

**Carborundum Universal Limited**  
**Conference call**  
**March 24, 2022**

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**Sanjiv:**

Good afternoon, everyone. I am Sanjiv Mohta from B&K Securities. I welcome you all to the session on Manufacturing Leaders. We have with us, the team from Carborundum Universal (CUMI). We have Mr. Padmanabhan, CFO and Mr. Chandramouli, and we will be joined very soon by Mr. Ananthaseshan. I think we will just start and we will get him involved as soon as he joins also. We also have Kunal Seth who is the head of our sector. Sir, the way we will do it is I'll ask a few questions on macro and strategy and then Kunal will ask more detailed questions on Company. We'll also have participants putting in their questions, although we have some questions already that have come in, so we'll ask those questions as well. Sir, the most topical question to start with is the current Russian situation, especially given that you all have a pretty big presence there in terms of a plant and a lot of sales also happens through EU from that plant. So, where are we on that, what is the on-ground situation?

**P. Padmanabhan:**

Good evening to all. As far as the Russian subsidiary is concerned, the exact situation is that nothing is happening on the Russian soil. The aggression is happening only in Ukraine. None of our products or the entity or employees or directors are coming under the sanction list, we are out of sanction list. The setup is that the entire input material, the fuel and the energy is made out of our own sources. We have our own mines in Russia, therefore, the input raw material is coming from those mines and therefore there is no impact from this aggression. As far as the domestic sales is concerned, it is around 50% plus and the exports will be balance 30% to Europe and 20% to India and other Asian countries. In respect of the domestic sale, it is going good and the production is in full swing, nothing has been impacted. The employees are coming and so far there is no impact of the war at this point of time. In respect of sales within the domestic land, it is happening, nothing has been impacted. The sales to Europe, it is because of the logistic reasons, there is a challenge and we are finding out ways to reroute it through countries like Finland, which are not affected by the sanctions, though they are a part of EU, the route through Finland, we can sell it to the other part of Europe, that is still there. And in respect of the exports to Russia and other Asian parts, Government of India is talking with the Russian Government to open the sea route wherein through the Caspian Sea, it will reach Iran and from Northern Iran through truck, it will be transported to the bottoms outside and from south Bandar Abbas, it will reach Indian ports. This is the plan which is being worked out by the Indian Government, and we expect that soon some solution will come and it will address the requirements of India and other parts of Asia.

We are also working on with logistic companies to see whether there are any opportunities to take it through Turkey to the other parts of Europe and the other exports. So, these are all the things, which are being worked out. In respect of the banking, the collections and all are routed

through the bankers, which are not affected by the sanctions list and therefore no banking operations is being affected, both the incoming collections and outgoing payments are going without any difficulty. In respect of the currencies, whatever we had in Dollars and Euros have already been converted into local Rouble and fortunately our Russian subsidiary is a debt-free company and we don't have any debt at this point of time and in fact it's a company with cash surplus. Now that the interest rates have mounted 20% plus, it is benefitting us in the form of interest, so it is adding to our profits to some extent.

Earlier, because of the long-term contract with the European customers, we were not able to supply to the incremental part in domestic Russia itself. So, those customers we're addressing now and we feel that the gap on the European exports can be compensated by way of increasing the domestic sales in Russia. Similar to the 'atmanirbhar' in India, Russian Government is also encouraging the companies within Russia, they're encouraging the local production so that the economy is going on in full swing. So, it is also helping us to increase the domestic sales front, and we feel that the demand from the local industries will fill the gap, which is presently exposed to Europe.

In respect of the other exports, as soon as the sea route is opened, it will help us continuing the operations through that also. This is how the present situation is, and it is under control and we feel that nothing is getting impacted and the situation will improve going forward.

**Sanjiv:** Sir, but as you said, Russia sales is probably slightly more than 50%, so would you see at least some impact in terms of sales and would that impact the bottom line at all or you think that right now that's not what is happening?

**P. Padmanabhan:** As I said earlier, because of the long-term contracts with the European customers, we were not able to address the demand from the local customers in respect of the refractory market, steel customers and other engineering industries in Russia. It is because of the logistics reasons, they are not able to import from other countries and that is filling the gap. So, we feel that the demand from the domestic industries will increase and to some extent it will offset the gap, which has arisen out of the logistics challenge in the European exports.

**Sanjiv:** Sir, in terms of currency, at least from a translation perspective, there would be an impact, right?

**P. Padmanabhan:** The financial statements of the Russian subsidiary, there will not be any impact at all. In respect of the consolidated at the CUMI level, we go with the average rate for the Profit and Loss Account. Up to December, the rates were good and at this point of time, there is a reduction of around 20-25%, which will not impact for the current year because it is going by the average rate. First nine months will be at a higher average, to a greater extent, will get compensated. We feel that the impact will be around less than 2%. It will be around 1.5-2% that will be reduction, which will get compensated on the Rouble front. Therefore, we don't see any impact during the current year. Going forward, yes, in Q1 we feel that it will impact the translation to

the extent of 20-25% subject to of course the rates are volatile and when it can change and improve further and go back to the same one. If it is not improving at the present level, yes, it will have a bearing of around 20%.

**Sanjiv:** Assuming that this goes on and maybe Russia gets a bit more isolated, are you thinking of some kind of a plan B in terms of how to use this or right now that's not the thought process at all?

