Thermo Fisher SCIENTIFIC

SAFETY DATA SHEET

Creation Date 12-May-2011 Revision Date 10-Dec-2021 Revision Number 3

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

1.1. Product identifier

Product Description: TB Decolorizer (3% Acid Alcohol)

Cat No.: R40106, R40206

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

Recommended Use Laboratory chemicals. Uses advised against No Information available

1.3. Details of the supplier of the safety data sheet

Company Oxoid Ltd Remel

Wade Road Santa Fe Trail Drive, KS 66215: Basingstoke, Hants, UK 1-80-255-6730: 1-800-621-8251.

RG24 8PW

Tel: +44 (0) 1256 841144

EU entity/business name Oxoid Deutschland GmbH

Postfach 10 07 53

D-46483 Wesel GERMANY

Tel: + 49 (0) 281 1520 Fax: 49 (0) 281 1521

E-mail address mbd-sds@thermofisher.com

1.4. Emergency telephone number

Chemtrec EU: 001-703-527-3887 Chemtrec US: (800) 424-9300

For customers in Switzerland:

Tox Info Suisse Emergency Number: 145 (24hr)

Tox Info Suisse: +41-44 251 51 51 (Emergency number from abroad)

Chemtrec (24h) Toll-Free: 0800 564 402 Chemtrec Local: +41-43 508 20 11 (Zurich)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CLP Classification - Regulation (EC) No 1272/2008

Physical hazards

TB Decolorizer (3% Acid Alcohol)

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Flammable liquids Category 2 (H225)

Substances/mixtures corrosive to metal Category 1 (H290)

Health hazards

Skin Corrosion/Irritation Category 2 (H315)
Serious Eye Damage/Eye Irritation Category 1 (H318)
Specific target organ toxicity - (single exposure) Category 2 (H371)

Environmental hazards

Based on available data, the classification criteria are not met

Full text of Hazard Statements: see section 16

2.2. Label elements



Signal Word

Danger

Hazard Statements

H225 - Highly flammable liquid and vapor

H290 - May be corrosive to metals

H315 - Causes skin irritation

H318 - Causes serious eye damage

H371 - May cause damage to organs

Precautionary Statements

P332 + P313 - If skin irritation occurs: Get medical advice/attention

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

P310 - Immediately call a POISON CENTER or doctor/physician

P308 + P313 - IF exposed or concerned: Get medical advice/attention

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

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

2.3. Other hazards

No information available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No	EC No	Weight %	CLP Classification - Regulation (EC) No 1272/2008
Ethyl alcohol	64-17-5	200-578-6	90	Flam. Liq. 2 (H225)
Isopropyl alcohol	67-63-0	200-661-7	5	Flam. Liq. 2 (H225)

TB Decolorizer (3% Acid Alcohol)

				Eye Irrit. 2 (H319) STOT SE 3 (H336)
Hydrochloric acid	7647-01-0	231-595-7	3	Met. Corr. 1 (H290) Skin Corr. 1B (H314) Eye Dam. 1 (H318) STOT SE 3 (H335)
Methanol	67-56-1	200-659-6	3	Flam. Liq. 2 (H225) Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) STOT SE 1 (H370)

Component	Specific concentration limits (SCL's)	M-Factor	Component notes
Hydrochloric acid	Skin Corr. 1B :: C>=25% Skin Irrit. 2 :: 10%<=C<25% Eye Irrit. 2 :: 10%<=C<25% STOT SE 3 :: C>=10% Met. Corr. 1 :: C>=0.1%	-	-
Methanol	STOT SE 1 (H370) :: C>=10% STOT SE 2 (H371) :: 3%<=C<10%	-	-

Full text of Hazard Statements: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General Advice If symptoms persist, call a physician.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get

medical attention.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists,

call a physician.

Ingestion Clean mouth with water and drink afterwards plenty of water.

Inhalation Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if

symptoms occur.

Self-Protection of the First Aider Ensure that medical personnel are aware of the material(s) involved, take precautions to

protect themselves and prevent spread of contamination.

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

None reasonably foreseeable.

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

Notes to Physician Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

OXDR40106

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Suitable Extinguishing Media

Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam.

Extinguishing media which must not be used for safety reasons

Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products

Carbon oxides.

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment as required.

6.2. Environmental precautions

Should not be released into the environment.

6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Ensure adequate ventilation. Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation.

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.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a cool, well-ventilated place.

Technical Rules for Hazardous Substances (TRGS) 510 Class 3 Storage Class (LGK) (Germany)

7.3. Specific end use(s)

Use in laboratories

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits

List source(s): **CH** - The Government of Switzerland has set a directive on limit values for working materials (Grenzwerte am arbeitplatz) which is based on the Swiss Federal Regulation "Verordnung über die Verhütung von Unfällen und Berufskrankheiten". This directive is administered, periodically revised and enforced by SUVA (Swiss National Accident Insurance Fund). **EU** - Commission Directive (EU) 2019/1831 of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC

Component	European Union	The United Kingdom	France	Belgium	Spain
Ethyl alcohol		TWA: 1000 ppm TWA;	TWA / VME: 1000 ppm	TWA: 1000 ppm 8 uren	STEL / VLA-EC: 1000
		1920 mg/m ³ TWA	(8 heures).	TWA: 1907 mg/m ³ 8	ppm (15 minutos).
		WEL - STEL: 3000 ppm		uren	STEL / VLA-EC: 1910
		STEL; 5760 mg/m ³	mg/m³ (8 heures).		mg/m³ (15 minutos).
		STEL	STEL / VLCT: 5000		
			ppm.		
			STEL / VLCT: 9500		
			mg/m³.		
Isopropyl alcohol			STEL / VLCT: 400 ppm.	TWA: 200 ppm 8 uren	STEL / VLA-EC: 400
		STEL: 1250 mg/m ³ 15	STEL / VLCT: 980	TWA: 500 mg/m ³ 8 uren	11 \
		min	mg/m³.	STEL: 400 ppm 15	STEL / VLA-EC: 1000
		TWA: 400 ppm 8 hr		minuten	mg/m³ (15 minutos).
		TWA: 999 mg/m ³ 8 hr		STEL: 1000 mg/m ³ 15	TWA / VLA-ED: 200
				minuten	ppm (8 horas)
					TWA / VLA-ED: 500
					mg/m³ (8 horas)
Hydrochloric acid	TWA: 5 ppm 8 hr	STEL: 5 ppm 15 min	STEL / VLCT: 5 ppm.		STEL / VLA-EC: 10 ppm
	TWA: 8 mg/m ³ 8 hr	STEL: 8 mg/m ³ 15 min	restrictive limit	TWA: 8 mg/m ³ 8 uren	(15 minutos).
	STEL: 10 ppm 15 min	TWA: 1 ppm 8 hr	STEL / VLCT: 7.6	STEL: 10 ppm 15	STEL / VLA-EC: 15
	STEL: 15 mg/m ³ 15 min	TWA: 2 mg/m ³ 8 hr	mg/m ³ . restrictive limit	minuten	mg/m³ (15 minutos).
				STEL: 15 mg/m ³ 15	TWA / VLA-ED: 5 ppm
				minuten	(8 horas)
					TWA / VLA-ED: 7.6
L					mg/m³ (8 horas)
Methanol	TWA: 200 ppm 8 hr	WEL - TWA: 200 ppm	TWA / VME: 200 ppm (8	TWA: 200 ppm 8 uren	TWA / VLA-ED: 200
	TWA: 260 mg/m ³ 8 hr	TWA; 266 mg/m ³ TWA	heures). restrictive limit	TWA: 266 mg/m ³ 8 uren	
	Skin	WEL - STEL: 250 ppm	TWA / VME: 260 mg/m ³	STEL: 250 ppm 15	TWA / VLA-ED: 266
		STEL; 333 mg/m ³ STEL	(8 heures). restrictive	minuten	mg/m³ (8 horas)
			limit	STEL: 333 mg/m ³ 15	Piel
			STEL / VLCT: 1000	minuten	
			ppm.	Huid	
			STEL / VLCT: 1300		
			mg/m³.		
			Peau		

Component	Italy	Germany	Portugal	The Netherlands	Finland
Ethyl alcohol		200 ppm TWA MAK;	TWA: 1000 ppm 8 horas	huid	TWA: 1000 ppm 8
		380 mg/m ³ TWA MAK		STEL: 1900 mg/m ³ 15	tunteina
				minuten	TWA: 1900 mg/m ³ 8
				TWA: 260 mg/m ³ 8 uren	tunteina
					STEL: 1300 ppm 15
					minuutteina
					STEL: 2500 mg/m ³ 15
					minuutteina
Isopropyl alcohol		TWA: 200 ppm (8	STEL: 400 ppm 15		TWA: 200 ppm 8
		Stunden). AGW -	minutos		tunteina
		exposure factor 2	TWA: 200 ppm 8 horas		TWA: 500 mg/m ³ 8
		TWA: 500 mg/m ³ (8			tunteina
		Stunden). AGW -			STEL: 250 ppm 15
		exposure factor 2			minuutteina
		TWA: 200 ppm (8			STEL: 620 mg/m ³ 15
		Stunden). MAK			minuutteina
		TWA: 500 mg/m ³ (8			
		Stunden). MAK			

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		Höhepunkt: 400 ppm Höhepunkt: 1000 mg/m³			
Hydrochloric acid	TWA: 5 ppm 8 ore. Media Ponderata nel Tempo TWA: 8 mg/m³ 8 ore. Media Ponderata nel Tempo STEL: 10 ppm 15 minuti. Breve termine STEL: 15 mg/m³ 15 minuti. Breve termine	TWA: 2 ppm (8 Stunden). AGW - exposure factor 2 TWA: 3 mg/m³ (8 Stunden). AGW - exposure factor 2 TWA: 2 ppm (8 Stunden). MAK TWA: 3.0 mg/m³ (8 Stunden). MAK Höhepunkt: 4 ppm Höhepunkt: 6 mg/m³	STEL: 10 ppm 15 minutos STEL: 15 mg/m³ 15 minutos Ceiling: 2 ppm TWA: 5 ppm 8 horas TWA: 8 mg/m³ 8 horas	STEL: 15 mg/m ³ 15 minuten TWA: 8 mg/m ³ 8 uren	STEL: 5 ppm 15 minuutteina STEL: 7.6 mg/m³ 15 minuutteina
Methanol	TWA: 200 ppm 8 ore. Media Ponderata nel Tempo TWA: 260 mg/m³ 8 ore. Media Ponderata nel Tempo Pelle	100 ppm TWA MAK; 130 mg/m³ TWA MAKSkin absorber	STEL: 250 ppm 15 minutos TWA: 200 ppm 8 horas TWA: 260 mg/m³ 8 horas Pele	huid TWA: 133 mg/m³ 8 uren	TWA: 200 ppm 8 tunteina TWA: 270 mg/m³ 8 tunteina STEL: 250 ppm 15 minuutteina STEL: 330 mg/m³ 15 minuutteina Iho

