





Section 1. Identification of the Substance/Mixture and the Company

1.1 Product Identifier	Product Name: TMB Soluble Reagent (High Sensitivity) Product Number: TM4	
1.2 Intended use	EN: Laboratory reagent. For professional use only. DA: Laboratoriereagens. Kun til professionelt brug. DE: Laboratoriumreagens. Alleen voor professioneel gebruik. EL: Αντιδραστήριο εργαστηρίου. Για επαγγελματική χρήση μόνο. ES: Reactivo de laboratorio. Sólo para uso profesional. FR: Réactif de laboratoire. Pour un usage professionnel uniquement. IT: Laboratorio di reagente. Solo per uso professionale. NL: Laboratoriumreagens. Alleen voor professioneel gebruik. PT: Reagente de laboratório. Para uso profissional. SV: Laboratoriereagens. Endast för yrkesmässig användning.	
1.3 Details of the supplier of the safety data sheet	Manufacturer	ScyTek Laboratories, Inc.
	Address	205 South 600 West Logan, Utah 84321 U.S.A.
	Phone Number	800-729-8350
	Fax Number	435-755-0015
	e-mail	msds@scytek.com
	Website	scytek.com

Section 2. Hazards Identification

2.1 GHS Classification	Flammable liquids (Category 3) – H226 Acute toxicity, Oral (Category 4) – H302 Acute toxicity, Inhalation (Category 4) – H332 Acute toxicity, Dermal (Category 4) – H312 Specific target organ toxicity - single exposure (Category 1) – H370	
Classification: Directive 1999/45/EC		Xn EN: Harmful DA: Sundhedsskadelig DE: Gesundheitsschädlich EL: Επιβλαβές ES: Nocivo FR: Nocif IT: Nocivo NL: Schadelijk PT: Nocivo SV: Hälsoskadlig













	 <p>F EN: Highly flammable DA: Meget brandfarlig DE: Leichtentzündlich EL: Πολύ εύφλεκτο ES: Fácilmente inflamable FR: Facilement inflammable IT: Facilmente infiammabile NL: Licht ontvlambaar PT: Facilmente inflamável SV: Mycket brandfarligt</p> <p>For full text of R- & S- phrases: see Section 15.</p>								
2.2 Label Elements	<p>Pictogram(s):</p>  <p>Signal Word: Danger</p> <p>Hazard Statement(s): H226 – Flammable liquid and vapor H302 + H312 + H332 – Harmful if swallowed, in contact with skin or if inhaled H370 – Causes damage to organs</p> <p>Precautionary statement(s): P202 – Do not handle until all safety precautions [on SDS] have been read and understood</p> <p>Precautionary statements not listed on label: P302 + P350 – IF ON SKIN: Gently wash with plenty of soap and water P305 + P351+P315 – IF IN EYES: Rinse cautiously with water for several minutes. Get immediate medical advice/attention P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P210 – Keep away from heat/sparks/open flames/hot surfaces. – No smoking. P260 – Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.</p>								
NFPA Scale: 0-4									
HMIS (U.S.A.) Scale: 0-4	<table border="1" style="width: 100%;"> <tr> <td style="background-color: #e6f2ff;">HEALTH</td> <td style="text-align: center;">2</td> </tr> <tr> <td style="background-color: #ffe6e6;">FLAMMABILITY</td> <td style="text-align: center;">1</td> </tr> <tr> <td style="background-color: #ffffe6;">PHYSICAL HAZARD</td> <td style="text-align: center;">0</td> </tr> <tr> <td>PERSONAL PROTECTION</td> <td style="text-align: center;">G</td> </tr> </table>	HEALTH	2	FLAMMABILITY	1	PHYSICAL HAZARD	0	PERSONAL PROTECTION	G
HEALTH	2								
FLAMMABILITY	1								
PHYSICAL HAZARD	0								
PERSONAL PROTECTION	G								
2.3 Other Hazards	<p>PBT: This mixture does not contain any substances that are assessed to be a PBT. vPvB: This mixture does not contain any substances that are assessed to be a vPvB.</p>								

Section 3. Composition and Information on Ingredients

3.2 Chemical Description: Mixture

*May contain additional non-hazardous proprietary ingredients.