**P. Padmanabhan:** We are not solely dependent on the Russian entities for our raw material requirements. We have our own source in India, our electro-minerals business can, to a great extent, secure the raw materials or the requirement of the abrasive and refractory internally. So, the closure of war may not impact the standalone operations in CUMI.

**Sanjiv:** So, Kunal, if you have any further questions on this, may be you can ask that, otherwise, I'll move to something else.

**Kunal:** So, I think most of it is covered. We just wanted to understand is there a plan B or like you said you were looking at alternative route, but will there be a need to be more local now given the changes in geopolitical scenario or things should come back to normal once this war situation subsides?

**P. Padmanabhan:** We feel that this may not go for a longer time and some solution will come, say, within the next fortnight and hopefully it will improve. Like any other person here also has to see how the war goes and we need to decide on that. As far as the operations are concerned, at this point of time, nothing has been impacted. It is getting offset to a greater extent by the domestic sales itself, and therefore, at the Russian company level, it will not have to an impact. Of course, it will have a bearing on the translation. For the current year, it may not affect anything. In respect of the next year, it will have a bearing and we feel that this is only temporary phenomenon and it will not hold good for a longer time. In case if it does, then we need to wait and watch how it behaves and then we can take it forward from that. Now that the Government of India is interfering and then working on releasing the route between India to Russia, then that will be a game changer wherein we can export to India and other Asian countries, and of course we can work around and see how we can separate the other part of the globe also, that can also be done.

**Sanjiv:** Again, if you look at the Russian business, was Russia importing also from outside and would you be able to cater to that part?

**P. Padmanabhan:** The import content by the Russian entity is almost negligible, it is almost nil. It is self-contained. The main raw material, the sand is being procured domestically and then it is used domestically. We have our own mines, which are owned by the Russian company, therefore, there is no requirement to go in for an outside supply. The energy is also available. The gas is also available inside, and there is no dependency on the imports at all.

**Sanjiv:** My question was slightly different, which was that Russian customers that you have, were they also importing you think or in that case you can supply them?

**P. Padmanabhan:** Yeah, we were importing because even though we were in the Russian soil, we were not in a position to sell to them because of the long-term contracts with the European customers. Now that that channel is blocked, they are dependent on the industries in Russia itself. So, it's an opportunity for us. Instead of supplying to the European customers, we can supply to them.

**Sanjiv:** Okay, and one question that has just been sent to me was that in terms of economics of the Russian subsidiary, from a gross margin or a fixed cost perspective, any thought on that would be great. Like what were the margins? Were they higher than the consolidated business in terms of fixed cost? So, basically trying to understand if there is a fall in sales?

**P. Padmanabhan:** It is almost on par with the standalone business margin, and it is not different in a significant manner.

**Sanjiv:** Even EBITDA margin?

**P. Padmanabhan:** Yes.

**Sanjiv:** Okay. I was just told that Mr. MD will take some more time, I guess, he has been called for a meeting. So, let's continue. Moving to the acquisitions, one of the ways that the growth has come is from acquisitions and you have just done a couple of acquisitions in Germany. On thought, given the experience of South Africa and also given that we've seen a lot of Indian companies not do very well when they acquire outside. There have been lots of cases like that. Of course, there are some success stories. What is giving you that confirmed that will actually play out well and what do these companies bring on table?

**P. Padmanabhan:** If you could see, our bigger acquisition was the Volzhsky Abrasive, which was done in 2007 and it has proved to be a successful acquisition, and we are the second-largest manufacturer of silicon carbide in the world and we enjoy around 10-12% of the global share where the silicon carbide market is concerned. We feel that the M&A is not new to us. The fact of the South African acquisition is entirely different. There, the input costs have a bearing and the input cost, though it is available in the domestic South African region itself, the pricing was linked to dollar terms. Therefore, the exchange fluctuation affected the cost and therefore impacting the margins. That's an entirely different fact, and there also what we have done is now that the raw material has been linked back to the South African Rand, therefore, the exchange risk has been avoided and it is showing us profits for the past two quarters. Going by the current trend and increasing the commodity prices and the rise in the demand, will necessarily bring in profits and say within a matter of 18 months, we will be able to get breakeven from that company. In respect of the recent acquisitions in Germany, it's a different thing. Both the companies have been acquired under the abrasive segment. As far as the abrasive segment is concerned, the local presence is very important. Without the local presence, the companies cannot survive in

the abrasive market that is why if you see in India also, the market for standalone abrasives predominantly caters to the domestic market. Like that the companies which we have acquired in Germany will cater to the markets in Germany as well as the European market over there, and it is already established, it has got branch, it has got very good distribution channels and the market is well accepted. The product quality is there, and it's a readymade market. So, we feel that the success will continue in this acquisition also.

**Sanjiv:** So, you would say that the main reason to acquire these companies was that they bring readymade product with clients so that you can actually sell more products to the same client or what's the thought process?

**P. Padmanabhan:** Yeah, that is one of the main advantage. The second, of course, the synergy benefit is also there. The product offerings given by the new companies will fill the gaps in the products, which are supplied at this point of time from the CUMI's angle, and this will bring in the synergy benefits. RHODIUS already has an established distribution network. The CUMI products can be sold using RHODIUS network in the other parts of the world. Like that the RHODIUS products can be sold within the Indian market and Asian market. So, it is a win-win strategy in terms of the synergy benefits, as well as the existing market. So, it's a double benefit for the acquisition.

