## MAR ATHANASIOS COLLEGE FOR ADVANCED STUDIES TIRUVALLA (MACFAST)



## LIST OF HAZARDOUS CHEMICALS AND MODE OF DISPOSAL

Sl. No	Chemical Name	Hazard statements	Precautions to be taken during accidental spill	Health Precautions to be taken if exposed to chemical	Mode of disposal
1.	Ammonium Chloride (Nice)	Harmful if swallowed Causes serious eye irritation Toxic to aquatic life with long lasting effects	Personal precautions, protective equipment and emergency procedures: Ensure adequate ventilation.Ensure that airhandling systems are operational. Environmental precautions: Should not be released into the environment. Prevent from reaching drains, sewer, or waterway. Methods and material for containment and cleaning up: Keep in suitable closed containers for disposal. If necessary, use trained response staff or contractors. Absorb with suitable material. Wear protective eyewear, gloves, and clothing. Refer to Section 8.Always obey local regulations.Evacuate personnel to safe areas. Containerize for disposal.	After inhalation: Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Give artificial respiration if necessary. Get medical assistance if cough or other symptoms appear. After skin contact: Wash affected area with soap and water. Seek medical advice if discomfort or irritation persists. After eye contact: Protect unexposed eye. Rinse or flush the exposed eye gently using water for 15-20 minutes. Remove contact lenses while rinsing. Continue rinsing eyes for an additional 15 minutes. Immediately get medical assistance. After swallowing: Rinse mouth thoroughly. Do not induce vomiting. Get medical assistance.	Keep in suitable closed containers for disposal. Dilute with water and flush to sewer.If necessary use trained response staff or contractor. Absorb with suitable material. Wear protective eyewear, gloves, and clothing.
2.	Antimony potassium Tartrate	May cause respiratory irritation	Personal Precautions Environmental Precautions	General Advice If symptoms persist, call a physician.	Use appropriate containment to avoid environmental

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		May cause damage to	Use personal protective	Eye Contact Rinse immediately	contamination. Remove
		organs through prolonged	equipment as required. Ensure	with plenty of water, also under the	waste in
		or repeated exposure	adequate ventilation. Avoid dust	eyelids, for at least 15 minutes. Get	accordance with local
		Harmful if swallowed or if	formation.	medical attention.	and/or national
		inhaled	Do not flush into surface water or	Skin Contact Wash off immediately	regulations. Hazardous
			the sanitary sewer system. Should	with plenty of water for at least 15	waste shall not be
			not be released into the	minutes. If skin irritation persists,	mixed together
			environment. Do not allow	call a physician.	with other waste.
			material to contaminate the	Inhalation Remove to fresh air. If	Different types of
			groundwater system.	not breathing, give artificial	hazardous waste shall
			Methods for Containment and	respiration. Get medical attention if	not be mixed together if
			Clean up: Sweep up and shovel	symptoms occur.	this may
			into suitable containers for	Ingestion: Clean mouth with water	entail a risk of pollution
			disposal. Keep in suitable, closed	and drink plenty of water. Get	or create problems for
			containers for disposal.	medical attention if	the further management
				symptoms occur.	of the waste. Hazardous
				Most important symptoms and	waste shall be managed
				effects:None reasonably	responsibly. All entities
				foreseeable.	that store, transport or
				Notes to Physician	handle hazardous
				Treat symptomatically	waste shall take the
					necessary measures to
					prevent risks of
					pollution or damage to
					people or
					animals. Recycle/reuse.
3.	Ammonium	May intensify fire;	Personal precautions, protective	Eyes: Immediately flush eyes with	Dispose of
	persulphate AR	oxidiser.	equipment and emergency	plenty of water for at least 15	contents/container to
		Harmful if swallowed.	procedures	minutes, occasionally lifting the	hazardous or special
		Causes skin irritation.	General measures	upper and lower eyelids. Get	waste collection point,
		May cause an allergic skin	: No open flames. No smoking.	medical aid.	in
		reaction.	For non-emergency personnel	Skin: Flush skin with plenty of	according to local,
		Causes serious eye	Emergency procedures : Evacuate	water for at least 15 minutes while	regional, national
		irritation.	unnecessary personnel.	removing contaminated clothing	and/or international
			For emergency responders	and shoes. Get medical aid if	regulation.

