

## SAFETY DATA SHEET

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### 1. IDENTIFICATION

**Product Name:** CYCAT® 4045 Catalyst  
**Synonyms:** None  
**Product Description:** Amine salt of an aromatic sulfonic acid in ethylene glycol  
**Molecular Formula:** Mixture  
**Molecular Weight:** Mixture  
**Intended/Recommended Use:** Catalyst

Allnex USA Inc., 9005 Westside Parkway, Alpharetta, Georgia 30009, USA

**For Product and all Non-Emergency Information call** your local Allnex contact point or contact us at <http://www.allnex.com/contact>

**EMERGENCY PHONE (24 hours/day) - For emergency only involving spill, leak, fire, exposure or accident call:**

+1-866-928-0789 (toll free) or +1-215-207-0061 (Carechem 24 - Allnex29003-NCEC)

See Section 16 for Emergency phone numbers for other regions.

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### 2. HAZARDS IDENTIFICATION

#### GHS Classification

Acute Toxicity (Oral) Hazard Category 4

Specific Target Organ Toxicity - Repeated Exposure Hazard Category 2

#### LABEL ELEMENTS



#### Signal Word

WARNING

#### Hazard Statements

Harmful if swallowed

May cause damage to organs through prolonged or repeated exposure

#### Precautionary Statements

Wash face, hands and any exposed skin thoroughly after handling.

Do not eat, drink or smoke when using this product.

Do not breathe dust/fume/gas/mist/vapours/spray.

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

Rinse mouth.

Get medical advice/attention if you feel unwell.

Dispose of contents/container in accordance with local and national regulations.

#### **Hazards Not Otherwise Classified (HNOC), Other Hazards**

Not applicable

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### **3. COMPOSITION/INFORMATION ON INGREDIENTS**

#### **HAZARDOUS INGREDIENTS**

<b>Component / CAS No.</b>	<b>%</b>	<b>GHS Classification</b>
Ethylene glycol 107-21-1	40 - 70	Acute Tox. 4 (H302) STOT RE 2 (H373)
Di-isopropanolamine 110-97-4	1 - 5	Eye Irrit. 2A (H319)

The specific chemical identity and/or exact percentage of composition for one or more ingredients has been withheld as a trade secret.

Additional GHS classification or other information may be included in this section but has not been adopted by OSHA. See Section 16 for full text of H phrases.

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### **4. FIRST AID MEASURES**

#### **First-aid Measures**

**Inhalation:**

Remove to fresh air. If breathing is difficult, give oxygen. Obtain medical advice if there are persistent symptoms.

**Skin Contact:**

Wash immediately with plenty of water and soap.

**Eye Contact:**

Rinse immediately with plenty of water for at least 15 minutes. Obtain medical advice if there are persistent symptoms.

**Ingestion:**

If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

#### **Most Important Symptoms and Effects, Acute and Delayed**

None known.

#### **Immediate Medical Attention and Special Treatment**

Not applicable.

**Notes To Physician:**

No specific measures have been identified.

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### **5. FIRE-FIGHTING MEASURES**

#### **Suitable Extinguishing Media:**

Use water spray, carbon dioxide or dry chemical.

**Unsuitable Extinguishing Media:**

full water jet.

**Protective Equipment:**

Firefighters, and others exposed, wear self-contained breathing apparatus. Wear full firefighting protective clothing. See SDS Section 8 (Exposure Controls/Personal Protection).

**Special Hazards:**

Keep containers cool by spraying with water if exposed to fire.

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## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions:**

Where exposure level is known, wear approved respirator suitable for level of exposure. Where exposure level is not known, wear approved, positive pressure, self-contained respirator. In addition to the protective clothing/equipment in Section 8 (Exposure Controls/Personal Protection), wear impermeable boots.

**Methods For Cleaning Up:**

Cover spills with some inert absorbent material; sweep up and place in a waste disposal container. Flush spill area with water.

**Environmental Precautions:**

None known.

**References to other sections:**

See Sections 7, 8 and 13 for additional information.

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## 7. HANDLING AND STORAGE

**HANDLING**

**Precautions:** Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe vapors or spray mist.

**Special Handling Statements:** Provide good ventilation of working area (local exhaust ventilation if necessary). During processing and handling of the product, comply with the indicative occupational exposure limit values.

**STORAGE**

None.

