eight weeks, either party shall have the right to cancel the contract. Should the Seller's suppliers fail to supply him in whole or in part, the Seller shall not be under obligation to purchase from other sources. In such cases the Seller shall have the right to distribute the available quantities among his customers while at the same time taking into account his captive requirements.

- VII. Shipment

 1. The Seller reserves the right to choose the route and the mode of transport. Any additional costs resulting from special shipping requests made by the Buyer shall be borne by the Buyer. Unless prepaid freight has been agreed, the Buyer shall also bear any increases in freight rates which become effective after the contract has been concluded, any additional costs resulting from re-routing a consignment, storage expenses,
- 2. The risk of destruction, loss or damage shall pass to the Buyer upon dispatch of the goods or, if they are collected by the Buyer, at the time they are placed at the Buyer's disposal

VIII. Retention of Title

- . Title to the goods shall not pass to the Buyer until he has fulfilled all liabilities arising from his business connection with the Seller, which shall include settling accessory claims and claims for damages and honoring cheques and bills. Title to the goods shall also remain with the Seller if the Seller's claims have been included in a current account and the balance of this account has been struck and acknowledged.
- If the Buyer defaults in his obligations to the Seller, the Seller shall have the right, without granting a respite and without cancelling the contract, to demand the return of the goods to which he retains title. Acceptance of the returned goods shall not constitute cancellation of the contract unless the Seller has expressly declared this in. If the Seller cancels the Contract, he shall have the right to demand appropriate compensation for having permitted the Customer to use the item for a certain period.
- and the permitted use considered to be the term of a certain period.

 If goods to which the Seller retains title are processed into new products, the Buyer shall be deemed to be effecting such processing on behalf of the Seller without thereby acquiring any claims on the Seller. The Seller's title shall thus extend to the products resulting from the processing. If goods to which title is retained by the Seller are processed together with, mixed with or attached to goods to which title is retained by third parties, the Seller shall acquire co-ownership of the resulting products in the ratio of the invoice value of the goods owned by him to the invoice value of the goods owned by those third parties. If the goods, as a result of such mixing or attaching become part of a principal matter of the Buyer, the Buyer, by accepting these Conditions, assigns in advance his title to the new item to the Seller.
- 4. The Buyer shall be under obligation to provide, on behalf of the Seller, adequate storage of the goods to which the Seller retains title, to service and repair them at his expense and to insure them at his expense against loss and damage up to an extend which may reasonably be expected of a prudent businessman. By accepting these Conditions the Buyer assigns in advance to the Seller any claims which may accrue to him under the insurance policies.
- 5. As long as the Buyer duly meets his liabilities to the Seller, he shall have the right, in the normal course of business, to do as he wishes with the goods to which the Seller retains title. This shall not apply, however, if business, to us a few wines with the goods or which the scheme teather use. This stain on apply, however, in the and his customers have concluded an agreement according to which the Buyer must not assign his claims on them to third parties. The Buyer shall not have the right to pledge, chattel mortgage or otherwise encumber the goods to which the Seller retains title. When reselling the goods, the Buyer shall make the passing of the title subject to full payment of the goods by his customers.
- 6. By accepting these Conditions, the Buyer assigns in advance to the Seller any claims which may arise from a resale of the goods to which the Seller retains title, together with any incidental rights and security interests including bills of exchange and cheques, so as to provide the Seller with security for all claims he has on the Buyer as a result of the business connection. If goods to which the Seller retains title are sold together with other goods at a single price, the assignment shall be limited to the portion of the invoice value which covers the goods to which the Seller retains title. If the Buyer sells goods of which the Seller has co-ownership pursuant to clause VIII. 3., the assignment shall be limited to the portion of the invoice value which corresponds to the Seller's co-ownership. If the Buyer uses goods to which the Seller retains title for

processing a third party's product on a contract basis, in accepting these Conditions he assigns in advance his contractual claim on the third party to the Seller in order to provide him with security for his claim. As long as the Buyer duly meets his liabilities to the Seller, he may collect claims from a resale or from contract processing himself. He shall not have the right to assign or pledge such claims as security.

- 7. If the Seller believes his claims to be at risk, the Buyer shall, at the Seller's request, inform his customers o the assignment of his claims to the Seller and supply the Seller with all necessary information and documents. Any acts of third parties aimed at seizing goods to which the Seller retains title or at appropriating claims assigned to him shall be brought to the Seller's attention by the Buyer immediately.
- assigned to limit shall be brought to the Seller sectionally by the subject that shall be strongly as the strongly and the security provided to the Seller exceeds the value of the claims to be safeguarded by more than 20 per cent, the Seller shall, at the Buyer's request, bring the excess coverage down to 20 per cent. by releasing security of his own choice.