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		May cause allergy or	Protective equipment	irritation develops or persists. Wash	
		asthma symptoms or	Emergency procedures: Use	clothing before reuse.	
		breathing difficulties if	personal protective equipment as	Ingestion: Do not induce vomiting.	
		inhaled.	required.	If the victim is conscious and alert,	
		May cause respiratory	: Ventilate area.	give 2-4 cupfuls of milk or water.	
		irritation.		Never give anything by mouth to an	
				unconscious person. Get medical	
				aid.	
				Inhalation: Remove from exposure	
				and move to fresh air immediately.	
				If breathing is difficult, give	
				oxygen. Get medical aid if cough or	
				other symptoms appear. Do NOT	
				use mouth-to-mouth resuscitation.	
				If breathing has ceased apply	
				artificial respiration using oxygen	
				and a suitable mechanical device	
				such as a bag and a mask.	
				Notes to Physician: Treat	
				symptomatically and supportively.	
4.	Barium chloride	Eye: Contact produces	General Information: Use proper	Eyes: Flush eyes with plenty of	Chemical waste
4.	(Merck)	irritation, tearing, and	personal protective equipment as	water for at least 15 minutes,	generators must
	(IVICICK)	burning pain. May cause	indicated in Section 8.	occasionally lifting the upper and	determine whether a
		conjunctivitis.	Spills/Leaks: Vacuum or sweep	lower eyelids. Get medical aid.	discarded chemical is
		3	1	Skin: Get medical aid. Flush skin	classified as a
		Skin: Causes skin	up material and place into a		
		irritation. Prolonged	suitable disposal container. Clean	with plenty of water for at least 15	hazardous waste. US
		contact with the skin,	up spills immediately, observing	minutes while removing	EPA guidelines for the
		especially if the skin is wet	precautions in the Protective	contaminated clothing and shoes.	classification
		or moist, causes necrosis.	Equipment section. Avoid	Wash clothing before reuse.	determination are listed
		Ingestion: Harmful if	generating dusty conditions.	Ingestion: Do not induce vomiting.	in 40 CFR Parts 261.3.
		swallowed. May cause	Provide ventilation.	If the victim is conscious and alert,	Additionally, waste
		kidney damage. The		give 2-4 cupfuls of milk or water.	generators must consult
		barium ion is a muscle		Never give anything by mouth to an	state and local
		poison causing stimulation		unconscious person. Get medical	hazardous waste
		and then paralysis. Initial		aid immediately.	regulations to ensure

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		symptoms are		Inhalation: Remove from exposure	complete and accurate
		gastrointestinal, including		and move to fresh air immediately.	classification.
		nausea, vomiting, colic,		If not breathing, give artificial	
		and diarrhea, followed by		respiration. If breathing is difficult,	
		myocardial and general		give oxygen. Get medical aid. Do	
		muscular stimulation with		NOT use mouth-to-mouth	
		tingling in the extremities.		resuscitation.	
		Barium chloride affects the		Notes to Physician: Do NOT use	
		muscles (especially the		mouth-to-mouth resuscitation.	
		smooth muscles of the			
		cardiovascular and			
		respiratory systems),			
		causes salivation, tingling			
		of the mouth or face,			
		convulsions, numbness,			
		muscle paralysis,			
		respiratory failure, slow			
		pulse rate, pulmonary			
		edema, irregular heart			
		beat, potassium deficiency			
		in the			
		Inhalation: Harmful if			
		inhaled. Causes respiratory			
		tract irritation. May cause			
		effects similar to those			
		described for ingestion.			
		Chronic: Chronic exposure			
		may cause effects similar			
		to those of acute exposure.			
5.	Barium chloride	Eye: Contact produces	General Information: Use proper	Eyes: Flush eyes with plenty of	Chemical waste
	(Nice-2 bottles)	irritation, tearing, and	personal protective equipment as	water for at least 15 minutes,	generators must
		burning pain. May cause	indicated in Section 8.	occasionally lifting the upper and	determine whether a
		conjunctivitis.	Spills/Leaks: Vacuum or sweep	lower eyelids. Get medical aid.	discarded chemical is
		Skin: Causes skin	up material and place into a	Skin: Get medical aid. Flush skin	classified as a
		irritation. Prolonged	suitable disposal container. Clean	with plenty of water for at least 15	hazardous waste. US

contact with the skin. especially if the skin is wet or moist, causes necrosis. Ingestion: Harmful if swallowed. May cause kidney damage. The barium ion is a muscle poison causing stimulation and then paralysis. Initial symptoms are gastrointestinal, including nausea, vomiting, colic, and diarrhea, followed by myocardial and general muscular stimulation with tingling in the extremities. Barium chloride affects the muscles (especially the smooth muscles of the cardiovascular and respiratory systems), causes salivation, tingling of the mouth or face. convulsions, numbness, muscle paralysis, respiratory failure, slow pulse rate, pulmonary edema, irregular heart beat, potassium deficiency in the Inhalation: Harmful if inhaled. Causes respiratory tract irritation. May cause effects similar to those described for ingestion.

up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately. Inhalation: Remove from exposure and move to fresh air immediately. If not breathing give artificial

and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation.

Notes to Physician: Do NOT use mouth-to-mouth resuscitation.

EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

		Chronic: Chronic exposure may cause effects similar			
6.	Borax (3 bottles)	to those of acute exposure.  Eye Contact: May cause eye irritation.  Skin Contact: Not irritating to skin.  Inhalation: High concentrations of dust may cause coughing and mild, temporary irritation.  Ingestion: Small amounts swallowed incidental to normal handling operations are not likely to cause injury. Swallowing larger amounts may cause gastrointestinal symptoms.  May cause abdominal discomfort, nausea, vomiting and diarrhea.	Personal Precautionary Measures: Wear appropriate protective equipment. Environmental Precautionary Measures: Borax is a water- soluble, white powder that may, at high concentrations, cause damage to trees or vegetation by root absorption. Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. Consult local authorities. Procedure for Clean Up: Scoop up or vacuum up and place in an appropriate closed container. Water spill: Where possible, remove any intact containers from the water. Advise local water authority that none of the affected water should be used for irrigation or for the abstraction of potable water until natural dilution returns the boron value to its natural environmental background level.	Eye Contact: Flush eyes with gently flowing water for at least 30 minutes or until the chemical is removed, while holding the eyelid(s) open. Take care not to rinse the contaminated water into the unaffected eye or face. Seek immediate medical attention.  Skin Contact: Wash with soap and water.  Inhalation: Move the person to fresh air.  Ingestion: Swallowing small quantities (one teaspoon) will cause no harm to healthy adults. If larger amounts are swallowed, seek medical attention.  Notes to Physician: Observation only is required for adult ingestion in the range of 4-8 grams of product. For ingestion of larger amounts, maintain adequate kidney function and force fluids. Gastric lavage is recommended for symptomatic patients only. Hemodialysis should be reserved for massive acute ingestion or patients with renal failure. Boron analyses of urine or blood are only useful for documenting exposure and should	Disposal of Waste Method: Disposal of all wastes must be done in accordance with municipal, provincial and federal regulations. Contaminated Packaging: Empty containers should be recycled or disposed of through an approved waste management facility.

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Burn in a incinerator
s equipped with an
in afterburner and
scrubber but exert extra
care in igniting as this
material
n into is highly flammable.
Offer surplus and non-
recyclable solutions to a
licensed disposal
company. Contact a
licensed

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				Wash off with soap and plenty of	professional waste
				water. Consult a physician.	disposal service to
				In case of eye contact	dispose of this material.
				Rinse thoroughly with plenty of	If the packaging is
				water for at least 15 minutes and	contaminated
				consult a physician.	dispose of as unused
				If swallowed	product
				Never give anything by mouth to an	
				unconscious person. Rinse mouth	
				with water. Consult a physician.	
9.	Barium	Harmful if swallowed	After inhalation: Move exposed	After inhalation: Move exposed	Dispose according to
	Hydroxide	Harmful if inhaled	individual to fresh air. Loosen	individual to fresh air. Loosen	the local and national
		Causes serious eye	clothing as necessary and position	clothing as necessary and position	regulations
		damage	individual in	individual in	
		Causes severe skin burns	a comfortable position.Seek	a comfortable position.Seek	
		and eye damage	medical advice if discomfort or	medical advice if discomfort or	
			irritation persists. If breathing is	irritation persists.If breathing	
			difficult, give oxygen.	difficult, give oxygen.	
			After skin contact: Wash affected	After skin contact: Wash affected	
			area with soap and water.	area with soap and water.	
			Rinse/flush exposed skin gently	Rinse/flush exposed skin gently	
			using water for	using water for	
			15-20 minutes. Seek medical	15-20 minutes. Seek medical	
			advice if discomfort or irritation	advice if discomfort or irritation	
			persists.	persists.	
			After eye contact: Protect	After eye contact: Protect	
			unexposed eye. Rinse/flush	unexposed eye. Rinse/flush	
			exposed eye(s) gently using water	exposed eye(s) gently using water	
			for 15-20 minutes.	for 15-20 minutes.	
			Remove contact lens(es) if able to	Remove contact lens(es) if able to	
			do so during rinsing. Seek	do so during rinsing. Seek medical	
			medical attention if irritation	attention if irritation persists or if	
			persists or if concerned.	concerned.	
			After swallowing: Rinse mouth	After swallowing: Rinse mouth	
			thoroughly. Do not induce	thoroughly. Do not induce	

