

## CATALOG



2020 - II

## Carbon Nano-Powders

#	Product	Description	Reference	Weight	Packing	Price, \$
1	<b>RayND</b> Code: 100	Nanodiamond powder of laser synthesis, customized surface functionalization	Average grain size: 4-5 nm; ash residue: <0.02 wt.%. The price is planned to drop.	2 g	Glass vial	30
				10 g	Plastic bottle	150
				100 g	Plastic bottle	1400
2	<b>RayND-AL</b> Code: 104	Nanodiamond powder of laser synthesis, hydroxylated & nitrogenized; metal free; for biomed research	<b>Hydrophilic &amp; Lyophilic, PL;</b> average grain size: 4-5 nm; ash residue: <0.02 wt.%	2 g	Glass vial	40
				10 g	Plastic bottle	200
				100 g	Plastic bottle	2000
3	<b>RayND-M</b> Code: 105	Nanodiamond powder of laser synthesis, modified, metal free, ferro-magnetic (unknown nature); for scientific research	<b>Magnetic, PL;</b> average grain size: 4-5 nm; ash residue: <0.1 wt.%	1 g	Glass vial	250
4	<b>RT-DND</b> Code: 110	Nanodiamond powder of detonation synthesis, specially purified, graphite & metal free, non-modified; for various applic.	<b>Polydispersed;</b> average grain size: 3-6 nm; ash residue: <0.1 wt.%	10 g	Plastic vial	40
				100 g	Plastic bottle	200
				500 g	Plastic jar	800
5	<b>RT-DND-A</b> Code: 111	Detonation nanodiamond powder, purified, modified, aminated; for compatible polymer compounds.	<b>Hydrophobic, lyophilic;</b> Average grain size: 3-6 nm; ash residue: <0.1 wt.%	10 g	Plastic vial	40
				100 g	Plastic bottle	300
				500 g	Plastic jar	1300
6	<b>RT-DND-B</b> Code: 112	Detonation nanodiamond powder, purified, eliminated radicals; for metal & ceramic composites, dry lubrication, nuclear appl.	<b>Hydrophobic, lyophobic;</b> average grain size: 3-6 nm; ash residue: <0.1 wt.%	10 g	Plastic vial	40
				100 g	Plastic bottle	300
				500 g	Plastic jar	1300
7	<b>RT-DND-L</b> Code: 113	Detonation nanodiamond powder, purified, hydroxylated; for electroplating & polishing, coolants, compatible polymers (PE)	<b>Hydrophilic, lyophobic;</b> average grain size: 3-6 nm; ash residue: <0.1 wt.%	10 g	Plastic vial	40
				100 g	Plastic bottle	300
				500 g	Plastic jar	1200
8	<b>RT-DND-LN</b> Code: 114	Detonation nanodiamond powder, purified, nitrogenized; for syn. oils, IPA, NMP, Cy, DMSO & acetone colloids & soluble rubbers	<b>Hydrophobic, lyophilic; high PL;</b> av. grain size: 3-6 nm, ash residue: <0.1 wt.%	10 g	Plastic vial	60
				100 g	Plastic bottle	500
				500 g	Plastic jar	1800
9	<b>RT-DND-BM</b> Code: 115	Detonation nanodiamond powder, purified, ethylated; for compatible polymers, paints, lacquers, inks, synth. oils, polishes, slurries	<b>Hydrophobic, lyophilic;</b> average grain size: 3-6 nm; ash residue: <0.1 wt.%	10 g	Plastic vial	40
				100 g	Plastic bottle	250
				500 g	Plastic jar	1100
10	<b>RT-DND-Fe</b> Code: 116	Detonation nanodiamond powder, purified, Fe-doped, for optic coatings & magnetic nano-fluids, bio-research	<b>Ferro-magnetic; high PL;</b> average grain size: 3-6 nm, ash residue: <0.8 wt.%	10 g	Plastic vial	70
				100 g	Plastic bottle	500
				500 g	Plastic jar	2000
11	<b>RT-DND-EN</b> Code: 117	Detonation nanodiamond powder, purified, nitrogenized; for stable solvent-based polymer additives, H <sub>2</sub> O, DMSO, Cy, IPA, NMP	<b>Hydrophilic, lyophilic; high PL;</b> average grain size: 3-6 nm; ash residue: <0.1 wt.%	10 g	Plastic vial	60
				100 g	Plastic bottle	450
				500 g	Plastic jar	1800
12	<b>RT-DND-EI</b> Code: 118	Detonation nanodiamond powder, purified, alkylated & aminated; for sintering and compatible polymers (PA)	<b>Highly hydrophobic &amp; lyophobic;</b> average grain size: 3-6 nm; ash residue: <0.1 wt.%	10 g	Plastic vial	50
				100 g	Plastic bottle	400
				500 g	Plastic jar	1600
13	<b>RT-DND-NH</b> Code: 119	Detonation nanodiamond powder, purified, nitrogenized & hydroxylated; for coolants, inks, wet polymer additives	<b>Hydrophilic, lyophilic; high PL;</b> average grain size: 3-6 nm; ash residue: <0.1 wt.%	10 g	Plastic vial	70
				100 g	Plastic bottle	500
				500 g	Plastic jar	2000
14	<b>RT-HPHT-L</b> Code: 133	Crashed High Pressure High Temperature nanodiamond powder, purified, hydroxylated; for polishing slurries, pastes & pads	<b>Hydrophilic, lyophobic;</b> average grain size: 30-50 nm; ash residue: <0.1 wt.%	10 g	Plastic vial	40
				100 g	Plastic bottle	300
				500 g	Plastic jar	1200
15	<b>RT-HPHT-AL</b> Code: 134	Crashed High Pressure High Temperature nanodiamond powder, purified, modified, hydroxylated & nitrogenized, for plating	<b>Hydrophilic, lyophilic;</b> average grain size: 30-50 nm; ash residue: <0.1 wt.%	10 g	Plastic vial	70
				100 g	Plastic bottle	500
				500 g	Plastic jar	2000
16	<b>RT-CNT</b> Code: 141	Carbon nanotubes hydroxylated; ; for water soluble polymer resins & other composite materials	<b>Hydrophilic, lyophobic;</b> 75 wt. % single wall CNT	10 g	Plastic vial	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.**