**Sanjiv:** Right, and you will see economics over a couple of years would start looking similar to the Indian business?

**P. Padmanabhan:** Correct. At least to the minimum extent, the existing pattern will continue and it's an aggregation of both the top line as well as the bottom line, and we feel that whatever the profit margin will be on the upward trend and it will not be the other way.

**Sanjiv:** Kunal, you wanted to ask something on this, right?

**Kunal:** Yeah. Hi, sir, I just wanted to understand specifically on these two acquisitions. One was that are those companies profitable with meeting margins or they are yet to turnaround?

**P. Padmanabhan:** In respect of the first acquisition, Awuko Abrasives. Awuko Abrasives was in liquidation that is why we have not acquired the company, we acquired the assets of the company along with its employees, its distribution network, its customers, etc., and we are continuing the production on our own. So, it will address the market relating to the leather and that of the steel industry and to some extent woodwork. So, this is how Awuko Abrasives will cater to that market. In respect of RHODIUS, we have entered into a share purchase agreement and the transaction will get complete by 31 March and we will be in a position to comment upon the profits only after that. One hint is that the company RHODIUS is an already existing company, enjoying the market as well as the profits at this point of time and therefore the same thing will continue.

**Kunal:** Sir, over a medium term, how should the Indian entity benefit out of these acquisitions, can we use the Indian base to leverage the cost and for example can Jumbos be built here and what's your thought on that?

**P. Padmanabhan:** Yeah, that synergy benefit of sending the Jumbos and then converting it in the local geographies is well thought out and then we will be doing truck also. Instead of selling the converted product and fitting to customer's specification, it may not be feasible if you are selling from India. Instead, if you are selling in the jumbo form and then getting it converted in the local geographies to meet the customer specifications that would be a better choice than selling the product per se. This will be a real value addition and it will save the carrying cost of the inventory both ways, and it will ensure that the products are made available at a time when they are demanded by the customer so that the demand is not left out and is addressed at that time.

**Sanjiv:** Is there a number that you are putting out in terms of the cost benefit or it's too early?

**P. Padmanabhan:** At this point of time, it is too early.

**Sanjiv:** So, overall from a profitability perspective, once these numbers come together, will it dilute the profitability?

**P. Padmanabhan:** It will be only in the upward trend and it will not dilute the profits. At the minimum level, on a conservative basis, the existing profitability margins will continue and going by a conservative model and of course it will be on the upward trend only.

**Sanjiv:** But reserve ratios may suffer a bit to start with, but it takes time, right?

**P. Padmanabhan:** No, it will be offset by the synergy benefit, which is happening in both the geographies. The RHODIUS products and the Awuko products will get introduced in the Indian market and the Asian market, similarly the CUMI products will fill the gaps in the Awuko and RHODIUS. So, it will offset the near term hit in the cost.

**Sanjiv:** Talking about cost, power and fuel is almost 10% of your cost if I look at the last numbers. So, given what is happening right now to power and fuel across the sector, are you able to pass on that kind of cost or you think that will hurt in the next few months or next few quarters.

**P. Padmanabhan:** If you could see the past 12 months, there were challenges. First it started with COVID and then went on increasing the input cost, which was again with the increase in the energy cost and then of course the fuel cost increase was also there earlier. So, at each and every point of time, we convinced the customers and then increased our prices. Of course, there will be a time lag between the cost push and that of the pass on to the ultimate customers, but the frequency of the increases, of course, the customers may not agree for the frequent increase in the prices and we feel that there is no other way, we need to go to the customer and then convince them because it has to be a feasible model. If the cost increases, unless otherwise it is passed on to

the ultimate customers, then it will impact our profits and we are confident that we can convince the customers and we can take it forward as we do now. Then, of course, there will be a time lag of maximum two to three months.

**Sanjiv:** Sir, one of the things that you have mentioned in your annual report, you were making a comment that as mechanisation increases, your leverages will likely do well going on and now we have this PLI scheme that has been announced where, of course the manufacturing standards will be much better plus I think on autos and/or electronics, overall how does this kind of impact, what you think, would it make your value-added products better, what happens to your growth margins, any comments on that?

**P. Padmanabhan:** If you compare the products of CUMI vis-à-vis the other items available in the mass market, say, if you compare it with the Chinese suppliers, as well as the supplies made by the unorganized players, one thing is always our prices were high. It is because of the quality reasons. We concentrate on the quality. We don't want to compromise on the quality front. We ensure that the product is good and we ensure that it never fails even during the worst circumstances or the worst usage. So, that confidence will give the ultimate customers, one is the reliability of the product, second thing is the availability, and third thing is even at bit higher prices also, it satisfies their requirement. So, considering these advantages, the niche of our products will continue.

**Sanjiv:** So, what I was trying to understand was with the PLI schemes and the new growth areas, do you think if we look at let's say growth, would that mean growth in top line or would that mean a growth in margins, how do you think it adds more opportunities come in?

**P. Padmanabhan:** The PLI scheme and 'atmanirbhar' scheme announced by the Government has increased the demand by the ultimate users in the certain industries, which have been listed in the PLI scheme and we are catering to almost eight of the industries in the PLI scheme. So, the demand will increase only. Demand will increase and it will ensure that the sale of our products will increase because of the PLI scheme.

**Sanjiv:** So, if you look at your products, there are two kind of products, you have what you call slightly value-added products versus bit more commodity, do you think it will be more value added products which will get sold and hence, that will have a positive impact on the margins.

**P. Padmanabhan:** Yes, now that because of all these schemes, the projects and the CAPEX expansion are increasing. The growth in the auto sector, the growth in the construction, the growth in the steel industry, the growth in the engineering and the bearing industry are there, and you could feel the demand is on the increasing trend.