			vomiting. Have exposed	vomiting. Have exposed individual	
			individual drink sips of	drink sips of	
			water. Seek medical attention if	water. Seek medical attention if	
			irritation, discomfort or vomiting	irritation, discomfort or vomiting	
			persists.	persists.	
			Most important symptoms and	Most important symptoms and	
			effects, both acute and delayed:	effects, both acute and delayed:	
			Irritation, Nausea, Headache,	Irritation, Nausea, Headache,	
			Shortness of breath.;	Shortness of breath.;	
			Indication of any immediate	Indication of any immediate	
			medical attention and special	medical attention and special	
			treatment needed:	treatment needed:	
			If seeking medical attention,	If seeking medical attention,	
			provide SDS document to	provide SDS document to	
			physician	physician.	
10.	Copper(II)	Harmful if swallowed	Do not eat, drink or smoke when	Eyes: Immediately flush eyes with	Products/containers
	sulfate	Causes skin irritation	using this product	plenty of water for at least 15	must not be disposed of
	Pentahydrate	Causes serious eye	Rinse mouth	minutes, occasionally lifting the	together with household
		irritation	Specific treatment (see on this	upper and lower eyelids. Get	garbage. Do not allow
		Very toxic to aquatic life	label)	medical aid.	product to reach
		Very toxic to aquatic life	Take off contaminated clothing	<b>Skin:</b> Get medical aid. Flush skin	sewage system or open
		with long lasting effect	and wash before reuse	with plenty of water for at least 15	water.Materials are
			Collect spillage	minutes while removing	disposed according to
			IF SWALLOWED: Call a	contaminated clothing and shoes.	applicable regulatory
			POISON CENTER or	Wash clothing before reuse.	entities after consulting
			doctor/physician if you feel	<b>Ingestion:</b> Do not induce vomiting.	t federal state/
			unwell	If victim is conscious and alert,	provincial and
			IF ON SKIN: Wash with soap and	give 2-4 cupfuls of milk or water.	local regulations
			water	Never give anything by mouth to an	regarding the proper
			IF IN EYES: Rinse cautiously	unconscious person. Get medical	disposal of waste
			with water for several minutes.	aid immediately.	material that may
			Remove contact lenses if present	<b>Inhalation:</b> Remove from exposure	incorporate some
			and easy to do –	and move to fresh air immediately.	amount of this
			continue rinsing	If breathing is difficult, give	product.
				oxygen. Get medical aid. Do NOT	

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			If skin irritation or a rash occurs: Get medical advice/attention If eye irritation persists get	use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen	
			medical advice/attention	and a suitable mechanical device	
				such as a bag and a mask.	
				Notes to Physician: Individuals	
				with Wilson's disease are more	
				susceptible to chronic copper	
				poisoning.	
				<b>Antidote:</b> The use of d-	
				Penicillamine as a chelating agent	
				should be determined by qualified	
1.1	G : 11 :	TT 0.1:0 11 1	D 1D 1	medical personnel.	
11.	1 1	Harmful if swallowed	Personal Precautions	Eye Contact Rinse immediately	Chemical waste
	AR	Causes skin irritation	Environmental Precautions	with plenty of water, also under the	generators must
		Causes serious eye	Use personal protective	eyelids, for at least 15 minutes. Get	determine whether a
		irritation	equipment as required. Ensure	medical attention.	discarded chemical is
			adequate ventilation. Avoid dust	Skin Contact Wash off immediately	classified as a
			formation. Avoid contact with	with plenty of water for at least 15	hazardous waste.
			skin, eyes or clothing.	minutes. Get medical attention if	Chemical waste
			Do not flush into surface water or	symptoms occur.	generators must also
			sanitary sewer system. Do not	Inhalation Remove to fresh air. Do	consult local, regional,
			allow material to	not use mouth-to-mouth method if	and
			contaminate ground water system.	victim ingested or inhaled the	national hazardous
			Prevent product from entering	substance; give artificial respiration	waste regulations to
			drains. Local authorities	with the aid of a pocket mask	ensure complete and
			should be advised if significant	equipped with a one-way	accurate classification.
			spillages cannot be contained.	valve or other proper respiratory	
			Should not be released into	medical device. Get medical	
			the environment.	attention. If not breathing,	
			Methods for Containment and	give artificial respiration.	
			Clean up: Sweep up and shovel into suitable containers for	Ingestion Do NOT induce	
				vomiting. Call a physician or	
			disposal. Avoid dust formation.	poison control center immediately.	
				Most important symptoms and	

