

# TMB Stop Solution

## MATERIAL SAFETY AND DATA SHEET

Section 1		Chemical Product and Company Identification	
Name	TMB Stop Solution		Cat.#UPS29590
Synonyms (CAS, chemical names, tradename, abbreviates...)	muriatic acid, Spirit(s) of Salt CAS No: 7647-01-0		
Company identification	INTERCHIM - UPTIMA		213 J.F.Kennedy, 03100 Montlucon (FRANCE) Tel. :+33 (0)4 70 03 88 55 Fax: +33 (0)4 70 03 82 60 e-mail: <a href="mailto:uptima@interchim.com">uptima@interchim.com</a>
In case of Emergency	In Europe: Call INTERCHIM out of office: Centre anti Poisons de Lyon In US: call CHEMTREC		Tel.: +33 4 70 03 88 55 Tel.: +33 4 72 11 69 11 Tel.: 800;424;9300

Section 2		Composition, Information on ingredients	
Ingredients	ingredients (Identification, CAS, Name...) information / hazards of pure material		Information (% weight, state...)
HydroChloric acid	CAS: [7647-01-0], MW: 36.46 g/mol 10-25%: Xi, R:36/37/38 >25%: C R:34-37		UN\$PG:1789 UN\$PG:1789/ II, 8 < 4%
Water	CAS: [7732-18-5] Not dangerous		95-100%
Other ingredients	Proprietary Not dangerous		<1% w/v solution

Section 3		Hazards Identification	
Label precautionary statement	This product contains a compound (hydrochloric acid) that is corrosive and even toxic at high concentrations. To our knowledge it is however in low enough concentration that would not require regulated labeling. IRRITATING (slightly corrosive) may cause eye and skin irritation		
Health effects (Routes of entry/ Eye, Skin, Ingestion, Inhalation)	Not available Component HCl(pure): Hazardous in case of skin contact (corrosive, irritant, permeator), of eye contact (irritant, corrosive), of ingestion. Slightly hazardous in case of inhalation (lung sensitizer). Non-corrosive for lungs. Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.		
(Acute)	Not available. Component HCl(pure): The substance may be toxic to kidneys, liver, mucous membranes, upper respiratory tract, skin, eyes, Circulatory System, teeth.		
(Chronic)	Not available Component HCl(pure): Slightly hazardous in case of skin contact (sensitizer). CARCINOGENIC EFFECTS: Classified 3 (Not classifiable for human.) by IARC MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available.		
Other information (over-exposure, toxicity...)	Repeated or prolonged exposure may aggravate medical condition.		
Emergency overview	In case of contact, rinse immediately with plenty of water and seek medical advice. Take off all contaminated clothing. (see sections 4, 5 & 6)		
Precautionary guidelines	Wear suitable protective clothing when handling to avoid contact. (see sections 7 & 8)		

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Section 4 First aid Measures	
General measures	Remove contaminated clothing promptly. Allow the victim to rest in a well ventilated area, and seek medical advice
Emergency first measures (Eyes, Skin, Ingestion, Inhalation...)	In case of skin contact, wash thoroughly. Remove contaminated clothing and wash affected skin with soap and water. Seek medical attention if irritation develops. Serious Skin Contact: wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention. In case of eye contact, rinse immediately 10min by separating eyelids, and seek for medical advice. Remove contact lenses if any. If inhaled, remove victim to fresh air. If difficult breathing, support breathing, give oxygen and obtain medical attention. If not breathing, give artificial respiration. If ingested, do NOT induce vomiting. If conscious and alert, rinse mouth, drink plenty of water, and seek medical advice.
Notes to physicians	Treat symptomatically

Section 5 Fire Fighting Measures	
Physical Information (Flammability, auto-ignition, flash point...)	See physical characteristics in section 9 Non Flammable / not combustible; aqueous solution May emit toxic fumes under fire conditions. Component HCl(pure): fire hazards in presence of several metals; Violent/vigorous reaction in presence of several chemicals.
General information	As in any fire, do not enter any enclosed or confined fire space without proper protective equipment (wear a self-contained breathing apparatus in pressure-demand, and full protective clothing) (see section 8)
Extinguishing media	N/A. Use water or extinguishing media appropriate to surrounding fire conditions. (water, carbon dioxide, dry chemical powder, or foam)
Spills and Leaks	See section 6

