

Product Name: PF-1G-CAT: Catalyst-1 Gal

SDS No. 649-192

Issue Date: 6-30-2015

Revision Date: 7-10-2015

* * * Section 1 - Product and Company Identification * * *

Manufacturer/Importer Information

Therma-Tru Corporation 108 RE Jones Road Butler IN, 46721

Emergency Phone: CHEMTREC, U.S.: (800) 424-930

International: (703) 527-3887 (703) 527-3887

Product Identifier 649-192 Recommended Use

Restrictions on Use

* * * Section 2 - Hazards Identification * * *

OSHA/HCS status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

GHS Classification

ACUTE TOXICITY (inhalation) - Category 4
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
RESPIRATORY SENSITIZATION - Category 1
SKIN SENSITIZATION - Category 1B

GHS Label Elements

Symbol(s)





Signal Word - Danger

Hazard Statements



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Harmful if inhaled.

Causes serious eye irritation.

Causes skin irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

Precautionary Statements

Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention

Wear protective gloves. Wear eye or face protection. In case of inadequate ventilation wear respiratory protection. Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

Response

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. If experiencing respiratory symptoms: Call a POISON CENTER or physician. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage

Not applicable.

Disposal

Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified

None known

* * * Section 3 - Composition / Information on Ingredients * * *

Substance/mixture

Mixture



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Other means of identification

Not Available

CAS#	Component	Percent
28182-81-2	hexamethylene diisocyanate, oligomers	
-	Aliphatic polyisocyanate	
822-06-0	hexamethylene-1,6-diisocyanate	

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.

* * * Section 4 – First Aid Measures * * *

First Aid: Eyes

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

First Aid: Skin

Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

First Aid: Ingestion

Wash out mouth with water. Remove dentures if any. 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. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery



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position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

First Aid: Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. In the event of any complaints or symptoms, avoid further exposure.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact

Causes serious eye irritation.

Inhalation

Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact

Causes skin irritation. May cause an allergic skin reaction.

Ingestion

Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

Eve contact

Adverse symptoms may include the following: pain or irritation watering redness.



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Inhalation

Adverse symptoms may include the following: Wheezing and breathing difficulties asthma

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Skin contact

Adverse symptoms may include the following:

Irritation

redness

Ingestion

No specific data

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

Notes to physician

In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments

No specific treatment.

Protection of first-aiders

No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

* * * Section 5 – Fire Fighting Measures * * *

Extinguishing Media

Suitable Extinguishing Media

Use an extinguishing agent suitable for the surrounding fire.

Unsuitable Extinguishing Media

None known.

Specific hazards arising from the chemical



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In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous Thermal Decomposition Products

Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides

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

Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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 nonemergency 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



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Small spill

Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill

Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

* * * Section 7 - Handling and Storage * * *

Protective measures

Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

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



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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. Store locked up. 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 Component Exposure Limits

Name (CAS #)	OSHA - PEL	ACGIH - TLV
hexamethylene diisocyanate, oligomers	NA	TWA: 1 mg/m ³ 8 hours
aliphatic polyisocyanate	NA	TWA: 1 mg/m³ 8 hours
hexamethylene-1,6- diisocyanate	NA	TWA: 0.005 ppm 8 hours

Engineering Measures

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

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



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contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. Selection of personal protective equipment (PPE) is to be established by the employer performing a PPE hazard assessment. In the U.S.A, OSHA requires completion of a documented PPE hazard assessment as described in 29 CFR 1910.132.

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: chemical splash goggles.

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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

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, air-purifying or air-fed 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.



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Dry sanding, flame cutting and/or welding of the dry paint film will give rise to dust and/or hazardous fumes. Wet sanding/flatting should be used wherever possible. If exposure cannot be avoided by the provision of local exhaust ventilation, suitable respiratory protective equipment should be used.

* * * Section 9 – Physical & Chemical Properties * * *

Appearance:	Not Available	Odor:	Not Available
Physical State:	Liquid	pH:	Not Available
Vapor Pressure:	Not Available	Volatility:	0% (w/w)
Boiling Point:	100 - 212 °C (212 - 413.6	Melting Point:	Not Available
	°F)		
Solubility	Not Available.	Specific	Not Available
(H2O):		Gravity:	
Evaporation	Not available	Density:	1.16 g/cm ³
Rate:			
Vapor Pressure:	Not applicable	Flash Point:	Closed cup:
			100°C (212°F)
Vapor Density:	Not available		

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Reactivity

No specific test data related to reactivity available for this product or its ingredients.

Chemical Stability

This product is stable.

Hazardous Reaction Potential

Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to Avoid

No specific data.

Incompatible Products

No specific data.



