

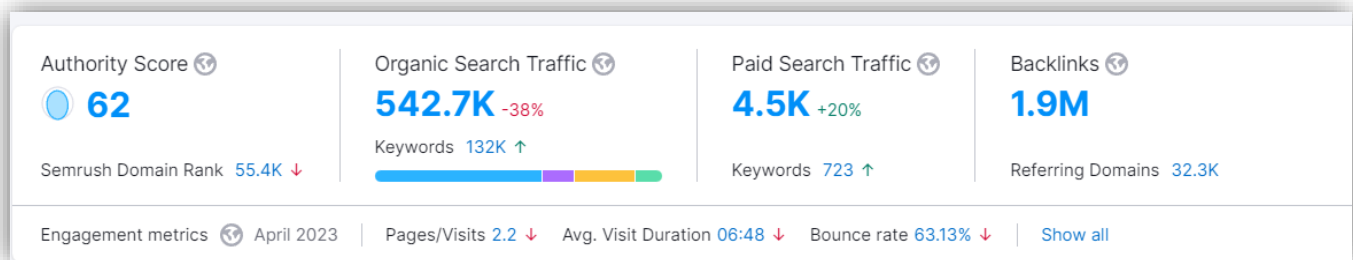
Dow Competitor Report

Company Overview

Dow Chemical Company is now referred to as Dow Inc and is a multinational company with headquarters in Midland, Michigan. They were founded in 1897 by Herbert H. Dow and have since grown to become one of the largest chemical manufacturers in the world. Dow operates in over 160 countries and employs roughly 35,000 people worldwide. They engage in the production and distribution of a tremendously wide number of products, including plastics, chemicals, agricultural products, and performance materials. The company operates through various business segments: Performance Coatings, Industrial Intermediates, and Packaging & Specialty Plastics. They have a strong commitment to sustainability and environmental stewardship and have a goal of achieving carbon neutrality by 2050. Lastly, they are considered a major player in innovations in the chemical industry.

Online Presence

I want to make note that from a marketing perspective, they have a highly navigable website and online presence. See below a general outline of their search traffic in comparison to ours. They receive over 542,700 monthly search results, but only 4,500 is paid. They have 1.9 million backlinks. Thus, their authority score (a nomination of how “well” Google ranks them) is incredibly high, meaning that their web presence rather than their products will be a definitive area to compete with. They are also very active on social media, and though it can be insinuated that they have had more time at this than UNISIL, one way to compete is in this light. Paid traffic may make sense in the long run, as they seem to have very little leverage in that medium. I can assist with this if needed or requested.



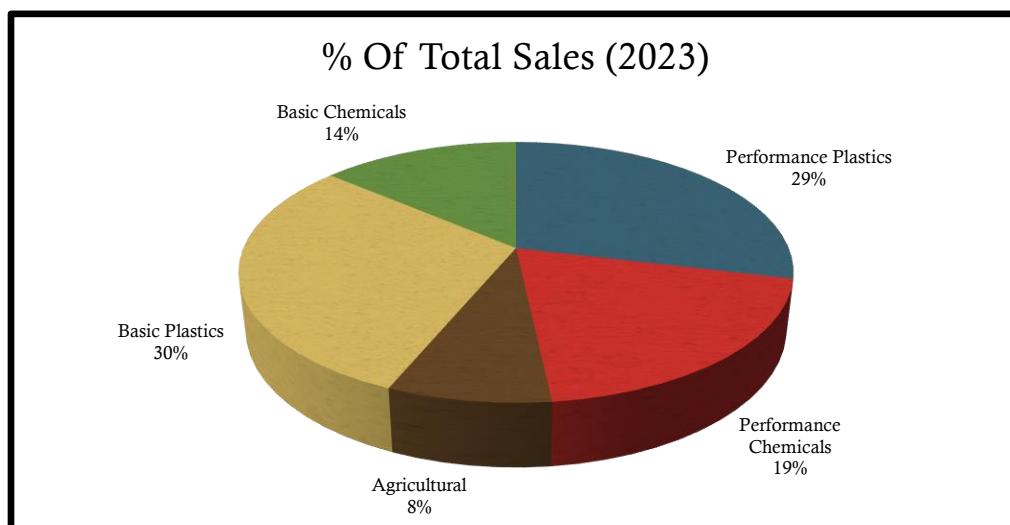
(SEMRush.com Analysis, May 15, 2023)

Social Media

Though not indicative of any upcoming trends, they do have a relatively stable social media profile, which consists of around 81 percent of buying decisions made by those in the United States. Thus, it might be worth looking into expanding a social media presence long-term. I will continue to monitor this endeavor throughout the next week or so, but it does show how far we could go with cause-based marketing online. Example: their main strategy with both social media and PR is based on cause marketing, i.e. social issues such as environmental protection, cancer research, etc. This means that they are using a very “American” marketing approach to attract their customers, and though I cannot estimate its impact, it is worth discussing in a report on Dow Chemical.