Component	Austria	Denmark	Switzerland	Poland	Norway
Ethyl alcohol	MAK-KZGW: 2000 ppm	TWA: 1000 ppm 8 timer	STEL: 1000 ppm 15	TWA: 1900 mg/m ³ 8	TWA: 500 ppm 8 timer
	15 Minuten	TWA: 1900 mg/m ³ 8	Minuten	godzinach	TWA: 950 mg/m ³ 8 timer
	MAK-KZGW: 3800	timer	STEL: 1920 mg/m ³ 15		STEL: 625 ppm 15
	mg/m³ 15 Minuten		Minuten		minutter. value
	MAK-TMW: 1000 ppm 8		TWA: 500 ppm 8		calculated
	Stunden		Stunden		STEL: 1187.5 mg/m ³ 15
	MAK-TMW: 1900 mg/m ³		TWA: 960 mg/m ³ 8		minutter. value
	8 Stunden		Stunden		calculated
Isopropyl alcohol	MAK-KZGW: 800 ppm	TWA: 200 ppm 8 timer	STEL: 400 ppm 15	STEL: 1200 mg/m ³ 15	TWA: 100 ppm 8 timer
	15 Minuten	TWA: 490 mg/m ³ 8 timer	Minuten	minutach	TWA: 245 mg/m ³ 8 timer
	MAK-KZGW: 2000		STEL: 1000 mg/m ³ 15	TWA: 900 mg/m ³ 8	STEL: 150 ppm 15
	mg/m³ 15 Minuten		Minuten	godzinach	minutter. value
	MAK-TMW: 200 ppm 8		TWA: 200 ppm 8		calculated
	Stunden		Stunden		STEL: 306.25 mg/m ³ 15
	MAK-TMW: 500 mg/m ³		TWA: 500 mg/m ³ 8		minutter. value
	8 Stunden		Stunden		calculated
Hydrochloric acid	MAK-KZGW: 10 ppm 15		STEL: 4 ppm 15	STEL: 10 mg/m ³ 15	Ceiling: 5 ppm
	Minuten	Ceiling: 8 mg/m ³	Minuten	minutach	Ceiling: 7 mg/m ³
	MAK-KZGW: 15 mg/m ³		STEL: 6 mg/m ³ 15	TWA: 5 mg/m ³ 8	
	15 Minuten		Minuten	godzinach	
	MAK-TMW: 5 ppm 8		TWA: 2 ppm 8 Stunden		
	Stunden		TWA: 3 mg/m ³ 8		
	MAK-TMW: 8 mg/m ³ 8		Stunden		
	Stunden				
Methanol	Haut	TWA: 200 ppm 8 timer	Haut/Peau	STEL: 300 mg/m ³ 15	TWA: 100 ppm 8 timer
	MAK-KZGW: 800 ppm	TWA: 260 mg/m ³ 8 timer	STEL: 400 ppm 15	minutach	TWA: 130 mg/m ³ 8 timer
	15 Minuten	Hud	Minuten	TWA: 100 mg/m ³ 8	STEL: 150 ppm 15
	MAK-KZGW: 1040		STEL: 520 mg/m ³ 15	godzinach	minutter. value
	mg/m ³ 15 Minuten		Minuten		calculated
	MAK-TMW: 200 ppm 8		TWA: 200 ppm 8		STEL: 162.5 mg/m ³ 15
	Stunden		Stunden		minutter. value
	MAK-TMW: 260 mg/m ³		TWA: 260 mg/m ³ 8		calculated
	8 Stunden		Stunden		Hud

Component	Bulgaria	Croatia	Ireland	Cyprus	Czech Republic
Ethyl alcohol	TWA: 1000 mg/m ³	TWA-GVI: 1000 ppm 8 satima.	STEL: 1000 ppm 15 min		TWA: 1000 mg/m³ 8 hodinách.
		TWA-GVI: 1900 mg/m ³			Ceiling: 3000 mg/m ³
		8 satima.			
Isopropyl alcohol	TWA: 980.0 mg/m ³	TWA-GVI: 400 ppm 8	TWA: 200 ppm 8 hr.		TWA: 500 mg/m ³ 8
	STEL: 1225.0 mg/m ³	satima.	STEL: 400 ppm 15 min		hodinách.
		TWA-GVI: 999 mg/m ³ 8	Skin		Potential for cutaneous
		satima.			absorption
		STEL-KGVI: 500 ppm			Ceiling: 1000 mg/m ³

