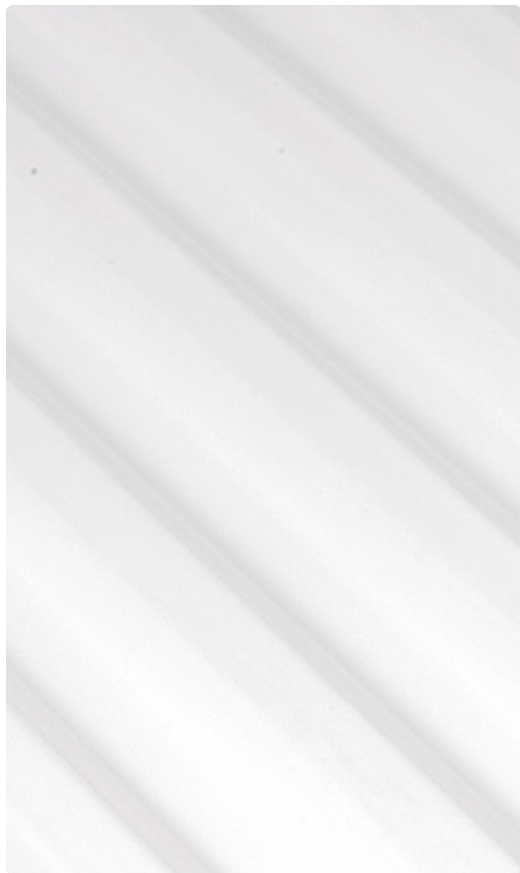




# DURASHIELD® Project Portfolio

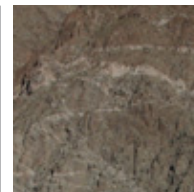
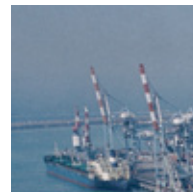
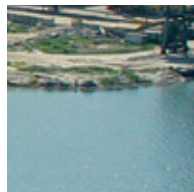
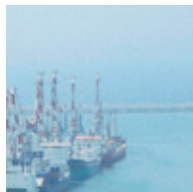




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Any Place, Any Condition.



# Palram Projects Support

## About Palram

Palram was founded in 1963 and is a leading global manufacturer of semi-finished extruded thermoplastic sheets, panel systems and consumer products. Palram sheets, manufactured mainly from Polycarbonate and PVC, are designed to suit a diverse range of applications in various markets, which include DIY, construction, architectural projects, advertising, agricultural, glazing, and fabrication. Palram panel systems are offered as part of the company's advanced products and services bundle for the construction and architectural markets. A variety of finished-products are marketed through DIY chain stores across the globe.

## Project Support

In the last two decades, the Palram Project Support Center has helped specify, adapt, support and facilitate architectural and industrial challenges around the globe. Among the Center's team members are civil engineers, designers, technical supporters, plastics engineers and others. The team offers a bundle of professional services based on accumulated experience in medium and large scale projects, a part of which are displayed here.



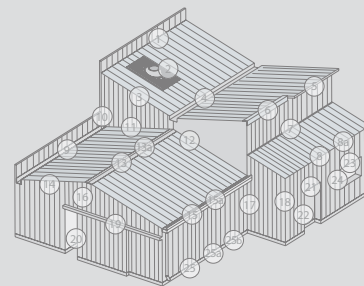
## Services for Planners

### Planning Stage

- Quick matching of product specification per project
- Adapting plans while preserving the planner's vision
- Creation of specific planning details
- Professional consultation on planning meetings
- Expert advice on materials and engineering
- Creating conceptual designs for given structures

### Implementation Stage

- Creating specific installation guidelines per project
- On-site support at important execution stages
- Background construction engineering supervision
- Conducting special seminars upon request



## Introduction to DURASHIELD®

DURASHIELD opaque corrugated PVC panel combines excellent resistance to chemicals, fire and impact, resulting in an extremely durable roofing solution. DURASHIELD withstands harsh chemical environments where conventional roofing quickly corrodes, which makes it ideal for long term use in demanding industrial applications such as chemical plants and storages, mines, ports and more. For domestic applications, it is ideal as a clear (in cold northern climates) or opaque roofing material that is easy to install and maintain. DURASHIELD evolved into the high quality product it is today based on the experience of nearly 50 years of service. It is lightweight, safe, extremely easy to handle and install using conventional tools and requires no maintenance.