**Storage Temperature:** Store at -10 - 32 °C 14 - 90 °F

**Reason:** Quality.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Measures:**

Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure.

**Respiratory Protection:**

For operations where inhalation exposure can occur use an approved respirator. Recommendations are listed below. Other protective respiratory equipment may be used based on user's own risk assessment. Recommended respirators include those certified by NIOSH.

Recommended:

Full Face Mask with organic vapor cartridge, Type A filter (BP >65°C)

**Eye Protection:**

Wear eye/face protection such as chemical splash proof goggles or face shield. Eyewash equipment and safety shower should be provided in areas of potential exposure.

**Skin Protection:**

Avoid skin contact. Wear impermeable gloves and suitable protective clothing.

**Hand Protection:**

Wear protective gloves. Recommendations are listed below. Other protective materials may be used based on user's own risk assessment. Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred. Replace gloves immediately when torn or any change in appearance (dimension, color, flexibility etc.) is noticed.

Gloves for repeated or prolonged exposure - non exhaustive list:

Nitrile rubber (NBR), thickness: > 0.12 mm, break through time: up to 480 min

Gloves for short term exposure/splash protection - non exhaustive list:

Nitrile rubber (NBR), thickness: > 0.12 mm, break through time: up to 480 min

The chemical resistance depends on the type of product and amount of product on the glove. Therefore gloves need to be changed when in contact with chemicals.

Due to many conditions (e.g. temperature, abrasion) the practical usage of a chemical protective glove in practice may be much shorter than the permeation time determined through testing. Use PE gloves as under gloves for difficult situations like for instance: high exposure, unknown composition or unknown properties of the chemicals.

**Additional Advice:**

Food, beverages, and tobacco products should not be carried, stored, or consumed where this material is in use. Before eating, drinking, or smoking, wash face and hands thoroughly with soap and water. It is recommended that a shower be taken after completion of workshift especially if significant contact has occurred. Work clothing should then be laundered prior to reuse. Street clothing should be stored separately from work clothing and protective equipment. Work clothing and shoes should not be taken home.

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**Exposure Limit(s)****107-21-1 Ethylene glycol**

OSHA (PEL):	Not established
ACGIH (TLV):	50 ppm vapor fraction (STEL) 10 mg/m <sup>3</sup> inhalable particulate matter, aerosol only (STEL) 25 ppm vapor fraction (TWA)
Other Value:	Not established

**Biological Exposure Limit(s)**

No values have been established.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Color:</b>	yellow
<b>Appearance:</b>	liquid
<b>Odor:</b>	glycol
<b>Boiling Point:</b>	Not applicable
<b>Melting Point:</b>	Not applicable
<b>Vapor Pressure:</b>	Not applicable

<b>Specific Gravity/Density:</b>	1.16 g/cm <sup>3</sup>
<b>Vapor Density:</b>	Not applicable
<b>Percent Volatile (% by wt.):</b>	~ 65 @ 105 °C
<b>pH:</b>	7.5 - 8.5
<b>Saturation In Air (% By Vol.):</b>	Not applicable
<b>Evaporation Rate:</b>	< 1
<b>Solubility In Water:</b>	Complete
<b>Volatile Organic Content:</b>	~ 61 % (g/g)
<b>Flash Point:</b>	> 99 °C 210 °F Closed Cup
<b>Flammable Limits (% By Vol):</b>	Not available
<b>Autoignition Temperature:</b>	Not available
<b>Decomposition Temperature:</b>	Not available
<b>Partition coefficient (n-octanol/water):</b>	Not available
<b>Odor Threshold:</b>	Not available
<b>Viscosity (Kinematic):</b>	Not available
<b>Viscosity (Dynamic):</b>	Not available
<b>Flammability:</b>	Not available
<b>Oxidizing Properties:</b>	No

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## 10. STABILITY AND REACTIVITY

<b>Reactivity:</b>	No information available
<b>Stability:</b>	Stable.
<b>Conditions To Avoid:</b>	Store below 4.4°C (40°F).
<b>Polymerization:</b>	Will not occur
<b>Conditions To Avoid:</b>	None known
<b>Materials To Avoid:</b>	Strong acids and strong oxidizing agents.
<b>Hazardous Decomposition Products:</b>	Carbon dioxide Carbon monoxide (CO) oxides of nitrogen oxides of sulfur (includes sulfur di and tri oxides)

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## 11. TOXICOLOGICAL INFORMATION

**Likely Routes of Exposure:** Skin, Eyes, Oral.

**Acute toxicity - oral:** Harmful if swallowed

**Acute toxicity - dermal:** Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

**Acute toxicity - inhalation:** Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

**Skin corrosion / irritation:** Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

**Serious eye damage / eye irritation:** Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

**Respiratory sensitization:** Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

**Skin sensitization:** Not Classified - Based on available data and/or professional judgment, the classification

criteria are not met.

