### Section 1

# **Chemical Product and Company Information**

### **3B Scientific GmbH**

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# CHEMTREC 24 Hour Emergency

Phone Number (800) 424-9300 For laboratory use only. Not for drug, food or household use.

Product	L+ASCORBIC ACID				
Synonyms	Vitamin C				
Section 2	Hazards Identification				
to the Glob Chemicals. Signal word Pictograms Target orga GHS Classi	ance or mixture has not been classified as hazardous according ally Harmonized System (GHS) of Classification and Labeling of d: Product not classified :: Product not classified ins: Blood, Kidneys. ffication: Product not classified information: Hazard statement: Product not classified	Precautionary statement(s): Do not breathe dust. Do not get in eyes, on skin, or on clothing. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Get medical attention if you feel unwell.			

Ca Prop 65 - This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Section 3	Composition / Information on Ingredients					
Chemical Name		CAS #	%	EINECS		
Ascorbic acid		50-81-7	100%	200-066-2		
Section 4	First Aid Measures					

INGESTION: Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

### Section 5

Suitable Extinguishing Media: Use any media suitable for extinguishing supporting fire

**Fire Fighting Measures** 

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

#### Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Protect from light, air and moisture.

Section 8	Exposure Controls / Personal Protection					
Exposure Limite:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)		
Exposure Limits:	Ascorbic acid	None established	None established	None established		

**Engineering controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

Section 9 Physical & Chemical Prop	perties	
Appearance: Solid, white, crystalline powder. Odor: Nearly odorless. Odor threshold: Data not available. pH: Data not available. Melting / Freezing point: 190-192°C (374-377°F) Boiling point: Decomposes Flash point: Non flammable	Evaporation rate (=1): Data not available Flammability (solid/gas): Data not available. Explosion limits: Lower / Upper: Non flammable Vapor pressure (mm Hg): Negligible Vapor density (Air = 1): Data not available Relative density (Specific gravity): 1.65 Solubility(ies): 30% by weight at 20°C in water.	$\begin{array}{l} \textbf{Partition coefficient:} \ Data not available \\ \textbf{Auto-ignition temperature:} \ 660^\circ\text{C} \ (1220^\circ\text{F}) \\ \textbf{Decomposition temperature:} \ Data not available. \\ \textbf{Viscosity:} \ Data not available. \\ \textbf{Molecular formula:} \ C_6H_8O_6 \\ \textbf{Molecular weight:} \ 176.13 \end{array}$
Section 10 Stability & Reactivity		

Chemical stability: Stable

Hazardous polymerization: Will not occur.

Conditions to avoid: Excessive temperatures, moisture, air and light.

Incompatible materials: Alkalies, iron, copper, water, oxidizing agents, acids.

Hazardous decomposition products: Oxides of carbon.

### Section 11 Toxicological Information

Acute toxicity: Data not available Skin corrosion/irritation: Data not available Serious eye damage/irritation: Data not available Respiratory or skin sensitization: Data not available Germ cell mutagenicity: Data not available Carcinogenity: Data not available NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-repeated exposure: Data not available Aspiration hazard: Data not available Potential health effects: Inhalation: Inhalation may cause cough and sore throat. Ingestion: May cause gastrointestinal irritation. Skin: May cause mild irritation with redness. Eves: May cause mild irritation with redness and pain. Signs and symptoms of exposure: See Potential health effects above. Additional information: RTECS #: CI7650000 Section 12 **Ecological Information** Toxicity to fish: No data available Toxicity to daphnia and other aquatic invertebrates: No data available Toxicity to algae: No data available Persistence and degradability: No data available Bioaccumulative potential: No data available Mobility in soil: No data available PBT and vPvB assessment: No data available Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14	Transport Informati	on					
UN/NA number: M Hazard class: Not Exceptions: Not	applicable	Shipping name: Packing group: 2012 ERG Guide	Not applicable	Reportable Qu	antity: No	Mari	ine pollutant: No
Section 15	Regulatory Informat	ion					
A chemical is considered	to be listed if the CAS num	ber for the anhydrous fo	rm is on the Inventory list.				
Componer	nt	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	WHMIS Classification
Ascorbic acid		Listed	Not listed	Not listed	Listed	Not listed	Uncontrolled product
Section 16	Additional Informati	ion					
The information contained	d herein is furnished withou	it warranty of any kind. I	Employers should use this i	nformation only as a su	upplement to othe	r information gathere	ed by them and must make indepen

The information contained herein is turnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook. SDS No.: HH0180

### Section 1

# **3B Scientific GmbH**

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**Chemical Product and Company Information** 

CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300 For laboratory use only. Not for drug, food or household use.

