

## CATALOG



## 2018 - II

Carbon Nano-Powders						
#	Product	Description	Reference	Quantity	Packing	Price, \$
1	<b>RayND Code: 100</b>	Nanodiamond powder of laser synthesis, Incombustible residue: < 0.01 wt.%; possibly customized	Average grain size: 4.0-5.0 nm	2 g	Glass vial	30
				10 g	Plastic bottle	160
				100 g	Plastic bottle	1400
2	<b>RayND-AL Code: 101</b>	Nanodiamond powder of laser synthesis, hydroxylated & nitrogenized; incombustible residue: < 0.01 wt. %; for biomed research	<b>Hydrophilic &amp; Lyophilic; high PL</b> , Average grain size: 4.0-5.0 nm	2 g	Glass vial	40
				10 g	Plastic bottle	200
				100 g	Plastic bottle	2000
3	<b>RayND-M Code: 102</b>	Nanodiamond powder of laser synthesis, modified, metal free, incombustible residue: < 0.1 wt. %, for scientific research	<b>Ferromagnetic;</b> Average grain size: 4.0-5.0 nm	1 g	Glass vial	250
4	<b>RT-DND Code: 110</b>	Detonation nanodiamond powder, purified, non-modified, incombustible residue: < 0.1 wt. %; for wide range of applications	<b>Hydrophilic &amp; Lyophobic;</b> Average grain size: 3.5-5.5 nm	10 g	Plastic bottle	30
				100 g	Plastic bottle	200
				500 g	Plastic jar	800
5	<b>RT-DND-B Code: 112</b>	Detonation nanodiamond powder, purified, alkylated; incomb. residue: < 0.1 wt. %, for nuclear physics research	<b>Hydrophobic &amp; Lyophobic;</b> Average grain size: 3.5-5.5 nm	10 g	Plastic bottle	40
				100 g	Plastic jar	260
				500 g	Plastic jar	1100
6	<b>RT-DND-L Code: 113</b>	Detonation nanodiamond powder, purified, hydroxylated; incomb. residue: < 0.1 wt. %, for electroplating & polishing	<b>Hydrophilic &amp; Lyophobic;</b> Average grain size: 3.5-5.5 nm	10 g	Plastic bottle	45
				100 g	Plastic jar	300
				500 g	Plastic jar	1400
7	<b>RT-DND-NH Code: 114</b>	Detonation nanodiamond powder, purified, nitrogenized & hydrated; incombustible residue: < 0.1 wt. %; for slurries & coolants	<b>Hydrophilic &amp; Lyophilic;</b> Average grain size: 3.5-5.5 nm, luminescent	10 g	Plastic bottle	80
				100 g	Plastic bottle	700
				500 g	Plastic jar	2500
8	<b>RT-DND-BM Code: 115</b>	Detonation nanodiamond powder, purified, alkylated & siliconized; incombustible residue: < 0.1 wt. %, for polymer compounds	<b>Hydrophobic &amp; Lyophilic;</b> Average grain size: 3.5-5.5 nm	10 g	Plastic bottle	50
				100 g	Plastic bottle	450
				500 g	Plastic jar	2000
9	<b>RT-DND-Fe Code: 116</b>	Detonation nanodiamond powder, purified, Fe-doped, incombustible residue: < 0.8 wt. %; for optic coatings & magnetic nano-fluids	<b>Magnetic; Hydrophilic &amp; Lyophobic;</b> Average grain size: 3.5-5.5 nm	10 g	Plastic bottle	100
				100 g	Plastic bottle	800
				500 g	Plastic jar	3000
10	<b>RT-DND-AB Code: 117</b>	Detonation nanodiamond powder, purified, alkylated & nitrogenized; incombustible residue: < 0.1 wt. %; for acetone slurries	<b>Hydrophobic &amp; Lyophilic,</b> Average grain size: 3.5-5.5 nm	10 g	Plastic bottle	70
				100 g	Plastic bottle	500
				500 g	Plastic jar	2000
11	<b>RT-HPHT-L Code: 133</b>	HPHT nanodiamond powder, purified, hydroxylated; incombustible residue: < 0.1 wt. %, for polishing	<b>Hydrophilic &amp; Lyophobic;</b> Average grain size: 30-50 nm	10 g	Plastic bottle	35
				100 g	Plastic bottle	300
				500 g	Plastic bottle	1100
12	<b>RT-HPHT-NH Code: 134</b>	HPHT nanodiamond powder, purified, nitrogenized & hydrated; incombustible residue: < 0.1 wt. %, for slurries	<b>Hydrophilic &amp; Lyophilic;</b> Average grain size: 30-50 nm	10 g	Plastic bottle	80
				100 g	Plastic bottle	600
				500 g	Plastic bottle	2500
13	<b>RT-CNT Code: 151</b>	Carbon nanotubes hydroxylated, soluble in water; for composite materials	<b>Hydrophilic &amp; Lyophobic;</b> 75 wt. % single wall CNT	10 g	Plastic bottle	100
				100 g	Plastic bottle	850
				500 g	Plastic jar	3200