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		15 minutama. STEL-KGVI: 1250 mg/m³ 15 minutama.			
Hydrochloric acid	TWA: 5 ppm TWA: 8.0 mg/m³ STEL : 10 ppm STEL : 15.0 mg/m³	TWA-GVI: 5 ppm 8 satima. TWA-GVI: 8 mg/m³ 8 satima. STEL-KGVI: 10 ppm 15 minutama. STEL-KGVI: 15 mg/m³ 15 minutama.	TWA: 8 mg/m ³ 8 hr. F TWA: 5 ppm 8 hr. STEL: 10 ppm 15 min STEL: 15 mg/m ³ 15 min	STEL: 10 ppm STEL: 15 mg/m³ TWA: 5 ppm TWA: 8 mg/m³	TWA: 8 mg/m³ 8 hodinách. Ceiling: 15 mg/m³
Methanol	TWA: 200 ppm TWA: 260.0 mg/m³ Skin notation	kože TWA-GVI: 200 ppm 8 satima. TWA-GVI: 260 mg/m³ 8 satima.	TWA: 200 ppm 8 hr. TWA: 260 mg/m³ 8 hr. STEL: 600 ppm 15 min STEL: 780 mg/m³ 15 min Skin	Skin-potential for cutaneous absorption TWA: 200 ppm TWA: 260 mg/m ³	TWA: 250 mg/m³ 8 hodinách. Potential for cutaneous absorption Ceiling: 1000 mg/m³

Component	Estonia	Gibraltar	Greece	Hungary	Iceland
Ethyl alcohol	TWA: 500 ppm 8 tundides. TWA: 1000 mg/m³ 8 tundides. STEL: 1000 ppm 15 minutites. STEL: 1900 mg/m³ 15 minutites.		TWA: 1000 ppm TWA: 1900 mg/m³	STEL: 3800 mg/m ³ 15 percekben. CK TWA: 1900 mg/m ³ 8 órában. AK	TWA: 1000 ppm 8 klukkustundum. TWA: 1900 mg/m³ 8 klukkustundum. Ceiling: 2000 ppm Ceiling: 3800 mg/m³
Isopropyl alcohol	TWA: 150 ppm 8 tundides. TWA: 350 mg/m³ 8 tundides. STEL: 250 ppm 15 minutites. STEL: 600 mg/m³ 15 minutites.		STEL: 500 ppm STEL: 1225 mg/m³ TWA: 400 ppm TWA: 980 mg/m³	STEL: 1000 mg/m³ 15 percekben. CK TWA: 500 mg/m³ 8 órában. AK lehetséges borön keresztüli felszívódás	TWA: 200 ppm 8 klukkustundum. TWA: 490 mg/m³ 8 klukkustundum. Skin notation Ceiling: 400 ppm Ceiling: 980 mg/m³
Hydrochloric acid	TWA: 5 ppm 8 tundides. TWA: 8 mg/m³ 8 tundides. STEL: 10 ppm 15 minutites. STEL: 15 mg/m³ 15 minutites.	TWA: 5 ppm 8 hr TWA: 8 mg/m³ 8 hr STEL: 10 ppm 15 min STEL: 15 mg/m³ 15 min	STEL: 5 ppm STEL: 7 mg/m³ TWA: 5 ppm TWA: 7 mg/m³	STEL: 16 mg/m³ 15 percekben. CK TWA: 8 mg/m³ 8 órában. AK	STEL: 5 ppm STEL: 8 mg/m³
Methanol	Nahk TWA: 200 ppm 8 tundides. TWA: 250 mg/m³ 8 tundides. STEL: 250 ppm 15 minutites. STEL: 350 mg/m³ 15 minutites.	Skin notation TWA: 200 ppm 8 hr TWA: 260 mg/m ³ 8 hr	skin - potential for cutaneous absorption STEL: 250 ppm STEL: 325 mg/m³ TWA: 200 ppm TWA: 260 mg/m³	TWA: 260 mg/m³ 8 órában. AK lehetséges borön keresztüli felszívódás	TWA: 200 ppm 8 klukkustundum. TWA: 260 mg/m³ 8 klukkustundum. Skin notation Ceiling: 400 ppm Ceiling: 520 mg/m³

Component	Latvia	Lithuania	Luxembourg	Malta	Romania
Ethyl alcohol	TWA: 1000 mg/m ³	TWA: 500 ppm IPRD TWA: 1000 mg/m³ IPRD STEL: 1000 ppm STEL: 1900 mg/m³			TWA: 1000 ppm 8 ore TWA: 1900 mg/m³ 8 ore STEL: 5000 ppm 15 minute STEL: 9500 mg/m³ 15 minute
Isopropyl alcohol	STEL: 600 mg/m³ TWA: 350 mg/m³	TWA: 150 ppm IPRD TWA: 350 mg/m³ IPRD STEL: 250 ppm STEL: 600 mg/m³			TWA: 81 ppm 8 ore TWA: 200 mg/m³ 8 ore STEL: 203 ppm 15 minute STEL: 500 mg/m³ 15 minute
Hydrochloric acid	STEL: 10 ppm STEL: 15 mg/m³ TWA: 5 ppm TWA: 8 mg/m³	TWA: 5 ppm IPRD TWA: 8 mg/m³ IPRD STEL: 10 ppm STEL: 15 mg/m³	TWA: 5 ppm 8 Stunden TWA: 8 mg/m ³ 8 Stunden STEL: 10 ppm 15	TWA: 5 ppm TWA: 8 mg/m ³ STEL: 10 ppm 15 minuti STEL: 15 mg/m ³ 15	TWA: 5 ppm 8 ore TWA: 8 mg/m³ 8 ore STEL: 10 ppm 15 minute