*May contain additional active ingredients at concentrations <0.1%w/v.

Hazardous Ingredients:	CAS#	EC#	GHS Symbols	%
Methanol	67-56-1	200-659-6	 Danger. 3 H225 Highly flammable liquid and vapour.  Danger. 3. H301 Toxic if swallowed. 3 H311 Toxic in contact with skin. 3 H331 Toxic if inhaled.  Danger. 1 H370 Causes damage to organs.	≤ 30
Dimethylsulfoxide	67-68-5	200-664-3	 Warning. 2 H315 Causes skin irritation.  Warning. 3 H226 Flammable liquid and vapour.	≤ 10
Acetone	67-64-1	200-662-2	 Danger. 2 H225 Highly Flammable liquid and vapour.  Warning. 2 H319 Causes serious eye irritation. STOT 3 H336 May cause drowsiness or dizziness.	≤ 10
3-3'-5-5'-Tetramethylbenzidine	64285-73-0	264-769-6	 Warning. 2 H315 Causes skin irritation. 2 H319 Causes serious eye irritation. 3 H335 May cause respiratory irritation.	≤ 0.1
Hydrogen Peroxide	7722-84-1	231-765-0	 Danger. 1. H271 May cause fire or explosion; strong oxidizer.  Danger. 1B.H314 Causes severe skin burns and eye damage.  Warning. 4 H302 Harmful if swallowed. H333 May be harmful if inhaled.  Warning. H402 Harmful to aquatic life.	≤ 0.1

Section 4. First Aid Measures

4.1 Description of first aid measures

Eye Contact: Check for and remove contact lenses. Immediately flush eyes with copious amounts of water and get immediate medical attention.

Skin Contact: Remove contaminated clothing and wash contact area with mild soap and copious amounts of water. Get medical attention if irritation develops.

Inhalation: If inhaled, remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms worsen.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as collar, tie, belt or waistband. Get immediate medical attention.

4.2 Most important symptoms and effects, both acute and delayed

See section 2.2 and 11.

4.3 Indication of any immediate medical attention and special treatment needed

No data available

Section 5. Fire Fighting Measures

5.1 Extinguishing Media	Extinguish fire using water spray, carbon dioxide, chemical foam, or dry chemical.
5.2 Special hazards arising from the substance or mixture	May produce flammable vapors when heated during fire conditions.
5.3 Advice for firefighters	As with any fire, wear personal protection equipment, including a self-contained breathing apparatus (S.C.B.A.)

Section 6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear chemical resistant clothing, gloves, and eye protection. Wear NIOSH/MSHA approved breathing apparatus.

6.2 Environmental precautions

Keep material away from heat, flame, ignition sources, and reactive materials. Don't allow product to enter drain.

6.3 Methods and materials for containment and cleaning up

Wipe up or absorb spill using inert absorbent and place in a suitable waste container for disposal.

Section 7. Handling and Storage

7.1 Precautions for safe handling.

Avoid contact with skin and eyes.

Wash thoroughly after handling.

Avoid breathing vapor.

7.2 Conditions for safe storage, including any incompatibilities.

Store in well ventilated area.

Keep container tightly closed.

Store at 2-8°C.

7.3 Specific end use(s).

See section 1.2

Section 8. Exposure Controls / Personal Protection

8.1 Control parameters	Exposure Limits: Methanol: NIOSH REL: TWA 200 ppm (260 mg/m ³) ST 250 ppm (325 mg/m ³) [skin] OSHA PEL: TWA 200 ppm (260 mg/m ³) ACGIH TLV: TWA 200 ppm (262 mg/m ³)
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	STEL 250 ppm (328 mg/m ³) Acetone: OSHA PEL: 1,000 ppm (2,400 mg/m ³) TWA NIOSH REL: 250 ppm (590 mg/m ³) TWA ACGIH: 500 ppm (1,188 mg/m ³) TWA 750 ppm (1,782 mg/m ³) STEL
8.2 Exposure controls	Personal Protective Equipment (PPE): Eye/Face protection. Safety glasses or goggles are required. Skin protection. Protective clothing is required. Hand protection. Chemical resistant gloves are required. Glove material must be resistant to the components of this product. Consult glove manufacturer for specific recommendations of appropriate material and thickness of glove. Respiratory protection. Avoid breathing vapor. Environmental exposure controls. Avoid releasing large quantities into the environment. No additional information.
Engineering Controls	Working area should be adequately large and well ventilated to prevent concentration of vapors. Provide mechanical exhaust ventilation or other engineering controls to keep airborne concentrations of vapors below their respective threshold limits.