Top Products

Dow focuses more on plastics than anything else, including polystyrene, polyurethane, polyethylene, polypropylene, and synthetic rubber. They also produce a wide variety of ethylene oxide, various acrylates, surfactants, and cellulose resins. It must be noted that, based on the below chart, 59 percent of their industry is in plastics, while only 33 percent is in chemicals. I hope this is useful info.



(2023 Categorical Rankings)

Current Activity

As of January 2023, Dow announced a \$1 billion dollar cost-saving drive after a rather disappointing financial performance in 2022. Thus, it is forecasted by their CEO that: “This could include spending less on maintenance and turnarounds while keeping the focus on safety and reliability.” They are estimating (and I quote): “Solutions being studied from a profitability standpoint date focus on smaller rather than larger European assets,” according to CEO Jim Fitterling. It is estimated that they will face multiple plant closures (in what areas, I have yet to determine) and the potential layoff of 2,000 jobs. This is due to negative financial performance.

They are estimated at \$56.9 billion in net sales as of 2022.

Expansion Into China (2023)

Dow plans on a 2023 move into China. As we speak, they are indeed investing \$250 million into a specialty chemical plant in Zhanjiang, China. They are also intending on adding other products and are in the process of expanding a silicone factory in Zhangjiagang, China. The target is the construction of specialty polyurethane and alkoxyate facilities, alongside a production capacity of about 250,000 metric tons of exports per year. This is according to Chemical & Engineering News. Reports date back to 2021. It is clear that though they do have a presence in China already, they are trying to merge into the region at a unified pace.



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Imports & Exports (Estimate)

Dow Chemical has a total of 9.8 million mt/year of capacity according to Platts Petrochemical Analytics (2022).

Lawsuits & Regulatory Issues

I will list a more inclusive overview of these, but the EPA (Environmental Protection Agency) has listed, in 2023 alone, numerous legal and ethical violations. This includes the Clean Air Act (CAA), the Resource Conservation and Recovery Act (RCRA), and the Clean Water Act (CWA). This is based on copious accounts of pollution and waste. In turn, from 2019 to 2021, they had one of the largest shares of waste in metric tons, topping at 780,000mt of dangerous waste. Thus, one thing we can do here is emphasize a more economical approach, which would broaden them as a rather haphazard pollutant. Lastly, they have faced ancillary lawsuits and have violated more laws than I can count. In the appendix, I will include a number of claims against them, which does affect the overall profitability of a company, as well as their ability to expand. With that said, it is good to note that they are also losing money.

Product Overview

Dow produces all of the following items: silicone emulsions, silicone fluids, resin, enamels, rubber, epoxies, and protective coatings. More specifically, their catalog is far too much to research, but I will list the products offered by US Silicon Trading, LLC below, and will indicate which are perniciously our most competitive products. I will break this down by category as necessitated.

Electrical Insulation Resins

They produce within this category with relatively similar products, most of which result from naturally high molecular weight and low-density polyethylene. These are primarily silicone resins and acrylic resins, for purposes including but not limited to building and construction, paints and coatings, personal care, films, tapes, release liners, and textiles/leather. Please refer to this attached document for more information on the many formats of this product they offer. One noted product we offer is UNISIL SRE 21, which is of a similar polymethyl resin, except ours seems to have more advanced properties. In turn, most, if not all, of our products, are used by Dow in this category, and yes, they are a threat. However, this can be differentiated by focusing on ancillary applications.



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Though they have a similar product offering, it seems that many of the Electrical Insulation Resins used by our company have a more advanced chemical structure, and we have a competitive advantage that offers a more synthesized organic composition.

Heat Resistant Resins

They produce in this category, as well, but not within the realm of industrial applications, from what appears to be a focus on their end on ethylene copolymer technology, mostly used for food or medicinal uses. I will download and attach all available Resin SDS/TDS properties for review, but it is indicated on their website that they use a similar polyethylene makeup, allowing for both high and low-density polyethylene resins. Everything from trash bags to industrial can liners is within their grasp, but if we are to differentiate our products using a different applicable industry, i.e. industrial or construction, there may be a way to beat them out.