**Sanjiv:** Sir, if you look at the abrasives markets, there is a question that has come, out of Rs. 4500 crores abrasives markets, Rs. 1700 crores were imports in FY19. That came down in FY21 and

FY22 and players like yourself actually benefited from there. Are you seeing imports from China, are they coming back now or what is the experience right now?

**P. Padmanabhan:** As far as the Chinese market is concerned, they are the largest producers of minerals in the world and the supply of the mass market abrasives by the Chinese market is also there. One, it is cheaper than the Indian products, that is the first thing and that was the advantage in the earlier regime. Now that there are restrictions in China relating to the emission control and then the energy costs are mounting and therefore, the products sold by the Chinese suppliers, the prices will increase. That will negate the advantage of the cheaper import prices vis-a-vis the prices in India. Therefore, we feel that the advantage of the cheaper product supplies by the Chinese suppliers will not be there and it will be either on par or it will be higher than the products supplied by us and the other players in India and therefore, we feel that the demand will only increase. It will not go in the other way.

**Sanjiv:** Right sir. One other thing was on the innovative products that you are launching and also catering to the new age industry as well, so there was something for lithium ion battery, something for even renewable solar, and so on. If you look at those innovative products that have been launched, today how big would they be and in the next two to three years, do you think they can grow much faster than the growth of the company?

**P. Padmanabhan:** The growth in the EV market is increasing, mainly in the two-wheeler front and the amount of increase in the EV market in the four-wheeler front also is substantial. Even though overall if you see that is less than 2%, but the frequency of the increase is very high and therefore, we feel that it will help us, the demand for the battery will increase. If the demand for the battery increases, the input supplies for the battery manufacturers, we are working on the high-end products like graphene and graphite, which will be used by the battery manufacturers for increasing the charging capability and that will help. The demand for those products will increase and we are confident that this will cater to the high end of the market.

**Sanjiv:** And these products because they are slightly more value added, asking about the economics of these products, are they much better, either in terms of margins or even in terms of return?

**P. Padmanabhan:** Before going into the margin first is the accessibility of the product. So, it involves a great amount of the test by the suppliers, by the manufactures, and it involves various cycles. We have crossed some of the cycles and our products have established and it has been accepted by the OEMs and because the data cycle, first the product has to be accepted by them, second on the application front, it has to be established and they should feel satisfied with that. After the product gets stabilized, the demand will increase and then it will be in-line with their production. So, it is a permanent demand and it will be on the higher side only. It will be linked to the output sales of the OEMs.

**Question:** Sir, last question from my side before I hand it to Kunal. If I look at your return on capital, it is almost 20%, it is a good combination of asset of turn 1.1, pretty decent margins. If I look at the

new products that are coming in, the PLI scheme, all these things, as a CFO if you think today and look at the next five years out, do you think that these return ratios can actually improve, let's say to 25% and what could drive, would it be better margins, would it be better asset turns, what can happen?

**P. Padmanabhan:** It has to be both the sides it has to increase. First is that, you would be aware that for the last four years, we are a debt-free company and then this has really helped us. The internal approvals were used to cater to the CAPEX needs and do that of the funding for all the M&A. So, this has really helped and then we have to reap the benefits out of this in the periods to come, that is the first thing. Second thing is that, when the top line growth is there, which is matched with that of the pass-on of the increasing cost and the sustainability of the margins is also taken care of, it will increase the margins and we feel that the margins will continue to be on the higher front. What we did was, we took COVID as a challenge and during that time, we concentrated on increasing the efficiency parameters in production, in the sourcing plan. We re-visited each and every aspect and we ensured that what are all the avenues available to increase the margins on a sustainable basis. This has really helped us in attacking both the variable cost as well as the fixed cost, which has given advantage of around 150 basis points to 200 basis points increase in a sustainable manner and we feel that this is sustainable over the periods to come and the idea of improving the efficiencies and reducing the cost has been imbibed in minds of the people at all levels. So, it's like a movement and then it will continue in the long run also. And we are focussing on the cash flows. We are ensuring that the cash flow is always higher than the sales we make.

**Sanjiv:** Sure sir, thank you. Kunal.

**Kunal:** Thank you, sir. My first question is pertaining to the solid oxide fuels, recently Bloom Energy introduced a next generation product, so has our content gone out in that product?

**P. Padmanabhan:** We are supplying the channels of the SOFCs to the customer and the product has already been established and then we had been supplying to them for almost a decade and the other parts of the SOFCs are also being tested and then it will be replaced by the ceramic products. Therefore, the demand for our ceramic supplies will increase in the near term. So, the newer projects of the supplier, we will supply to them for the new projects also, thereby, increasing the demand both in the top line as well as the margin.

**Kunal:** Sir, currently that SOS supply will be around Rs. 70-80 crores in our revenue?

**P. Padmanabhan:** Yes.

**Kunal:** And with the increasing content, could this be about say Rs. 200-300 crore kind of business in the next two to three years?

**P. Padmanabhan:** Yes. It depends on the trend at which the customer establishes his project and then accordingly our demand will also increase.

**Kunal:** And sir do we have enough capacity for this product or we need to add given that now the content has also gone up?

**P. Padmanabhan:** At this point of time, our capacities are around say 70-73% and it can cater to the near demands and if the demand by the customers increases, we will ensure that the CAPEX are increasing and in fact we have plans to increase on those lines and it will cater to the requirements also.