## Carbon Nanofluids

#	Product	Description	Reference	Volume	Packing	Price, \$
1	<b>RayND-SP</b> Code: 201	1 wt. % disaggregated nanodiamond water colloid (carboxylated RayND), pH: 3.5-4.5; for biomed R&D	Highly dispersed; average grain size: 4-5 nm. The price is planned to drop.	100 ml	Glass vial	75
2	<b>RayND-W-4</b> Code: 202	4 wt. % disaggregated nanodiamond water colloid (nitrogenized & hydroxylated RayND), pH: 3.5-4.5; for biomed R&D	Highly dispersed; high PL; average grain size: 4-5 nm. The price is planned to drop.	50 ml	Glass vial	125
				200 ml	Plastic bottle	450
				1 L	Plastic bottle	2000
3	<b>RayND-S-2</b> Code: 203	2 wt.% nanodiamond saline colloid (RayND with eliminated radicals); for biomed R&D	Highly dispersed; average grain size: 4-5 nm. The price is planned to drop.	50 ml	Glass vial	80
				200 ml	Plastic bottle	250
				1 L	Plastic bottle	1000
4	<b>Ray-DMSO-3</b> Code: 204	3 wt. % nanodiamond Dimethyl sulfoxide colloid (RayND), for cosmetics, biomed R&D, CVD diamond growth, fuel cells	Highly dispersed; high PL, average grain size: 4-5 nm. The price is planned to drop.	50 ml	2 glass vials	100
				200 ml	Plastic bottle	350
				1 L	Plastic bottle	1500
5	<b>Ray-IPA-5</b> Code: 205	5 wt. % nanodiamond isopropyl alcohol colloid (RayND), highly dispersed, for seeding in CVD diamond growth	Highly dispersed; high PL, average grain size: 4-5 nm. The price is planned to drop.	50 ml	2 glass vials	150
				200 ml	Plastic bottle	500
				1 L	Plastic bottle	2400
6	<b>RT-DND-SP</b> Code: 211	1 wt. % nanodiamond water colloid (disaggregated RT-DND), pH=3.5-5.5; for polishing, inks, water soluble polymer resins	Highly dispersed, disaggregated single particles; average grain size: 3-6 nm	50 ml	Glass vial	80
				200 ml	Plastic bottle	300
				1 L	Plastic bottle	1200
7	<b>RT-W-10</b> Code: 212	10 wt. % nanodiamond water-based gel; for lapping, running-in, polishing, cooling, ultrasonic cleaning	Stable; average grain size: 3-6 nm; pH of wide range	50 ml	Glass vial	40
				1 L	Plastic bottle	300
				5 L	HDPE jerrican	1400
8	<b>RT-W-3A</b> Code: 213	3 wt. % nitrogenized nanodiamond water colloid; for water soluble polymers, inks, coolants, sensors	Highly dispersed & stable; high PL; pH of wide range; average grain size: 3-6 nm	50 ml	Glass vial	40
				1 L	Plastic bottle	400
				5 L	HDPE jerrican	1600
9	<b>RT-Ac-4</b> Code: 214	4 wt. % nanodiamond acetone colloid, for HIPS & ABS rubbers and other acetone soluble polymers	Highly dispersed & stable; high PL; average grain size: 3-6 nm.	50 ml	2 glass vials	40