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Silicone Liquids

They produce in this category, more or less for the intention of paints and coatings. This consists of a similar polymer pre-composite, as well as hydrophilic binders. The primary application for this is in paints, inks, and coatings, followed by only 3 total chemical and manufacturing/industrial compounds that are used for a) coil coatings, b) weatherproofing, and c) auto/home care formulations. Thus, though they do focus on similar products, UNISIL SL 136-157M seems to be the primary “standout” product thus far. However, and as I will consistently state throughout, our website is not optimized to illustrate proper applications of the materials, so all I can say is that they seem to focus on a similar chemical makeup, but if we have a proprietary concoction, then great. I just need to know what it does individually, as all of their products come with an application section, as well, explaining in plain English.

Silicone Emulsions

They produce in this category, consisting of a similar chemical makeup to UNISIL products. Many of them consist of nonionic dimethyl, polydimethylsiloxane, and trimethylsilyl. Their applications vary, as there are almost 335 results of the “emulsion” category, but it seems to home in on the chemical manufacturing and industrial sectors. It only represents 6 results of paint, ink, and coatings, while the remainder consists of beauty and personal care. It seems most of our Silicone Emulsion categories represent water repellence and other treatments, though the undeterminable wording on our product pages does not help classify them. I can list chemical makeup (see above), which is the same as theirs, but until I have a more comprehensive application for each, I cannot at present determine if we are facing a threat with them or not. Either way, it is clear that a lesson is learned in this manner.

Ethyl Silicates

They do not produce in this category, but it can be insinuated that they will offer some form of this product in another category. Based on the website’s product descriptions, I can understand that Ethyl Silicate is meant for weatherproofing, hardening stone, mortars, and types of cement, as well as protective coatings. These are all categories they cover, but perhaps not with this same chemical makeup or organic construct. They do offer something called Ethyl Acrylate, as well as similar polymers, mostly used for paints, inks, coatings, and industrial cleaning. They also have a rather vivid category called Polyethylene Resin, used in fiber and construction materials. Because the US Silicon Trading, LLC website does not list applications and does not summarize their products in the same manner as Dow, my personal suggestion here is to focus on building each section based on Dow’s format.



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Epoxy Products

They do not produce in this category, and I can insinuate that Diane-epoxy resin (in the case of Resin ED-20) is meant for glues, sealers, adhesives, and reinforced plastics, as well as used in machine building and within the building industry. However, they do have an Epoxy section, consisting of chemical names such as Polyethylene glycol and alkyl polyglycolide. Applications seem to reside in the realm of industrial cleaning, lubricity, and a general continuation of products meant for industrial-grade cleaning. I do not know if we offer this or not, but in turn, they do have products with a relatively similar construct.

Silicon Enamels

They do not produce in this category, but they will more than likely have some form of product that offers similar properties. One product is called DOWSIL 795 Silicone Building Sealant, containing the properties of weatherproofing and application to structural applications with excellent adhesion. Thus, I cannot conclusively say if they offer this product or not, but it can be implied that they will offer some form of product within their 3,500+ line of products and various chemicals. Further research is attributable.



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Rubber & Rubber Mastic

Without question, this is the product classification we do not want to try and replicate. They offer around 350 products of various makes, including those applicable to chemical/industrial manufacturing, consumer goods and appliances, mobility, and food and beverage. Though there is not much listed on the US Silicon Trading, LLC website in regard to chemical makeup, it is difficult to determine if they have anything proprietary like ours or not. I see a lot of primers involved, as well as insulation, installation, foams, and coatings. They also offer polyolefin elastomers, which may be very similar to our product makeup at present.

The following were not located on the Dow website:

Methyl Silica Gel

They do not produce this particular chemical.

Potassium Hydrochloride

They do not produce this particular chemical.

