



# EXCEL PVC SHEETS with IN-BUILT ANTI MICROBIAL & ANTI FUNGAL FEATURE

An innovative product from Jains for microbial & viral protection.

Now Jains EXCEL PVC Sheets are available with in-built Anti-microbial and Anti-Fungal characteristics to give protection against Microbes and Fungi.

The proprietary additive in EXCEL PVC Sheets ensures that the microbes and fungi in contact with the sheet surface die thus making them clean, safe and hygiene for use.

Product tested and proven for efficacy in

## ELIMINATION OF BACTERIA

- |                               |   |
|-------------------------------|---|
| ✓ Escherichia coli            | ✓ Salmonella Typhimurium                      |
| ✓ Staphylococcus aureus       | ✓ Klebsiella terrigena (Raoultella terrigena) |
| ✓ Klebsiella Pnuemoniae etc., |   |

## FUNGI

- |                          |                                 |
|--------------------------|---------------------------------|
| ✓ Aspergillus Niger      | ✓ Penicillium Globosum          |
| ✓ Gliocladium Virens     | ✓ Chaetomium globosum           |
| ✓ Penicillium pinophilum | ✓ Aureobasidium Pullulans etc., |

## ALGAE

- |                       |                          |
|-----------------------|--------------------------|
| ✓ Chlorella app etc., | ✓ MS2 phage ATCC 15597B1 |
|-----------------------|--------------------------|





## APPLICATION AREAS

**EXCEL®** Anti-microbial & Anti-Viral sheets are ideal for the places where the growth of Microbes & Viruses has to be totally Eliminated because of demanding conditions in following highlighted applications.

- Food processing industry, ● Wall Cladding, ● Ceiling, ● Chemical process industries, ● Hospitals, ● Infant care centres, ● Shopping Malls, ● Sterile / Clean rooms, ● Medicinal stores and facilities, ● Commercial restaurants & kitchens, ● Play school table & chairs, ● Laboratories, Storage area including cold storage for food items, ● Raw vegetables and fruit storage, ● Dairy farms & poultry, ● Hospital operation theatres, ● Pharmaceutical plants, ● Coffee shops, ● Intensive care units, ● Airport lounge, ● Ambulance interior/cabins



## MECHANISM OF SURFACE PROTECTION AGAINST MICROBES / FUNGI

Polyvinyl chloride is compounded with heat stabiliser, lubricants, foaming agent, colourants and other relevant additives along with the anti-microbial and anti-fungi additive.

This ensures that the active component is present throughout the product. Active ingredient has negative impact on the microbes thus making them to die on the surface. EXCEL Anti-microbial & Anti-fungi sheet, by virtue of its unique property, resists, inhibits and prevents the growth of microbes and viruses.

When Microbes come in contact with the sheet surface and contaminate, proprietary additive in the sheets act against the Microbes. The active ingredient combines with Bacterial proteins in the cell & cell wall and damages the protein and cell membrane. Protein damage results in damage of essential function such as Energy production. Through Cell membrane damage, structural integrity is affected which results in leakage of essential nutrients and ultimately catastrophic structural failure. When Anti-microbial comes on the surface, reactive oxygen is generated which damages the internal systems of the microbes. Once the genetic material of the bacteria is disrupted, its replication is stopped by blocking the copying of their genetic material. Now the microbes die on the surface and the end result is more hygiene product for the customer.

- ◇ EXCEL Anti-Microbial Sheets reduce the Microbes by 99.99 %.
- ◇ Unpleasant Moulds and algae can't survive on the sheets surface.
- ◇ It is proven to deactivate the viruses..
- ◇ Since the sheets surface does not allow the growth mould or algae and does not allow the Bacteria to survive the surface, there is no question of transfer of microbes to the end user.
- ◇ Product will have protection against microbes and viruses throughout its life cycle.
- ◇ Since the active ingredient responsible for anti microbial and anti viral phenomena is introduced during the compounding stage of Extrusion process and it is present throughout the sheet, it does not get washed or removed from the surface even if there is any tear on the surface.

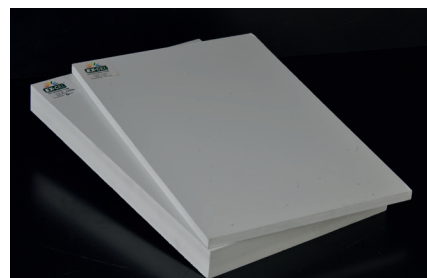


Building a strong future together



## BENEFITS OF EXCEL ANTI-MICROBIAL & ANTI-VIRAL SHEETS

- ◇ Can be easily cleaned and repeated cleaning will not have any effect on hygienic quality.
- ◇ Non Toxic
- ◇ Ideal for application where hygiene is the prime requirement.
- ◇ Proven product with 99.9 % reduction in Microbes & virus as per ASTM G29, ASTM G21 and ISO 22196. Independent testing laboratory reports are available on request.
- ◇ Light weight
- ◇ Outstanding printability
- ◇ Fine cell structure
- ◇ Low flammability
- ◇ Non warping
- ◇ Non corrosive
- ◇ Matt finish / Smooth Glossy Finish
- ◇ High impact strength



Free Foam Sheet



Intergral Foam Sheet

## PRODUCT TEST PROTOCOL

Products are tested for its efficacy against Microbes – Bacteria, Fungi, Mould and Viruses as per ASTM G29, ASTM G21 & ISO 22196 standards to validate its worth for providing hygienity.

## SUITABLE FOR OPERATIONS

cutting, sawing, shearing, punching, Drilling, Milling, Riveting, Screwing, Printing, Engraving etc.,

## PRODUCT RANGE / AVAILABILITY

### Free Foam Sheet

Colour Code	Colour	Thickness	Std Width in mm	Std Length
J 1018	White Shades	1 to 10 mm	1000, 1220 & 1525.	2440, 3050
J 1022				
J 1023				
J 1026		12.7 to 25 mm	1220	2440, 3050, 5490 & 6100.

### Intergral Foam Sheet

Colour Code	Colour	Thickness	Std Width in mm	Std Length
J 1054 &	White Shades	"8 to 30 mm	"1220 & 1250.	
J 1058		10 to 19"	1560 mm"	2440 & 3050

**Approved by M.E.S. E-in-C, Min, of Defence, Government of India &  
Dept. of Atomic Energy, Government of India.**

We produce and export to more than 110 countries a complete range of Micro Irrigation System, PVC & PE Pipes, PVC Sheets, Processed Fruits and Dehydrated Vegetables, Solar Energy System conforming to BIS and International standards. The Manufacturing facility is ISO 9001, ISO 14001, ISO 45001 & ISO 50001 certified by TUV Nord Germany.

Our products are specially formulated at our well equipped in-house R & D facility



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