



**PALRAM INDUSTRIES (1990) LTD.**

Ramat Yohanan 30035, Israel

**פלרם תעשיות (1990) בע"מ**

קבוץ רמת יוחנן 30035, ישראל

Fax: 972-4-8444012 פקס: טל: 972-4-8459900

Web site: <http://www.paltough.com> אתר אינטרנט:

לוחות PVC, פוליקרבונט ואקריל, לבנין, שילוט, תעשייה וחקלאות



**MATERIAL SAFETY DATA SHEET**

**RIGID POLYVINYL CHLORIDE SHEETS**

DATE OF ISSUE: 18 October 2000

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**This Safety Data Sheet conforms to EC Directive 91/155/EEC**

PALRAM urges the recipient of this Material Safety Data Sheet to study it carefully to become aware of hazards, if any, of the product involved. In the interest of safety you should (1) notify your employees, agents and contractors of the information on this sheet, (2) furnish a copy to each of your customers for the product, and (3) request your customers to inform their employees and customers as well.

**1. IDENTIFICATION OF THE SUBSTANCE AND THE COMPANY**

**1.1. IDENTIFICATION OF THE SUBSTANCE OR PREPARATION**

PALRUF, PALCLEAR, PALOPAQUE, PALDOOR, and PALGAG.	:	TRADE NAMES
Rigid Polyvinyl Chloride sheets	:	PRODUCT NAME
Polyvinyl Chloride Homopolymer	:	CHEMICAL NAME
Polyvinyl Chloride	:	CHEMICAL FAMILY
(CH <sub>3</sub> CH <sub>2</sub> Cl) <sub>n</sub>	:	FORMULA
9002-86-2	:	CAS number
None	:	UN number
X1007407-8	:	ACX number
KV0350000	:	RTECS
PVC	:	SYNONIMS
HEALTH=1, FIRE=0, REACTIVITY=0	:	NFPA RATINGS

**1.2. COMPANY IDENTIFICATION**

PALRAM INDUSTRIES (1990) LTD.  
Ramat Yohanan  
30035, ISRAEL  
Fax: 972 4 8444 012 Tel: 972 4 8459 900

**1.3. EMERGENCY TELEPHONE NUMBERS**

E-mail: AlexM@paltough.com Fax: 972 4 8459 910 Tel: 972 4 8459 993 ISRAEL:  
call your nearest poison control center. Local:

**2. COMPOSITION / INFORMATION OF INGREDIENTS**

Tin stabilized PVC sheets, 2.5% by weight tin-maleate or tin-mercaptide based stabilizer.  
Pigments and additives used to enhance specific properties are encapsulated in the polymer resin matrix.  
No solvents. No plasticizers. **No cadmium, lead, or other heavy metals used.**

**3. HAZARDS IDENTIFICATION**

No particular hazards known.

**3.1. HEALTH HAZARD DATA**

**3.1.1 EFFECTS OF A SINGLE OVEREXPOSURE**

non-relevant	:	<b>Swallowing</b>
non-relevant	:	<b>Skin absorption</b>
non-relevant	:	<b>Inhalation</b>



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exposure is not expected to cause adverse health effects : **Skin contact**  
non-relevant : **Eye contact**

None currently known

3.1.2 EFFECTS OF A REPEATED OVEREXPOSURE -

None currently known

3.1.3 MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE -

None currently known

3.1.4 OTHER EFFECTS OF OVEREXPOSURE -

## 4. FIRST AID MEASURES

In general handling the material will not cause accidents.

### 4.1. INHALATION

Route of entry – inhalation: No

If exposed to combustion fumes in high concentration - bring victim to fresh air. Medical attention needed.

### 4.2. INGESTION

Route of entry – ingestion: No

### 4.3. SKIN CONTACT

Burns resulting from accidental contact with molten material must be flushed immediately with cold water.

Do not remove the polymer from the skin. Medical attention needed.

### 4.4. SKIN ABSORPTION

Route of entry – skin: No

### 4.5. EYE CONTACT

Like any foreign body, can cause mechanical irritation. Consult physician.

### 4.6. NOTES FOR PHYSICIAN

There are no specific notes.

## 5. FIRE FIGHTING MEASURES

### 5.1. EXTINGUISHING MEDIA

Water spray or CO<sub>2</sub>. CO<sub>2</sub> is less recommended due to lack of cooling capacity.

