

A Geno Technology, Inc. (USA) brand name

Safety Data Sheet

Cat. # BC86

6-trinitrobenzene sulfonic acid); 1% Solution in methanol (CAS# 2508-19-2; F.V

Size: 10ml





Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 04/26/2013 Revision date: 05/11/2017 Version: 7.1

SECTION 1: Identification

1.1. Identification

Product form : Mixture

Product name : 2,4,6-trinitrobenzenesulfonic acid

Product code : 094T Formula : C6H3N3O9S

Synonyms : benzenesulfonic acid, 2,4,6-trinitro- / trinitrobenzenesulfonic acid

BIG No : 12562

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

Geno Technology, Inc./ G-Biosciences 9800 Page Avenue

Saint Louis, 63132-1429 - United States T 800-628-7730 - F 314-991-1504

technical@GBiosciences.com - www.GBiosciences.com

1.4. Emergency telephone number

Emergency number : Chemtrec 1-800-424-9300 (USA/Canada), +1-703-527-3887 (Intl)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Acute toxicity (oral) Category 3

Acute toxicity (inhalation:dust,mist) Category 3

Skin corrosion/irritation Category 2

Serious eye damage/eye irritation Category 2

Specific target organ toxicity (single exposure) Category 1

H301

Toxic if swallowed

H331

Causes skin irritation

Causes serious eye irritation

H319

Causes serious eye irritation

H370

Causes damage to organs

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US)







Signal word (GHS US) : Danger

Hazard statements (GHS US) : H301+H331 - Toxic if swallowed or if inhaled

H315 - Causes skin irritation H319 - Causes serious eye irritation H370 - Causes damage to organs

Precautionary statements (GHS US) : P260 - Do not breathe dust/fume/gas/mist/vapors/spray.

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray. P264 - Wash hands, forearms and face thoroughly after handling.

P264 - Wash hands, forearms and face thoroughly after handling. P270 - Do not eat, drink or smoke when using this product.

P271 - Use only outdoors or in a well-ventilated area.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P301+P310 - If swallowed: Immediately call a poison center or doctor

P302+P352 - If on skin: Wash with plenty of water

P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing P307+P311 - If exposed: Call a poison center/doctor

P311 - Call a poison center or doctor

P321 - Specific treatment (see supplemental first aid instruction on this label)

P330 - Rinse mouth.

P332+P313 - If skin irritation occurs: Get medical advice/attention. P337+P313 - If eye irritation persists: Get medical advice/attention.

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P362+P364 - Take off contaminated clothing and wash it before reuse.

P403+P233 - Store in a well-ventilated place. Keep container tightly closed.

P405 - Store locked up.

P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

Other hazards which do not result in classification

No additional information available

Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

Substances

Not applicable

3.2. **Mixtures**

Name	Common Name (Synonyms)	Product identifier	%	GHS US classification
methanol	420A reagent #5 / acetone alcohol / Al3-00409 / alcohol C1 / alcohol, methyl / carbinol / caswell No 552 / coat-B1400 / colonial spirit / colonial spirits / columbian spirit / columbian spirits / EPA pesticide chemical code 053801 / eureka products criosine disinfectant / eureka products, criosine / freers elm arrester / green wood spirits / holzin / HYDRANAL-standard-methanol / ideal concentrated wood preservative / manhattan spirits / methanol / methyl alcohol / methyl hydrate / methyl hydroxide / Methylalcohol / methylen / methylol / monohydroxymethane / pyroligneous spirit / pyroxylic spirit / RCRA waste number U154 / standard wood spirits / surflo-B17 / wilbur-ellis smut-guard / wood alcohol / wood naphtha / wood spirit / X-cide 402 industrial bactericide	(CAS-No.) 67-56-1	>= 80	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Inhalation), H331 Acute Tox. 3 (Inhalation:vapour), H331 STOT SE 1, H370
2,4,6-trinitrobenzenesulfonic acid	benzenesulfonic acid, 2,4,6-trinitro- / trinitrobenzenesulfonic acid	(CAS-No.) 2508-19-2	0.5 - 2	Skin Corr. 1B, H314

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

Description of first aid measures

First-aid measures general

: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid

First-aid measures after inhalation

First-aid measures after skin contact

physical strain. Depending on the victim's condition: doctor/hospital.

: Remove the victim into fresh air.

Wash immediately with lots of water (15 minutes)/shower. Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. If burned surface > 10%: take victim to hospital.

First-aid measures after eye contact

Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Take victim to an ophthalmologist. Do not apply neutralizing agents.

First-aid measures after ingestion

Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Do not give activated charcoal. Take the container/vomit to the doctor/hospital. Ingestion of large quantities: immediately to hospital. Do not give chemical antidote. Call Poison Information Centre (www.big.be/antigif.htm).

4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms

: Causes severe skin burns. Causes serious eye damage.

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Symptoms/effects after skin contact : Caustic burns/corrosion of the skin.