**Carcinogenicity:** Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

**Germ cell mutagenicity:** Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

**Reproductive toxicity:** Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

**Specific target organ toxicity (STOT) - single exposure:** Not Classified. - Based on available data and/or professional judgment, the classification criteria are not met.

**Specific target organ toxicity (STOT) - repeated exposure:** May cause damage to organs through prolonged or repeated exposure.

**Route of Exposure:** oral **Affected Organs:** Kidneys

**Aspiration hazard:** Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

## PRODUCT TOXICITY INFORMATION

### ACUTE TOXICITY DATA

oral	rat	Acute LD50	800 mg/kg
dermal	rat	Acute LD50	> 2000 mg/kg
inhalation	rat	Acute LC50 4 hr	> 5 mg/l (Dust/Mist)

### LOCAL EFFECTS ON SKIN AND EYE

Acute Irritation	dermal	rabbit	Not irritating
Acute Irritation	eye	rabbit	Minimal

### ALLERGIC SENSITIZATION

Sensitization	dermal	guinea pig	Not sensitizing
Sensitization	inhalation	No data	

### SUBACUTE/SUBCHRONIC TOXICITY

oral (gavage)	rat	28-day repeated dose toxicity test	150 mg/kg NOEL
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**Specific target organ toxicity (repeated exposure):** May cause damage to kidneys through prolonged or repeated exposure if swallowed. .

### GENOTOXICITY

#### Assays for Gene Mutations

Bacterial Reverse Mutation +/-S9	Salmonella Typhimurium	Negative
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#### Assays for Chromosomal Aberrations

In Vitro Chromosomal Aberrations	Human Lymphocyte	Negative
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### OTHER INFORMATION

The above information is based on toxicity studies conducted on the salt only, without ethylene glycol. Only for the acute toxicity data (oral) the presence of the solvent was taken into account.

## HAZARDOUS INGREDIENT TOXICITY DATA

Ethylene glycol has acute oral (rat) and dermal (rabbit) values of >2000 mg/kg and >10000 mg/kg, respectively. This substance is mildly irritating to the eyes, skin and respiratory tract. Repeated skin contact may cause an eczema-like skin disorder but sensitization is not expected to occur. Ethylene glycol is not mutagenic, carcinogenic or a reproductive toxin based on available data. Repeated exposures may cause adverse kidney and liver effects/damage.

Diisopropanolamine has an acute oral (rat) LD50 value of 4765 mg/kg. Direct contact with this material may cause moderate eye and mild skin irritation.



**WARNING:** Reproductive Harm – [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

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## 12. ECOLOGICAL INFORMATION

### TOXICITY, PERSISTENCE AND DEGRADABILITY, BIOACCUMULATIVE POTENTIAL, MOBILITY IN SOIL, OTHER ADVERSE EFFECTS

This material is readily biodegradable.

This material is not classified as dangerous for the environment.