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minuti	STEL: 15 mg/m ³ 15 minute
sibility of significant	Skin notation

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			Minuten STEL: 15 mg/m³ 15 Minuten	minuti	STEL: 15 mg/m³ 15 minute
Methanol	skin - potential for cutaneous exposure TWA: 200 ppm TWA: 260 mg/m ³	TWA: 200 ppm IPRD TWA: 260 mg/m³ IPRD Oda		possibility of significant uptake through the skin TWA: 200 ppm TWA: 260 mg/m ³	Skin notation TWA: 200 ppm 8 ore TWA: 260 mg/m³ 8 ore

Component	Russia	Slovak Republic	Slovenia	Sweden	Turkey
Ethyl alcohol	TWA: 1000 mg/m ³ 2391	Ceiling: 1920 mg/m ³	TWA: 960 mg/m ³ 8 urah	Indicative STEL: 1000	
	MAC: 2000 mg/m ³	TWA: 500 ppm	TWA: 500 ppm 8 urah	ppm 15 minuter	
		TWA: 960 mg/m ³	STEL: 1000 ppm 15	Indicative STEL: 1900	
			minutah	mg/m ³ 15 minuter	
			STEL: 1920 mg/m ³ 15	TLV: 500 ppm 8 timmar.	
			minutah	NGV	
				TLV: 1000 mg/m ³ 8	
				timmar. NGV	
Isopropyl alcohol	TWA: 10 mg/m ³ 1761	Ceiling: 1000 mg/m ³	TWA: 200 ppm 8 urah	Indicative STEL: 250	
	MAC: 50 mg/m ³	TWA: 200 ppm	TWA: 500 mg/m ³ 8 urah	ppm 15 minuter	
		TWA: 500 mg/m ³	STEL: 400 ppm 15	Indicative STEL: 600	
			minutah	mg/m ³ 15 minuter	
			STEL: 1000 mg/m ³ 15	TLV: 150 ppm 8 timmar.	
			minutah	NGV	
				TLV: 350 mg/m ³ 8	
				timmar. NGV	
Hydrochloric acid	MAC: 5 mg/m ³	Ceiling: 15 mg/m ³		Binding STEL: 4 ppm 15	
		TWA: 5 ppm	anhydrous	minuter	TWA: 8 mg/m ³ 8 saat
		TWA: 8.0 mg/m ³	TWA: 8 mg/m ³ 8 urah	Binding STEL: 6 mg/m ³	STEL: 10 ppm 15
			anhydrous	15 minuter	dakika
			STEL: 10 ppm 15	TLV: 2 ppm 8 timmar.	STEL: 15 mg/m ³ 15
			minutah anhydrous	NGV	dakika
			STEL: 15 mg/m ³ 15	TLV: 3 mg/m ³ 8 timmar.	
			minutah anhydrous	NGV	
Methanol	TWA: 5 mg/m ³ 1250	Potential for cutaneous	TWA: 200 ppm 8 urah	Indicative STEL: 250	Deri
	Skin notation	absorption	TWA: 260 mg/m ³ 8 urah	ppm 15 minuter	TWA: 200 ppm 8 saat
	MAC: 15 mg/m ³	TWA: 200 ppm	Koža	Indicative STEL: 350	TWA: 260 mg/m ³ 8 saat
		TWA: 260 mg/m ³	STEL: 800 ppm 15	mg/m ³ 15 minuter	
			minutah	TLV: 200 ppm 8 timmar.	
			STEL: 1040 mg/m ³ 15	NGV	
			minutah	TLV: 250 mg/m ³ 8	
				timmar. NGV	
				Hud	

Biological limit values

Component	European Union	United Kingdom	France	Spain	Germany
Isopropyl alcohol				Acetone: 40 mg/L urine	Acetone: 25 mg/L whole
				end of workweek	blood (end of shift)
					Acetone: 25 mg/L urine (end of shift)
Methanol			Methanol: 15 mg/L urine	Methanol: 15 mg/L urine	Methanol: 15 mg/L urine
			end of shift	end of shift	(end of shift)
					Methanol: 15 mg/L urine
					(for long-term
					exposures: at the end of
					the shift after several
					shifts)

Component	Italy	Finland	Denmark	Bulgaria	Romania
Isopropyl alcohol					Acetone: 50 mg/L urine end of shift
Methanol		_			Methanol: 6 mg/L urine end of shift

Component Gibraltar Latvia Slovak Republic Luxembourg Turkey

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Methanol	Methanol: 30 mg/L urine	
	end of exposure or work	
	shift	
	Methanol: 30 mg/L urine	
	after all work shifts for	
	long-term exposure	

Monitoring methodsBS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

Derived No Effect Level (DNEL) / **Derived Minimum Effect Level (DMEL)** See table for values