Symptoms/effects after eye contact : Corrosion of the eye tissue.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Quick-acting ABC powder extinguisher. Class A foam extinguisher. Water (quick-acting

extinguisher, reel). Water. Class A foam.

Unsuitable extinguishing media : Quick-acting BC powder extinguisher. Quick-acting CO2 extinguisher.

5.2. Specific hazards arising from the chemical

Fire hazard : INDIRECT FIRE HAZARD: Fire/heat: explosive hazard bigger than fire hazard.

Explosion hazard : DIRECT EXPLOSION HAZARD: Explosive when dry. Substance belongs to the group of

explosives

5.3. Special protective equipment and precautions for fire-fighters

Precautionary measures fire : Exposure to fire/heat: keep upwind.

Firefighting instructions : Extinguish/cool from behind cover/unmanned monitors. Do not move the load if exposed to

heat. Dilute toxic gases with water spray. Depending on nature/size of load: consider extinguishment. Take account of toxic fire-fighting water. Use water moderately and if possible

collect or contain it.

Protection during firefighting : Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment

 $: \ \ \mbox{Gloves. Face-shield. Corrosion-proof suit. Dust cloud production: compressed air/oxygen}$

pparatus.

Emergency procedures : Notify experts. Mark the danger area. Prevent dust cloud formation, e.g. by wetting. Consider

evacuation. Stop engines and no smoking. No naked flames or sparks. Spark- and explosionproof appliances and lighting equipment. Keep containers closed. Prevent

shock/impact. Wash contaminated clothes.

6.1.2. For emergency responders

Protective equipment

10.01 10 01

 Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

For containment : Contain released product, pump into suitable containers. Dam up the solid spill. Do not use compressed air for pumping over spills. Knock down/dilute dust cloud with water spray. Take

account of toxic/corrosive precipitation water.

Methods for cleaning up : Start with disposal only in the presence of experts. Carefully collect the spill/leftovers. Do not use compressed air for pumping over spills. Take collected spill to manufacturer/competent

use compressed air for pumping over spills. Take collected spill to manufacturer/competent authority. Clean contaminated surfaces with an excess of water. Wash clothing and equipment

after handling.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling

: Avoid raising dust. Use spark-/explosionproof appliances and lighting system. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Avoid shock and friction. Do not discharge the waste into the drain. Do not use compressed air for pumping over. Keep container tightly closed.

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Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product.

Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.

Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.

Storage area : Store in a cool area. Keep locked up. Meet the legal requirements.

Special rules on packaging : SPECIAL REQUIREMENTS: closing, shock-absorbing, correctly labelled, meet the legal

requirements. Secure fragile packagings in solid containers.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

2,4,6-trinitrobenzenesulfonic acid		
No additional information available		
methanol (67-56-1)		
USA - ACGIH - Occupational Exposure Limits		
ACGIH TWA (ppm)	200 ppm	
ACGIH STEL (ppm)	250 ppm	
2,4,6-trinitrobenzenesulfonic acid (2508-19-2)		
No additional information available		

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Gloves

Color

Eye protection:

Face shield

Skin and body protection:

Corrosion-proof clothing

Respiratory protection:

High vapour/gas concentration: self-contained respirator

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid
Appearance : Solid.

Odor : No data available Odor threshold : No data available рН : No data available Melting point : No data available Freezing point : Not applicable Boiling point : No data available Flash point : Not applicable Relative evaporation rate (butyl acetate=1) : No data available Flammability (solid, gas) : Non flammable. Vapor pressure : No data available Relative vapor density at 20 °C : Not applicable

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No data available

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Relative density : Not applicable

Molecular mass : 293.17 g/mol

Solubility : Soluble in water.

Water: soluble, Literature

Log Pow No data available : Not applicable Auto-ignition temperature Decomposition temperature : No data available · No data available Viscosity, kinematic Viscosity, dynamic : No data available **Explosion limits** : Not applicable Explosive properties : No data available : No data available Oxidizing properties

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Toxic if swallowed.

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Toxic if inhaled.

 ATE US (oral)
 101.01 mg/kg body weight

 ATE US (dust, mist)
 0.505 mg/l/4h

methanol (67-56-1)	
LD50 oral rat	1187 - 2769 mg/kg body weight (BASF test, Rat, Male / female, Weight of evidence, Aqueous solution, Oral, 7 day(s))
LD50 dermal rabbit	17100 mg/kg (Rabbit, Inconclusive, insufficient data, Dermal)
LC50 inhalation rat (mg/l)	128.2 mg/l air (BASF test, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours))
ATE US (oral)	100 mg/kg body weight
ATE US (dermal)	17100 mg/kg body weight
ATE US (gases)	700 ppmV/4h
ATE US (vapors)	3 mg/l/4h
ATE US (dust, mist)	0.5 mg/l/4h

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye irritation.