Section 9. Physical and Chemical Properties

Physical State	Liquid
Color	Translucent, clear to slightly yellow.
Odor	Mild alcohol odor.
Odor Threshold	Unknown
pH	Unknown
Melting Point/ Freezing Point	Unknown
Initial Boiling Point	Unknown
Flash Point	Unknown
Evaporation Rate	Unknown
Flammability (solid, gas)	Unknown
Upper/Lower Flammability Limits	Unknown
Vapor Pressure	Unknown
Vapor Density	Unknown
Relative Density	Unknown
Solubility(ies)	Water
Partition Coefficient: n-octanol/water	Unknown
Auto-Ignition Temperature	Unknown
Decomposition Temperature	Unknown
Viscosity	Unknown
Explosive Properties	Not explosive.
Oxidizing Properties	Unknown

Section 10. Stability and Reactivity

10.1 Reactivity	No relevant data available.
10.2 Chemical Stability	Stable under normal temperatures and pressures.
10.3 Possibility of Hazardous Reactions	No hazardous reactions known.
10.4 Conditions to Avoid	Fire, static electricity, direct sunlight.
10.5 Incompatible Materials	Strong oxidizing agents such as sulfuric acid, nitrates, and perchlorates.
10.6 Hazardous Decomposition Materials	May release carbon dioxide, carbon monoxide, nitrogen oxides, and formaldehyde under fire conditions.

Section 11. Toxicological Information

11.1 Information on Toxicological Effects.	<p>Acute Toxicity. Methanol: <u>Oral LD50</u> LDLO Oral - Human - 143 mg/kg and diarrhea. LD50 Oral - rat - 1,187 - 2,769 mg/kg <u>Inhalation LC50</u> LC50 Inhalation - rat - 4 h - 128.2 mg/l LC50 Inhalation - rat - 6 h - 87.6 mg/l Dermal LD50 LD50 Dermal - rabbit - 17,100 mg/kg Dimethylsulfoxide: LD50 Oral - rat - 14,500 mg/kg LC50 Inhalation - rat - 4 h - 40250 ppm LD50 Dermal - rabbit - > 5,000 mg/kg</p> <p>Skin Corrosion/Irritation. May be irritating to skin and mucous membranes.</p> <p>Serious Eye Damage/Irritation. May be irritating to eye.</p> <p>Respiratory or skin sensitization. No relevant data available.</p> <p>Germ Cell Mutagenicity. No relevant data available.</p>
Carcinogenicity.	<p>International Agency for Research on Cancer (IARC). None of the components are listed.</p> <p>National Toxicology Program (NTP). None of the components are listed.</p>

Section 12. Ecological Information


12.1 Toxicity	<p>Fish: No relevant studies identified. Crustacea: No relevant studies identified. Algae/Aquatic Plants: No relevant studies identified. Other Organisms: No relevant studies identified.</p>
12.2 Persistence and Degradability.	No relevant studies identified.
12.3 Bioaccumulative Potential.	No relevant studies identified.
12.4 Mobility in Soil.	Miscible in water. May spread in water systems. This component is non-volatile.

Additional Remarks	None.
12.5 Results of PBT and vPvB Assessment.	PBT: This mixture does not contain any substances that are assessed to be a PBT. vPvB: This mixture does not contain any substances that are assessed to be a vPvB.

Section 13. Disposal Considerations

13.1 Waste Disposal Methods.	Sewage disposal is discouraged. Waste should not be disposed of by release to sewers. Dispose waste in accordance with federal, state and local environmental control regulations.
Product/Packaging Disposal.	Final decisions on the appropriate waste management method must be in line with local, regional and national regulations.
Other Disposal Recommendations.	No relevant data available.

