

# Material Safety Data Sheet

SA88 CATALYST

## 1. Product and company identification

<b>Product name</b>	SA88 CATALYST
<b>MSDS Number</b>	300000012041
<b>Product Type</b>	Resin hardener
<b>Product use</b>	Catalyst - Foundry
<b>Manufacturer, Importer, Supplier</b>	HA International, LLC 630 Oakmont Lane Westmont, IL 60559
<b>Print date</b>	01-FEB-2010
<b>Telephone</b>	<b>For Emergency Medical Assistance</b> Call Health & Safety Information Services, 1-866-303-6949  <b>For Emergency Transportation Information</b> CHEMTREC US Domestic (800) 424-9300 CHEMTREC International (703) 527-3887 CANUTEC CA Domestic (613) 996-6666

For additional health and safety or regulatory information, call (630)575-5722, or (630)575-5705.

## 2. Hazards identification

<b>Form</b>	Liquid
<b>Odor</b>	Slight acidic
<b>OSHA/HCS status</b>	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

### Emergency overview

#### Potential acute health effects

<b>Inhalation</b>	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
<b>Ingestion</b>	Not expected to be harmful under normal conditions of use.
<b>Skin</b>	May cause irritation on prolonged or repeated contact.
<b>Eyes</b>	May cause eye irritation.

#### Potential chronic health effects

<b>Chronic effects</b>	Contains material that can cause target organ damage.
<b>Carcinogenicity</b>	No known significant effects or critical hazards.
<b>Mutagenicity</b>	No known significant effects or critical hazards.
<b>Teratogenicity</b>	No known significant effects or critical hazards.

<b>Developmental effects</b>	No known significant effects or critical hazards.
<b>Fertility effects</b>	No known significant effects or critical hazards.
<b>Target organs</b>	Contains material which causes damage to the following organs: eyes, Review Section 2 and 11 for any additional assessments.

**Over-exposure signs/symptoms**

<b>Inhalation</b>	No specific data.
<b>Ingestion</b>	No specific data.
<b>Skin</b>	No specific data.
<b>Eyes</b>	No specific data.
<b>Medical conditions aggravated by over-exposure</b>	Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See section 11 for more detailed information on health effects and symptoms.

**3. Composition/Information on ingredients**

<u>Ingredient name</u>	<u>CAS number</u>	<u>%</u>
Glycerol Triacetate	102-76-1	10.0 - 30.0
Glycerine	56-81-5	10.0 - 30.0

*\*\* Any applicable Canadian trade secret numbers will be listed in Section 15.*

**4. First aid measures**

<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
<b>Skin contact</b>	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
<b>Inhalation</b>	Move exposed person to fresh air. Keep person warm and at rest. 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. 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. Get medical attention.
<b>Ingestion</b>	Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
<b>Protection of first aid personnel</b>	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
<b>Notes to physician</b>	No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

See section 11 for more detailed information on health effects and symptoms.

## 5. Fire-fighting measures

<b>Flammability of the product</b>	In a fire or if heated, a pressure increase will occur and the container may burst.
<b><u>Extinguishing media</u></b>	
<b>Suitable</b>	Use an extinguishing agent suitable for the surrounding fire.
<b>Not suitable</b>	None known.
<b>Special exposure hazards</b>	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.
<b>Hazardous combustion products</b>	Decomposition products may include the following materials: carbon oxides,
<b>Special protective equipment for fire-fighters</b>	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## 6. Accidental release measures

<b>Personal precautions</b>	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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
<b>Environmental precautions</b>	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).
<b>Large spill</b>	Stop leak if without risk. Move containers from spill area. 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.
<b>Small spill</b>	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

## 7. Handling and storage

**Handling** Put on appropriate personal protective equipment (see section 8). 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. Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. 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.

**Storage** 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.

## 8. Exposure controls/personal protection

<u>Ingredient name</u>	<u>Occupational exposure limits</u>
Glycerine	<p><b>ACGIH TLV 8-hr TWA</b> 10 mg/m<sup>3</sup> (mist)</p> <p><b>OSHA PEL 8-hr TWA</b> 15 mg/m<sup>3</sup> (total dust)</p> <p><b>OSHA PEL 8-hr TWA</b> 5 mg/m<sup>3</sup> (respirable fraction)</p>

**Consult local authorities for acceptable exposure limits.**

**Recommended monitoring procedures** If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

**Engineering measures** No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

**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.

**Respiratory** 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.

<b>Hands</b>	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.
<b>Eyes</b>	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 or dusts.
<b>Skin</b>	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.
<b>Environmental exposure controls</b>	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.

