NORTH AMERICAN

amosite asbestos crocidolite news

PUBLISHED BY NORTH AMERICAN ASBESTOS CORPORATION
200 South Michigan Ave. / Chicago, Illinois 60604 / Phone (312) 922-7435 / Cable Address NORAMCO, CHICAGO

Vol. 5, No. 3 – March, 1970

DIFFERENCES: AMPHIBOLE AND CHRYSOTILE – Naturally, because it is our sole stock-in-trade, the NAAC Newsletter dwells primarily on Amphibole fibre – Amosite and Crocidolite asbestos. As most of our readers know, of course, Chrysotile asbestos is, by far, the dominant fibre in quantity, accounting for over 93% of all asbestos used worldwide, compared to 6-7% for Amosite and Crocidolite combined. In many applications, Chrysotile and Amphibole fibres are used together to create end-products which are of better quality than if either fibre were used alone.

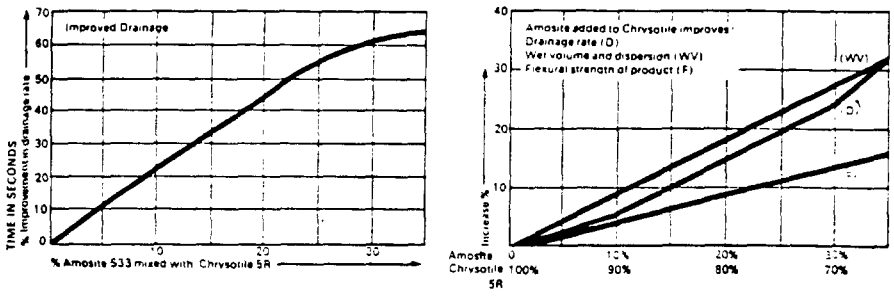
A relatively easy way to think of the difference between Amphibole and Chrysotile fibres is in the structure of the fibres themselves. Scientists have shown that a fundamental difference exists in that Chrysotile fibres are hollow, and Amphibole fibres are solid. This partially explains why Amosite and Crocidolite (Blue) fibres are hard and springy, and why the white Chrysotile fibres are softer, more flexible and absorbent. Electron micrographs also show that Amphibole fibres are larger in diameter, around 0·1 microns compared to 0·02 microns for Chrysotile fibres.

Blue and Amosite fibres produce a great flocculent volume when fiberized; and, while the length of all asbestos fibres depends upon the grade, Amphibole fibres are considerably longer than Chrysotile fibres of similar grades. Pound for pound and ton for ton, Amphibole fibres, due to their stiff-resilient nature, will fiberize to a much greater volume than Chrysotile; also, the longer lengths of both Blue and Amosite are less costly than comparable lengths of Chrysotile. The majority of Chrysotile production is in Canadian Standard Grades 6, 7, and 8, which average about 1/16-inch in fibre length, whereas the very shortest grade of Amosite and Crocidolite averages 1/4-inch or more in fibre length. The longer Amosite and Crocidolite fibres are particularly advantageous pricewise where reinforcement is a primary consideration.

MORE ON QUEEN'S AMOSITE – An article in 'Cape Review 1969', published by the NAAC parent group, Cape Asbestos Co., Ltd., sheds additional light on the use of more than 2.3 million square feet of 'Marinite' in the construction of QE2 (Queen Elizabeth 2) – "the finest ship afloat." Marinite, a rigid marine insulation which contains generous quantities of Amosite asbestos, was used virtually throughout QE2 to provide sound conditioning, insulation, and the all-important incombustibility. During construction of this most luxurious of the luxury liners, over 70,000 Marinite sheets and 2,000 doors were delivered to

PRESSURE PIPES – Amosite, unlike Chrysotile, does not hold water, therefore, when Amosite is included in pressure pipe mixes there is less water retention in the laminate. Pipes can be compressed to maximum densities without excessive pressure, thus avoiding weaknesses between laminates and obtaining maximum finished strength.

Below are two charts showing the improved drainage characteristics of Amosite and showing the effect of Amosite on the drainage rate, wet volume and dispersion.