Component	Acute effects local (Dermal)	Acute effects systemic (Dermal)	Chronic effects local (Dermal)	Chronic effects systemic (Dermal)
Ethyl alcohol				DNEL = 343mg/kg
64-17-5 (90)				bw/day
Isopropyl alcohol				DNEL = 888mg/kg
67-63-0 (5)				bw/day
Methanol		DNEL = 20mg/kg		DNEL = 20mg/kg
67-56-1 (3)		bw/day		bw/day

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Ethyl alcohol 64-17-5 (90)	DNEL = 1900mg/m ³			DNEL = 950mg/m ³
Isopropyl alcohol 67-63-0 (5)				DNEL = 500mg/m ³
Hydrochloric acid 7647-01-0 (3)	DNEL = 15mg/m ³		DNEL = 8mg/m ³	
Methanol 67-56-1 (3)	DNEL = 130mg/m ³	DNEL = 130mg/m ³	DNEL = 130mg/m ³	DNEL = 130mg/m ³

Predicted No Effect Concentration (PNEC)

See values below.

Component	Fresh water	Fresh water	Water Intermittent	Microorganisms in	Soil (Agriculture)
		sediment		sewage treatment	
Ethyl alcohol	PNEC = 0.96mg/L	PNEC = 3.6mg/kg	PNEC = 2.75mg/L	PNEC = 580mg/L	PNEC = 0.63mg/kg
64-17-5 (90)		sediment dw		-	soil dw
Isopropyl alcohol	PNEC = 140.9mg/L	PNEC = 552mg/kg	PNEC = 140.9mg/L	PNEC = 2251mg/L	PNEC = 28mg/kg
67-63-0 (5)	-	sediment dw	-	-	soil dw
Methanol	PNEC = 20.8mg/L	PNEC = 77mg/kg	PNEC = 1540mg/L	PNEC = 100mg/L	PNEC = 100mg/kg
67-56-1 (3)	1	sediment dw		_	soil dw

Component	Marine water	Marine water	Marine water	Food chain	Air
		sediment	Intermittent		
Ethyl alcohol	PNEC = 0.79mg/L	PNEC = 2.9mg/kg		PNEC = 0.38g/kg	
64-17-5 (90)		sediment dw		food	
				PNEC = 0.72g/kg	
				food	
Isopropyl alcohol	PNEC = 140.9mg/L	PNEC = 552mg/kg		PNEC = 160mg/kg	
67-63-0 (5)		sediment dw		food	
Methanol	PNEC = 2.08mg/L	PNEC = 7.7mg/kg			
67-56-1 (3)		sediment dw			

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8.2. Exposure controls

Engineering Measures

Ensure adequate ventilation, especially in confined areas. Use spark-proof tools and explosion-proof equipment.

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 Wear safety glasses with side shields (or goggles) (European standard - EN 166)

Hand Protection Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Disposable gloves	See manufacturers	-	EN 374	(minimum requirement)
	recommendations			

Skin and body protection Long sleeved clothing.

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 compatability, 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.

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

On basis of test data

and maintained properly

In case of insufficient ventilation, wear suitable respiratory equipment Large scale/emergency use

Small scale/Laboratory use Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure

limits are exceeded or if irritation or other symptoms are experienced.

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

No information available. **Environmental exposure controls**

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State Liquid

Appearance Colourless

Odor No information available

Odor Threshold No data available **Melting Point/Range** No data available **Softening Point** No data available **Boiling Point/Range** Not applicable Flammability (liquid) Highly flammable

No information available Flammability (solid,gas)

No data available **Explosion Limits**

13.9 °C / 57 °F Method - No information available Flash Point

Autoignition Temperature No data available **Decomposition Temperature** No data available

pН 4.0

No data available **Viscosity** Water Solubility No information available Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

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Component log Pow Ethyl alcohol -0.320.05 Isopropyl alcohol Methanol -0.74

Vapor Pressure No data available **Density / Specific Gravity** No data available No data available **Bulk Density Vapor Density** No data available

Particle characteristics Not applicable (liquid)

9.2. Other information

SECTION 10: STABILITY AND REACTIVITY

(Air = 1.0)

10.1. Reactivity None known, based on information available

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization does not occur. **Hazardous Polymerization**

Hazardous Reactions None under normal processing.

10.4. Conditions to avoid

Heat, flames and sparks.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Carbon oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Product Information Product does not present an acute toxicity hazard based on known or supplied information

(a) acute toxicity;

Oral Based on ATE data, the classification criteria are not met **Dermal** Based on ATE data, the classification criteria are not met Inhalation Based on ATE data, the classification criteria are not met

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethyl alcohol	LD50 = 7060 mg/kg (Rat)	-	20000 ppm/10H (Rat)
Isopropyl alcohol	5045 mg/kg (Rat) 3600 mg/kg (Mouse)	12800 mg/kg (Rat)	72.6 mg/L (Rat) 4 h
Hydrochloric acid	238 - 277 mg/kg (Rat)	> 5010 mg/kg (Rabbit)	1.68 mg/L (Rat)1 h
Methanol	LD50 = 1187 - 2769 mg/kg (Rat)	LD50 = 17100 mg/kg (Rabbit)	LC50 = 128.2 mg/L (Rat) 4 h

(b) skin corrosion/irritation; Category 2

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(c) serious eye damage/irritation; Category 1

(d) respiratory or skin sensitization;

Respiratory SkinNo data available

No data available

Component	Test method	Test species	Study result
Methanol	OECD Test Guideline 406	guinea pig	non-sensitising
67-56-1 (3)	Guinea Pig Maximisation Test		_
	(GPMT)		

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; No data available

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

(g) reproductive toxicity; No data available

Component	Test method	Test species / Duration	Study result
Methanol	OECD Test Guideline 416	Rat / Inhalation	NOAEC =
67-56-1 (3)		2 Generation	1.3 mg/l (air)

(h) STOT-single exposure; Category 2

Results / Target organs Optic nerve, Central nervous system (CNS).