Respiratory or skin sensitization : Not classified Germ cell mutagenicity : Not classified Carcinogenicity : Not classified

Reproductive toxicity : Not classified

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Specific target organ toxicity – single exposure : Causes damage to organs.

methanol (67-56-1)	
Specific target organ toxicity – single exposure	Causes damage to organs.

Specific target organ toxicity - repeated

exposure

: Not classified

Aspiration hazard : Not classified
Viscosity, kinematic : No data available

Potential Adverse human health effects and

symptoms

: Causes severe skin burns. Causes serious eye damage.

Symptoms/effects after skin contact : Caustic burns/corrosion of the skin. Symptoms/effects after eye contact : Corrosion of the eye tissue.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

Ecology - water : No data available on ecotoxicity.

methanol (67-56-1)	
LC50 fish 1	15400 mg/l (EPA 660/3 - 75/009, 96 h, Lepomis macrochirus, Flow-through system, Fresh water, Experimental value, Lethal)
EC50 Daphnia 1	18260 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 96 h, Daphnia magna, Semistatic system, Fresh water, Experimental value, Locomotor effect)
ErC50 (algae)	22000 mg/l (OECD 201: Alga, Growth Inhibition Test, 96 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value)

12.2. Persistence and degradability

2,4,6-trinitrobenzenesulfonic acid		
Persistence and degradability	Biodegradability in water: no data available.	
methanol (67-56-1)		
Persistence and degradability	Readily biodegradable in the soil. Readily biodegradable in water.	
Biochemical oxygen demand (BOD)	0.6 - 1.12 g O ₂ /g substance	
Chemical oxygen demand (COD)	1.42 g O₂/g substance	
ThOD	1.5 g O ₂ /g substance	
2,4,6-trinitrobenzenesulfonic acid (2508-19-2)		
Persistence and degradability	Biodegradability in water: no data available.	

12.3. Bioaccumulative potential

2,4,6-trinitrobenzenesulfonic acid		
Bioaccumulative potential	No bioaccumulation data available.	
methanol (67-56-1)		
BCF fish 1	1 - 4.5 (72 h, Cyprinus carpio, Static system, Fresh water, Experimental value)	
Log Pow	-0.77 (Experimental value)	
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).	
2,4,6-trinitrobenzenesulfonic acid (2508-19-2)		
Bioaccumulative potential	No bioaccumulation data available.	

12.4. Mobility in soil

methanol (67-56-1)	
Surface tension	0.023 N/m (20 °C)
Log Koc	0.088 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Highly mobile in soil.

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Other adverse effects

No additional information available

SECTION 13: Disposal considerations

Disposal methods

Waste treatment methods

: Waste treatment methods.

Product/Packaging disposal recommendations

Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Specific incineration with energy recovery.

Additional information

Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No

1357/2014 and Regulation (EU) No 2017/997.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN3265 Corrosive liquid, acidic, organic, n.o.s. (2,4,6-Trinitrobenzenesulphonic acid), 8, II

UN-No.(DOT) : UN3265

Proper Shipping Name (DOT) : Corrosive liquid, acidic, organic, n.o.s.

2,4,6-Trinitrobenzenesulphonic acid

Class (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136

Packing group (DOT) : II - Medium Danger : 8 - Corrosive Hazard labels (DOT)



DOT Packaging Non Bulk (49 CFR 173.xxx)

DOT Packaging Bulk (49 CFR 173.xxx)

DOT Symbols

DOT Special Provisions (49 CFR 172.102)

: 202 : 242

: G - Identifies PSN requiring a technical name

: B2 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks are not authorized.

IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.

T11 - 6 178.274(d)(2) Normal...... 178.275(d)(3)

TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.

TP27 - A portable tank having a minimum test pressure of 4 bar (400 kPa) may be used provided the calculated test pressure is 4 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.

DOT Packaging Exceptions (49 CFR 173.xxx)

DOT Quantity Limitations Passenger aircraft/rail : 1 L

(49 CFR 173.27)

: 154

DOT Quantity Limitations Cargo aircraft only (49 : 30 L

CFR 175.75)

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DOT Vessel Stowage Location

: B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

DOT Vessel Stowage Other : 40 - Stow "clear of living guarters"

Emergency Response Guide (ERG) Number : 153

Other information : No supplementary information available.

Transportation of Dangerous Goods

Transport by sea

Not regulated

Air transport

Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

methanol (67-56-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313 Listed on EPA Hazardous Air Pollutant (HAPS)

CERCLA RQ 5000 lb

2,4,6-trinitrobenzenesulfonic acid (2508-19-2)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

methanol (67-56-1)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

National regulations

No additional information available

15.3. US State regulations

methanol (67-56-1)					
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
No	Yes	No	No		47000 μg/day (inhalation); 23,000 μg/day (oral)

SECTION 16: Other information

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Full text of H-phrases:

H225	Highly flammable liquid and vapour
H301	Toxic if swallowed
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H319	Causes serious eye irritation
H331	Toxic if inhaled
H370	Causes damage to organs

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

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