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				effects	
				Notes to Physician No information	
				available.	
				Treat symptomatically	
12.	Calcium	None	General Information: Use	Eyes: Immediately flush eyes with	Chemical waste
	chloride		proper personal protective	plenty of water for at least 15	generators must
	dihydrate		equipment as indicated in Section	minutes, occasionally lifting the	determine whether a
	-		8.	upper and lower eyelids. Get	discarded chemical is
			Spills/Leaks: Vacuum or sweep	medical aid.	classified as a
			up material and place into a	<b>Skin:</b> Immediately flush skin with	hazardous waste.
			suitable disposal container. Avoid	plenty of water for at least 15	Additionally, waste
			generating dusty conditions.	minutes while removing	generators must consult
			Provide ventilation. Do not let this	contaminated clothing and shoes.	state and local
			chemical enter the environment.	Get medical aid if irritation	hazardous waste
			chemical enter the environment.	develops or persists.	regulations to ensure
				<b>Ingestion:</b> Do not induce vomiting.	complete and accurate
				Get medical aid if irritation or	classification.
					Classification.
				symptoms occur.	
				<b>Inhalation:</b> Remove from exposure	
				and move to fresh air immediately.	
				If not breathing, give artificial	
				respiration. If breathing is difficult,	
				give oxygen. Get medical aid if	
				cough or other symptoms appear.	
				Notes to Physician: Treat	
				symptomatically and supportively.	
13.	Citric acid	Causes serious eye	For non-emergency personnel	Inhalation	No additional
	anhydrous Pure	irritation	Emergency procedures : Evacuate	: Assure fresh air breathing. If	information available
			unnecessary personnel.	breathing is difficult, remove	
			For emergency responders	victim to fresh air and keep	
			Protective equipment	at rest in a position comfortable for	
			Emergency procedures : Use	breathing.	
			personal protective equipment as	Skin contact	
			required.		
			: Ventilate area.		

			Environmental precautions Avoid release to the environment. Methods and material for containment and cleaning up Methods for cleaning up : On land, sweep or shovel into suitable containers. Soak up	: Wash with plenty of water/Get immediate medical advice/attention. Eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention. Ingestion : Rinse mouth. Do not induce vomiting.	
14.	Calcium Hydroxide	Skin Irritation Eye Damage Specific Target Organ Toxicity, Single Exposure (respiratory)	Personal precautions, protective equipment and emergency procedures: Wear protective equipment. Transfer to a disposal or recovery container. Use spark-proof tools and explosion-proof equipment. Use respiratory protective device against the effects of fumes/dust/aerosol. Keep unprotected persons away. Ensure adequate ventilation. Keep away from ignition sources. Protect from heat. Stop the spill, if possible. Contain spilled material by diking or using inert absorbent. Environmental precautions: Prevent from reaching drains, sewer or waterway. Collect contaminated soil for characterization per Section 13	After inhalation: Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort or irritation persists. If breathing difficult, give oxygen.  After skin contact: Wash affected area with soap and water. Rinse thoroughly. Seek medical attention if irritation, discomfort or vomiting persists.  After eye contact: Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes.  Remove contact lens(es) if able to do so during rinsing. Seek medical attention if irritation persists or if concerned.	Product/containers must not be disposed together with household garbage. Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Consult federal state/ provincial and local regulations regarding the proper disposal of waste material that may incorporate some amount of this

			Methods and material for	After swallowing: Rinse mouth	product.
			containment and cleaning up:	thoroughly. Do not induce	Frank
			If in a laboratory setting, follow	vomiting. Have exposed individual	
			Chemical Hygiene Plan	drink sips of	
			procedures.Collect liquids using	water. Seek medical attention if	
			vacuum or by use of	irritation, discomfort or vomiting	
			absorbents. Place into properly	persists.	
			labeled containers for recovery or	Most important symptoms and	
			disposal. If necessary, use trained	effects, both acute and delayed:	
			response	Skin, eye, and upper respiratory	
			staff/contractor.Dust deposits	tract irritation. Irritation,	
			should not be allowed to	Nausea, Headache, Shortness of	
			accumulate on surfaces, as these	breath.;	
			may form an	Indication of any immediate	
			explosive mixture if they are	medical attention and special	
			released into the atmosphere in	treatment needed:If seeking	
			sufficient concentration. Avoid	medical attention, provide SDS	
			dispersal of dust in	document to physician.	
			the air (i.e., clearing dust surfaces	The state of the s	
			with compressed air).		
15.	Cupric sulphate	Harmful if swallowed	Personal Precautions	Eye Contact Rinse immediately	Chemical waste
		Causes skin irritation	Environmental Precautions	with plenty of water, also under the	generators must
		Causes serious eye	Use personal protective	eyelids, for at least 15 minutes. Get	determine whether a
		irritation	equipment as required. Ensure	medical attention.	discarded chemical is
			adequate ventilation. Avoid dust	Skin Contact Wash off immediately	classified as a
			formation. Avoid contact with	with plenty of water for at least 15	hazardous waste.
			skin, eyes or clothing.	minutes. Get medical attention if	Chemical waste
			Do not flush into surface water or	symptoms occur.	generators must also
			sanitary sewer system. Do not	Inhalation Remove to fresh air. Do	consult local, regional,
			allow material to	not use mouth-to-mouth method if	and
			contaminate ground water system.	victim ingested or inhaled the	national hazardous
			Prevent product from entering	substance; give artificial respiration	waste regulations to
			drains. Local authorities	with the aid of a pocket mask	ensure complete and
				equipped with a one-way	accurate classification.