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Hazardous Decomposition Products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

* * * Section 11 - Toxicological Information * * *

Acute Toxicity

Product/Ingredient	Result	Species	Dose	Exposure
Name				
hexamethylene diisocyanate,	LD50 Inhalation Vapot	Rat	18500 mg/kg	1 hour
oligomers				
hexamethylene-1, 6-diisocyanate	LC inhalation vapor LD50 Dermal LD50 Oral	Rat Rabbit Rat	120 mg/kg 570 mg/kg 746 mg/kg	4 hours - -

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not Available

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not Available.

Specific target organ toxicity (single exposure)



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Product/Ingredient	Category	Route of exposure	Target organs
hexamethylene-1,6- diisocyanate	3	NA	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not Available.

Aspiration hazard

Not Available.

Information on the likely routes of exposure

Not available.

Potential Acute Health Effects

Eye contact :

Causes serious eye irritation

Inhalation:

Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact:

Causes skin irritation.

Ingestion:

Irritating to mouth, throat and stomach

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact

Adverse symptoms may include the following: pain or irritation, watering, redness

Inhalation

Adverse symptoms may include the following: wheezing and breathing difficulties, asthma

Skin contact

Adverse symptoms may include the following: irritation, redness



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Ingestion

No specific data

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects

Not available

Potential delayed effects

Not available

Long term exposure

Potential immediate effects

Not available

Potential delayed effects

Not available

Potential chronic health effects

Not available

General Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels

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.

* * * Section 12 – Ecological Information * * *	

Data available upon request



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* * * Section 13 - Disposal Considerations * * *

Waste 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. 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. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

* * * Section 14 - Transportation Information * * *

	DOT	TDG	Mexico	ADR/RID	IMDG	IATA
	Classification	Classification	Classification	ADIVINID	INIDO	IAIA
UN number	Not regulated	Not regulated	Not regulated	Not	Not	Not
UN proper				regulated	regulated	regulated
1 -	-	-	-	-	-	-
shipping						
name						
Transport	-	-	-	_	-	-
hazard						
class(es)						
Packing group	-	-	-	-	-	-
Environmental	No.	No.	No.	No.	No.	No.
hazards						
Additional	Reportable	_	_	_	_	_
information	quantity 50000 lbs / 22700 kg [5169.6 gal / 19569 L] Package sizes shipped in quantities less					



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than the		
product		
reportable		
quantity are		
not subject to		
the RQ		
(reportable		
quantity)		
transportation		
requirements.		

Special precautions for user

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available

* * * Section 15 – Regulatory Information * * *

U.S. Federal regulations

United States inventory (TSCA 8b): All components are listed or exempted.

Clean Air Act (CAA) 112 regulated toxic substances: hexamethylene-1, 6-diisocyanate

State Regulations

Massachusetts: None of the components are listed New Jersey: None of the components are listed New York: None of the components are listed Pennsylvania: None of the components are listed

Canada Inventory: At least one component is not listed in DSL but all such components

are listed in NDSL.

International Regulations

Australia inventory (AICS): Not determined. China inventory (IECSC): Not determined.

Japan inventory: Not determined. Korea inventory: Not determined.



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Malaysia Inventory (EHS Register): Not determined.

New Zealand Inventory of Chemicals (NZIoC): Not determined.

Philippines inventory (PICCS): Not determined. Taiwan inventory (CSNN): Not determined.

Chemical Weapons Convention List Schedule Chemicals:

Not listed

Chemical Weapons Convention List Schedule II Chemicals:

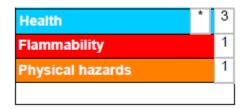
Not listed

Chemical Weapons Convention List Schedule III Chemicals:

Not listed

* * * Section 16 - Other Information * * *

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910.

1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials

may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material

National Fire Protection Association (U.S.A.)





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Disclaimers

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.

Language for consideration:

Information presented in this Safety Data Sheet for the product(s) described in Section 1 ("Product") has been compiled from sources considered to be dependable, accurate, and reliable, but manufacturer/importer does not guarantee the accuracy of any information presented. Except as expressly provided otherwise in a written contract executed by manufacturer/importer, to the fullest extent permitted by applicable law, manufacturer/importer disclaims, and the recipient or user of this safety data sheet ("recipient") hereby expressly waives, any and all warranties, whether express, implied or statutory, with respect to the product or this safety data sheet, and any results or effect obtained from their use by recipient and/or other users, including, without limitation, any statutory or implied warranties of merchantability or fitness for a particular purpose. Manufacturer/importer specifically, but not by way of limitation, disclaims any and all liability for the use or performance of the product or safety data sheet by recipient, recipient's customers and/or other users.