### 5.2. EXTINGUISHING MEDIA TO AVOID

No information currently available.

### 5.3. SPECIAL FIRE FIGHTING PROCEDURES

Personnel without suitable respiratory apparatus should leave the affected area to prevent exposure to toxic or combustible gases.

### 5.4. SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS



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Positive-pressure self-contained breathing apparatus, protective closing, gas mask approved for acid vapours.

**5.5. UNUSUAL FIRE AND EXPLOSION HAZARDS**

PVC is a self extinguishing fire retardant material, that being exposed to open fire and high temperatures decomposes emitting large quantities of HCl, which tends to extinguish the flames. It does not continue to burn after ignition without an external fire source. HCl has a strong acidic odor that causes sensory alert at very low concentrations. HCl odor threshold = 0.77 ppm. Exposure to high concentrations of HCl will cause irritation of the respiratory passages, at very high concentrations may cause burns to mucous membranes. OSHA legal airborne PEL is 5 ppm, not to be exceeded at any time. ACGIH recommended airborne exposure limit is 5 ppm, which should not be exceeded at any time. Soot emitted when PVC is forced to burn may obscure visibility.

**6. ACCIDENTAL RELEASE MEASURES**

No special precautions and no personal protective equipment needed. Collect mechanically for disposal.

**7. HANDLING AND STORAGE**

**7.1. HANDLING**

**General handling precautions**

Avoid mechanical contact with eyes.

**Ventilation**

General (mechanical) room ventilation is expected to be satisfactory where this product is stored and handled.

**Other precautions**

No explosion hazard. In the event of fire, cool and overlap product with water.

Static electricity discharge sparks possible during handling. Avoid contact or vicinity of flammable materials.

When opening truck or railcar for unloading, ventilate before entering.

**7.2. STORAGE**

Store in a cool shady area. No special technical protective measures required.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**8.1. EXPOSURE LIMITS**

No occupational exposure limits established by OSHA, ACGIH, or NIOSH.

**8.2. PERSONAL PROTECTION**

	No special protection needed	:		:	<b>Respiratory protection</b>
<b>Hand protection / protection gloves</b>	:		No special protection needed	:	
<b>Eye protection</b>	:		No special protection needed	:	



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Other protective equipment : No special protection needed

**9. PHYSICAL AND CHEMICAL PROPERTIES**

flat or corrugated plastic sheets	:	APPEARANCE
solid	:	PHYSICAL STATE
clear or coloured	:	COLOUR
none	:	ODOR
1.35-1.45 gr/cm <sup>3</sup>	:	DENSITY
62-65°C	:	HEAT DEFLECTION
not relevant	:	BOILING POINT, 760 Hg
not relevant	:	VISCOSITY
<0.1g/100mL at 23°C	:	SOLUBILITY IN WATER:
not relevant	:	pH VALUE
391°C ASTM D 1929	:	FLASH POINT
454°C ASTM D 1921	:	AUTOIGNITION TEMP.
none	:	FLAMMABILITY LIMIT
none	:	EXPLOSION LIMITS
not relevant	:	EVAPORATION RATE
not relevant	:	PERCENT VOLATILES

**10. STABILITY AND REACTIVITY**

**10.1. STABILITY**

Stable.

**Conditions to avoid**

Excessive heat, or open flame. Temperature above 150°C will decompose raw polymer resin and liberate HCl.

**Incompatible materials**

Oxidizing agents or strong mineral acids can cause reaction.

**Thermal decomposition**

Begins above 150°C caused by fire, overheating during improper processing. Fumes damaging to health may be released.

**Hazardous decomposition products**

Burning can produce the following combustion products:

- is highly toxic if inhaled; - Carbon monoxide (CO)
- in sufficient concentrations can act as an asphyxiant; - Carbon dioxide (CO<sub>2</sub>)
- Hydrogen chloride (HCl) - in high concentrations cause irritation of the respiratory passages, at very high concentrations may cause burns to mucous membranes.

**10.2. REACTIVITY**

Will not occur : **Hazardous polymerization**



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None. : Hazardous reactions

**11. TOXICOLOGICAL INFORMATION**

PVC materials have a very low acute toxicity. In rats an acute LD50 > 10 gr/kg of body weight. PNEUMOCONIOSIS has been described from inhalation of combustion products (effects of overexposure). Industrial hygiene studies have shown that under normal and expected conditions of use of PVC materials, exposures are well below applicable limits.