				1 L	HDPE bottle	400
				5 L	HDPE jerrican	1600
10	<b>RT-NMP-5</b> Code: 216	5 wt. % nanodiamond N-methyl-2-pyrrolidone colloid; additive for textiles, resins, plastics, inks, sensors	Highly dispersed & stable; high PL; average grain size: 3-6 nm.	50 ml	2 glass vials	50
				1 L	HDPE bottle	500
				5 L	HDPE jerrican	2200
11	<b>RT-T-7</b> Code: 217	7 wt. % nanodiamond toluene colloid; for paints, lacquers, adhesives, rubbers, fuels, explosives	Highly dispersed & stable; high PL; average grain size: 3-6 nm.	50 ml	2 glass vials	70
				1 liter	Glass bottle	700
				5 liters	HDPE jerrican	3000
12	<b>RT-ETA-5</b> Code: 218	5 wt.% nanodiamond ethanolamine colloid for gas stream scrubbing	Highly dispersed & stable; average grain size: 3-6 nm.	50 ml	2 glass vials	50
				1 liter	Glass bottle	500
				5 liters	HDPE jerrican	2200
13	<b>RT-Xy-7</b> Code: 219	7 wt. % nanodiamond xylene colloid; for PET products, inks, rubbers, glues, paints, for wafers & PCB cleaning agents	Highly dispersed & stable; average grain size: 3-6 nm.	50 ml	2 glass vials	70
				1 L	HDPE bottle	700
				5 L	HDPE jerrican	3000
14	<b>RT-Cy-7</b> Code: 220	7 wt. % nanodiamond cyclohexane colloid, additive to anionic elastomers, CPL & nylon	Highly dispersed & stable; average grain size: 3-6 nm.	50 ml	2 glass vials	70
				1 L	HDPE bottle	700
				5 L	HDPE jerrican	3000
15	<b>RT-DMF-7</b> Code: 221	7 wt. % nanodiamond dimethylformamide colloid, for acrylic fibers, plastics, synthetic leathers, glues	Highly dispersed & stable; average grain size: 3-6 nm.	50 ml	2 glass vials	70
				1 L	HDPE bottle	700
				5 L	HDPE jerrican	3000
16	<b>RT-Bu-10</b> Code: 222	10 wt. % nanodiamond 2-Butoxyethanol colloid; for varnishes, herbicides, latex paints, enamels	Highly dispersed & stable. Average grain size: 3-6 nm	50 ml	2 glass vials	40
				1 L	HDPE bottle	300
				5 L	HDPE jerrican	1400
17	<b>RT-PEO-1.5</b> Code: 223	1.5 wt. % nanodiamond polyester oil colloid; additive to lubricants (lapping / finishing / running-in), compressor oils	Based on BVA-68. Highly dispersed & stable. Average grain size: 3-6 nm	200 ml	Plastic bottle	40
				1 L	Plastic bottle	130
				5 L	HDPE jerrican	600
18	<b>RT-DMSO-3</b> Code: 224	3 wt. % nanodiamond Dimethyl sulfoxide colloid; additive to lubricants for lapping, finishing, running-in	Highly dispersed & stable. Average grain size: 3-6 nm	50 ml	2 glass vials	40
				1 L	Plastic bottle	300
				5 L	HDPE jerrican	1400