In addition, RAY provides carbon nanoparticles with customized surface chemistry: **nanodiamonds, CNT and graphene**. RAY offers also process development for nanocarbons surface functionalization for increase in their dispersability in diverse media.

## Carbon Nano-Fluids for Various Applications

#	Product	Description	Reference	Quantity	Packing	Price, \$
1	RayND-SP Code: 201	1.7 wt. % disaggregated nanodiamond water suspension (RayND), pH: 3.5-4.5; for R&D. The price is planned to drop significantly.	Stable. Average grain size: 4.0-5.0 nm	10 ml	Glass vial	100
2	RayND-W-4A Code: 202	4 wt.% nanodiamond water suspension; Nitrogenized RayND, highly dispersed; for biomed; The price is planned to drop.	Stable. Average grain size: 4.0-5.0 nm; high photoluminescence	10 ml	Glass vial	50
				200 ml	Plastic bottle	600
				1 liter	Plastic bottle	1800
3	RT-DND-SP Code: 211	1.7 wt. % nanodiamond water suspension (disaggregated RT-DND), pH=3.5-4.5; for polishing, inks, water soluble polymers	Stable, disaggregated single particles; Average grain size: 3.5-5.5 nm	50 ml	Plastic bottle	50
				1 liter	Plastic bottle	400
				5 liter	HDPE jerrycan	1500
4	RT-W-10 Code: 212	10 wt. % nanodiamond water suspension (RT-DND) for electroplating and polishing; pH of wide range	Stable. Average grain size: 3.5-5.5 nm	50 ml	Plastic bottle	30
				1 liter	Plastic bottle	300
				5 liter	HDPE jerrycan	1400
5	RT-W-4A Code: 213	4 wt. % nanodiamond water suspension (RT-DND), highly dispersed, pH of wide range; for water soluble polymers, inks & sensors	Stable. Average grain size: 3.5-5.5 nm; high photoluminescence	50 ml	Plastic bottle	30
				1 liter	Plastic bottle	400
				5 liter	HDPE jerrycan	1600
6	RT-Ac-4 Code: 214	4 wt. % nanodiamond acetone suspension, highly dispersed, for HIPS and ABS rubbers and other acetone soluble polymers	Stable. Average grain size: 3.5-5.5 nm	50 ml	Plastic bottle	50
				1 liter	Plastic bottle	400
				5 liters	HDPE jerrycan	1600
7	RT-IPA-5 Code: 215	5 wt. % nanodiamond isopropyl alcohol suspension (RayND), highly dispersed, for seeding in CVD diamond growth	Stable. Average grain size: 4.0-5.0 nm	50 ml	Plastic bottle	50
				1 liter	Plastic bottle	800
				5 liters	HDPE jerrycan	3500
8	RT-NMP-5 Code: 216	5 wt. % nanodiamond N-methyl-2-pyrrolidone suspension, highly dispersed; for textiles, resins, plastics, inks, sensors	Stable. Average grain size: 3.5-5.5 nm, high photoluminescence	50 ml	Glass bottle	50
				1 liter	Glass bottle	500
				5 liters	HDPE jerrycan	2200
9	RT-Xy-7 Code: 219	7 wt. % nanodiamond xylene suspension, highly dispersed; for varnishes, paints, polishes, wafers and PCB cleaning agents	Stable. Average grain size: 3.5-5.5 nm	50 ml	Glass bottle	60
				1 liter	Glass bottle	950
				5 liters	HDPE jerrycan	4200
10	RT-Cy-7 Code: 220	7 wt. % nanodiamond cyclohexane suspension, highly dispersed, additive to anionic elastomers	Stable. Average grain size: 3.5-5.5 nm	50 ml	Glass bottle	60
				1 liter	Glass bottle	950
				5 liters	HDPE jerrycan	4200
11	RT-DMF-10 Code: 221	10 wt. % nanodiamond dimethylformamide suspension, highly dispersed, for acrylic fibers, plastics, synthetic leathers, glues	Stable. Average grain size: 3.5-5.5 nm	50 ml	Glass bottle	50
				1 liter	Glass bottle	800
				5 liters	HDPE jerrycan	3500
12	RT-PEO-3 Code: 223	3 wt. % nanodiamond polyester oil colloid, highly dispersed, additive to lubricants, lapping / finishing	Stable; Average grain size: 3.5-5.5 nm	200 ml	Plastic vial	80
				1 liter	Plastic bottle	350
				5 liters	HDPE jerrycan	1500
13	RT-Di50-W-3 Code: 224	3 wt.% nanodiamond slurry, for polishing and electroplating, hydroxylated HPHT	Average grain size: 30-50 nm	100 ml	Plastic bottle	30
				1 liter	Plastic bottle	120
14	RT-Di50-W-3A Code: 225	3 wt.% HPHT nanodiamond slurry, highly dispersed for polishing & polymers	Average grain size: 30-50 nm	100 ml	Plastic bottle	80
				1 liter	Plastic bottle	300