**11.1. ACUTE TOXOCOLOGICAL INFORMATION**

none	:	Acute oral toxicity
none	:	Acute percutaneous toxicity
none	:	Acute vapour exposure
no irritation	:	Primary skin irritation
no irritation	:	Eye irritation
no information available	:	Sensitization
unknown	:	Chronic effects
not listed	:	- NTP Carcinogenicity
not listed	:	- IARC
not listed	:	- OSHA

**11.2. OTHER TOXICOLOGICAL INFORMATION**

No known toxicological effects with normal use. For heating see section 10.

**11.3. ADDITIONAL INFORMATION**

No additional toxicity information currently available.

**12. ECOLOGICAL INFORMATION**

**12.1. PERSISTANCE AND DEGRADABILITY**

Detailed studies have not been conducted concerning the environmental fate of the product. According to present knowledge no unfavorable ecological effects are to be expected. Not generally hazardous to water. Insoluble in water, non-toxic solid.

No information currently available	:	Mobility
Biodegradation period - tens of years.	:	Persistence and biodegradability
No information currently available.	:	Bioaccumulative potential

**12.2. ENVIRONMENTAL RISCS**

No hazard expectation to terrestrial or aquatic flora and fauna.

: LD50 (rats) > 10 gr/kg	Ecotoxicity
: IC50 (bacterial inhibition) - no data available	
: LC50 (daphnia magna) - no data available	Aquatic toxicity
: LC50 (fathead minnow – fish) - no data available	



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**12.3. OTHER INFORMATION**

All available ecological data have been taken into account for the development of the hazard and precautionary information contained in this safety data.

**13. DISPOSAL CONSIDERATIONS**

The product is not considered hazardous under current EPA hazardous waste regulations.

Recycling is the preferred method of disposal.

Alternatively, the product may be disposed of in an approved landfill.

High temperature incineration under controlled conditions due to formation of HCl.

All wastes should be evaluated in conjunction with applicable solid and hazardous waste regulations, Toxicity Characteristic Leaching Procedures (TCLP), and disposed of as appropriate.

This product does not contain any cadmium or other heavy metal pigments or stabilizers.

It is the user's responsibility to dispose of all wastes in accordance with all national and local regulations at properly permitted or authorized facilities.

**14. TRANSPORT INFORMATION**

	: ZZZ	<b>DOT PSN Code</b>
<b>Labeling</b>	: Not regulated by this mode of transportation	<b>DOT Proper Shipping Name</b>
<b>Placarding</b>	: ZZZ	<b>IMO PSN Code</b>
	: Not regulated by this mode of transportation	<b>IMO Proper Shipping Name</b>
	: ZZZ	<b>IATA PSN Code</b>
	: Not regulated by this mode of transportation	<b>IATA Proper Shipping Name</b>
	: ZZZ	<b>AFI PSN Code</b>
	: Not regulated by this mode of transportation	<b>AFI Proper Shipping Name</b>
	: Not currently regulated under Department of Transportation regulations	<b>Additional transportation data</b>
<b>Labeling</b>	: No labeling is required in accordance with the EEC directives	
<b>Placarding</b>	: No placarding is required in accordance with the EEC directives	
<b>Special transport requirements</b>	: None	
<b>Packaging</b>	: Avoid dark-colored packaging to prevent heat distortion	

The product is classified as a non-hazardous material in the meaning of transport regulations.

**15. REGULATORY INFORMATION**

With regards to dust formed as a consequence of mechanical treatments, the appropriate regulations value limits for fine dust must be observed: MAC value (fine dust) – 5mg/m<sup>3</sup>.

OSHA Hazard Communication Classification for dusts and combustion fumes: Irritant, Skin Hazard, and Lung Hazard.

SARA Title III Classification for dusts and combustion fumes: Acute Health Hazard; Chronic Health Hazard.

WHMIS Classification: Non-hazardous

**16. OTHER INFORMATION**



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**RECOMMENDED USES AND RESTRICTIONS**

Please consult the relevant product and/or application information for this product.

**FURTHER INFORMATION**

Additional information on this product may be obtained by calling your PALRAM Sales or Customer Service Contact.

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