19	<b>RT-D50-W5</b> Code: 231	5 wt.% nanodiamond water colloid (hydroxylated HPHT-ND); for lapping, inner surfaces flow polishing, electroplating	Average grain size: 40-50 nm, requires sonication before handling	100 ml	Glass vial	50
				1 L	Plastic bottle	250
				5 L	HDPE jerrican	1200
20	<b>RT-D50-W3A</b> Code: 232	3 wt.% nanodiamond water colloid (aminated HPHT-ND); for coatings, polishing, lapping	Highly dispersed & stable. High PL. Average grain size: 40-50 nm	100 ml	Plastic bottle	40
				1 l	Plastic bottle	300
				5 liter	HDPE jerrican	1500
21	<b>RT-CNT-1</b> Code: 251	1 wt.% CNT nanodiamond water-based colloid, for new composite materials	Highly dispersed & stable. 75 wt. % single wall CNT	100 ml	Plastic bottle	100
				1 L	Plastic bottle	500
				5 L	HDPE jerrican	2000

All suspensions are prepared without surfactants.

RAY offers customized carbon nanofluids with high sedimentation stability containing diamond, CNT, graphene and fullerene nanoparticles based on various solvents.

RAY also offers process development for surface modification & dispersing nanoparticles within diverse solvents & composites.

Nanodiamond Products for Industry						
#	Product	Description	Reference	Weight	Packing	Price, \$
1	<b>RT-W-10</b> Code: 212	10 wt. % nanodiamond water-based gel; for lapping, finishing, running-in, cooling, ultrasonic cleaning, pretreatment at CVD & PVD	Stable; average grain size: 3-6 nm	50 ml	Plastic bottle	40
				1 L	Plastic bottle	300
				5 L	HDPE jerrican	1400
2	<b>RT-Lub</b> Code: 312	3 wt.% nanodiamond additive to synthetic oils; recommended dilution: finishing: 1/40, running-in: 1/70, motor oils: 1/100	Stable; average grain size: 3-6 nm; based on BVA-68	100 ml	Plastic vial	40
				1 L	Plastic bottle	300
				5 liters	HDPE jerrican	1400
3	<b>RT-Lap</b> Code: 313	10 wt. % nanodiamond organic-based grease for fine polishing of diamonds, CVD diamond films, optic crystals & ceramics	Stable; average grain size: 3-6 nm	10 g	3 plastic jars	30
				100 g	Plastic jar	90
				500 g	Plastic jar	430
4	<b>RT-Lap-A</b> Code: 314	5 wt. % nanodiamond antiwear grease for lapping, finishing, running-in of gears, engines, generators and precision parts	Stable, average grain size: 3-6 nm. Washed off with water	10 g	3 plastic jars	20
				100 g	Plastic jar	50
				500 g	Plastic jar	230
5	<b>ND-Galvano</b> Code: 317	20 wt.% nanodiamond water slurry, additive to electrolytes in galvanic coatings for improving wear & corrosion resistance	Stable. Recommended dilution 1/40, or 0.5 -0.6 wt. % ratio in electrolyte	1 L	Plastic bottle	600
				5 L	HDPE jerrican	2800
				25 L	5 HDPE jers	13000
6	<b>ND-Depo-Ni</b> Code: 318	20 wt.% nanodiamond water slurry, additive to electrolytes in Ni Electroless coatings for wear & corrosion resistance	Stable. Recommended dilution 1/40, or 0.5 -0.6 wt. % ratio in electrolyte	1 L	Plastic bottle	600
				5 L	HDPE jerrican	2800
				25 L	5 HDPE jers	13000

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 December 2020.**

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

In case of quotation request or ordering, please fill the contact form in the website:

[www.nanodiamond.co.il](http://www.nanodiamond.co.il) and we will answer you shortly.

Please feel free to contact, if you need more information about our goods and the terms of their delivery.

We are always at your service.