**Kunal:** Sure. Sir, my second question is pertaining to the silicon carbide based ceramics for batteries and energy storage, where are we in this journey, at what stage are our products in terms of this approach in supply?

**P. Padmanabhan:** Actually, we are not going to manufacture any batteries directly. We will be supplying to the manufacturers. We are an intermediary supplier. We will be giving it to the battery manufacturers. It involves various stages of testing. First is that our products are to be tested at various stages on the quality front, on the application front and on the usage front. At each and every stage, it will be tested by the OEM through the external agencies also. So, we have crossed various stages and we are almost in the final levels.

**Kunal:** Sure. Sir, what would be our content per battery for this product?

**P. Padmanabhan:** The content, in the sense, it depends on the demand by the ultimate OEMs.

**Kunal:** So, if we were to put all the products that we were working on for the battery and energy storage, including the ceramic based silicon carbide, approximately what part of the cost will turn out to be for the battery manufacturer?

**P. Padmanabhan:** It will come around 25-30% of their supplies.

**Kunal:** Sir, how critical are our components for them?

**P. Padmanabhan:** Without that, you cannot store the energy at all.

**Kunal:** So, basically once we get into a supplier, then it will be a very tricky business because there will not be any need for the supplier to change given the criticalness of our products.

**P. Padmanabhan:** Correct, that is why the gestation period taken by the OEMs in testing our products at various stages is happening and that is why it is taking a long process.

**Kunal:** Sir, can you give a sense on what would be the potential size of this business, three to five years down the line?

**P. Padmanabhan:** It depends on their sales. If the product is accepted, you can expect a huge size from our end and more than 25% growth will be there in our top line business.

**Kunal:** Can this business also be Rs. 300-500 crores business in the next five years?

**P. Padmanabhan:** It depends on how quick the turnaround happens in the battery industry. The battery industry is linked to the EV. The acceptance of the EV is the main question. The acceptance of the EV depends on the charging market. So, as soon as the infrastructure for charging is developed, then it will have a bearing on the demand for the EV. EV, once again, without the batteries they cannot run. For manufacturing the batteries, our product is the base. So, everything is linked.

**Kunal:** Sir, we have one question from Mr. Bhavin.

**Mr. Bhavin:** Thanks, Kunal, for the opportunity. My question is on VAW as well as the new acquisitions. What I understand is what time you have been forward integrating in VAW abrasives and the German acquisitions also would have actually helped and accelerated that journey. In fact, you were just telling SIC could have sold ceramics and VAW could have acted as a supply source for them. Are the current events, in your view, jeopardized that or you believe that a year or two down the line, we will be back on the steam and the long-term goals are on track.

**P. Padmanabhan:** We feel that the current situation is only a temporary phenomenon and will not last long and it will come to a conclusion soon and the advantage of these acquisitions is that if you take CUMI standalone, it's the entire abrasive business and the refractory business, can be catered out of our own resources. The raw materials are secured. So, we can extend the same thing to the new acquisitions also. Their raw material input requirements are also secured and the synergy benefit will work like standalone, it will get extended to the entire group. We don't feel that it will not be affected because of the current situation. We feel that the current situation is only temporary.

**Mr. Bhavin:** Sir, last question from side. After these two acquisitions, three actually, in the recent past, do you believe that you would take a pause because in the past interactions you have highlighted that we need to be local and that is why you have done these acquisitions in January. U.S. is on the same link as of now and there are certain other pieces also in the super abrasives, so if something comes up now given the way the situation is, are you okay to leverage your balance sheet?

**P. Padmanabhan:** You know that our balance sheet is strong and can accommodate leveraging any acquisitions in the future also. If any opportunity arises in any geography in the same areas, certainly we will be taking up and then moving forward, and we feel that the current situation, it is not going to affect our aspirations or plans.

**Mr. Bhavin:** Thank you so much for taking my questions. Thanks, Kunal.

**Kunal:** Thank you. My next question is pertaining to the high purity silicon carbide for the semiconductor part of the business. So, should the supply start next year, we were targeting to start supplying next year?

**P. Padmanabhan:** Yeah, in fact, we are in the final stages where the purity levels of the silicon carbide is taken up to 99.99% level, which we have already attained and we are in the third decimal and we feel that we are nearing completion stages.

**N. Ananthaseshan:** Good afternoon, my sincere apologies for joining late, got into a discussion channel, which could not get out of earlier.

**Sanjiv:** Sir, thank you very much for joining. We were already told that you have been stuck. Kunal, maybe I can ask a question to Mr. Ananthaseshan. Sir, I actually wanted your view on some of these new materials that you are talking about, some of the exciting products, which are catering to the new businesses like EVs or lithium-ion battery and so on. I just wanted to understand your thought vision on this, like how big these products can be over the next three, four, five years or maybe even longer, and what are we bringing on table, how are we differentiating these?

**N. Ananthaseshan:** The materials what we are talking about here is something, which we have been working on for the last couple of years, high purity silicon carbide. When I say high purity, we are talking about purity levels of 4N (99.9999) and the high purity graphite, which is used for improving the conductivity and energy density of batteries and the graphene. Graphene has multiple applications as you all know. So, these are products, which have been highlighted. In the case of silicon carbide, we are looking at a couple of levels. One is in terms of generating or synthesizing the powders of this purity. We have achieved now reasonable levels of impurity rather than purity levels because impurities are more important than the purity here because that is what is used to grow the single crystals and we have invested in a pilot to not only produce the powders, but also the crystals, wafers as well. So, that will give us an understanding of what really is required to make the powders work for this application.

