

TMI INTERNATIONAL, LLC
SAFETY DATA SHEET (SDS)



MARINE GRADE CLEAR FLEXIBLE PVC SHEET

SECTION 1 | IDENTIFICATION

Product Name/Identifier: 72 Compound Flexible PVC
Description: Marine Grade Clear Flexible PVC Sheet
Supplier Information: TMI International, LLC
Corporate Headquarters:
5350 Campbells Run Road
Pittsburgh, PA 15205
1.800.888.9750 or 412.787.9750

SECTION 2 | HAZARDS IDENTIFICATION

This mixture has not been evaluated as a whole for health effects. All ingredients are bound in a PVC polymer matrix and potential for hazardous exposure as shipped is minimal. PVC resin is manufactured from Vinyl Chloride Monomer (VCM). PVC resin manufacturers take special efforts to strip residual VCM from their resins. Residual VCM in the resin is typically below 8.5 ppm. However, VCM is a known carcinogen. The end-user (fabricator) should take necessary precautions (mechanical ventilation, local exhaust, respiratory protection, etc.) to protect employees from exposure to any vapors or dusts that may be released during heating or fabrication. See Sections 8 and 11 for special precautions. After handling, always wash hands thoroughly with soap and water.

OSHA/HCS status While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture Not classified.

Supplemental label elements None known.

Hazards not otherwise classified None known.

SECTION 3 | COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture Mixture
Chemical name Mixture
Other means of identification VC1000814560
CAS number/other identifiers

Ingredient Name	%	CAS Number
Diundecyl phthalate	10 - 30	3648-20-2

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section. Occupational exposure limits, if available, are listed in Section 8.

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SECTION 4 | FIRST-AID MEASURES

Description of necessary first aid measures

Eye contact	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	No known significant effects or critical hazards.
Inhalation	No known significant effects or critical hazards.
Skin contact	No known significant effects or critical hazards.
Ingestion	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	No specific data.
Inhalation	No specific data.
Skin contact	No specific data.
Ingestion	No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	No specific treatment.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

SECTION 5 | FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media	In case of fire, use water spray (fog), foam, dry chemical or CO ₂ .
Unsuitable extinguishing media	None known.

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Specific hazards arising from the chemical	No specific fire or explosion hazard.
Hazardous thermal decomposition products	May emit Hydrogen Chloride (HCl). Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds
Special protective actions for fire-fighters	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6 | ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
For emergency responders	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental precautions	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill	Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
Large spill	Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

SECTION 7 | HANDLING AND STORAGE

Precautions for safe handling

Protective measures	Put on appropriate personal protective equipment (see Section 8).
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Advice on general occupational hygiene Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

SECTION 8 | EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Occupational exposure limits

None.

Appropriate engineering controls

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

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Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Body protection	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Other skin protection	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

SECTION 9 | PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	Solid
Color	Transparent
Odor	Not available.
Odor threshold	Not available.
pH	Not available.
Melting point	Not available.
Boiling point	Not available.
Flash point	Not available.
Burning time	Not available.
Burning rate	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Lower and upper explosive (flammable) limits	Lower: Not available. Upper: Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility	Not available.
Solubility in water	Not available.
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
SADT	Not available.
Viscosity	Dynamic: Not available.

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Conclusion/Summary	Mixture. Not fully tested.
<u>Specific target organ toxicity (single exposure)</u>	
Not available.	
<u>Specific target organ toxicity (repeated exposure)</u>	
Not available.	
<u>Aspiration hazard</u>	
Not available.	
<u>Information on the likely routes of exposure</u>	
Not available.	
<u>Potential acute health effects</u>	
Eye contact	No known significant effects or critical hazards.
Inhalation	No known significant effects or critical hazards.
Skin contact	No known significant effects or critical hazards.
Ingestion	No known significant effects or critical hazards.
<u>Symptoms related to the physical, chemical and toxicological characteristics</u>	
Eye contact	No specific data.
Inhalation	No specific data.
Skin contact	No specific data.
Ingestion	No specific data.
Delayed and immediate effects and also chronic effects from short and long term exposure	
<u>Short term exposure</u>	
Potential immediate effects	Not available.
Potential delayed effects	Not available.
<u>Long term exposure</u>	
Potential immediate effects	Not available.
Potential delayed effects	Not available.
<u>Potential chronic health effects</u>	
Conclusion/Summary	Mixture. Not fully tested.
General	No known significant effects or critical hazards.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Teratogenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates
Not available.

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SECTION 12 | ECOLOGICAL INFORMATION

Toxicity

Product/Ingredient Name	Result	Species	Exposure
Diundecyl phthalate			
	Acute LC50 740 µg/l Fresh water	Fish - Fathead minnow	96 h
	Acute LC50 730 µg/l Fresh water	Fish - Bluegill	96 h
	Acute LC50 220 µg/l Fresh water	Fish - Sheepshead minnow	96 h
	Acute LC50 1,400 µg/l Fresh water	Fish - Rainbow trout, donaldson trout	96 h
	Acute LC50 1,300 µg/l Fresh water	Fish - Fathead minnow	96 h
	Acute EC50 20 µg/l Fresh water	Aquatic invertebrates. Water flea	48 h
	Acute EC50 12 mg/l Fresh water	Aquatic invertebrates. Water flea	48 h
	Acute EC50 15 mg/l Fresh water	Aquatic invertebrates. Water flea	48 h
	Acute EC50 2,100 µg/l Fresh water	Aquatic plants - Green algae	96 h
	Chronic NOEC 59 µg/l Fresh water	Aquatic invertebrates. Water flea	21 d
	Chronic NOEC 7.6 mg/l Fresh water	Aquatic invertebrates. Water flea	21 d
	Chronic NOEC 12 mg/l Fresh water	Aquatic invertebrates. Water flea	21 d
	Chronic NOEC 7.6 mg/l Fresh water	Aquatic invertebrates. Water flea	21 d
Remarks - Acute - Aquatic invertebrates.	Chemicals are not readily available as they are bound within the polymer matrix.		

