

Creation Date Oct-2013

Revision Date Oct-2018

Revision Number 2

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identification

Product Description:Chlorotex ReagentCat No. :Q42453, Q42453FX

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Uses advised against Laboratory chemicals. No Information available

1.3. Details of the supplier of the safety data sheet

Company

E-mail address

Thermo Fisher Scientific India Pvt. Ltd 403-404, B-wing, Delphi, Hiranandani Business Park Powai, Mumbai 400076, INDIA. laboratorysolutions@thermofisher.com

1.4. Emergency telephone number

India Toll Free: Chemtrec US: Chemtrec EU: 18 00 22 22 30 (800) 424-9300 001 (202) 483-7616

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CLP Classification - Regulation (EC) No 1272/2008

Physical hazards

Flammable liquids

Health hazards

Serious Eye Damage/Eye Irritation Specific target organ toxicity - (single exposure)

Environmental hazards

Based on available data, the classification

Category 2 (H225)

Category 2 (H319) Category 3 (H336)

2.2. Label elements



Signal Word

Danger

Hazard Statements

H225 - Highly flammable liquid and vapor

H319 - Causes serious eye irritation

H336 - May cause drowsiness or dizziness

Precautionary Statements

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking

P240 - Ground/bond container and receiving equipment

P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray

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

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

2.3. Other hazards

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB)

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

| Component | CAS-No | EC-No. | Weight % | CLP Classification - Regulation (EC) No 1272/2008 |
|--------------------------------|---------------|---------------|----------|--|
| Isopropyl alcohol | 67-63-0 | 200-661-7 | 50-52 | Flam. Liq. 2 (H225) Eye Irrit. 2 (H319) STOT SE 3 (H336) |
| Dimineralized Water | 7732-18-5 | 231-791-2 | 48-50 | |
| Dihydrogen potassium phosphate | 7778-77-0 | 231-913-4 | <1.0 | |
| Potassium iodide | 7681-11-0 | 231-659-4 | <0.5 | |
| Proprietary Ingredient | Not available | Not available | 0.010 | |

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Eyes:

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

Skin:

In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

Ingestion:

Potential for aspiration if swallowed. Get medical aid immediately. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs naturally, have victim lean forward

Inhalation:

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

Notes to Physician:

Urine acetone test may be helpful in diagnosis. Hemodialysis should be considered in severe intoxication. Treat symptomatically and supportively.

4.2. Most important symptoms and effects, both acute and delayed

No information available.

4.3. Indication of any immediate medical attention and special treatment needed

SECTION 5: FIREFIGHTING MEASURES

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Use water spray to keep fire-exposed containers cool. Flammable liquid and vapor. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas.

Extinguishing Media:

Water may be ineffective. Do NOT use straight streams of water. For large fires, use dry chemical, carbon dioxide, alcoholresistant foam, or water spray. For small fires, use carbon dioxide, dry chemical, dry sand, or alcohol-resistant foam. Cool containers with flooding quantities of water until well after fire is out.

Autoignition Temperature:

Not available

Explosion Limits:

Lower: Not available Upper: Not available

Flash Point:

24°C (75.20°F)

NFPA Rating:

(estimated) Health: 1; Flammability: 3; Instability: 0

SECTION 6: ACCIDENTAL RELEASE MEASURES

General Information:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Use water spray to dilute spill to a non-flammable mixture. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors.

SECTION 7: HANDLING AND STORAGE

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Take precautionary measures against static discharges. Keep container tightly closed. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Use only with adequate ventilation. Avoid breathing vapor or mist.