Section 14. Transport Information

14.1 UN Number DOT, IATA,IMDG, ADR	DOT: 1230 ADR/RID: 1230 IMDG: 1230 IATA: 1230
14.2 UN Proper Shipping Name DOT, IATA,IMDG, ADR	ADR/RID: METHANOL IMDG: METHANOL IATA: METHANOL DOT: METHANOL
14.3 Transport Hazard Class(es)	DOT: 3 IATA: 3 IMDG: ADR/RID:3 
14.4 Packing Group DOT, IATA,IMDG, ADR	ADR/RID: II IMDG: II IATA: II DOT: II
14.5 Environmental Hazards	Marine Pollutant: No
14.6 Special Precautions for User	Not applicable.

Section 15. Regulatory Information

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture.	
Extremely Hazardous Substances; Section 355	None of the components in this mixture are listed.
Toxic Substances Control Act; TSCA	All of the components in this mixture are listed.
California Proposition 65	Methanol is listed as a having developmental toxicity.
Right To Know Components	<u>Methanol CAS# 67-56-1:</u> Massachusetts, Pennsylvania, New Jersey, California, Minnesota <u>3-3'-5-5'-Tetramethylbenzidine CAS# 64285-73-0:</u>

	Pennsylvania, New Jersey <u>Acetone CAS# 67-64-1:</u> Massachusetts, Pennsylvania, New Jersey, California, Minnesota
15.2 Chemical Safety Assessment	No Chemical Safety Assessment has been carried out for this substance/mixture by ScyTek Laboratories, Inc.
R phrases	<p>R10 EN: Flammable. DA: Brandfarlig. DE: Entzündlich. EL: Εύφλεκτο. ES: Inflamable. FR: Inflammable. IT: Inflammabile. NL: Ontvlambaar. PT: Inflamável. SV: Brandfarligt.</p> <p>R23/24/25 EN: Toxic by inhalation, in contact with skin and if swallowed. DA: Giftig ved indånding, ved hudkontakt og ved indtagelse. DE: Giftig beim Einatmen, Verschlucken und Berührung mit der Haut. EL: Τοξικό όταν εισπνέεται, σε επαφή με το δέρμα και σε περίπτωση καταπόσεως. ES: Tóxico por inhalación, por ingestión y en contacto con la piel. FR: Toxique par inhalation, par contact avec la peau et par ingestion. IT: Tossico per inalazione, contatto con la pelle e per ingestione. NL: Vergiftig bij inademing, opname door de mond en aanraking met de huid. PT: Tóxico por inalação, em contacto com a pele e por ingestão. SV: Giftigt vid inandning, hudkontakt och förtäring.</p> <p>R36 EN: Irritating to eyes. DE: Reizt die Augen. FR: Irritant pour les yeux. IT: Irritante per gli occhi. ES: Irrita los ojos. FR: Irritant pour les yeux. IT: Irritante per gli occhi. NL: Irriterend voor de ogen. PT: Irritante para os olhos. SV: Irriterar ögonen.</p>
S phrases	<p>S7 EN: Keep container tightly closed. DA: Emballagen skal holdes tæt lukket. DE: Behälter dicht geschlossen halten. EL: Το δοχείο να διατηρείται ερμητικά κλεισμένο. ES: Manténgase el recipiente bien cerrado. FR: Conserver le récipient bien fermé. IT: Conservare il recipiente ben chiuso. NL: In goed gesloten verpakking bewaren. PT: Manter o recipiente bem fechado. SV: Förpackningen förvaras väl tillsluten.</p> <p>S16 EN: Keep away from sources of ignition - No smoking. DA: Holdes væk fra antændelseskilder - Rygning forbudt. DE: Von Zündquellen fernhalten - Nicht rauchen. EL: Μακριά από πηγές ανάφλεξης - Απαγορεύεται το κάπνισμα. ES: Conservar alejado de toda llama o fuente de chispas - No fumar. FR: Conserver a l'écart de toute flamme ou source d'étincelles - Ne pas fumer. IT: Conservare lontano da fiamme e scintille - Non fumare.</p>

NL: Verwijderd houden van ontstekingsbronnen - Niet roken.
 PT: Manter afastado de qualquer chama ou fonte de ignição - Não fumar.
 SV: Förvaras åtskilt från antändningskällor - Rökning förbjuden.

