

DANVERS INDUSTRIAL PARK  
10 ELECTRONICS AVENUE  
DANVERS, MA 01923  
(508) 777-7860

# TRANSENE COMPANY, INC.

RV'D: JUNE 1992

S8236 -02 NICKEL ETCHANT TFG  
Effective: 09/08/86

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Issued: 09/09/86

## SECTION I - PRODUCT IDENTIFICATION

Product Name: NICKEL ETCHANT TYPE TFG  
Formula: MIXTURE  
Formula Wt:  
CAS No.: MIXTURE SEE BELOW  
Product Codes: NICKEL TFG

## PRECAUTIONARY LABELLING

BAKER SAF-T-DATA™ System  
HEALTH



### Laboratory Protective Equipment



GOOGLES & SHIELD



LAB COAT & APRON



VENT HOOD



PROPER GLOVES

**FOR CHEMICAL EMERGENCY**  
SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT  
CALL CHEMTREC - DAY OR NIGHT  
1-800-424-9300

### Precautionary Label Statements

**WARNING!**  
CAUSES BURNS  
HARMFUL IF SWALLOWED

Do not get in eyes, on skin, on clothing.  
Avoid breathing vapor. Keep in tightly closed container. Use with adequate ventilation. Wash thoroughly after handling.

## SECTION II - HAZARDOUS COMPONENTS

Component	Z	CAS No.
Thiourea Carcinogenic	0.4	62-56-6
Sodium N-Nitro Benzene Sulfonate	10	127-68-4
Sulfuric Acid	1-10	7664-93-9

## SECTION III - PHYSICAL DATA

Boiling Point:	N/A	Vapor Pressure(mmHg):	N/A
Melting Point:	N/A	Vapor Density(air=1):	N/A
Specific Gravity: (H <sub>2</sub> O=1)	1.04	Evaporation Rate: (Butyl Acetate=1)	N/A

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SECTION III - PHYSICAL DATA (Continued)

Solubility(H<sub>2</sub>O): Complete (in all proportions) & Volatiles by Volume: N/A

Appearance & Odor: Clear, colorless, solutions.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point: N/A NFPA 704M Rating: 3-0-2

Flammable Limits: Upper - N/A & Lower - N/A &

Fire Extinguishing Media

Use extinguishing media appropriate for surrounding fire.

SECTION V - HEALTH HAZARD DATA

Toxicity test results and safety and health effects are based on the solute.

	Z	TLV <sup>3</sup>	PEL <sup>3</sup> **	
Sodium N-Nitro Benzene Sulfonate	10	5mg/M <sup>3</sup>	5mg/M <sup>3</sup>	
* Thiourea	0.4	n/a	***	
Sulfuric Acid	3	1mg/M <sup>3</sup>	1mg/M <sup>3</sup>	
Threshold limit value (TLV/TWA)		1mg/M <sup>3</sup>		Sulfuric Acid
Permissible exposure limit (PEL)		1mg/M <sup>3</sup>		Sulfuric Acid
Toxicity: LD <sub>50</sub> (oral rat)		mg/kg		Sulfuric Acid

\* Carcinogenicity: (Thiourea) NTP:Yes IARC:Yes Z List:No OSHA reg:No  
\*\* Recommended BASF

Effects of Overexposure

Vapors may be irritating to skin, eyes, and mucous membranes.  
Contact with skin or eyes may cause severe irritation or burns.  
Inhalation of vapors may cause coughing, chest pains, or nose and throat irritation.

Medical Conditions Generally Aggravated By Exposure

None Identified

Routes Of Entry

inhalation, ingestion, eye contact, skin contact

Emergency and First Aid Procedures

CALL A PHYSICIAN.

If swallowed, do NOT induce vomiting; if conscious, give water, milk, or milk of magnesia.

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Chronic Effects of Exposure:

Thiourea is a sensitizer in persons who exhibit photosensitivity; it has produced goiter and bone marrow depression (anemia, leukopenia, thrombocytopenia and agranulocytosis) in experimental animals. Thiourea appears to be highly toxic orally, in animals, however, its toxicity in rats varies from strain to strain. Upon chronic administration, Thiourea can cause hepatic tumors; It is an invitro and invivo mutagen via multiple test systems. It has also been shown to cause reproductive effects in animals.

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\*\*\* FATA: DOSE 10/Kg by Norman Brenner/Soap Special May 6, 1953



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SECTION X - TRANSPORTATION DATA AND ADDITIONAL INFORMATION (Continued)  
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Proper Shipping Name      Sulphuric acid  
Hazard Class              Corrosive material (liquid)  
ID Number                  UN1830  
Hazard Labels              CORROSIVE  
Net Weight or Net Content      1000 LBS.

INTERNATIONAL (I.M.O.)

Proper Shipping Name      CORROSIVE LIQUIDS, N.O.S. | d  
Hazard Class              (SULFURIC ACID & SULFONATE)  
ID Number                  UN 1760

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- Not Applicable or Not Available

The information published in this Material Safety Data Sheet has been compiled from our experience and data presented in various technical publications. It is the user's responsibility to determine the suitability of this information for the adoption of necessary safety precautions. We reserve the right to revise our Material Safety Data Sheets periodically as new information becomes available.

M.E. HECHT 9/86

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# Material Safety Data

## TRANSENE COMPANY, INC.

### Addendum to Material Safety Data Sheet

#### REGULATORY STATUS

Hazard Categories for SARA  
 Section 311/312 Reporting  
 Acute Chronic Fire Pressure Reactive

Product or Components of Product:	SARA EHS Sec. 302 RO (lbs.)	TPQ (lbs.)	SARA Section 313 Chemicals Name List	Chemical Category	CERCLA Sec.103 RO (lbs.)	RCRA Sec. 261.33
Sulfuric Acid (7664-93-9)	1000	1000	Yes	No	1000	No
Thiourea (62-56-6)	No	No	Yes	No	1.0	U219

This Addendum Must Not Be Detached from the MSDS

Identifies SARA 313 substances in covering or redistribution of the MSDS must include a copy of this addendum

SARA Section 302 EHS RO: Reportable Quantity of Extremely Hazardous Substance, listed at 40 CFR 355.  
 SARA Section 302 EHS TPO: Threshold Planning Quantity of Extremely Hazardous Substance. An asterisk (\*) following a Threshold Planning Quantity signifies that if the material is a solid and has a particle size equal to or larger than 100 micrometers, the Threshold Planning Quantity = 10,000 LBS.  
 SARA Section 313 Chemicals: Toxic Substances subject to annual release reporting requirements listed at 40 CFR 372.65.  
 CERCLA Sec. 103: Comprehensive Environmental Response, Compensation and Liability Act (Superfund). Releases to air, land or water of these hazardous substances which exceed the Reportable Quantity (RQ) must be reported to the National Response Center. (800-424-8802). Listed at 40 CFR 302.4  
 RCRA: Resource Conservation and Reclamation Act. Commercial chemical products wastes designated as acute hazards and toxic under 40 CFR 261.33

Effective Date: 02-17-87 Supersedes 04-30-86