How far are we away from commercialisation, I would believe between 9 to 12 months in terms of pilot commercialisation of the powders. We have set up a unit or what is called a reactor system, which would give us reasonable amounts of volumes to establish consistency of our product quality. In the case of graphite, we have been working with institutes like the CECRI, which is the Central Electrochemical Research Institute where we have supplied reasonable volumes of high purity graphite for their evaluation. So, you may remember that CECRI and CUMI among others have been given the licence of the technology for making the batteries. While we are not into the batteries itself, but battery materials is what is of interest to us. So, this is a part of that program where we start working with CECRI and others to establish our products.

The third one, which is graphene, and here what we are doing is in terms of making intermediates, as I call it. It is not the graphene powder per se, which we are looking at commercializing, but intermediates, which would go into coatings, which could be antibacterial, antifungal or also for enhancing the mechanical properties of coatings. It can go for industrial coatings, it can go for MSOT coatings and in thermal energy protection, and also as additives in terms of building the raw materials of 3D printing. So, these are some of the properties of graphene that we are looking at and we had some difficulties initially in terms of using it as a powder itself because it's very-very fine powder, it's very difficult to disperse and today we have reasonable progress in terms of using it as intermediates. So, that would be the way to go for graphene. So, we would be building as intermediates and getting them tested and established in these applications, which would be largely large applications like paints and coatings first and then introducing them into products like oil propylene or polyethylene or high-density polyethylene for rare applications. So, that's where we are today. In terms of commercialisation of these, as I said earlier, the first one possibly would be the high purity silicon carbide followed by the intermediates and then the graphite.

**Sanjiv:** In fact, in terms of potential size of these businesses, what can they be over a period of time, let's say the next three, four, five years?

**N. Ananthaseshan:** The high purity silicon carbide is largely used in power electronics and depends on the market size at various levels starting from \$250 million to \$500 million, various reports. I'm not saying that any of these reports are incorrect because this depends on the speed at which people would start adopting these materials for whether it's EV application or battery management systems. So, it is a very fast evolving technology with the way at which unlearning has to happen or the learning has to happen. So, people are moving away from a 4-inch wafer to 6 inches and some now to the 8-inch wafers already. So, while the popular ones are still the 4-inch wafers, moving towards 6-inch and 8-inch wafers would make the processes much more cost efficient. So, that is where the R&D is headed, and we will see more and more companies moving towards those sizes and that also places a lot more challenge on the producer of the powder itself because having a powder for a 4-inch crystal is a completely different challenge for 6-inch or 8-inch crystals. So, I believe that the silicon carbide mono crystal will see a significant rate of growth, it may be small today, \$250 million is not a big amount, but I believe that it can grow significantly. So, we do have our R&D working on both India and Russia and I am confident that they would definitely be looking at a much efficient towards the end of this year.

**Sanjiv:** So, if you look at in terms of CAPEX, do you think, it will be more CAPEX required for these products and currently the kind of returns that you have, this CAPEX will be much higher given this?

**N. Ananthaseshan:** I would not guess what kind of CAPEX we are looking at because honestly to make these powders at a pilot level or something and then to look at what kind of CAPEX we will need to make it, our scale module is slightly different. But having said that, we are currently using

similar infrastructure to what we have where we produce silicon carbide for the abrasives and refractory applications, but of course, the power controls are different at levels of precision and also the raw materials used to be of much higher order, so in terms of CAPEX, too early to estimate, but I believe that the asset turnover ratios can be much better than what we have.

**Sanjiv:** And sorry I am not a technical person, the availability of the raw material for this kind of business because today the biggest challenge is raw material price, so how does that work?

**N. Ananthaseshan:** The good news for the business of the Hi-purity silicon carbide is that it is not a volume business in the sense that we are not going to take hundreds or thousands of tons, could be hundreds of tons, but not million tons like what we see in regular silicon carbide, at least to start with. Because silicon chips, it is going to exist. Silicon is still the most popular and the cheapest semiconductor material. It is silicon carbide chips that would address an application where it demands high power carrying capacities. So, it is those kind of applications, which would see the use of silicon carbides chip in our normal day-to-day applications, let's say, use of semiconductors in washing machine control or refrigerator control or even a smart watch. So, that is still going to be a silicon because that's a cheap silicon material we can produce. So, the volumes of silicon carbide that could be required for use would be limited and consequently the volumes of high purity raw material also would be not so much.

**Sanjiv:** You made a comment in your earning calls, so another layman way of looking at this company could be to break it up into high-performance materials. If I look at the business today, how much is the high-performance and in two, three, four or five years down the line, how much do you think you want the high-performance to be?

**N. Ananthaseshan:** When I say today high-performance, I would categorize what we do in technical ceramics and engineered ceramics as high-performance. We are still supplying silicon carbide, not of this high purity, but for high-performance applications like in the semiconductor industry. So, even for normal silicon wafer, the machine or one needs silicon carbide for cutting and polishing. So, if I were to put together all these as high-performance materials and some of what we do with carbon reinforced polymer composites, so that's also high-performance. I would say that in percentage terms, approximately between 15-20% would be the high-performance materials. I am targeting about 30% of our business going forward should be in this space over the next three to five years. So, that is the kind of product mix that we should look at and leverage the trends. So, if we can get into that kind of a region, then it would be a much-much stronger business than we have today.