### Main Benefits

**Excellent Chemical Resistance** - DURASHIELD withstands a wide variety of chemicals, making it ideal for applications in chemically aggressive environments.

**UV and Weather Resistant** - Offering long service periods in cold or hot climates.

**Flexible** - Suitable for curved roofing.

**Non-Corrosive** - DURASHIELD is ideal for seaside projects, mines, livestock farms and more.

**Insulating** - Heat buildup is reduced in comparison with metal roofing, which creates a cooler and more friendly environment within the structure.

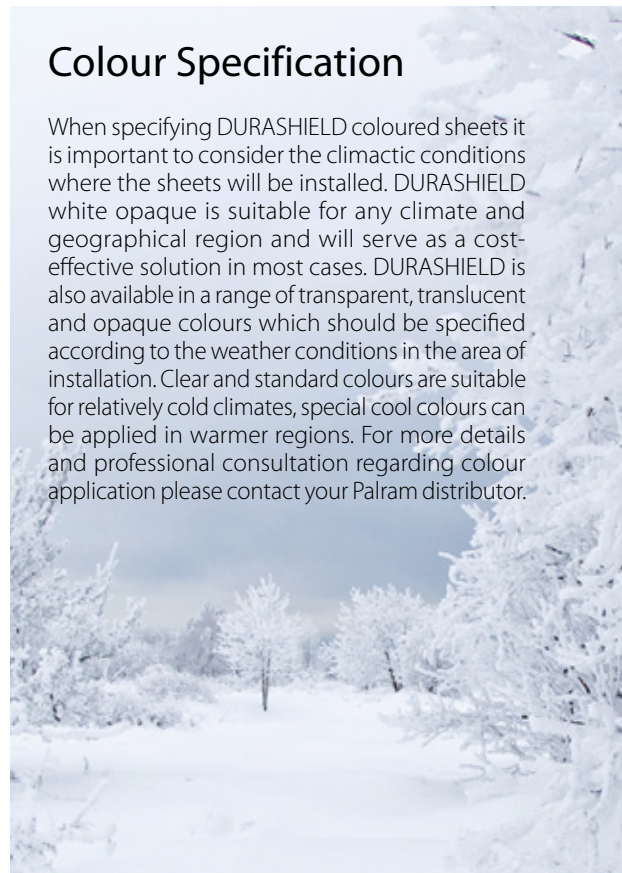
**Minimum Maintenance** - Freedom from high maintenance and frequent roofing replacement.

**High Impact Strength** - Resisting hail, wind and snow loads.

**Fire Resistance** - DURASHIELD self-extinguishes and meets the highest standards in the field.

## Colour Specification

When specifying DURASHIELD coloured sheets it is important to consider the climactic conditions where the sheets will be installed. DURASHIELD white opaque is suitable for any climate and geographical region and will serve as a cost-effective solution in most cases. DURASHIELD is also available in a range of transparent, translucent and opaque colours which should be specified according to the weather conditions in the area of installation. Clear and standard colours are suitable for relatively cold climates, special cool colours can be applied in warmer regions. For more details and professional consultation regarding colour application please contact your Palram distributor.





# Mines

Mining environments are typically characterized with aggressive chemical substances that attack and corrode the infrastructure.

DURASHIELD® is the only cover solution that resists the attack of minerals, phosphates and other materials found in mines. Its 10 year warranty, 50 years of manufacturing experience, support per project and guaranteed professionalism promise the most suitable and cost effective solution for any roofing, cladding and internal covering challenges in mines.



# Mines

## Laborers Barracks in Mineria Caserones - Chile

DURASHIELD® White Opaque 2.5 mm





# Mines

## Gaby Mine - Chile

Construction: Bateman

---

DURASHIELD® 2mm White  
Opaque sheets cover the oxygen  
pools around the mine.