Storage:

Keep away from sources of ignition. Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

| Chemical Name: | ACGIH | NIOSH | OSHA |
|-------------------|-----------------------------|--|--------------------------------|
| Isopropyl alcohol | 200 ppm TWA;400 ppm STEL | 400 ppm TWA; 980 mg/m3 TWA 2000 ppm IDLH | 400 ppm TWA; 980 mg/m3 TWA; |

Chlorotex Reagent

Revision Date Oct-2018

Dimineralized Water

| Dihydrogen potassium | None listed None listed | None listed None listed | None listed None listed |
|-------------------------------|----------------------------|----------------------------|----------------------------|
| phosphate Potassium iodide | None listed | None listed | None listed |
| Proprietary Ingredient | None listed | None listed | None listed |

OSHA Vacated PELs

Isopropyl alcohol: 400 ppm TWA; 980 mg/m3 TWA

Personal Protective Equipment

Eyes:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid Color: Clear colorless Odor: No information found pH: 5-6 Vapor Pressure: No information found Vapor Density: No information found Evaporation Rate: No information found Viscosity: No information found Boiling Point: No information found Freezing/Melting Point: No information found Decomposition Temperature: No information found Solubility in water: No information found Specific Gravity/Density: 0.8-0.9 Molecular Formula: Solution Molecular Weight: No information found

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability:

Stable.

Conditions to Avoid:

Ignition sources, excess heat

Incompatibilities with Other Materials

Strong oxidizing agents, strong acids, strong bases, amines, ammonia, ethylene oxide, isocyanates, acetaldehyde, chlorine, phosgene, Attacks some forms of plastics, rubbers, and coatings., aluminum at high temperatures

Hazardous Decomposition Products

Carbon monoxide, carbon dioxide

Hazardous Polymerization

Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

RTECS:

CAS# 67-63-0: NT8050000 CAS# 7732-18-5: ZC0110000 CAS# 7778-77-0: TC6615500 CAS# 7681-11-0: TT2975000

LD50/LC50:

CAS# 67-63-0:

Draize test, rabbit, eye: 100 mg Severe Draize test, rabbit, eye: 10 mg Moderate Draize test, rabbit, eye: 100 mg/24H Moderate Draize test, rabbit, skin: 500 mg Mild Inhalation, mouse: LC50 = 53000 mg/m3 Inhalation, rat: LC50 = 16000 ppm/8H Inhalation, rat: LC50 = 72600 mg/m3 Oral, mouse: LD50 = 3600 mg/kg Oral, mouse: LD50 = 3600 mg/kg Oral, rabbit: LD50 = 6410 mg/kg Oral, rat: LD50 = 5045 mg/kg Oral, rat: LD50 = 5000 mg/kg Skin, rabbit: LD50 = 12800 mg/kg. CAS# 7732-18-5: Oral, rat: LD50 = >90 mL/kg. CAS# 7778-77-0: Skin, rabbit: LD50 = >4640 mg/kg. CAS# 7681-11-0: No information found

Carcinogenicity:

CAS# 67-63-0: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65. CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65. CAS# 7778-77-0: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65. CAS# 7681-11-0: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology:

No information found

Teratogenicity:

A rat & rabbit developmental toxicity study showed no teratogenic effects at doses that were clearly maternally toxic. In a separate rat study, no evidence of developmental neurotoxicity was associated with gestational exposures to IPA up to 1200 mg/kg/d.

Reproductive:

See actual entry in RTECS for complete information.

Mutagenicity:

See actual entry in RTECS for complete information.

Neurotoxicity:

In rats exposed to isopropanol by inhalation, acute neurotoxicity was noted at 1 and 6 hours at 5000 ppm, but only minimal effects were seen at 1500 ppm and the animals recovered within 5 hours. No toxicity was noted at 500 ppm.

Other:

See actual entry in RTECS for complete information

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity:

Fish: Fathead Minnow: >1000 ppm; 96h; LC50 Daphnia: >1000 ppm; 96h; LC50 Fish: Gold orfe: 8970-9280 ppm; 48h; LC50

Chlorotex Reagent

IPA has a high biochemical oxygen demand and a potential to cause oxygen depletion in aqueous systems, a low potential to affect aquatic organisms, a low potential to affect secondary waste treatment microbial metabolism, a low potential to affect the germination of some plants, a high potential to biodegrade (low persistence) with unacclimated microorganisms from activated sludge.