### ALGAE TEST RESULTS

**Test:** Growth Inhibition (OECD 201)

**Duration:** 72 hr

**Species:** Green Algae (*Scenedesmus subspicatus*)

> 100 mg/l EC50

### FISH TEST RESULTS

**Test:** Acute toxicity, freshwater (OECD 203)

**Duration:** 96 hr.

**Species:** Rainbow Trout (*Oncorhynchus mykiss*)

> 100 mg/l LC50

### INVERTEBRATE TEST RESULTS

**Test:** Acute Immobilization (OECD 202)

**Duration:** 48 hr

**Species:** Water Flea (*Daphnia magna*)

> 100 mg/l EC50

### BACTERIA TEST RESULTS

**Test:** Respiration Inhibition (OECD 209)

**Duration:** 3 hr

**Species:** Activated Sludge - Bacterial

> 1000 mg/l EC50

### DEGRADATION

**Test:** CO2 Evolution: Modified Sturm (OECD 301B)

**Duration:** 28 day **Procedure:** Ready biodegradability

98 %

Readily Biodegradable

**RESULTS OF PBT AND vPvB ASSESSMENT**

Not determined

**HAZARDOUS INGREDIENT TOXICITY DATA**

Component / CAS No.	Toxicity to Fish
Ethylene glycol (107-21-1)	LC50 14 - 18 mL/L - Oncorhynchus mykiss (96h) LC50 40000 - 60000 mg/L - Pimephales promelas (96h) LC50 = 16000 mg/L - Poecilia reticulata (96h) LC50 = 27540 mg/L - Lepomis macrochirus (96h) LC50 = 40761 mg/L - Oncorhynchus mykiss (96h) LC50 = 41000 mg/L - Oncorhynchus mykiss (96h)
Di-isopropanolamine (110-97-4)	LC50 1000 - 2200 mg/L - Brachydanio rerio (96h)

Component / CAS No.	Toxicity to Water Flea
Ethylene glycol (107-21-1)	EC50 = 46300 mg/L - Daphnia magna (48h)
Di-isopropanolamine (110-97-4)	EC50 = 277.7 mg/L - Daphnia magna Straus (48h)

Component / CAS No.	Toxicity to Algae
Ethylene glycol (107-21-1)	EC50 6500 - 13000 mg/L - Pseudokirchneriella subcapitata (96h)
Di-isopropanolamine (110-97-4)	EC50 = 270 mg/L - Desmodesmus subspicatus (72h)

Component / CAS No.	Partition coefficient
Ethylene glycol (107-21-1)	-1.93
Di-isopropanolamine (110-97-4)	-0.79

**13. DISPOSAL CONSIDERATIONS**

The information on RCRA waste classification and disposal methodology provided below applies only to the product, as supplied. If the material has been altered or contaminated, or it has exceeded its recommended shelf life, the guidance may be inapplicable. Hazardous waste classification under federal regulations (40 CFR Part 261 et seq) is dependent upon whether a material is a RCRA "listed hazardous waste" or has any of the four RCRA "hazardous waste characteristics." Refer to 40 CFR Part 261.33 to determine if a given material to be disposed of is a RCRA "listed hazardous waste"; information contained in Section 15 of this SDS is not intended to indicate if the product is a "listed hazardous waste." RCRA Hazardous Waste Characteristics: There are four characteristics defined in 40 CFR Section 261.21-61.24: Ignitability, Corrosivity, Reactivity, and Toxicity. To determine Ignitability, see Section 9 of this SDS (flash point). For Corrosivity, see Sections 9 and 14 (pH and DOT corrosivity). For Reactivity, see Section 10 (incompatible materials). For Toxicity, see Section 3 (composition). Federal regulations are subject to change. State and local requirements, which may differ from or be more stringent than the federal regulations, may also apply to the classification of the material if it is to be disposed. The Company encourages the recycle, recovery and reuse of materials, where permitted, as an alternate to disposal as a waste. The Company recommends that organic materials classified as RCRA hazardous wastes be disposed of by thermal treatment or incineration at EPA approved



facilities. The Company has provided the foregoing for information only; the person generating the waste is responsible for determining the waste classification and disposal method.

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## 14. TRANSPORT INFORMATION

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

### US DOT

Dangerous Goods? X

PROPER SHIPPING NAME: OTHER REGULATED SUBSTANCE, LIQUID, N.O.S.

Hazard Class: 9

Packing Group: III

UN/ID Number: NA3082

Transport Label Required: Miscellaneous

TECHNICAL NAME (N.O.S.): ETHYLENE GLYCOL

Comments: Hazardous Substances/Reportable Quantities - DOT requirements specific to Hazardous Substances only apply if the quantity in one package equals or exceeds the product reportable quantity.

### TRANSPORT CANADA

Dangerous Goods? Not applicable/Not regulated

### ICAO / IATA

Dangerous Goods? Not applicable/Not regulated

### IMO

Dangerous Goods? Not applicable/Not regulated

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## 15. REGULATORY INFORMATION

### Inventory Information

**United States (USA):** All components of this product are designated as "Active" on the TSCA Inventory or are not required to be listed.

**Canada:** All components of this product are included on the Domestic Substances List (DSL) or are not required to be listed on the DSL.