**Sanjiv:** And I am assuming that from a finance angle, it would mean better margins or more stable earnings.

**N. Ananthaseshan:** Again, when you say stable margin and stable earnings, obviously when you are looking at, going up the value chain, you would aim to have higher margins and these products while today they are very-very exotic, it will also tend to be a commodity and then when more people adopt

it, the entry barrier here was going to be the ability to produce those products of a consistent quality and this is a very-very demanding applications where there is no room for making up for quality products. So, that's the kind of process that we would need to build. So, the margins definitely can be better. In terms of stability of sales. The operation has to balance what you call the real core businesses of what we currently do. These may not be exotic, but it brings in the cash. So, we have to balance both.

**Sanjiv:**

Sir, last question from my side before I hand over to Kunal. So, if you look at your company and if you look at global benchmark, either in your business and may be other businesses similar like into electrochemistry businesses or something broader, who would you benchmark yourself against?

**N. Ananthaseshan:**

Good question. If I were to take my business, it has broadly three verticals. There are good companies that we deal with. For example, in the minerals space, Emerson is a good company and I think St. Gobain themselves have nice range of product groups in the silicon carbide space whether it is hi-purity silicon carbide or in performance ceramics and it is a better company in terms of their methods of operations, their governance and ESG practices that they have, and we believe that in many of these product groups, we are equally good and there definitely is also room for improvement. In terms of share size and variety in the mineral space, I guess we are right up there with many of the leading producers in the world and it has not been an easy journey and we all know what issues that we have to handle currently in the Russia-Ukraine conflict, but notwithstanding that, just as a producer of a basket of high-performance synthetic minerals and all this, but for sheer range, we would possibly be right up there. In abrasives, definitely there are giants. We have the 3M, the Nortons, globally, and we have groomed ourselves mostly as an Indian company all-in-all, but with exposure to international markets, largely in the precisions side, but going forward, we believe that the abrasives will continue to play an important role in manufacturing industry. It is still going to be the work horse of any manufacturing. 3D printing is a forming method, but it's still quite a long way off in terms of volume business. So, I think we can definitely grow in abrasives to the global player. We have the appetite, we have the elements of growth foundation now, strong domestic presence, increasing presence and manufacturing large portfolio of high-performance products and that should take us good distance in terms of creating an abrasives business globally. Ceramics, is what I call a fairly innovation-intensive, customer-driven and co-creating business.

So, this is where all the technical talent in the company would be working in terms of creating unique applications and ceramics is definitely one area which would grow as a material in many applications whether it is in manufacturing and engineering, space, automotive. In automotive, a lot more ceramics we are going to see in the future. So, I believe that each one of these verticals have their own benchmark companies to look at and compare and grow. In case of ceramics, I think there are a lot many companies. So, each one is niche, whether Morgan or any global companies, St. Gobain, SKC Korea. So, bunch of companies and each one is a speciality company.

**Sanjiv:** Okay sir, thank you. Sir, I always wonder given that you have so many products and so many industry verticals that you are getting, how do you get sales teams to go and actually market this?

**N. Ananthaseshan:** I would categorise ourselves as not one company, its individual companies, small boutique companies who have their own speciality with people speciality application teams and each one is looking at themselves as a complete company. So the sales guys in abrasives would be very-very thorough and what they do in abrasives business, similarly in ceramics, the sales teams are actually doing what they do in ceramics. So, I don't see a problem with that, each team knows what they have to drive and get it done because it is catered by different teams. It is not same sales teams driving it.

**Sanjiv:** Sir, there is a question from a fund manager. He is asking do you see the company reaching Rs. 1000 crores profit in five years?

**N. Ananthaseshan:** Everybody desires to do much better than we are currently doing, so five years if you would asked me the same question on February 23, you would get a different answer as world is so volatile right now.

**Sanjiv:** Sir, I am assuming that February 23 is just a blip.

**N. Ananthaseshan:** Definitely. I mean that is nothing. There is no life without hope. We have to hope that somebody would see sense and soon and the world will get back to its normal levels and I think there are more important things in life.

**Sanjiv:** Assuming that we go back to status quo soon and given how may interesting product and the growth that we are starting to see even in India and China +1 given all the factors that are in your favor.

**N. Ananthaseshan:** We will try our best. As you said there are elements of growth all in place. I see the there is no reason why you should not have aspirations.

**Kunal:** Sir, two question from my side. First question is for abrasives. While in abrasives we are largely India dominated, there is large market out there and there is tremendous opportunity but what you see as the biggest challenge in converting these abrasives business globally, what are the key challenges? Because opportunity is huge and market share is small compared to India then what are key challenges in converting this grand opportunity?

**N. Ananthaseshan:** Abrasives is a niche business itself, which is kind of restricting the growth but the nature of the business this is a global business, but very-very local in nature. So, if you have to run in various markets, you have to manufacture in the local markets, because abrasives and the volume of abrasives which are sold, whether it is in coated or the mass market, the thin wheels, of course on the power tools, they are all very fast consumables. Paper does not last more than half an hour, the peel does not last more than half an hour. So, what happens is if we make locally,

distribute locally, use locally, we have to have entire value chain very-very efficient, then we can win these markets. So, in India reason for our success is our belief that we have been making very consistent products. We have a good quality image built, we have a good team of applications business working on these applications, and a wide distribution network of three to four decades. So, for a newcomer to come in and build that kind of strength is very difficult in a local market. So, it has to be worked through possible acquisitions. So, here again, the difference is on precision abrasives, still it is easy to carry a position of this over distance. It is more fight friendly than the mass market products and it is also driven my application. It is easy to have an application in a team located in many of these precision markets, but the volume of business would not be as high as we seen in mass markets. So, there are two different natures of abrasives business. So, in Europe, if you wanted to grow in these areas and having a manufacturing business, route is through acquisitions, and same thing would be in any other market as well.