- A. No claims for compensation may be lodged by the Buyer including those of a non-contractual nature for any minor negligent breach of duty by the Seller, his executive staff or other agents, unless such breach concerns a duty that is crucial for the object of the contract.
- The Seller shall only be liable for indirect damage or damage which could not be foreseen at the time of conclusion of the contract if such damage is due to a gross fault on the part of the Seller or one of his managerial employees.
- The above limitations shall not apply to damage resulting from death, injury or damage to health. However, this shall not affect the applicability of compelling statutory liability regulations such as, for example, liability for the assumption of a guarantee or product liability law.

X. Notification of Defects

1. Notification of defects shall only be recognized if filed in writing within two weeks of receipt of the goods, together with supporting evidence, samples and packing slips, stating the invoice number and date, and the markings on the packaging.

2. Hidden defects must be notified to the Seller immediately upon discovery, but not later than five months

after receipt of the goods. This shall not affect the periods of limitation. The burden of proving that a defect is a hidden defect shall rest with the Buyer.

3. Goods forming the subject of a complaint shall not be returned to the Seller except with the Seller's express

XI. Buyer's Rights in the event of Defects

- 1. Warranty claims made by the Buyer shall only entitle the Buyer to be supplied with a replacement. If the replacement provided by the Seller is also defective, the Buyer may reduce the purchase price or opt to cancel the contract. Claims for damages as defined in Section IX shall remain unaffected by the above. Claims made by the Buyer due to expenses incurred as a result of reworking, in particular transport, travel, labor and material costs, shall be excluded where such expenses have been increased by the fact that the item was subsequently transported to a location other than the premises of the party placing the order, unless the goods were supplied to this location in line with their intended use.

 2. In the event of recourse to the guarantee by the Buyer following a successful claim against the latter on the
- basis of the provisions governing the purchase of a consumer good, the claims under a right of recourse in accordance with the regulations on the purchase of consumer goods shall remain unaffected. Section IX shall
- apply to any claim for damages.

 3. The Buyer must inform the Seller without delay of any case of recourse within the supply chain. Statutory claims under a right of recourse by the Buyer against the Seller shall not apply with respect to arrangements entered into by the Buyer with its customer over and above statutory warranty claims.
- 4. Any guarantee agreement must be made in writing. A statement of guarantee shall only be effective if it describes the content of the guarantee and the duration and physical scope of guarantee protection in sufficient detail.

XII. Periods of Limitation

In cases that fall under § 438, paragraph 1, no. 3 of the Federal Civil Code (BGB), warranty claims shall expire with effect from one year from the beginning of the statutory period of limitation. In cases that fall under § 438, paragraph 1, no. 2 of the Federal Civil Code (BGB) warranty claims shall expire with effect from two years from the beginning of the statutory period of limitation. Compelling regulations governing the statutory period of limitation or the question of liability, such as, for example, liability for the assumption of a guarantee, liability for willful intent and gross negligence, for death, physical injury or damage to health, for the violation of essential contractual obligations, liability in accordance with the product liability law and the provisions relating to the sale of consumer goods shall remain unaffected.

- to the sale of consumer goods shall remain unameteted.

 XIII. Properties of Goods, Technical Support, Use and Processing

 1. The properties of the goods shall as a general rule only include the properties as stated in the product descriptions, specifications and labeling of the Seller. Public statements, claims or advertising shall not be classed as information on the properties of the item for sale.
- 2. Technical advice provided by the Seller verbally, in writing or by way of trials is given in good faith but without warranty, and this shall also apply where proprietary rights of third parties are involved. The Seller's technical advice shall not release the Buyer from the obligation to test the products supplied by the Seller as to their suitability for the intended processes and uses The application, use and processing of the products are beyond the Seller's control and therefore entirely the Buyer's responsibility.

- 1. The Buyer shall not have the right to refer to the Seller's products when offering or supplying substitute products or, in price lists or similar business communications, to use the word "substitute" in conjunction with the Seller's - protected or unprotected product designations or list these designations together with any designations for substitute products.
- When using the Seller's products for manufacturing purposes or when processing them into new products, the Buyer shall not have the right, without the Seller's prior consent, to use the Seller's product designations, especially his trademarks, on the resulting products or on the packaging therefore or in any relevant printed matter or advertising literature, particularly by mentioning the Seller's products as components of his own products. The supply of goods under a trademark shall not be deemed agreement to the use of this trademark for the products manufactured therefrom.

XV. Place of Performance and Jurisdiction, Invalidity of Individual Clauses

- 1. Place of performance for delivery shall be the Seller's dispatch department; place of performance for payment shall be "Heilbronn".

 2. Place of jurisdiction for both parties shall be Heilbronn. The Seller shall furthermore have the right to sue
- the Buyer at the Buyer's general place of jurisdiction.

 3. Should any clause in these General Conditions of Sale and Delivery be or become invalid, this shall not
- affect the validity of the remaining clauses or remaining parts of the clause concerned. T he parties shall replace any invalid arrangement by an effective one which conforms as far as possible to the economic purpose of the invalid clause

Heilbronn, June 2010

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