## 9. Physical and chemical properties

<b>Form</b>	Liquid
<b>Flash point</b>	137 °C(279 °F) Tag Closed Cup
<b>Auto-ignition temperature</b>	Not available
<b>Flammable limits</b>	
<b>Lower:</b>	Not available
<b>Upper:</b>	Not available
<b>Color</b>	Clear.
<b>Odor</b>	Slight acidic
<b>pH</b>	Not applicable
<b>Boiling point</b>	280 °C(536 °F)
<b>Relative density</b>	1.172 - 1.181
<b>Vapor pressure</b>	Less than 1 mm Hg @ 25 °C(77 °F)
<b>Viscosity</b>	Dynamic- Not applicable
<b>Solubility</b>	Moderate
<b>Partition coefficient: n-octanol/water</b>	Not available
<b>Evaporation rate</b>	Not available
<b>Vapor density</b>	6.1

## 10. Stability and reactivity

<b>Stability</b>	The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur.
<b>Conditions to avoid</b>	Strong oxidizer,
<b>Materials to avoid</b>	No specific data.
<b>Hazardous decomposition products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## 11. Toxicological information

### Acute toxicity

#### Ingredient name

Glycerol Triacetate

Glycerine	LD50 Oral	Rat	3,000 mg/kg
	LD50 Oral	Mouse	1,100 mg/kg
	LD50 Oral	Rat	12,600 mg/kg
	LD50 Oral	Mouse	4,090 mg/kg
	LD50 Oral	Rabbit	27,000 mg/kg
Glycerine	LD50 Oral	Guinea pig	7,750 mg/kg
	LD50 Dermal	Rabbit	> 10,000 mg/kg

### **Other Toxicological Information**

#### **Carcinogenicity**

##### **Classification**

##### **Ingredient name**

Glycerol Triacetate

ACGIH Not classified  
 IARC Not classified  
 NTP Not listed  
 OSHA Not regulated

Glycerine

ACGIH Not classified  
 IARC Not classified  
 NTP Not listed  
 OSHA Not regulated

## **12. Ecological information**

### **Environmental effects**

No known significant effects or critical hazards.

### Other adverse effects

No known significant effects or critical hazards.

## **13. Disposal considerations**

### **Waste disposal**

The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## **14. Transportation**

The data provided in this section is for information only and may not be specific to your package size or mode of transport. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

### **International transport regulations**

<b>Regulatory information</b>	<b>UN/NA number</b>	<b>Proper shipping name</b>	<b>Classes/*PG</b>	<b>Reportable Quantity (RQ)</b>
<b>CFR</b>		Non-regulated		
<b>TDG</b>		Non-regulated		
<b>IMO/IMDG</b>		Non-regulated		

IATA (Cargo) Non-regulated

\*PG : Packing group

## 15. Regulatory information

### US regulations

**HCS Classification** Target organ effects

**U.S. Federal regulations** **SARA 311/312 Classification** Delayed (chronic) health hazard

#### **SARA 313 - Supplier Notification**

This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and Subpart C-Supplier Notification Requirement of 40 CFR Part 372.  
None required.

**SARA 302 Extremely Hazardous Substances** None required.

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants** None required.

**State regulations** **Massachusetts RTK Substances** The following components are listed: Glycerine,

**New Jersey RTK Hazardous Substances** None required.

**Pennsylvania RTK Hazardous Substances** The following components are listed:  
Glycerine,

**California Prop. 65:** None required.

### Canada

**WHMIS (Canada)** Not controlled under WHMIS (Canada).

**Canadian lists** **Canadian NPRI:** None required.

### International regulations

#### **Chemical inventories**

Europe inventory All components are listed or exempted.  
Australia inventory (AICS) All components are listed or exempted.  
China inventory (IECSC) All components are listed or exempted.  
Japan inventory (ENCS) All components are listed or exempted.  
Japan inventory (ISHL) Not determined.  
Korea inventory (KECI) All components are listed or exempted.  
New Zealand Inventory of Chemicals (NZIoC) Not determined.  
Philippines inventory (PICCS) Not determined.  
Canada inventory All components are listed or exempted.  
United States inventory (TSCA 8b) All components are listed or exempted.

## 16. Other information

**Hazardous Material Information System III (U.S.A.)** Health : 1  
Flammability: 1  
Physical hazards : 0  
Chronic : \*

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 MSDSs under 29 CFR

1910.1200, the preparer may choose to provide them. HMIS<sup>®</sup> ratings are to be used with a fully implemented HMIS<sup>®</sup> program. HMIS<sup>®</sup> is a registered mark of the National Paint & Coatings Association (NPCA). HMIS<sup>®</sup> materials may be purchased exclusively from J. J. Keller (800) 327-6868. The customer is responsible for determining the PPE code for this material.

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