**Kunal:** So, you would be targeting Europe as key markets or US key markets initially because US is still moderate.

**N. Ananthaseshan:** We are very moderate in US, we are only in precision area, but there is a big market for both the precision coated abrasives as we call it, and also in the case of Europe, the acquisitions what we have done now in the coated abrasives, has applications across geographies whether it is India, Europe, and America. Obviously, the first market would be to regain the markets in Europe through Awuko and in case of RHODIUS built on what we have, a very strong brand, very innovative product range and abrasives market in the Europe and transfer that strength to India because India is one market, which is a much bigger market where we don't have till now a good product for that market. So, I am looking forward to leveraging the RHODIUS brand and strength to build a market in India.

**Kunal:** So, what could be our market share in Europe currently in abrasives?

**N. Ananthaseshan:** See, when you look at defining market share through RHODIUS, definition of abrasives all of them put together would be anywhere between \$2 to 3 billion worth and much-much more in terms of the product group that we are dealing with. I can't work out a number, but in the space that we are operating, in the thin mill space, I think RHODIUS is very well known player, much respected player.

**Kunal:** Sir, lastly we finally request if you can spend a minute or two on the current near term trends that you are in the market across abrasive, electro mineral and ceramic?

**N. Ananthaseshan:** The raw material business is going through good times or tough times depending on where you are looking at. The good news is that there is a continued demand for all these materials whether it is for medicines or the factories or for application like floor laminates and metallurgy applications, foundry applications. So, those are increase demands and these demands are not going to dry down soon. But what's also happening is our minerals business, whether it's the

natural minerals or for cosmetic minerals, energy costs are on the up, so energy costs are very critical to some minerals, more than the natural minerals. The demands of cleaner production processes are on the up, which means people have to invest in emission control, people have to invest in back filters, electrostatic precipitator etc. to ensure that emissions are limited and labor is not getting any cheaper.

So, what's happening is in China at least, the energy costs, labor costs have been on the up and while China because of its advantage on the cost manufacturing and high volume manufacturing have led the world in terms of the capacities of production of minerals, it is now findings it increasingly difficult to produce and distribute at much cheaper prices than what is available in the rest of the world. This gives us at least an opportunity in India and manufacturers who have built volumes, but also built volumes based on the strength of cleaner production technologies and that is where we are positioned today whether it is in Russia silicon carbide or Fused Alumina in India, our production is far-far cleaner than many of the companies in this space and not only on the clean production side, but also in terms of energy efficiencies, I believe that we are in a better position. So, that is the trend we are seeing, how do we lower the energy consumption of the business, how do we emit lower and how do we waste lower. That is the theme which runs across all the minerals producers and whoever is getting better at it, is the clear winner among us.

In the case of abrasives, the precision abrasives, while it is moving more and more towards super abrasives for finishing business, it is also largely due to the fact that the forming processes, it leaves very little room for removal of materials. Many of the processes are very critical for tolerance. The demand is of finishing and polishing more and more. While the productivity driven abrasives, which are all the thin wheels or coated abrasives means, they would get to be more mechanised. So, people will use more and more power tools to mount coated abrasives or thin wheels for fasted cutting. Even in thin wheels gone are the days when people were looking at life, people look less life, so they don't want to have long life, they want to have little life but very-very fast cutting and that's on one end, but on the abrasives which goes into larger machines for example, here you want long life because there robotics have started coming in, so many people are using robotic grinders. Robotic grinders mean that they want to see the abrasives to stay there forever logically. So, these are multiple things that are happening in abrasives. So, which is just no longer cost driven, it is performance driven, it is life driven, it is design and very application driven as well. Ceramics, it's the ceramic industry where we are participating, has always been a technical intensive business. So, there we have to work with the customers along to see our application trends whether it is, for example, an alternative energy business, hydrogen electrolyzers, we have to have a very close working relationship with customers and develop products and develop technology along with them. So, these are some of the trends I am seeing. In the precision abrasives, obviously move towards electric vehicles from the ICE will happen, but when it will happen also depends on the infrastructure availability and the adoption rate of these vehicles. So, there is a combination of charging infrastructure, combination of how the battery technology itself will evolve, whether people

would have high density fast charging batteries and what are those materials which would have play in them, that's what the drivers for the change from ICEs to EVs. It is happening, it will happen and we have to learn faster to adopt and adapt to this change.

**Kunal:**

And lastly are you seeing any changes in demand trends vs the last quarter, are you slowdown demand in India or any overseas market in the last Q3, any changes you have seen on the demand side?

**N. Ananthaseshan:**

The last Q2 and Q3 the pickup in demand was much more, I would say, noticeable and significant. While in comparison to Q4 of last year, when we compare this Q4 to last Q4, the demand, especially in the abrasives side, is still not as fast as it was in Q2 and Q3 in specific segment of in precision abrasives. In automobiles, even now I am seeing a little bit kind of a slowdown in construction and/or possibly fuel price increases, etc. I think it would take a quarter to resolve.

**Sanjiv:**

Thank you so much for spending your valuable time with us.