(i) STOT-repeated exposure; No data available

Target Organs No information available.

(j) aspiration hazard; No data available

Symptoms / effects,both acute and No information available.

delayed

11.2. Information on other hazards

Endocrine Disrupting Properties Assess endocrine disrupting properties for human health. This product does not contain any

known or suspected endocrine disruptors.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity effects

Ecotoxicity effects

Component	Freshwater Fish	Water Flea	Freshwater Algae
Ethyl alcohol	Fathead minnow (Pimephales	EC50 = 9268 mg/L/48h	EC50 (72h) = 275 mg/l (Chlorella
	promelas) LC50 = 14200	EC50 = 10800 mg/L/24h	vulgaris)
	mg/l/96h		
Isopropyl alcohol	LC50: = 9640 mg/L, 96h	13299 mg/L EC50 = 48 h	EC50: > 1000 mg/L, 96h
	flow-through (Pimephales	9714 mg/L EC50 = 24 h	(Desmodesmus subspicatus)
	promelas)		EC50: > 1000 mg/L, 72h
	LC50: > 1400000 μg/L, 96h		(Desmodesmus subspicatus)
	(Lepomis macrochirus)		

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Component	Microtox	M-Factor
Ethyl alcohol	Photobacterium phosphoreum:EC50 = 34634	
	mg/L/30 min	
	Photobacterium phosphoreum:EC50 = 35470	
	mg/L/5 min	
Isopropyl alcohol	= 35390 mg/L EC50 Photobacterium phosphoreum	
	5 min	
Hydrochloric acid	-	
Methanol	EC50 = 39000 mg/L 25 min	
	EC50 = 40000 mg/L 15 min	
	EC50 = 43000 mg/L 5 min	

12.2. Persistence and degradability No information available

Component	Degradability
Methanol	DT50 ~ 17.2d
67-56-1 (3)	>94% after 20d

12.3. Bioaccumulative potential No information available

Component	log Pow	Bioconcentration factor (BCF)
Ethyl alcohol	-0.32	No data available
Isopropyl alcohol	0.05	No data available
Methanol	-0.74	<10

12.4. Mobility in soil No information available .

12.5. Results of PBT and vPvB

assessment

No data available for assessment.

12.6. Endocrine disrupting

properties

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors

12.7. Other adverse effects

Persistent Organic Pollutant Ozone Depletion Potential This product does not contain any known or suspected substance This product does not contain any known or suspected substance

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues/Unused

Products

Hazardous waste classification. Dispose of in accordance with federal, state and local regulations.

Contaminated Packaging Empty remaining contents. Dispose of in accordance with local regulations. Do not re-use

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empty containers.

European Waste Catalogue (EWC) According to the European Waste Catalog, Waste Codes are not product specific, but

application specific.

Other Information Waste codes should be assigned by the user based on the application for which the product

was used.

Switzerland - Waste Ordinance Disposal should be in accordance with applicable regional, national and local laws and

regulations. Ordinance on the Avoidance and the Disposal of Waste (Waste Ordinance,

ADWO) SR 814.600

https://www.fedlex.admin.ch/eli/cc/2015/891/en

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

14.1. UN number UN2924

14.2. UN proper shipping name Flammable liquid, corrosive, n.o.s. (Contains Ethanol and Hydrochloric acid)

14.3. Transport hazard class(es) 3
Subsidiary Hazard Class 8
14.4. Packing group II

ADR

14.1. UN number UN2924

14.2. UN proper shipping name Flammable liquid, corrosive, n.o.s. (Contains Ethanol and Hydrochloric acid)

14.3. Transport hazard class(es)
Subsidiary Hazard Class
8
14.4. Packing group

IATA

14.1. UN number UN2924

14.2. UN proper shipping name Flammable liquid, corrosive, n.o.s. (Contains Ethanol and Hydrochloric acid)

14.3. Transport hazard class(es)3Subsidiary Hazard Class814.4. Packing groupII

14.5. Environmental hazards No hazards identified

14.6. Special precautions for user No special precautions required

<u>14.7. Maritime transport in bulk</u> Not applicable, packaged goods according to IMO instruments

SECTION 15: REGULATORY INFORMATION

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

International Inventories

Europe (EINECS/ELINCS/NLP), China (IECSC), Taiwan (TCSI), Korea (KECL), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Australia (AICS), New Zealand (NZIoC), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

Component	CAS No	EINECS	ELINCS	NLP	IECSC	TCSI	KECL	ENCS	ISHL
Ethyl alcohol	64-17-5	200-578-6	-	-	Х	X	KE-13217	Χ	Х
Isopropyl alcohol	67-63-0	200-661-7	-	-	Х	X	KE-29363	Х	Х