S26
 EN: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 DA: Kommer stoffet i øjnene, skylles straks grundigt med vand og læge kontaktes.
 DE: Bei Berührung mit den Augen sofort gründlich mit Wasser abspülen und Arzt konsultieren.
 EL: Σε περίπτωση επαφής με τα μάτια πλύνετε τα αμέσως με άφθονο νερό και ζητήστε ιατρική συμβουλή.
 ES: En caso de contacto con los ojos, lávense inmediata y abundantemente con agua y acúdase a un médico.
 FR: En cas de contact avec les yeux, laver immédiatement et abondamment avec de l'eau et consulter un spécialiste.
 IT: In caso di contatto con gli occhi, lavare immediatamente e abbondantemente con acqua e consultare un medico.
 NL: Bij aanraking met de ogen onmiddellijk met overvloedig water afspoelen en deskundig medisch advies inwinnen.
 PT: Em caso de contacto com os olhos, lavar imediata e abundantemente com água e consultar um especialista.
 SV: id kontakt med ögonen, spola genast med mycket vatten och kontakta läkare.

S36/37/39
 EN: Wear suitable protective clothing, gloves and eye/face protection.
 DA: Brug særligt arbejdstøj, egnede beskyttelseshandsker og -briller/ansigtsskærm.
 DE: Bei der Arbeit geeignete Schutzkleidung, Schutzhandschuhe und Schutzbrille/Gesichtsschutz tragen.
 EL: Φοράτε κατάλληλη προστατευτική ενδυμασία, γάντια και συσκευή προστασίας ματιών/προσώπου
 ES: Úsense indumentaria y guantes adecuados y protección para los ojos/la cara.
 FR: Porter un vêtement de protection approprié, des gants et un appareil de protection des yeux/du visage.
 IT: Usare indumenti protettivi e guanti adatti e proteggersi gli occhi/la faccia.
 NL: Draag geschikte beschermende kleding, handschoenen en een beschermingsmiddel voor de ogen/het gezicht.
 PT: Usar vestuário de protecção, luvas e equipamento protector para os olhos /face adequados.
 SV: Använd lämpliga skyddskläder, skyddshandskar samt skyddsglasögon eller ansiktsskydd.

S45
 EN: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
 DA: Ved ulykkestilfælde eller ved ildebefindende er omgående lægebehandling nødvendig; vis etiketten, hvis det er muligt.
 DE: Bei Unfall oder Unwohlsein sofort Arzt zuziehen (wenn möglich, dieses Etikett vorzeigen).
 EL: Σε περίπτωση ατυχήματος ή αν αισθανθείτε αδιαθεσία ζητήστε αμέσως ιατρική συμβουλή (δείξτε την ετικέτα αν είναι δυνατό).
 ES: En caso de accidente o malestar, acúdase inmediatamente al médico (si es posible, muéstresele la etiqueta).
 FR: En cas d'accident ou de malaise, consulter immédiatement un medecin (si possible lui montrer l'etiquette).
 IT: In caso di incidente o di malessere consultare immediatamente il medico (se possibile, mostrargli l'etichetta).
 NL: Bij een ongeval of indien men zich onwel voelt, onmiddellijk een arts raadplegen (indien mogelijk hem dit etiket tonen).
 PT: Em caso de acidente ou de indisposição, consultar imediatamente o médico (se possível mostrar-lhe o rótulo).
 SV: Vid olycksfall, illamående eller annan påverkan, kontakta omedelbart läkare. Visa om möjligt etiketten.

Section 16. Other Information



Safety Data Sheet

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P.O. Box 3286 - Logan, Utah 84323, U.S.A. - Tel. (800) 729-8350 – Tel. (435) 755-9848 - Fax (435) 755-0015 - www.scytek.com

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. ScyTek Laboratories shall not be held liable for any damage resulting from handling or from contact with the above product.