**European Economic Area (including EU):** When purchased and shipped from an Allnex legal entity based in the EEA (EU or Norway), this product is compliant with the registration of the REACH Regulation (EC) No. 1907/2006 as all its components are either excluded, exempt and/or registered.

**Australia:** All components of this product are included in the Australian Inventory of Industrial Chemicals (AIIC) or are not required to be listed on AIIC.

**New Zealand:** This product is approved or exempt under the Hazardous Substances and New Organisms (HSNO) Act.

**China:** All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese inventory.

**Japan:** All components of this product are included on the Japanese (ENCS and ISHL) inventories or are not required to be listed on the Japanese inventories.

**Korea:** All components of this product are included on the Korean (ECL) inventory or are not required to be listed on the Korean inventory. When purchased from Allnex Korea or Chemart distributor this product is compliant with the ARECs (the Act on the Registration and Evaluation, etc. of Chemical Substances). All its components are either excluded, exempt, pre-notified and/or registered. When purchased from another allnex entity, please contact PSRA-KREACH@allnex.com to check the possibility to be covered by our Only Representative.

**Philippines:** One or more components of this product are NOT included on the Philippine (PICCS) inventory.

**Taiwan:** All components of this product are included in the Taiwan chemical substance inventory or are not required to be listed on the Taiwan chemical substance inventory (TCSI).

**Turkey:** When purchased directly from Allnex by a Turkish legal entity, this product is compliant with the PRE-registration requirements of KKDIK as all its components are either pre-registered, excluded and/or exempt.

#### OTHER ENVIRONMENTAL INFORMATION

The following components of this product may be subject to reporting requirements pursuant to Section 313 of CERCLA (40 CFR 372), Section 12(b) of TSCA, or may be subject to release reporting requirements (40 CFR 307, 40 CFR 311, etc.) See Section 13 for information on waste classification and waste disposal of this product.

Component / CAS No.	%	TPQ (lbs)	RQ(lbs)	S313	TSCA 12B
Ethylene glycol 107-21-1	40 - 70	None	5000	Yes	No

#### PRODUCT HAZARD CATEGORY UNDER SECTIONS 311 AND 312 OF EPCRA

##### Physical Hazards

Not applicable

##### Health Hazards

Acute toxicity (any route of exposure)

Specific target organ toxicity (single or repeated exposure)

## 16. OTHER INFORMATION

#### NFPA Hazard Rating (National Fire Protection Association)

Health: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

Fire: 1 - Materials that must be preheated before ignition can occur.

Instability: 0 - Materials that in themselves are normally stable, even under fire exposure conditions.

**Reasons for Issue:** Date update

**Date Prepared:** 02/22/2022

**Date of last significant revision:** 07/21/2020

#### Component - Hazard Statements

Ethylene glycol

H302 - Harmful if swallowed.

H373 - May cause damage to organs through prolonged or repeated exposure.  
Di-isopropanolamine  
H319 - Causes serious eye irritation.

### Emergency phone numbers for other regions

#### Asia Pacific

Australia: +61 1800 022 037 (Allnex Australia)  
China (PRC): +86(0)532 8388 9090 (NRCC)  
India: 000 800 100 7479 (toll free) or +65 3158 1198 (Carechem 24)  
Indonesia: 007 803 011 0293 (Carechem 24)  
Japan: +81 345 789 341 (Carechem 24)  
Korea: +82 2 3479 8401 (Carechem 24)  
Malaysia: +60 3 6207 4347 (Carechem 24)  
New Zealand: +64 0800 803 002 (Allnex New Zealand)  
Philippines: +63 2 231 2149 (Carechem 24)  
Taiwan: +886 2 8793 3212 (Carechem 24)  
Vietnam: +84 8 4458 2388 (Carechem 24)  
All Others: +65 3158 1074 (Carechem 24)

#### Europe

+44 (0) 1235 239 670 (Carechem 24)

#### Middle East, Africa

+44 (0) 1235 239 671 (Carechem 24)

#### Latin America

Brazil: +55-800-707-7022 (toll free) or +55-11-98149-0850 (Suatrans 24)  
Chile: +56 2 2582 9336 (Carechem 24)  
Mexico and all others: +52-555-004-8763 (Carechem 24)

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Prepared By: Product Stewardship & Regulatory Affairs Department, <http://www.allnex.com/contact>

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