Product	HYDROGEN PEROXIDE, 3%	
Synonyms	Hydrogen peroxide aqueous solution, stabilized	
Section 2	Hazards Identification	
Pictograms Target orga	<ul> <li>WARNING</li> <li>No symbol required</li> <li>ns: Respiratory and gastrointestinal systems, skin, eyes</li> </ul>	Precautionary statement: P264: Wash hands thoroughly after handling. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	fication: y (Category 5) ı (Category 2B)	P337+P313: If eye irritation persists: Get medical attention. P312: Call a POISON CENTER or doctor if you feel unwell.
H303: May b	information: Hazard statement: be harmful if swallowed. es eye irritation.	

Ca Prop 65 - This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Section 3	Composition / Information on Ingredients				
Chemical Name		CAS #	%	EINECS	
Water Hydrogen peroxide Acetanilide		7732-18-5 7722-84-1 103-84-4	<94% 6% 0.05%	231-791-2 231-765-0 203-150-7	
Section 4	First Aid Measures				

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES IRRITATION TO EYES. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

#### Section 5 **Fire Fighting Measures**

Suitable Extinguishing Media: Water only! Apply vast amounts for cooling and dilution.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. This product is a strong oxidizer which may release oxygen and promote the combustion of flammable materials. Spontaneous combustion can occur if allowed to remain in contact with oxidizable materials. Drying of product on clothing or combustible material may cause fire.

### Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Remove all sources of ignition. Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8	Exposure Controls / Personal Protection					
Exposure Limite:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)		
Exposure Limits:	Hydrogen peroxide	TWA: 1 ppm ; 1.4 mg/m <sup>3</sup> (A3)	TWA: 1 ppm ; 1.4 mg/m <sup>3</sup>	TWA: 1 ppm ; 1.4 mg/m <sup>3</sup>		