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ĺ	Hydrochloric acid	7647-01-0	231-595-7	-	-	Х	Х	KE-20189	Х	Х
	Methanol	67-56-1	200-659-6	-	-	Х	Х	KE-23193	X	Х

Component	CAS No	TSCA	TSCA Inventory notification -	DSL	NDSL	AICS	NZIoC	PICCS
			Active-Inactive					
Ethyl alcohol	64-17-5	X	ACTIVE	X	•	X	X	X
Isopropyl alcohol	67-63-0	X	ACTIVE	X	Ī	X	X	X
Hydrochloric acid	7647-01-0	X	ACTIVE	X	-	X	X	X
Methanol	67-56-1	X	ACTIVE	X	Ī	X	X	Х

Legend: X - Listed '-' - Not Listed KECL - NIER numb

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

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	
Isopropyl alcohol	-	Use restricted. See item 75.	-
		(see link for restriction details)	
Hydrochloric acid	-	Use restricted. See item 75.	-
		(see link for restriction details)	
Methanol	-	Use restricted. See item 69.	-
		(see link for restriction details)	

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

Component	CAS No	Seveso III Directive (2012/18/EC) -	Seveso III Directive (2012/18/EC) -
		Qualifying Quantities for Major	Qualifying Quantities for Safety
		Accident Notification	Report Requirements
Ethyl alcohol	64-17-5	Not applicable	Not applicable
Isopropyl alcohol	67-63-0	Not applicable	Not applicable
Hydrochloric acid	7647-01-0	25 tonne	250 tonne
Methanol	67-56-1	500 tonne	5000 tonne

Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals

Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Take note of Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values

National Regulations

UK - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

WGK Classification Water endangering class = 1 (self classification)

Component	Germany - Water Classification (VwVwS)	Germany - TA-Luft Class
Ethyl alcohol	WGK1	
Isopropyl alcohol	WGK1	
Hydrochloric acid	WGK1	
Methanol	WGK 2	

Component	France - INRS (Tables of occupational diseases)		
Ethyl alcohol	Tableaux des maladies professionnelles (TMP) - RG 84		
Isopropyl alcohol	Tableaux des maladies professionnelles (TMP) - RG 84		
Methanol	Tableaux des maladies professionnelles (TMP) - RG 84		

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Swiss Regulations

Article 4 para. 4 of the Ordinance on the protection of young people in the workplace (SR 822.115) and Article 1 lit. f of the EAER regulation on hazardous work and young people (SR 822.115.2).

Take note on Article 13 Maternity Ordinance (SR 822.111.52) with regards expectant and nursing mothers.

Component	Switzerland - Ordinance on the Reduction of Risk from handling of hazardous substances preparation (SR 814.81)	Switzerland - Ordinance on Incentive Taxes on Volatile Organic Compounds (OVOC)	Switzerland - Ordinance of the Rotterdam Convention on the Prior Informed Consent Procedure
Ethyl alcohol 64-17-5 (90)		Group I	
Isopropyl alcohol 67-63-0 (5)		Group I	
Hydrochloric acid 7647-01-0 (3)	Prohibited and Restricted Substances		
Methanol 67-56-1 (3)	Prohibited and Restricted Substances	Group I	

15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H290 - May be corrosive to metals

H315 - Causes skin irritation

H318 - Causes serious eye damage

H370 - Causes damage to organs

H225 - Highly flammable liquid and vapor

H319 - Causes serious eye irritation

H336 - May cause drowsiness or dizziness

H314 - Causes severe skin burns and eye damage

H335 - May cause respiratory irritation

H301 - Toxic if swallowed

H311 - Toxic in contact with skin

H331 - Toxic if inhaled

H371 - May cause damage to organs

Legend

CAS - Chemical Abstracts Service

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

EINECS/ELINCS - European Inventory of Existing Commercial Chemical DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances/EU List of Notified Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

Substances List **ENCS** - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances NZIoC - New Zealand Inventory of Chemicals

WEL - Workplace Exposure Limit

ACGIH - American Conference of Governmental Industrial Hygienists

DNEL - Derived No Effect Level

RPE - Respiratory Protective Equipment

LC50 - Lethal Concentration 50%

NOEC - No Observed Effect Concentration

PBT - Persistent, Bioaccumulative, Toxic

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

Predicted No Effect Concentration (PNEC)

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%

POW - Partition coefficient Octanol:Water

vPvB - very Persistent, very Bioaccumulative

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

MARPOL - International Convention for the Prevention of Pollution from Ships

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OECD - Organisation for Economic Co-operation and Development ATE - Acute Toxicity Estimate **BCF** - Bioconcentration factor VOC - (volatile organic compound)

Key literature references and sources for data

https://echa.europa.eu/information-on-chemicals

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Creation Date 12-May-2011 **Revision Date** 10-Dec-2021

Update to CLP Format. **Revision Summary**

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006. COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No 1907/2006

For Switzerland - Compiled in accordance with the technical provisions referred to in Annex 2, Number 3, ChemO (SR 813.11 - Ordinance on Protection against Dangerous Substances and Preparations).

Disclaimer

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End of Safety Data Sheet