

Non-Crystalline Silica (NCS) Products for the Coatings Market

<u>Product</u>	<u>Description</u>
NCS-15:	APS of 15 Micron
NCS-12:	APS of 12 Micron
NCS-10:	APS of 10 Micron
NCS-8:	APS of 8 Micron
NCS-5:	APS of 5 Micron
NCS-3:	APS of 3 Micron
<u>General Physical Properties</u>	
pH:	7.2
Radioactivity:	0
Softening Point:	900 ° C
Mohs :	6.1
Crystalline SiO₂:	None Detected
HMIS:	0
Specific Gravity	2.3 approx

NCS: Typical Chemical Analysis

SiO₂:	79.6%
Al₂O₃:	13.9
H₂O (Bound)	0.3
K:	1.6
Na:	1.5
Fe:	0.9
Ca:	0.8
MgO:	0.5
TiO₂:	0.5

Hess Pumice Products, Inc.

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Hess

**NCS-3, NCS-5, NCS-10,
NCS-8, NCS-12 & NCS-15**

***MICRONIZED,
NON-HAZARDOUS
AMORPHOUS
SILICA PRODUCTS***

*Hess Micronized Functional
Fillers & Extenders for
Coatings, Rubber, & Plastics*



Toll Free: 1-800-767-4701

Call for a sample of the brightest and hardest Amorphous Aluminum Silica commercially available in the world. It is near white in color, neutral in pH, non-toxic, non-hazardous & has great hardness for outstanding durability & low oil absorption. Our corporate motto is "On Time-On Spec". 18007674701 or salesmgr@hesspumice.com.

Non-Crystalline Silica (NCS) Functional Fillers

Environmental concerns, health issues, and workplace rules are placing increased pressures on those manufacturers which have traditionally relied on an abundant supply of crystalline silica (CS) for their products. CS is now classified as a carcinogenic as well as the cause of silicosis.

Alternatives for CS have been few – and often difficult to source. There is now an effective replacement for CS, Minex, and SafSil. Our new



product, Non-Crystalline Silica (NCS) has the beneficial features of CS but without the health risk. This product is an Amorphous Aluminum Silicate, including nearly 80%

SiO₂ - see typical Chemical Analysis. Our NCS products have a lower density than CS so it cannot replace the CS on a drop-in basis. The NCS must replace the CS, or any other filler, on a **volume** basis rather than by weight. This results in higher bulking values & higher yields per lb of NCS product vs CS. Gloss and sheen control with NCS is, in general, equal to and usually better than CS products. Hiding power can also be improved using NCS products. Additionally, NCS products work well as a replacement for Zeospheres in coatings.

PROPERTIES FOR COATINGS

Hegman	5~8
Oil Absorption%	34 ~ 40
Bulking Value	0.05
Moisture	<1%

APPLICATIONS

- Industrial Coatings
- Architectural Paints
- Wood Stains
- Exterior Coatings
- Rubber compounds
- Plastics/Fiberglass



**Specialty Rubber Compounds
Plastic/Fiberglass compounds
Epoxyes/Silicones**



Hess Pumice Products of Malad City, ID, USA now has six Non-Crystalline Silica (NCS) products developed specifically as functional fillers for the paint/coatings and rubber/plastic industries. With the numbers indicating the average particle size, the grades are as follows: NCS-3, NCS-5, NCS-8, NCS-10, NCS-12, and NCS-15. The amorphous aluminum silicate products are non-hazardous (crystalline silica free - to the detectable limit of .05%), inert, near white, pH of 7.2, with unit weights (loose) ranging from approx 1.6 kg/gallon for the finer grades up to approx 3 kg/gallon for the coarser grades. The NCS provides outstanding scrub, burnish, and stain resistance properties due to the hardness of the particles (6.1 Mohs hardness). Hegman results start at around 5 for the coarser grades. Oil absorption ranges between 30% and 40% depending on the grade. These products are also known for their outstanding durability & weathering properties including no known instance of frosting or chalking after several years exposed to the elements. NCS grades are also used in sheen control applications. These products are shipped world-wide in 500 kg or 2000 lb bulk bags & 20 kg or 50 lb poly-lined paper bags.

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