**Engineering controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

Section 1         Physical & Chonical Proportion           Operation 2::::::::::::::::::::::::::::::::::::	approved respirator.								
Code:       Signify ourgent dor:       Image: A standard and s	Section 9	Physical & Chemical	I Properties						
Chemical stability:     Stability:     Hazardous polymerization:     Will not occur:       Conditions to avoid:     Excessive temperatures, heat, sports, open fame and other sources of ignition.     Conduction:       Incompatible material:     Adds, bases, metals, metal sals, reducing agents, organic materials, sikalies, dust and dit contaminants, flammable substances, oxidizable materials       Hazardous decomposition products:     Organic Stressive temperatures, flammable materials, sikalies, dust and dit contaminants, flammable substances, oxidizable materials       Section 1     Toxicological Information       Acute toxicity:     Ordan ovaliable.       Serious sy damage/irritation:     Data not available       Gerningenity:     Data not available       Gerningenity:     Data not available       Gerningenity:     Data not available       StrOr-single seporture:     Data not available <td< th=""><th>Odor: Slightly punge Odor threshold: Da pH: Data not availab Melting / Freezing point: Boiling point: Approx</th><th>ent odor. ata not available. ble. : Approximately 0°C (32°F) (wa ximately 100°C (212°F) (wa</th><th>ter) Relative dep</th><th>lity (solid/gas): Data no limits: Lower / Upper: ssure (mm Hg): 14 (wat sity (Air = 1): 0.7 (wate nsity (Specific gravity): Ap</th><th>Data not available er) ) proximately 1.0 (water</th><th>Auto-igniti Decompos Viscosity: Molecular</th><th>ion temperature: sition temperature Data not available formula: Mixture</th><th>Data not available Data not available.</th></td<>	Odor: Slightly punge Odor threshold: Da pH: Data not availab Melting / Freezing point: Boiling point: Approx	ent odor. ata not available. ble. : Approximately 0°C (32°F) (wa ximately 100°C (212°F) (wa	ter) Relative dep	lity (solid/gas): Data no limits: Lower / Upper: ssure (mm Hg): 14 (wat sity (Air = 1): 0.7 (wate nsity (Specific gravity): Ap	Data not available er) ) proximately 1.0 (water	Auto-igniti Decompos Viscosity: Molecular	ion temperature: sition temperature Data not available formula: Mixture	Data not available Data not available.	
Conditions to avoid: Excessive temperatures, heat, sparks, open fame and other sources of lightion. Contact with combustible materials may result in spontaneous combustion.         Incomputition materials: Adds, bases, metals, metal asits, reducing agents, organic materials, addated, dust and dit contaminants, flammable substances, oxidizable materials         Vestion 1       Toxicologia Information         Section 1       Toxicologia Information: Bases, metal asits, reducing agents, organic materials, addated, dust and dit contaminants, flammable substances, oxidizable materials         Section 1       Toxicologia Information: Data not available         Service says damage/infration: Data not available       Service says damage/infration: Data not available         Generation 2000 and available       The is component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP:         ARC classified Corgu 3: Not classified as a to its contagenicity butuants.       Carcinogenity: Data not available         Stription 1       Toxicologia Information:       Service says damage/infration: Base says and available         Stription 1       Stription 1       Service says damage/infration: Base says and available         Stription 2       Data not available       Stription 1         Stription 2       Data not available       Stription 2         Stription 2       Data not available       Stription 2         Stription 2       Data not available <td>Section 10</td> <td>Stability &amp; Reactivity</td> <td>/</td> <td></td> <td></td> <td></td> <td></td> <td></td>	Section 10	Stability & Reactivity	/						
Haradous decomposition products:       Oxicological Information         Section 1       Toxicological Information         Acute toxicity:       Oral rat LS00: 800 mg/kg [S0% hydrogen peroxide]         Skin corresolution/initation:       Data not available:         Geratingenity:       Data not available:         Strint corresolution this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by NTP.         Not corported of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.         Strint Corresolution this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.         Strint Corresolution this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by NTP.         Strint Corresolution the motion tarvailable:       Strint Corresolution the motion tarvailable:         Strint Corresolution:       Toxicity to law:       Strint Corresolution tarvailable:         Strint Corresolution:       Toxicity to law:       Strintoresolution:       Strint Corresolut	Conditions to avoid	Conditions to avoid: Excessive temperatures, heat, sparks, open flame and other sources of ignition. Contact with combustible materials may result in spontaneous							
Section 11       Toxicological Information         Acute toxicity: Ore-rat LDSD: 800 mg/kg (50% hydrogen peroxide)         Serious arys damage/infration: Data not available         Respiratory or skin sensitization: Data not available         Gerringenity: Data not available         MTP: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen by NTP.         LARC classified as to its carcinogenity to humans.         OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.         Reproductive dopositie: Data not available         STOT-ropeated to sposure: Data not available.         STOT-ropeated to sposure: Data not available.         STOT-ropeated to sposure: Data not available.         Approximation: May be harmful finaled.         Ingestion: May be harmful finaled.         Ingestion: May be harmful finaled.         Ingestion: May cause intation.         Eyes: May cause intation.         Eyes: May cause intation.         Station all compatible product presents: To the best of our knowledge the chemical, physical and toxicological properties have not been thoroughly investigated. Specific data is not available.         Station all compatible in the advective is optimizing (statis fresh water), NECC = 2.38 - 9.86 mg/l [Hydrogen peroxide]         Toxicity to daphin and other equatitin invertorizes. Daphin amang (Crustacia),	-					d dirt contamir	nants, flammable s	ubstances, oxidizable materials.	
Acute toxicity: Oral-rat LD50: 80 mg/kg (50% hydrogen peroxide)         Skrious eye damage/intration: Data not available.         Respiratory or skin sensitization: Data not available.         Germ cell mutigenitity: Data not available.         Component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by NTP.         LARC. classified. Group 3: Not classifiable as to its carcinogenicity to humans.         SDHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by NTP.         LARC. classified. Group 3: Not classifiable as to its carcinogenicity to humans.         STOT-ingle exposure: Data not available         STOT-ingle exposure: Data not available.         Store as emistration.         Stare as emistration.         Stare as expropriate proceedures to ninimice potential hazard.         Stare as emistration.         Stare as expropriate proceedures to ninimice potential hazard.         Stare as expropriate proceedures to ninimice potential hazard.         Rest of 12       Eco	Hazardous decomp	osition products: Oxyge	en, which will prom	ote the combustion of flar	nmable material.				
Skin corrossion/firitation: Data not available.         Services see damage/firitation: Data not available.         Germ cell mutagenicity: Data not available         Carcinogenity: Data not available         ThP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.         LARC classified: Group 3: Not classifiable as to its carcinogenity to humans.         SOHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.         Reproductive toxicity: Data not available         STOT-single exposure: Data not available         STOT-single exposure: Data not available         StoTe-single exposure: Data not available         StoTe-single exposure: Data not available         StoTe-single available.         StoTe-single available.         StoTe-single available.         StoTe-single available.         StoTe-single available.         Store available.         Stare and symptoms of exposure: To the best of our knowledge the chemical, physical and toxicological properties have not been thoroughly investigated. Specific data is not available.         Stare and symptoms of exposure: To the best of our knowledge the chemical, physical and toxicological properties have not been thoroughly investigated. Specific data is not available.         Stare and symptoms of exposure: To the best of our knowledge the chemical, physi	Section 11	Toxicological Inform	ation						
Toxicity to fish: Gambusia affinis (fish, fresh water), NOEC = 2.38 - 9.86 mg/l [Hydrogen peroxide]         Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Crustacia), EC50 = 7.7 mg/l/24 hours [Hydrogen peroxide]         Toxicity to algae: Chlorella vulgaris (Algae), EC50 = 2.5 mg/l/growth rate [Hydrogen peroxide]         Persistence and degradability: No data available         Mobility in soil: No data available       PBT and vPvB assessment: No data available         Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.         Section 13       Disposal Considerations         These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.         Section 14       Transport Information         UN/NA number: Not applicable       Shipping name: Not Regulated         Hazard class: Not applicable       2012 ERG Guide # Not applicable         Reportable Quantity: No       Marine pollutant: No         Section 15       Regulatory Information         A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.         Component       TSCA       CERLCA (RQ)       RCRA code       DSL       NDSL       WHMIS Classification	Skin corrosion/irrita Serious eye damage Respiratory or skin Germ cell mutageni Carcinogenity: Datk NTP: No component IARC classified: Grou OSHA: No component Reproductive toxici STOT-single expose STOT-repeated expo Aspiration hazard: Potential health effe Inhalation: May be ha Skin: May cause irrit Eyes: May cause irrit Signs and symptom not available. Exerci	ation: Data not available. e/irritation: Data not available. e/irritation: Data not available a not available of this product present at up 3: Not classifiable as to not of this product present at ity: Data not available ure: Data not available ure: Data not available Data not available ects: armful if inhaled. armful if swallowed. iation. is of exposure: To the b se appropriate procedure	available. available levels greater than b its carcinogenicity at levels greater that e est of our knowled s to minimize poter	or equal to 0.1% is ident to humans. an or equal to 0.1% is ide ge the chemical, physical tial hazards.	ntified as a carcinoger	n or potential c	carcinogen by OSF		
Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Crustacia), EC50 = 7.7 mg//24 hours [Hydrogen peroxide]         Toxicity to algae: Chlorella vulgaris (Algae), EC50 = 2.5 mg//growth rate [Hydrogen peroxide]         Persistence and degradability: No data available       Bioaccumulative potential: No data available         Mobility in soil: No data available       PBT and VPVB assessment: No data available         Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.         Section 13       Disposal Considerations         These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.         Section 14       Transport Information         UN/NA number: Not applicable       Shipping name: Not Regulated         Hazard class: Not applicable       Shipping rame: Not applicable         Reportable Quantity: No       Marine pollutant: No         Exceptions: Not applicable       2012 ERG Guide # Not applicable         Section 15       Regulatory Information         A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.         Component       TSCA       CERLCA (RQ)       RCRA code       DSL       NDSL       WHMIS Classificat	Section 12	Ecological Information	on						
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regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.         Section 14       Transport Information         UN/NA number: Not applicable       Shipping name: Not Regulated         Hazard class: Not applicable       Packing group: Not applicable         Packing group: Not applicable       Packing group: Not applicable         Section 15       Regulatory Information         A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.         Component       TSCA         CERLCA (RQ)       RCRA code         Not listed       Not listed         Hydrogen peroxide       Listed         Section 16       Additional Information									
Section 14       Transport Information         UN/NA number: Not applicable       Shipping name: Not Regulated         Hazard class: Not applicable       Packing group: Not applicable       Reportable Quantity: No         Marine pollutant: No       2012 ERG Guide # Not applicable       Marine pollutant: No         Section 15       Regulatory Information       A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.         Component       TSCA       CERLCA (RQ)       RCRA code       DSL       NDSL       WHMIS Classification         Hydrogen peroxide       Listed       Not listed       Not listed       Not listed       Not listed       Not listed									
UN/NA number:       Not applicable       Shipping name:       Not Regulated         Hazard class:       Not applicable       Packing group:       Not applicable       Reportable Quantity:       No       Marine pollutant:       No         Section 15       Regulatory Information       A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.       TSCA       CERLCA (RQ)       RCRA code       DSL       NDSL       WHMIS Classification         Hydrogen peroxide       Listed       Not listed       Not listed       Listed       Not listed </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									
Hazard class: Not applicable       Packing group: Not applicable       Reportable Quantity: No       Marine pollutant: No         Exceptions: Not applicable       2012 ERG Guide # Not applicable       Reportable Quantity: No       Marine pollutant: No         Section 15       Regulatory Information       A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.       Marine pollutant: No         Component       TSCA       CERLCA (RQ)       RCRA code       DSL       NDSL       WHMIS Classification         Hydrogen peroxide       Listed       Not listed       Not listed       Not listed       Not listed       Not listed         Section 16       Additional Information       Kection 16       Additional Information       Kection 16       Kection 16       Kection 16		•		Not Regulated					
Exceptions:       Not applicable       2012 ERG Guide # Not applicable         Section 15       Regulatory Information         A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.         Component       TSCA       CERLCA (RQ)       RCRA code       DSL       NDSL       WHMIS Classification         Hydrogen peroxide       Listed       Not listed       Not listed       Listed       Not listed       Not listed         Section 16       Additional Information       Exceptional information       Exceptional information       Model information				•	Reportable Qua	ntity: No	Mari	ine pollutant: No	
A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.       RCRA code       DSL       NDSL       WHMIS Classification         Hydrogen peroxide       Listed       Not listed       Not listed       Listed       Not listed       Not listed       Not listed         Section 16       Additional Information       Additional Information       Additional Information       Additional Information						-		-	
A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.       RCRA code       DSL       NDSL       WHMIS Classification         Hydrogen peroxide       Listed       Not listed       Not listed       Listed       Not listed       Not listed       Not listed       Not listed         Section 16       Additional Information       Additional Information       Additional Information       Additional Information       Additional Information	Section 15	Regulatory Informati	ion	· · · · · · · · · · · · · · · · · · ·					
Hydrogen peroxide     Listed     Not listed     Not listed     Listed     Not listed     Not listed       Section 16     Additional Information	A chemical is considered			form is on the Inventory list.					
Section 16 Additional Information	Compone	ent	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	WHMIS Classification	
	Hydrogen peroxide		Listed	Not listed	Not listed	Listed	Not listed	Not listed	
	Section 16	Additional Information	on						
The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent of the information only as a supplement to other information gathered by them and must make independent of the information only as a supplement to other information gathered by them and must make independent of the information only as a supplement to other information gathered by them and must make independent of the information only as a supplement to other information gathered by them and must make independent of the information only as a supplement to other information gathered by them and must make independent of the information only as a supplement of the information gathered by the information of the information only as a supplement of the information gathered by the information gathered by the information only as a supplement of the information gathered by the information gathered by the information only as a supplement of the information gathered by the information gathered				Employers should use this	information only as a sur	onlement to othe	er information gather	ed by them and must make indepen-	

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook. SDS No.: IX0160

### Section 1 **Chemical Product and Company Information CHEMTREC 24 Hour Emergency 3B Scientific GmbH** Phone Number (800) 424-9300 Rudorffweg 8 • 21031 Hamburg • Germany Tel: + 49-40-73966-0 Fax: + 49-40-73966-100 For laboratory use only. Not for drug, food or household use. www.3bscientific.com • 3b@3bscientific.com **IODINE-POTASSIUM IODIDE SOLUTION** Product Synonyms Iodine-Iodide / Iodine Solution / Iodine / Iodine Lugol's Dilute / Gram's Iodine Solution / Iodine 2% / Dilute Lugol's Solution Section 2 Hazards Identification Signal word: WARNING Precautionary statement(s): Pictograms: GHS07 / GHS09 P261: Avoid breathing mist/vapours/sprav Target organs: Thyroid, kidneys, endocrine system, skin, eyes, P271: Use only outdoors or in a well-ventilated area. reproductive system, central nervous system. P273: Avoid release to the environment. P280: Wear protective gloves/protective clothing/eye protection/face protection. P302/352: IF ON SKIN: Wash with plenty of soap and water. P304/340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing P312: Call a POISON CENTER or doctor/physician if you feel unwell. **GHS Classification:** P362: Take off contaminated clothing and wash before reuse. Acute toxicity, oral (Category 4) P391: Collect spillage. Acute toxicity, inhalation (Category 4) P501: Dispose of contents/container to an approved waste disposal plant. Aquatic Acute (Category 1) GHS Label information: Hazard statement(s): H312: Harmful in contact with skin. H332: Harmful if inhaled. H400: Very toxic to aquatic life.

Ca Prop 65 - This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Section 3	Composition / Information on Ingredients					
Nommé Chimique		# CAS	%	EINECS		
Water Potassium iodide Iodine		7732-18-5 7681-11-0 7553-56-2	95.10% 3.05% 1.85%	231-791-2 231-659-4 231-442-4		
Section 4	First Aid Measures					

**INGESTION:** MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: HARMFUL IF INHALED. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. Harmful if inhaled.

EYE CONTACT: MAY CAUSE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: HARMFUL IN CONTACT WITH SKIN. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention. Harmful in contact with skin.

### Section 5 Fire Fighting Measures

Extinguishing Media: Use any media suitable for extinguishing supporting fire.

General information: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: In fire conditions, water may evaporate from this solution which may cause hazardous decomposition products to be formed as dust or fume.

### Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation. Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Read label on container before using. Do not wear contact lenses when working with chemicals. Keep container tightly closed. Keep out of reach of children. Use with adequate ventilation. Wash thoroughly after handling.

Handling: Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid ingestion. Do not inhale vapors, mist or spray. Wash thoroughly after handling. Remove and wash clothing before reuse.

### Storage: Store in a cool, well-ventilated area away from incompatible substances. Section 8 **Exposure Controls / Personal Protection** Chemical Name ACGIH (TLV) OSHA (PEL) NIOSH (REL) Exposure Limits: TWA: 0.01 ppm<sup>(IFV)</sup>/ STEL: 0.1 ppm<sup>(V)</sup> Iodine CAS # 7553-56-2 STEL: C 0.1 ppm/C 1 mg/m<sup>3</sup> STEL: C 0.1 ppm/C 1 mg/m<sup>3</sup> Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low. Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator. **Physical & Chemical Properties** Section 9 Appearance: Deep amber liquid. Evaporation rate (Water = 1): < 1 Partition coefficient: (n-octanol / water): Not applicable Odor: Characteristic odor Flammability (solid/gas): Not applicable. Auto-ignition temperature: Not applicable Odor threshold: Not applicable. Explosion limits: Lower / Upper: Not applicable Decomposition temperature: Data not available. Vapor pressure (mm Hg): 14 [water] pH: Data not available Viscosity: Data not available. Melting / Freezing point: ~ 0°C (~ 32°F) [water] Vapor density (Air = 1): 0.7 [water] Molecular formula: Mixture Boiling point: ~ 100°C (212°F) [water] Molecular weight: Mixture Relative density (Specific gravity): 1.0 [water] Flash point: Not flammable. Solubility(ies): Complete in water. Section 10 Stability & Reactivity Chemical stability: Stable Hazardous polymerization: Will not occur. Conditions to avoid: Stable under recommended storage conditions. Excessive temperatures which cause evaporation. Incompatibilities with other materials: Metals or unsaturated organic compounds, ammonia solutions or alkaline solutions of ammonia salts. Will form explosive nitrogen iodides when reacted with gaseous ammonia. Hazardous decomposition products: Toxic iodide fumes. Section 11 **Toxicological Information** Acute toxicity: Oral-Rat LD50: 14,000 mg/kg [lodine CAS # 7553-56-2] Skin corrosion/irritation: Data not available Serious eye damage/irritation: Data not available Respiratory or skin sensitization: Inhalation-rat 3.1 mg/m3 / 24 hour / 13 weeks - continuous [lodine CAS # 7553-56-2] Germ cell mutagenicity: Data not available Carcinogenity: Data not available IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTF OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-repeated exposure: Data not available Aspiration hazard: Data not available Potential health effects: Inhalation: Symptoms include cough, wheezing, and labored breathing. Symptoms may be delayed. Ingestion: Causes abdominal pain, diarrhea, nausea, and vomiting. Ingestion of levels of 2-3 grams of iodine may cause death. Skin: Contact may cause redness and pain. Eyes: Contact causes watering of the eyes, redness and pain. Signs and symptoms of exposure: Effects of short-term exposure: Lachrymator. The substance is severely irritating to the eyes and the respiratory tract, and is irritating to the skin. Inhalation of the vapor may cause asthma-like reactions. Inhalation of the vapor may cause lung edema. The effects may be delayed. Effects of long-term exposure: Repeated or prolonged contact may cause skin sensitization in rate cases. Repeated or prolonged inhalation exposure may cause asthma-like syndrome. The substance may have effects on the thyroid. Specific data not available for this mixture. Exercise appropriate procedures to minimize potential hazards. Additional information: RTECS #: NN1575000 [lodine CAS # 7553-56-2] Section 12 **Ecological Information** Toxicity to fish: Very toxic to aquatic life. Toxicity to daphnia and other aquatic invertebrates: No data available Toxicity to algae: No data available Persistence and degradability: No data available Bioaccumulative potential: No data available Mobility in soil: No data available PBT and vPvB assessment: No data available Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. **Disposal Considerations** Section 13 These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency. Section 14 Transport Information UN/NA number: None assigned Shipping name: Not Regulated. Hazard class: None assigned Reportable Quantity: No Marine pollutant: No Exceptions: No Packing group: None assigned Section 15 **Regulatory Information** A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list. WHMIS Classification RCRA code DSL NDSL Component TSCA CERLCA (RQ) lodine Listed Not listed Not listed Listed Not listed E; D2A Potassium iodide Listed Not listed Not listed Listed Not listed D2A Section 16 **Additional Information**

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SDS No.: SS0940

### Section 1

# 3B Scientific GmbH

Rudorffweg 8 • 21031 Hamburg • Germany Tel: + 49-40-73966-0 Fax: + 49-40-73966-100

**Chemical Product and Company Information** 

CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300 For laboratory use only.

www.3bscientific.com • 3b@3bscientific.com	Not for drug, food or household use.
Product STARCH, SOLUBLE	
Synonyms Amylodextrin ; Amylogen	
Section 2 Hazards Identification	
This substance or mixture has not been classified as hazardous according o the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals. Signal word: Not classified Pictograms: Not classified Target organs: None known GHS Classification: Not classified GHS Label information: Hazard statement(s): Not classified Precautionary statement(s): Not classified	Supplemental information: Do not breathe dust. Do not get in eyes, on skin, or on clothing. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Get medical attention if you feel unwell.

Ca Prop 65 - This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Section 3	Composition / Information on Ingredients				
Chemical Name		CAS #	%	EINECS	
Starch, soluble		9005-84-9	100%	232-686-4	
Section 4	First Aid Measures				

**INGESTION:** Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

### Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Carbon dioxide, dry chemical, dry sand, alcohol foam.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Dust dispersed in air becomes explosive when exposed to ignition sources.

### Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Remove all sources of ignition. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from ignition sources.

Section 8	Exposure Controls / Personal Protection								
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)					
	Starch (9005-25-8)	TWA: 10 mg/m <sup>3</sup> (A4)	TWA: 15 mg/m <sup>3</sup> (Total dust)	TWA: 10 mg/m <sup>3</sup> (Total dust)					

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

shh s se seh ses									
Section 9 Physical & Chemical Pro	operties								
Appearance:Solid, white powder.Odor:Bland odor.Odor threshold:Data not available.pH:Data not available.Melting / Freezing point:Data not availableBoiling point:Data not availableFlash point:Data not available	Evaporation rate ( = 1): Data not available Flammability (solid/gas): Data not available. Explosion limits: Lower / Upper: Data not available Vapor pressure (mm Hg): Data not available Vapor density (Air = 1): Data not available Relative density (Specific gravity): 1.45 Solubility(ies): 5 g/100 ml water @ 20°C		$\begin{array}{l} \textbf{Partition coefficient:} \ Data not available \\ \textbf{Auto-ignition temperature:} \ 410^\circ\text{C} \ (770^\circ\text{F}) \ [cloud] \\ \textbf{Decomposition temperature:} \ Data not available. \\ \textbf{Viscosity:} \ Data not available. \\ \textbf{Molecular formula:} \ (C_6H_{10}O_5)_n \\ \textbf{Molecular weight:} \ (162.15)_n \end{array}$						
Section 10 Stability & Reactivity									
Chemical stability: Stable Conditions to avoid: Excessive temperatures, he Incompatible materials: No data available. Hazardous decomposition products: None.	Hazardous polymerization: at, sparks, open flame and other sourc		actices which p	produce dust.					
Section 11 Toxicological Informatio	n								
Acute toxicity: Data not available Skin corrosion/irritation: Data not available Serious eye damage/irritation: Data not available Gern cell mutagenicity: Data not available Carcinogenity: Data not available NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. IARC: No component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible or confirmed human carcinogen by IARC. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-repeated exposure: Data not available STOT-repeated exposure: Data not available Stot-single exposure: Data not ava									
Section 12 Ecological Information									
Toxicity to fish: No data availableToxicity to daphnia and other aquatic invertebraToxicity to algae: No data availablePersistence and degradability: No data availableMobility in soil: No data availableOther adverse effects: An environmental hazardSection 13Disposal Considerations	Bioaccumulative potential: N PBT and vPvB assessment: 1 cannot be excluded in the event of unp	No data available rofessional handling or	·						
These disposal guidelines are intended for the regulations may be different. Dispose of in ac									
Section 14 Transport Information									
Hazard class: Not applicable Pac	ping name: Not Regulated ing group: Not applicable Reportable C ERG Guide # Not applicable		antity: No Mari		ne pollutant: No				
Section 15 Regulatory Information									
A chemical is considered to be listed if the CAS number for									
Component	TSCA CERLCA (RQ)	RCRA code	DSL	NDSL	WHMIS Classification				
Starch, soluble	Listed Not listed	Not listed	Listed	Not listed	Not listed				
Section 16 Additional Information									
The information contained herein is furnished without warn dent determinations of suitability and completeness of info									

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