# Ports





# Ports

## Haifa Port - Israel

DURASHIELD® White Opaque 2mm  
The warehouses have permanent  
contact with sea spray and minerals.

Excellent resistance to chemicals  
and corrosion makes DURASHIELD®  
ideal for any port application.



## Ports

### Chemical Terminal at Ashdod Port, Israel

DURASHIELD® White Opaque 3mm  
Permanent contact with salt water  
and minerals.

Sea spray attacks metal panels and  
causes corrosion. DURASHIELD®  
sheets are non-corrosive and resist  
salty environments.







# Agriculture



When building agricultural structures such as barns, dairies, warehouses or simple sheds, it can be anticipated that within a few years the roofing will require maintenance, whether it is weathering, typical gasses in a livestock environment or corrosion due to any other factor. This is not the case when using DURASHIELD. Any structure covered with DURASHIELD® corrugated PVC sheets will be virtually maintenance free for over a decade. This makes it economical for the long term, and also provides peace of mind for the operator and owner. DURASHIELD® has been produced by Palram for over 50 years and was installed in numerous barns, dairies, henhouses, pigpens and similar projects.



## Agriculture

Unicoop Planta UPM  
Pig Breeding Farm - Paraguay

DURASHIELD® White Opaque 2.2mm

DURASHIELD® ideally withstands long term contact with gasses typical of livestock environments.



# Agriculture

## Dairy Farm - Israel

DURASHIELD® White Opaque 2mm





# Agriculture

## Poultry Farm - Israel

DURASHIELD® White Opaque 2mm



# Warehouses





## Warehouses

### Coca Cola Warehouse - George, South Africa

DURASHIELD® White Opaque 2mm

DURASHIELD® prevails where alternative materials fail. It provides a long term roofing and cladding solution in industrial environments and reduces overall maintenance work and expenditure.



## Warehouses

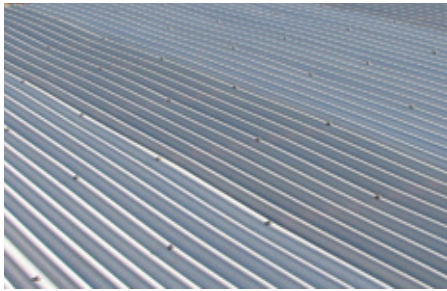
Chemical Hangar in TIS Port  
near Odessa, Ukraine

DURASHIELD® White Opaque 2mm













# Conveyor Belts





## Conveyor Belts

### Zefa Phosphate Conveyor at Dead Sea Works - Israel

DURASHIELD® White Opaque 3mm  
This 14km phosphate conveyor is  
located in the Judean Desert, in the  
Dead Sea area.

DURASHIELD® is the only product  
that stands up to the aggressive  
magnesium environment.









# Factories



## Factories

Tempo Beverages Factory,  
Israel

DURASHIELD® White Opaque 2mm





# Factories

## Coca Cola Factory, Israel

DURASHIELD® White Opaque 2mm







# Chemical Plants

The mechanism of chemical attack on thermoplastics in general, and Palram PVC sheets in particular, differs significantly from the mechanism of corrosion of metals. The chemical resistant behavior of Palram PVC sheet is therefore simple to determine.

DURASHIELD® Corrugated PVC sheets provide exceptional resistance against the following classes of chemicals in both liquid and vapor, form mineral acids, alkalis plating solutions, paper making, chemicals, pickling solutions, most inorganic compounds, alcohols, aliphatic hydrocarbons, glycols, amines, phenols and more.



# Chemical Plants

Chemotel - Israel

DURASHIELD® White Opaque 2mm





## Chemical Plants

Nyrstar Zinc Smelter -  
Hobart, Australia

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DURASHIELD® White Opaque 2mm



# Chemical Plants

## Dead Sea Works - Israel

DURASHIELD® White Opaque 3mm

DURASHIELD provides a long term roofing solution to withstand phosphate and other minerals produced at the plant.







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