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			should be advised if significant	valve or other proper respiratory	
			spillages cannot be contained.	medical device. Get medical	
			Should not be released into	attention. If not breathing,	
			the environment.	give artificial respiration.	
			Methods for Containment and	Ingestion Do NOT induce	
			Clean up: Sweep up and shovel	vomiting. Call a physician or	
			into suitable containers for	poison control center immediately.	
			disposal. Avoid dust formation.	Most important symptoms and	
				effects	
				Notes to Physician No information	
				available.	
				Treat symptomatically	
16.	Citric acid	Causes serious eye	For non-emergency personnel	Inhalation	No additional
	anhydrous	irritation	Emergency procedures : Evacuate	: Assure fresh air breathing. If	information available
			unnecessary personnel.	breathing is difficult, remove	
			For emergency responders	victim to fresh air and keep	
			Protective equipment	at rest in a position comfortable for	
			Emergency procedures : Use	breathing.	
			personal protective equipment as	Skin contact	
			required.	: Wash with plenty of water/Get	
			: Ventilate area.	immediate medical	
			Environmental precautions	advice/attention.	
			Avoid release to the environment.	Eye contact	
			Methods and material for	: Rinse cautiously with water for	
			containment and cleaning up	several minutes. Remove contact	
			Methods for cleaning up	lenses, if present	
			: On land, sweep or shovel into	and easy to do. Continue rinsing.	
			suitable containers. Soak up	Get medical advice/attention.	
			· · · · · · · · · · · · · · · · · · ·	Ingestion	
				: Rinse mouth. Do not induce	
				vomiting.	
17.	Potassium	May intensify fire;	General Information: Use proper	Eyes: Immediately flush eyes with	Do not discharge into
	nitrate	oxidizer	personal protective equipment as	plenty of water for at least 15	drains or the
		Causes skin irritation	indicated in Section 8.	minutes, occasionally lifting the	environment. Remove

		Causes serious eye irritation May cause respiratory irritation	Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Provide ventilation. Do not use combustible materials such as paper towels to clean up spill. Keep combustibles (wood, paper, oil, etc.,) away from spilled material. Do not let this chemical enter the environment.	upper and lower eyelids. If irritation develops, get medical aid. Skin: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.  Ingestion: Do not induce vomiting. Get medical aid if irritation or symptoms occur.  Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear. Notes to Physician: Treat symptomatically and supportively.	waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Remove to an authorized dump (Class I). Precipitate/make insoluble.
18.	Sodium	Poison, danger, corrosive.	Ventilate area of leak or spill.	Inhalation: Remove to fresh air. If not	Processing, use or contamination of this
	hydroxide pellet	May be fatal if swallowed.  Harmful if	Keep unnecessary and		
			unprotected people away from	breathing, give artificial respiration.	product may change the
		inhaled. Causes burns to	area of spill. Wear	If breathing is difficult, give	waste
		any area of contact.Reacts	appropriate personal protective	oxygen.	management options.
		with water,	equipment. Pick up and place in a	Call a physician.	State and local disposal

		acids and other materials.	suitable container for reclamation or disposal, using a method that does not generate dust.  Do not flush caustic residues to the sewer. Residues from spills can be diluted with water, neutralized with dilute acid such as acetic, hydrochloric or sulfuric. Absorb neutralized caustic residue on clay, vermiculite or other inert substance and package in a suitable container for disposal.	Ingestion: DO NOT INDUCE VOMITING! Give large quantities of water or milk if available. Never give anything by mouth to an unconscious person. Get medical attention immediately. Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician, immediately. Wash clothing before reuse. Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.Note to Physician: Perform endoscopy in all cases of suspected sodium hydroxide ingestion. In cases of severe esophageal corrosion, the use of therapeutic doses of steroids should be considered. General supportive measures with continual monitoring of gas exchange, acid-base balance, electrolytes, and fluid intake are also	regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.
19.	Phenol	Very hazardous in case of skin contact (corrosive,	Small Spill: Use appropriate tools to put the spilled solid in a		Waste must be disposed of in accordance with

irritant), of eye contact (irritant), of ingestion, of inhalation. Hazardous in case of skin contact (sensitizer, permeator). The amount of tissue damage depends on length of contact. Eye contact can result in corneal damage or blindness. Skin contact can produce inflammation and blistering. Inhalation of dust will produce irritation to gastrointestinal or respiratory tract, characterized by burning, sneezing and coughing. Severe overexposure can produce lung damage, choking, unconsciousness or death. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering, Carcinogenic effect, mutagenic effect and developmental toxicity

convenient waste disposal container.