Conclusion/Summary

Chemicals are not readily available as they are bound within the polymer matrix.

Persistence and degradability

Conclusion/Summary

Chemicals are not readily available as they are bound within the polymer matrix.

Conclusion/Summary

Chemicals are not readily available as they are bound within the polymer matrix.

Bioaccumulative Potential

Bioaccumulation Potential

Chemicals are not readily available as they are bound within the polymer matrix.

Mobility in soil

Soil/water partition coefficient (KOC)

Not available.

Other adverse effects

No known significant effects or critical hazards.

SECTION 13 | DISPOSAL CONSIDERATIONS

Disposal methods

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor.

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Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

United States - RCRA Acute hazardous waste "P" List

Not listed

United States - RCRA Toxic hazardous waste "U" List

Not listed

SECTION 14 | TRANSPORT INFORMATION

U.S. DOT Classification

Not regulated for transportation.

ICAO/IATA

Consult mode specific transport rules

IMO/IMDG (maritime)

Consult mode specific transport rules

SECTION 15 | REGULATORY INFORMATION

U.S. Federal regulations

United States - TSCA 12(b) - Chemical export notification: None of the components are listed.

United States - TSCA 4(a) - Final Test Rules: Listed

1,2-Benzenedicarboxylic acid

di-C8-10-branched alkyl esters

C9-rich

United States - TSCA 4(a) - ITC Priority list: Not listed

United States - TSCA 4(a) - Proposed test rules: Not listed

United States - TSCA 4(f) - Priority risk review: Not listed

United States - TSCA 5(a)2 - Final significant new use rules: Not listed

United States - TSCA 5(a)2 - Proposed significant new use rules: Not listed

United States - TSCA 5(e) - Substances consent order: Not listed

United States - TSCA 6 - Final risk management: Not listed

United States - TSCA 6 - Proposed risk management: Not listed

United States - TSCA 8(a) - Chemical risk rules: Not listed

United States - TSCA 8(a) - Dioxin/Furane precursor: Not listed

United States - TSCA 8(a) - Chemical Data Reporting (CDR): Not determined

United States - TSCA 8(a) - Preliminary assessment report (PAIR): Listed Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-,branched

United States - TSCA 8(c) - Significant adverse reaction (SAR): Not listed

United States - TSCA 8(d) - Health and safety studies: Not listed

United States - EPA Clean water act (CWA) section 307 - Priority pollutants: Listed

2-Ethylhexanoic acid zinc salt

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10,10'-Oxybisphenoxarsine

Vinyl chloride monomer

United States - EPA Clean water act (CWA) section 311 - Hazardous substances: Not listed

United States - EPA Clean air act (CAA) section 112 - Accidental release prevention - Flammable substances: Not listed

United States - EPA Clean air act (CAA) section 112 - Accidental release prevention - Toxic substances: Not listed

United States - Department of commerce - Precursor chemical: Not listed

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs): Not listed

Clean Air Act Section 602 Class I Substances: Not listed

Clean Air Act Section 602 Class II Substances: Not listed

DEA List I Chemicals (Precursor Chemicals): Not listed

DEA List II Chemicals (Essential Chemicals): Not listed

US. EPA CERCLA Hazardous Substances (40 CFR 302)

not applicable

SARA 311/312

Classification Not applicable.

Composition/information on ingredients

Ingredient Name	%	Classification
Diundecyl phthalate	10 - 30	AH

SARA 313

Not applicable.

State regulations

Massachusetts	None of the components are listed.
New York	None of the components are listed.
New Jersey	The following components are listed: Ethene, chloro-, homopolymer
Pennsylvania	None of the components are listed.
California Prop. 65	WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

United States inventory (TSCA 8b)

All components are listed or exempted.

Canada inventory

All components are listed or exempted.

International regulations

International lists

Australia inventory (AICS):	Not determined.
Taiwan inventory (CSNN):	Not determined.
Malaysia Inventory (EHS Register):	Not determined.
EINECS:	All components are listed or exempted.
Japan inventory:	Not determined.
China inventory (IECSC):	Not determined.

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Korea inventory: Not determined.
New Zealand Inventory of Chemicals (NZIoC): Not determined.
Philippines inventory (PICCS): Not determined.

Chemical Weapons Convention List Schedule I Chemicals: Not listed
Chemical Weapons Convention List Schedule II Chemicals: Not listed
Chemical Weapons Convention List Schedule III Chemicals: Not listed

SECTION 16 | OTHER INFORMATION

History

Date of issue/Date of revision 09/09/2014
Date of previous issue 08/20/2012
Version 1.2

Key to abbreviations

ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

References Not available.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. Particularly this information may not be valid for such material used in conjunction with any other materials or in any process, unless specified in the text.