MINING BOOM – Growth of mineral production in Southern Africa, not counting gold, has averaged 16.3% per year for the past three years. The growth in production of Amosite and Crocidolite asbestos, which is mined in the same area, has averaged about 5% per year.

CHRYSOTILE BELOW BORDER – "Substantial tonnages of commercial material are present", according to a drilling report on a Chrysotile asbestos discovery in Southern Mexico. The report from Mexico, which has produced no commercial quantities of asbestos up to now, says that the asbestos-bearing rock ranges from 93 feet to 385 feet in thickness. It appears that our Mexican friends will be joining the family of asbestos producing nations.

TUNE-IN A TON – Experiments in actual fracturing of rocks containing asbestos with radio-frequency power are under investigation by a Canadian mining engineer.

FIRE RETARDANT CLOTH – An American textile company has recently developed a more flameproof cloth using a new fire-retardant rayon fibre. Normally, in asbestos textiles, about 75% to 85% Chrysotile asbestos fibre is blended with other fibres, such as cotton, conventional rayons and polyesters. While the asbestos is fireproof, the other fibres are usually combustible. The new rayon yarn is said to be superior in its ability to resist fire.

NORTH AMERICAN

amosite asbestos crocidolite news

PUBLISHED BY NORTH AMERICAN ASBESTOS CORPORATION
200 South Michigan Ave. Chicago, Illinois 60604 / Phone (312) 922-7435 Cable Address NORAMCO, CHICAGO

Vol. 4, No. 11 – November, 1969

AMOSITE IN ASBESTOS CEMENT PRODUCTS – Chrysotile asbestos is in relatively tight supply and probably will become even tighter. The supply of good quality, fast-filtering Chrysotile in Group 5, such as used in asbestos-cement products, seems to be very limited. This has created considerable interest by a number of companies in reexamining the role of Amosite in asbestos-cement products and currently there is quite a lot of activity in the reformulation of asbestos-cement furnishes to include Amosite for flat sheet and corrugated material. Amosite asbestos has been used for many years in the manufacture of asbestos-cement products in all parts of the world; however, a better understanding of technical characteristics of Amosite in recent years has led to more extensive use of Amosite in a/c products.

DRAINAGE – Amosite has the best drainage properties of all asbestos fibres used in asbestos-cement. Amosite improves drainage at sieve cylinders and on felts, with the consequent benefit of higher felt speed and increased production.

WET VOLUME/DISPERSION – Amosite has the highest wet bulk volume of all asbestos fibres and produces an excellent and well dispersed fibrous matrix. Such a matrix acts as a 'carrier' for Chrysotile fibres, preventing their entanglement and agglomeration. A good dispersion of all asbestos fibres results in the maximum exposure of fibrous surface, thus providing the maximum area of support for cement particles. With Amosite, therefore, it is easier to make a homogeneous mix of all raw materials in the system; it is easier to maintain a good suspension without settling of solids in tanks and vats; sieve cylinders take up uniform mixtures of cement and fibre; there is a reduction of solids carried through to the backwater; there is reduced clogging of felts; efficient felt cleaning is made easier; there is a substantial reduction to formation of clots of fibre which tend to be dragged out of the slurry by the sieve cylinder and which, by being transferred to the felt, cause disfigurement of finished board surfaces and weaknesses internally in the board.

STRENGTH IN FINISHED SHEETS – Amosite gradings have reinforcing strengths similar to those of Canadian Chrysotile in the range 4T to 5R, but, by adding Amosite to Chrysotile, and thus improving the dispersion of all fibres, the distribution of fibrous reinforcement becomes more regular and even. Amosite, therefore, acts as a beneficial additive to all Chrysotiles in asbestos-cement and enhances their reinforcing properties.

STRENGTH IN GREEN SHEETS – Amosite is naturally a longer fibre than Chrysotile. The reinforcing effect of longer Amosite fibres improves the strength of green sheets from the machine which is of particular value in the manufacture of corrugated sheets and moulded products.

North American Asbestos Corporation, a member of the Cape Asbestos group of companies, is the leading marketer of amosite and crocidolite fibers in North America.