Environmental:

No information found

Physical:

THOD: 2.40 g oxygen/g COD: 2.23 g oxygen/g BOD-5: 1.19-1.72 g oxygen/g

Other:

No information found

SECTION 13: DISPOSAL CONSIDERATIONS

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Part 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P Series Wastes

None of the components are on this list.

RCRA U Series Wastes

None of the components are on this list

SECTION 14: TRANSPORT INFORMATION

| | US DOT | Canadian TDG | |
|------------------------------|--------------------------------------|--------------|--------------------------------------|
| Proper Shipping Name: | ALCOHOLS, N.O.S. (Isopropanol) | | ALCOHOLS, N.O.S. (Isopropanol) |
| Hazard Class: | 3 | | 3 |
| UN Number: Packing Group: | UN1987 II | | UN1987 II |

SECTION 15: REGULATORY INFORMATION

US Federal

TSCA

CAS# 67-63-0 is listed on the TSCA Inventory. CAS# 7732-18-5 is listed on the TSCA Inventory. CAS# 7778-77-0 is listed on the TSCA Inventory. CAS# 7681-11-0 is listed on the TSCA Inventory. Proprietary Ingredient is not listed on the TSCA Inventory. It is for research and development use only.

Health and Safety Reporting List

CAS# 67-63-0: Effective 12/15/86, Sunset 12/15/96

Chemical Test Rules

CAS# 67-63-0: 40 CFR 799.2325

TSCA Section 12b

None of the components are on this list.

TSCA Significant New Use Rule (SNUR)

None of the components are on this list.

CERCLA Hazardous Substances and corresponding RQs

None of the components are on this list.

SARA Section 302 Extremely Hazardous Substances

None of the components are on this list.

SARA Hazard Categories

CAS# 67-63-0: immediate, delayed, fire. CAS# 7778-77-0: immediate. CAS# 7681-11-0: immediate, delayed.

SARA Section 313

This material contains Isopropyl alcohol (CAS# 67-63-0, 50-52%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 372.

Clean Air Act - Hazardous Air Pollutants (HAPs)

None of the components are on this list. Clean

Air Act - Class 1 Ozone Depletors None of

the components are on this list. Clean Air Act -

Class 2 Ozone Depletors None of the

components are on this list.

Clean Water Act - Hazardous Substances

None of the components are on this list.

Clean Water Act - Priority Pollutants

None of the components are on this list.

Clean Water Act - Toxic Pollutants

None of the components are on this list.

OSHA - Highly Hazardous

None of the components are on this list.

OSHA - Specifically Regulated Chemicals

None of the components are on this list.

US State

State Right to Know

Isopropyl alcohol can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts. No information found

California Prop 65

None of the components are on this list.

California No Significant Risk Level

None of the components are on this list. None of the components are on this list.

European/International Regulations

European Labelling in Accordance with EC Directives:

Hazard Symbols: F XI

Risk Phrases: R 11 Highly flammable. R

36 Irritating to eyes.

R 67 Vapours may cause drowsiness and dizziness.

Safety Phrases: S 7 Keep container tightly closed.

S 16 Keep away from sources of ignition - No smoking. S

24/25 Avoid contact with skin and eyes.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

WGK (Water Danger/Protection)

Chlorotex Reagent

No information found

United Kingdom Occupational Exposure Limits

No information found

United Kingdom Maximum Exposure Limits

No information found

Canadian DSL/NDSL

CAS# 67-63-0 is listed on Canada's DSL List. CAS# 7732-18-5 is listed on Canada's DSL List. CAS# 7778-77-0 is listed on Canada's DSL List. CAS# 7681-11-0 is listed on Canada's DSL List.

Canadian WHMIS Classifications

This product has a WHMIS classification of B2, D2B. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 67-63-0 is listed on the Canadian Ingredient Disclosure List. CAS# 7681-11-0 is listed on the Canadian Ingredient Disclosure List.

SECTION 16: OTHER INFORMATION

Creation Date Next Revision Date Revision Summary Oct-2013 Oct-2023 SDS section 1 updated and update of Format

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet