

# SAFETY DATA SHEET

Creation Date 04-May-2010

Revision Date 19-December-2025

Revision Number 6

This safety data sheet was created pursuant to the requirements of: Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR) - SOR 2022-272

## 1. Identification

<b>Product Name</b>	<b>Sodium bis(2-methoxyethoxy)aluminiumhydride, 70 wt% sol. in toluene (ca. 3.5M)</b>
<b>Cat No. :</b>	<b>AC43091000; AC430911000; AC430918000</b>
<b>Synonyms</b>	Sodium dihydro-bis-(2-methoxyethoxy)aluminate in toluene
<b>Recommended Use</b>	Laboratory chemicals.
<b>Uses advised against</b>	Food, drug, pesticide or biocidal product use.

## Details of the supplier of the safety data sheet

### Company

#### Importer/Distributor

Fisher Scientific  
112 Colonnade Road,  
Ottawa, ON K2E 7L6,  
Canada  
Tel: 1-800-234-7437

#### Manufacturer

Fisher Scientific Company  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

### Emergency Telephone Number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
CHEMTREC Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

## 2. Hazard(s) identification

### Classification

#### **WHMIS 2015 Classification**

This product is hazardous in accordance with the Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended (SOR/2022-272)

<b>Flammable liquids</b>	Category 2
<b>Substances/mixtures which, in contact with water, emit flammable gases</b>	Category 1
<b>Skin Corrosion/Irritation</b>	Category 1 B
<b>Serious Eye Damage/Eye Irritation</b>	Category 1
<b>Reproductive Toxicity</b>	Category 2
<b>Specific target organ toxicity (single exposure)</b>	Category 3
Target Organs - Respiratory system, Central nervous system (CNS).	
<b>Specific target organ toxicity - (repeated exposure)</b>	Category 2
Target Organs - Gastrointestinal tract (GI), Respiratory system, Neurological effects, Eyes, Ears.	
<b>Aspiration Toxicity</b>	Category 1

<b>Physical Hazards Not Otherwise Classified</b> Reacts violently with water	Category 1
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**Label Elements**

**Signal Word**

Danger

**Hazard Statements**

Highly flammable liquid and vapor  
In contact with water releases flammable gases which may ignite spontaneously  
May be fatal if swallowed and enters airways  
Causes severe skin burns and eye damage  
May cause respiratory irritation  
May cause drowsiness and dizziness  
Suspected of damaging the unborn child  
May cause damage to organs through prolonged or repeated exposure  
Reacts violently with water



**Precautionary Statements**

**Prevention**

Do not allow contact with water  
Keep container tightly closed  
Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
Handle and store contents under inert gas. Protect from moisture  
Ground and bond container and receiving equipment  
Use non-sparking tools  
Take action to prevent static discharges  
Do not breathe dust/fumes/gas/mist/vapours/spray  
Wash face, hands and any exposed skin thoroughly after handling  
Use only outdoors or in a well-ventilated area  
Wear protective gloves/protective clothing/eye protection/face protection

**Response**

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower  
IF INHALED: Remove person to fresh air and keep comfortable for breathing  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
Immediately call a POISON CENTER/doctor  
Rinse mouth  
Do NOT induce vomiting  
IF ON SKIN: Brush off loose particles from skin. Immerse in cool water  
Wash contaminated clothing before reuse  
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

**Storage**

Store locked up  
Store in a well-ventilated place. Keep container tightly closed  
Store in a dry place. Store in a closed container

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Other Hazards**

Harmful to aquatic life with long lasting effects

### 3. Composition/Information on Ingredients

Component	CAS-No	Weight %
Aluminate(1-), dihydrobis(2-methoxyethanolato-O,O)-, sodium	22722-98-1	70
Toluene	108-88-3	30

### 4. First-aid measures

<b>General Advice</b>	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Call a physician immediately.
<b>Inhalation</b>	If not breathing, give artificial respiration. Remove from exposure, lie down. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician immediately.
<b>Ingestion</b>	Do NOT induce vomiting. Clean mouth with water. Never give anything by mouth to an unconscious person. Call a physician immediately.
<b>Most important symptoms/effects</b>	Causes burns by all exposure routes. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation
<b>Notes to Physician</b>	Treat symptomatically

### 5. Fire-fighting measures

**Suitable Extinguishing Media** CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam.

**Unsuitable Extinguishing Media** DO NOT USE WATER

**Flash Point** 4 °C / 39.2 °F

**Method -** No information available

**Autoignition Temperature** No information available

**Explosion Limits**

**Upper** No data available

**Lower** No data available

**Sensitivity to Mechanical Impact** No information available

**Sensitivity to Static Discharge** No information available

**Specific Hazards Arising from the Chemical**

Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous

membranes. Reacts violently with water.

**Hazardous Combustion Products**

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

**NFPA**

<b>Health</b>	<b>Flammability</b>	<b>Instability</b>	<b>Physical hazards</b>
3	3	2	W

## 6. Accidental release measures

**Personal Precautions**

Use personal protective equipment as required. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**Environmental Precautions**

Should not be released into the environment.

**Methods for Containment and Clean Up** Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Do not expose spill to water.

## 7. Handling and storage

**Handling**

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance. Do not allow contact with water. Handle under an inert atmosphere.

**Storage.**

Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area. Flammables area. Keep away from heat, sparks and flame. Keep away from water or moist air. Store under an inert atmosphere. Air sensitive. Keep container tightly closed in a dry and well-ventilated place. Incompatible Materials. Strong oxidizing agents. Acids. Acid anhydrides. Acid chlorides. Alcohols.

## 8. Exposure controls / personal protection

**Exposure Guidelines**

<b>Component</b>	<b>Alberta</b>	<b>British Columbia</b>	<b>Ontario TWAEV</b>	<b>Quebec</b>
Toluene	TWA: 50 ppm TWA: 188 mg/m <sup>3</sup> Skin	TWA: 20 ppm	TWA: 20 ppm	TWA: 20 ppm

<b>Component</b>	<b>Manitoba</b>	<b>New Brunswick</b>	<b>Newfoundland and Labrador</b>	<b>Nova Scotia</b>
Toluene	TWA: 20 ppm	TWA: 20 ppm	TWA: 20 ppm	TWA: 20 ppm

<b>Component</b>	<b>Nunavut</b>	<b>Prince Edward Island</b>	<b>Saskatchewan</b>	<b>Yukon</b>
Toluene	TWA: 50 ppm STEL: 60 ppm Skin	TWA: 20 ppm	TWA: 50 ppm STEL: 60 ppm Skin	TWA: 100 ppm TWA: 375 mg/m <sup>3</sup> STEL: 150 ppm STEL: 560 mg/m <sup>3</sup> Skin

<b>Component</b>	<b>ACGIH TLV</b>	<b>OSHA PEL</b>	<b>NIOSH</b>
Toluene 108-88-3 ( 30 )	TWA: 20 ppm	(Vacated) TWA: 100 ppm (Vacated) TWA: 375 mg/m <sup>3</sup> Ceiling: 300 ppm (Vacated) STEL: 150 ppm (Vacated) STEL: 560 mg/m <sup>3</sup>	IDLH: 500 ppm REL = 100 ppm (TWA) REL = 375 mg/m <sup>3</sup> (TWA) STEL: 150 ppm STEL: 560 mg/m <sup>3</sup>

		TWA: 200 ppm	
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**Legend**

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH: NIOSH - National Institute for Occupational Safety and Health

**Engineering Measures**

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure adequate ventilation, especially in confined areas.  
Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

**Personal protective equipment**

**Eye Protection**

Goggles

**Hand Protection**

Wear appropriate protective gloves and clothing to prevent skin exposure.

<b>Glove material</b>	<b>Breakthrough time</b>	<b>Glove thickness</b>	<b>Glove comments</b>
Nitrile rubber Viton (R)	See manufacturers recommendations	-	Splash protection only

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

**Respiratory Protection**

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

**Recommended Filter type:** Organic gases and vapours filter Type A Brown conforming to EN14387

When RPE is used a face piece Fit Test should be conducted

**Environmental exposure controls**

Prevent product from entering drains. Do not allow material to contaminate ground water system.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

## 9. Physical and chemical properties

**Appearance**

**Physical State**

Viscous liquid

**Color**

Liquid

**Odor**

No information available

**Odor Threshold**

No information available

**Property**

**Values**

**Remarks**

**• Method**

**Melting Point/Range**

No data available

**Softening Point**

No data available

**Boiling Point/Range**

110 °C / 230 °F

760 mmHg

<b>Flash Point</b>	4 °C / 39.2 °F	<b>Method</b> - No information available
<b>Flammability (liquid)</b>	Highly flammable	On basis of test data
<b>Flammability (solid,gas)</b>	Not applicable	Liquid
<b>Explosion Limits</b>	No data available	
<b>Autoignition Temperature</b>	No data available	
<b>Decomposition Temperature</b>	200 °C	
<b>pH</b>	No information available	
<b>Viscosity</b>	65 cPs at 20 °C	
<b>Water Solubility</b>	Reacts violently with water	
<b>Solubility in other solvents</b>	No information available	
<b>Partition Coefficient (n-octanol/water)</b>	<b>log Pow</b>	
<b>Component</b>	2.73	
Toluene	No data available	
<b>Vapor Pressure</b>	1.036	
<b>Density / Specific Gravity</b>	Not applicable	Liquid
<b>Bulk Density</b>	6.9	(Air = 1.0)
<b>Vapor Density</b>	Not applicable (liquid)	
<b>Particle characteristics</b>		

**Other Information**

<b>Molecular Formula</b>	C6 H16 Al Na O4
<b>Molecular Weight</b>	202.16
<b>Explosive Properties</b>	Vapors may form explosive mixtures with air

## 10. Stability and reactivity

<b>Reactive Hazard</b>	Yes
<b>Stability</b>	Moisture sensitive.
<b>Conditions to Avoid</b>	Incompatible products. Excess heat. Keep away from open flames, hot surfaces and sources of ignition. Exposure to moist air or water. Exposure to moisture.
<b>Incompatible Materials</b>	Strong oxidizing agents, Acids, Acid anhydrides, Acid chlorides, Alcohols
<b>Hazardous Decomposition Products</b>	Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> )
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.
<b>Hazardous Reactions</b>	None under normal processing. Reacts violently with water.

## 11. Toxicological information

**Information on expected route of exposure**

<b>Inhalation</b>	Not an expected route of exposure.
<b>Ingestion</b>	May be harmful if swallowed.
<b>Eyes</b>	Avoid contact with eyes. Corrosive to the eyes and may cause severe damage including blindness. Risk of serious damage to eyes.
<b>Skin</b>	Avoid contact with skin. Causes burns. Skin Corrosion/Irritation. Contact with moist skin may cause skin burns.

**Toxicology data for the components**

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Aluminate(1-), dihydrobis(2-methoxyethanolato-O,O)-,	-	LD50 > 400 mg/kg ( Rat )	-

sodium			
Toluene	> 5000 mg/kg ( Rat )	12000 mg/kg ( Rabbit )	26700 ppm ( Rat ) 1 h

**Toxicologically Synergistic Products** No information available

**(b) skin corrosion/irritation;** No data available

**(c) serious eye damage/irritation;** No data available

**(d) respiratory or skin sensitization;**

Respiratory No data available  
Skin No data available

**(e) germ cell mutagenicity;** No data available

**(f) carcinogenicity;**

The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Aluminate(1-), dihydrobis(2-methoxyethoxy)thanolato-O,O)-, sodium	22722-98-1	Not listed				
Toluene	108-88-3	Not listed				

**(g) reproductive toxicity;** No data available

**Reproductive Effects** May cause harm to the unborn child. Possible risk of impaired fertility.

**(h) STOT-single exposure;** No data available

**Results / Target organs** Central nervous system (CNS).

**(i) STOT-repeated exposure;** No data available

**Target Organs** Skin, Respiratory system, Eyes, Gastrointestinal tract (GI), Ears, Neuropsychological effects.

**(j) aspiration hazard;** Category 1

**Other Adverse Effects** The toxicological properties have not been fully investigated.

**Symptoms / effects,both acute and delayed** Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

**Other Adverse Effects** The toxicological properties have not been fully investigated.

**Endocrine Disrupting Properties** This product does not contain any known or suspected endocrine disruptors.

## 12. Ecological information

### Ecotoxicity

The product contains following substances which are hazardous for the environment. Contains a substance which is:.. Toxic to aquatic organisms. Reacts with water so no ecotoxicity data for the substance is available. Harmful to aquatic organisms. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Toluene	EC50: = 12.5 mg/L, 72h static (Pseudokirchneriella subcapitata) EC50: > 433 mg/L, 96h (Pseudokirchneriella subcapitata)	50-70 mg/L LC50 96 h 5-7 mg/L LC50 96 h 15-19 mg/L LC50 96 h 28 mg/L LC50 96 h 12 mg/L LC50 96 h	EC50 = 19.7 mg/L 30 min	EC50: = 11.5 mg/L, 48h (Daphnia magna) EC50: 5.46 - 9.83 mg/L, 48h Static (Daphnia magna)

**Persistence and Degradability** Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Is not likely mobile in the environment.

Component	log Pow
Toluene	2.73

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

Component	RCRA - U Series Wastes	RCRA - P Series Wastes
Toluene - 108-88-3	U220	-

## 14. Transport information

### DOT

<b>UN-No</b>	UN3399
<b>Proper Shipping Name</b>	ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE
<b>Hazard Class</b>	4.3
<b>Subsidiary Hazard Class</b>	3, 8
<b>Packing Group</b>	I

### TDG

<b>UN-No</b>	UN3399
<b>Proper Shipping Name</b>	ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE
<b>Hazard Class</b>	4.3
<b>Subsidiary Hazard Class</b>	3, 8
<b>Packing Group</b>	I

### IATA

<b>UN-No</b>	UN3399
<b>Proper Shipping Name</b>	ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE
<b>Hazard Class</b>	4.3
<b>Subsidiary Hazard Class</b>	3
<b>Packing Group</b>	I

### IMDG/IMO

<b>UN-No</b>	UN3399
<b>Proper Shipping Name</b>	ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE
<b>Hazard Class</b>	4.3
<b>Subsidiary Hazard Class</b>	3
<b>Packing Group</b>	I

## 15. Regulatory information

**International Inventories**

Component	CAS-No	DSL	NDSL	TSCA	TSCA Inventory notification - Active-Inactive	EINECS	ELINCS	NLP
Aluminate(1-), dihydrobis(2-methoxyethanolato-O <sub>2</sub> ), sodium	22722-98-1	X	-	X	ACTIVE	245-178-2	-	-
Toluene	108-88-3	X	-	X	ACTIVE	203-625-9	-	-

Component	CAS-No	IECSC	KECL	ENCS	ISHL	TCSI	AICS	NZIoC	PICCS
Aluminate(1-), dihydrobis(2-methoxyethanolato-O <sub>2</sub> ), sodium	22722-98-1	X	99-3-1269	X	X	X	X	X	X
Toluene	108-88-3	X	KE-33936	X	X	X	X	X	X

**Legend:**

X - Listed 'I' - Not listed

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

ENCS - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

**Canada**

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and its amendments and meets the requirements of the HPR (Paragraph 13(1)(a) of the revised Hazardous Products Act (HPA)).

Component	Canada - National Pollutant Release Inventory (NPRI)	Canadian Environmental Protection Agency (CEPA) - List of Toxic Substances	Canada's Chemicals Management Plan (CEPA)
Toluene	Part 1, Group A Substance Part 5, Individual Substances Part 4 Substance		

**Legend**

NPRI - National Pollutant Release Inventory

**Other International Regulations**

**Authorisation/Restrictions according to EU REACH**

Component	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Toluene	-	Use restricted. See entry 48. (see link for restriction details) Use restricted. See entry 75. (see link for restriction details)	-

**REACH links**

<https://echa.europa.eu/substances-restricted-under-reach>

**Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?**

Not applicable

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

Component	CAS-No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Aluminate(1-), dihydrobis(2-methoxyethanolato-O,O)-, sodium	22722-98-1	Not applicable	Not applicable	Not applicable	Not applicable
Toluene	108-88-3	Listed	Not applicable	Not applicable	Not applicable

Component	CAS-No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Aluminate(1-), dihydrobis(2-methoxyethanolato-O,O)-, sodium	22722-98-1	Not applicable	Not applicable	Not applicable	Not applicable
Toluene	108-88-3	Not applicable	Not applicable	Not applicable	Annex I - Y42

**16. Other information**

**Prepared By** Product stewardship (Regulatory Affairs)  
Thermo Fisher Scientific  
email - begel.sdsdesk@thermofisher.com

**Creation Date** 04-May-2010  
**Revision Date** 19-December-2025  
**Print Date** 19-December-2025  
**Revision Summary** This document has been updated to comply with the requirements of WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR) to align with the Globally Harmonised System (GHS) (V7/8) for the Classification and Labelling of Chemicals.

**Disclaimer**

The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text

**End of SDS**