Large Spill:

Corrosive solid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. Be careful that the product is not

present at a concentration level

above TLV. Check TLV on the

MSDS and with local authorities.

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately. Skin Contact:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately. Serious Skin Contact:

Wash with a disinfectant soap and

cover the contaminated skin with

an anti-bacterial cream. Seek

attention. Inhalation:

immediate medical

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If federal, state and local environmental control regulations.

				breathing is difficult, administer	
				1	
				oxygen. If the victim is not	
				breathing, perform mouth-to-mouth	
				resuscitation. WARNING: It may	
				be hazardous to the person	
				providing aid to give mouth-to-	
				mouth resuscitation when the	
				inhaled material is toxic, infectious	
				or	
				corrosive. Seek immediate medical	
				attention.	
				Ingestion:	
				Do NOT induce vomiting unless	
				directed to do so by medical	
				personnel. Never give anything by	
				mouth to an unconscious	
				person. If large quantities of this	
				material are swallowed, call a	
				physician immediately. Loosen	
				tight clothing such as a collar,	
				tie, belt or waistband.	
				Serious Ingestion: Not available.	
20.	Hydrogen	May cause fire or	Personal precautions, protective	After inhalation: Remove to fresh	Product/containers must
	peroxide 30%	explosion; strong oxidizer	equipment and emergency	air. Give artificial respiration if	not be disposed
		Harmful if swallowed	procedures:	necessary. If breathing is difficult,	together with household
		Causes severe skin burns	Wear protective equipment. Use	give	garbage. Do not allow
		and eye damage	respiratory protective device	oxygen.Move exposed individual to	product to reach
		Harmful if inhaled	against the effects of	fresh air. Loosen clothing as	sewage system or open
			fumes/dust/aerosol. Keep	necessary and position individual in	water.It is the
			unprotected persons away. Ensure	a	responsibility of the
			adequate ventilation. Keep away	comfortable position. Seek medical	waste generator to
			from ignition sources. Protect	advice if discomfort or irritation	properly characterize all
			from	persists.	waste
			heat.Stop the spill, if possible.	After skin contact: Flush with water	materials according to
			Contain spilled material by diking	for 15 minutes. Get medical	applicable regulatory
			Contain spined material by diking	101 13 minutes. Get medical	applicable regulatory

			or using inert absorbent. Transfer	assistance if irritation	entities (US
			to a disposal	develops.Wash	40CFR262.11). Consult
			or recovery container.	affected area with soap and water.	federal state/ provincial
			Environmental precautions:	Rinse thoroughly. Seek medical	and
			Should not be released into the	attention if irritation, discomfort or	local regulations
			environment .Prevent from	vomiting	regarding the proper
			reaching drains, sewer or	persists.	disposal of waste
			waterway. Collect	After eye contact: Immediately	material that may
			contaminated soil for	flush eyes with water for at least 15	incorporate some
			characterization per Section 13	minutes. Immediately get medical	amount of this
			Methods and material for	assistance.Protect unexposed eye.	product.
			containment and cleaning up:	Rinse/flush exposed eye(s) gently	-
			Soak up with an inert absorbent	using water for 15-20 minutes.	
			material and containerize for	Remove	
			disposal.If in a laboratory setting,	contact lens(es) if able to do so	
			follow Chemical	during rinsing. Seek medical	
			Hygiene Plan procedures.Collect	attention if irritation persists or if	
			liquids using vacuum or by use of	concerned.	
			absorbents. Place into properly	After swallowing: DO NOT induce	
			labeled	vomiting. Dilute with water or	
			containers for recovery or	milk. Get medical assistance.Rinse	
			disposal. If necessary, use trained	mouth	
			response staff/contractor	thoroughly. Do not induce	
				vomiting. Have exposed individual	
				drink sips of water. Seek medical	
				attention if	
				irritation, discomfort or vomiting	
				persists	
21.	Chloroform	Harmful if swallowed	Personal precautions : No action	Eye contact:Check for and remove	The information
		Causes skin irritation	shall be taken involving any	any contact lenses. Immediately	presented only applies
			personal risk or without suitable	flush eyes with plenty of water	to the material as
			training.	for at least 15 minutes, occasionally	supplied. The
			Evacuate surrounding areas. Keep	lifting the upper and lower eyelids.	identification based on
			unnecessary and unprotected	Get medical	characteristic(s) or
			personnel from	attention immediately.	listing

entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8). Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil. waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Methods for cleaning up Spill Continued on next page : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local

Skin contact: In case of contact. immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately. Inhalation: Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately. Ingestion: Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical

attention immediately.

may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

			regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container.		
22.	Ammonium persulphate	May intensify fire; oxidiser. Harmful if swallowed. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation.	Personal precautions, protective equipment and emergency procedures General measures : No open flames. No smoking. For non-emergency personnel Emergency procedures: Evacuate unnecessary personnel. For emergency responders Protective equipment Emergency procedures: Use personal protective equipment as required. : Ventilate area.	Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.  Skin: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.  Ingestion: Do not induce vomiting. If the victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.  Inhalation: Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear. Do NOT use mouth-to-mouth resuscitation.	Dispose of contents/container to hazardous or special waste collection point, in according to local, regional, national and/or international regulation.