Protective Coatings & Floor Coatings

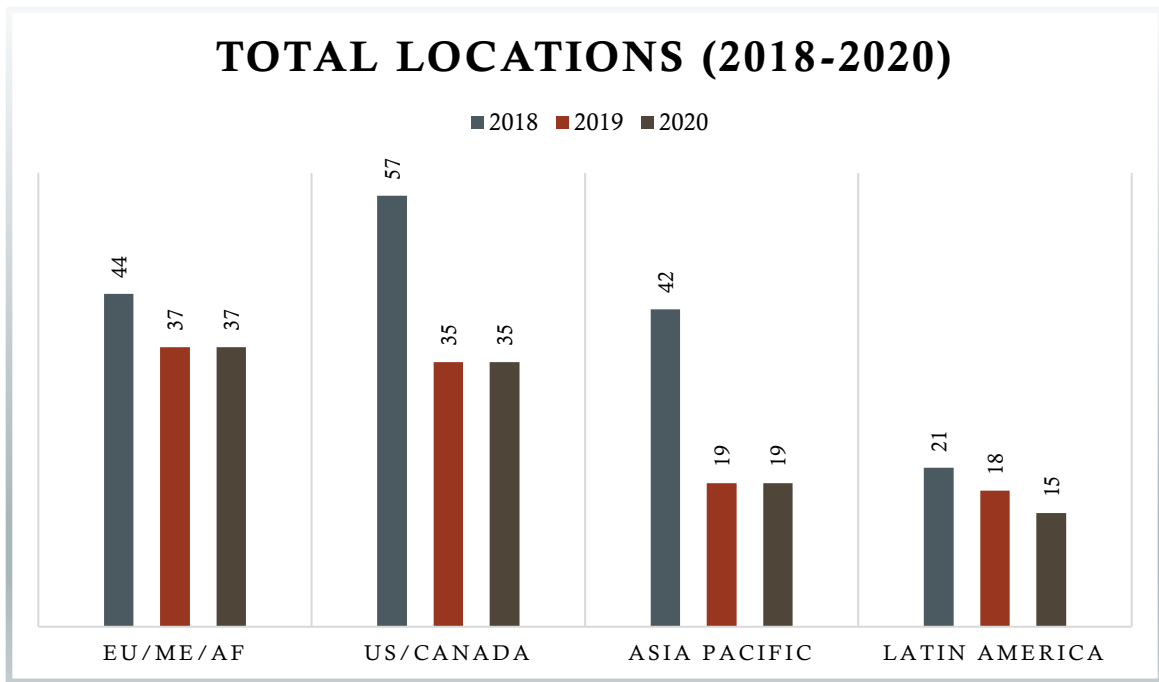
They offer very similar structures within their product line.

Locations & Facilities

There are currently 37 facilities for manufacturing and production in Europe, the Middle East, and Africa. There are 35 in the United States (it was 57 facilities in 2018). They have 19 facilities in the Asia Pacific region (it was 42 in 2018). In Latin America, they had 21 facilities in 2018 but in 2020, it was limited to 15. Lastly, the total number of locations is 164 (2018), 109 (2019), and 106 (2020.) The reason for this is unknown, but it is an odd bar graph to stare at, so I will try to decipher why they closed facilities in 2019/2020.

Potential Reasons For Fewer Facilities

Though no notable cause behind this drop is available, it can be insinuated based on three factors: 1) the energy market, in this case, is suffering, 2) the pandemic forced them to downgrade, and 3) they have faced several lawsuits and have accepted far too much negative press attention in 2022 than Donald Trump himself. There is also the possibility that in 2015, Dow and DuPont merged.



Total Facilities: 164 in 2018, 109 in 2019, 106 in 2020

Litigatory Issues

I wanted to add a necessary addendum. I cannot link to all of them, mind you, but they are definitively under active watch by the EPA, and the US Department of Justice, and multiple civil penalties have been issued in regard to clean air and water. These violations were placed when many hazardous waste locations were being used to dump harmful pollutants into the water. Mind you, in the US, if you are in violation of the EPA, you are in violation of federal law, and that is not good. Their stock, though not a sign of their competitive standing but definitely something to consider, is also high in attentiveness. In the past year,



Dow Inc. Stock Prices (\$52.26 USD, down by 23.12 percent)

This is because of said litigation issues, but it may also be populated by factors such as competitors capitalizing on their negative news and press exposure, or simply based on the economic economy we are living in at present. However, it is clear that this does show they are not the healthiest company at the present moment, and that is one way to capitalize on their market. If they are not doing things safely and are not looking out for their employees or their customers, this can be “spun” into a campaign where Dow is a potentially dangerous company to buy from. However, given their size and industry, it is not an indication of dropped sales. Do note that their net income in 2019 was \$1.216B, while in 2020 it was \$5.279B, and in 2021, it declined to \$ 4.558B. Lastly, as of March 31st, 2023, they are at \$2.896B. As of the previous quarter, it is negative \$9,300,000. They are essentially losing money.