All suspensions are prepared without surfactants.

Ray provides also customized carbon nanofluids: **nanodiamond, CNT, graphene and fullerene** nanoparticles dispersed in various solvents. In addition, RAY offers process development for dispersing other nanoparticles within diverse media.

## Nanodiamond Compounds for Industry

#	Product	Description	Reference	Quantity	Quantity	Price, \$
1	<b>RT-Gel Code: 311</b>	Nanodiamond water-based gel for lapping, finishing, fine polishing	Stable; Average grain size: 3.5-5.5 nm	100 ml	Plastic jar	60
				500 ml	Plastic jar	250
2	<b>RT-Lub Code: 312</b>	1.5 wt. % nanodiamond additive to lubricating oils for antifriction treatment; recommended dilution 1/25	Stable; Average grain size: 3.5-5.5 nm	200 ml	Plastic bottle	30
				1 liter	Plastic bottle	100
				5 liters	HDPE jerrican	450
3	<b>RT-Lap Code: 313</b>	15 wt. % nanodiamond organic-based grease for fine polishing diamonds, CVD diamond films, optic crystals & ceramics	Stable; Average grain size: 3.5-5.5 nm	10 g	2 plastic jars	30
				100 g	Plastic jar	100
				500 g	Plastic jar	450
4	<b>RT-Lap-A Code: 314</b>	10 wt. % nanodiamond antiwear grease for lapping, finishing, running-in of friction pairs	Soluble in water; Stable, Average grain size: 3.5-5.5 nm	15 g	3 plastic jars	30
				100 g	Plastic jar	75
				500 g	Plastic jar	300
5	<b>TG NanoHeat Code: 611</b>	Nanodiamond thermal grease for electronics, LED industry and electricity, heat conductive & electrically insulating	Density: 1.2 g/cm <sup>3</sup> , Vis: 4500 mPs; workT: -40 ÷ 185 °C	20 ml	10 syringes	30
				100 ml	Plastic jar	70
				500 ml	Plastic jar	300

RAY provides also **customized additives to polymers**: epoxy and silicone resins, elastomers and plastics in forms of ready-to-use masterbatches or modified powders, which can be easily mixed with a basic material and not require additional equipment to be applied in existing processes .

Dear Sirs,

This product catalog is valid by the end of August 2018.

The prices do not include shipping, insurance and bank charges.

In case of your interest in more information about our products, data sheets, terms of their delivery, quotation or invoice, please fill the contact form in the website [www.nanodiamond.co.il](http://www.nanodiamond.co.il) and we will answer you shortly.

In any case RAY will ship you the ordered goods as soon as possible.

We are always at your service.

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