Section 6 Accidental Release Measures	
General information	Wear proper personal protective equipment (see section 8): wear respirator, rubber boots, chemical resistant gloves.
Spills and Leaks	Sweep up or vacuum material and place into a suitable waste disposal container. Clean contaminated surfaces by spreading water. Ventilate area. Dispose off according to local and regional authority requirements. See section 13
Other	

Section 7 Handling and Storage	
Handling	Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific applications. Wear proper personal protective lab equipment (see section 8). Avoid skin contact Wash thoroughly after handling.
Storage	Store tightly closed at room temperature or a cool place

Section 8 Exposure Controls, Personal Protection	
Engineering controls	Ensure there is eyewash stations and safety showers close to the work-stations. Avoid breathing vapors, and provide an exhaust ventilation if prolonged work periods.
Personal protection (eyes, hands, body, respiratory...)	No special equipment is required in intended conditions of normal use (see instruction sheet): Follow good laboratory practices to avoid contact with eyes, mucosa and skin: splash goggles, labcoat and gloves are sufficient when handled properly.
Exposure limits	consult local authorities

Section 9 Physical and Chemical Properties	
Physical state (Appearance, odor, color)	Appearance: clear colourless solution

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<b>Other</b> (pH, Melting/Freezing Point, Vapor Pressure, Vapor Density, Volatility, Boiling Point, Viscosity, Flash point, Auto-ignition temperature, Explosion limits (low.Upp.), Specific Gravity / Density, Molecular Formula /MW)	Component HCl (pure): HCl, MW: 36.46 g/mol Melting point: -26 C Boiling point: 109 C Specific gravity: 1.19g/cm3 PKa: -8.0
<b>Comments</b>	See section 10(Stability), 5(Flammability)

Section 10 Stability and Reactivity	
<b>Chemical Stability</b> <b>Chemical Reactivity</b> (conditions, by-products...)	This product is stable under normal storage and handling conditions
<b>Incompatibilities</b> (conditions, materials...)	Conditions to avoid: keep away from heat, strong alkalis, oxidizers (produces chlorine gas). Component HCl (pure): Incompatible with most common metals, amines, metal oxides, acetic anhydride, propiolactone, vinyl acetate, mercuric sulphate, calcium phosphide, formaldehyde, alkalies, carbonates, strong bases, sulphuric acid, chlorosulphonic acid.
<b>Decomposition polymerisation</b> (conditions, materials...)	No Hazardous decomposition or polymerisation under normal conditions
<b>Comments</b>	

Section 11 Toxicological Information	
<b>Toxicity in animals in human</b>	Slightly corrosive. May have toxic effects upon large exposure. Component HCl(pure): ORL-RBT LD50 900 mg kg-1 IPR-MUS LD50 40 mg kg-1 IHL-RAT LC50 3124 ppm/1h. IHL-HMN LCLO 1300 ppm 30min
<b>Chronic effects</b> (carcinogenicity, teratogenicity, reproductive toxicity, mutagenesis)	No other known significant effects or critical hazards is expected from ingredients datas (carcinogenicity, mutagenicity, reproductive toxicity)
<b>Remarks</b> (RTECS...)	To the best of our knowledge, the toxicological properties of this product have not been thoroughly investigated. See actual entry in RTECS for complete information.

Section 12 Ecological Information	
<b>Ecotoxicity</b> (BOD5, COD....; Biodegradation; Mobility)	Not available Component HCl (pure): Lethal to fish from 25 mg/l up.
<b>Remarks</b>	Toxic for aquatic organisms due to pH shift in case of large volumes

Section 13 Disposal Considerations	
<b>Waste</b>	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Neutralize with NaOH solution before disposing off. Observe all local regulations.
<b>Remarks</b>	

Section 14 Transport Information	
<b>Classifications</b> (Europe) (Other classifications)	Not controlled
<b>Shipping</b>	Contact your supplier / Room temperature
<b>Hazards Class</b>	N/A
<b>UN Class</b>	N/A
<b>Packing Group</b>	N/A
<b>Comments</b> (marine pollutants...)	

For any question,  
contact your local distributor

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Section 15 Regulatory Information	
<b>Classification Europe</b>	* European labeling in accordance with EC directives Not Regulated according EU regulations (DSCL/EEC) Hazard symbols: Xi (IRRITATING) Risk phrases: R36/37/38 Irritating to eyes, respiratory system and skin Safety phrases: S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
<b>Other classifications</b>	* US regulations: N/A * International regulations: N/A
Section 16 Additional Information	
<b>MSDS validation</b>	InterBioTech/UPTIMA-INTERCHIM, I07E
<b>Comment</b>	<i>The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages</i>