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				If breathing has ceased apply	
				artificial respiration using oxygen	
				and a suitable mechanical device	
				such as a bag and a mask.	
				Notes to Physician: Treat	
				symptomatically and supportively.	
23.	Chloroform	Harmful if swallowed	Personal precautions : No action	Eye contact: Check for and remove	The information
	Molecular	Causes skin irritation	shall be taken involving any	any contact lenses. Immediately	presented only applies
	biology grade		personal risk or without suitable	flush eyes with plenty of water	to the material as
			training.	for at least 15 minutes, occasionally	supplied. The
			Evacuate surrounding areas. Keep	lifting the upper and lower eyelids.	identification based on
			unnecessary and unprotected	Get medical	characteristic(s) or
			personnel from	attention immediately.	listing
			entering. Do not touch or walk	Skin contact: In case of contact,	may not apply if the
			through spilled material. Do not	immediately flush skin with plenty	material has been used
			breathe vapor or mist.	of water for at least 15 minutes	or otherwise
			Provide adequate ventilation.	while removing contaminated	contaminated. It is the
			Wear appropriate respirator when	clothing and shoes. Wash clothing	responsibility of the
			ventilation is	before reuse. Clean	waste generator to
			inadequate. Put on appropriate	shoes thoroughly before reuse. Get	determine the toxicity
			personal protective equipment	medical attention immediately.	and physical properties
			(see section 8).	Inhalation: Move exposed person to	of the material
			Environmental precautions:	fresh air. If not breathing, if	generated to determine
			Avoid dispersal of spilled material	breathing is irregular or if	the proper waste
			and runoff and contact with soil,	respiratory arrest occurs, provide	identification and
			waterways, drains	artificial respiration or oxygen by	disposal methods in
			and sewers. Inform the relevant	trained personnel.	compliance with
			authorities if the product has	Loosen tight clothing such as a	applicable regulations.
			caused environmental	collar, tie, belt or waistband. Get	Disposal should be in
			pollution (sewers, waterways, soil	medical attention	accordance with
			or air).	immediately.	applicable regional,
			Methods for cleaning up	Ingestion: Wash out mouth with	national and local laws
			Spill	water. Do not induce vomiting	and regulations.
			Continued on next page	unless directed to do so by medical	<i>J</i>
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			: Stop leak if without risk. Move	personnel. Never give anything by	
			containers from spill area.	mouth to an unconscious person.	
			Approach release from	Get medical	
			upwind. Prevent entry into	attention immediately.	
			sewers, water courses, basements		
			or confined areas.		
			Contain and collect spillage with		
			non-combustible, absorbent		
			material e.g. sand, earth,		
			vermiculite or diatomaceous earth		
			and place in container for disposal		
			according to local		
			regulations. Dispose of via a		
			licensed waste disposal		
			contractor.		
			Contaminated absorbent material		
			may pose the same hazard as the		
			spilled product. Dilute with water		
			and mop up if water-soluble or		
			absorb with an inert dry		
			material and place in an		
			appropriate waste disposal		
			container.		
24.	Ammonium	May intensify fine		Evasy Immediately flush avec with	Dispose of
24.		May intensify fire; oxidiser.	Personal precautions, protective	Eyes: Immediately flush eyes with	Dispose of
	persulphate	Harmful if swallowed.	equipment and emergency	plenty of water for at least 15	contents/container to
			procedures	minutes, occasionally lifting the	hazardous or special
		Causes skin irritation.	General measures	upper and lower eyelids. Get	waste collection point,
		May cause an allergic skin	: No open flames. No smoking.	medical aid.	in
		reaction.	For non-emergency personnel	Skin: Flush skin with plenty of	according to local,
		Causes serious eye	Emergency procedures: Evacuate	water for at least 15 minutes while	regional, national
		irritation.	unnecessary personnel.	removing contaminated clothing	and/or international
		May cause allergy or	For emergency responders	and shoes. Get medical aid if	regulation.
		asthma symptoms or	Protective equipment	irritation develops or persists. Wash	
		breathing difficulties if		clothing before reuse.	
		inhaled.			

		May cause respiratory	Emergency procedures : Use	Ingestion: Do not induce vomiting.	
		irritation.	personal protective equipment as	If the victim is conscious and alert,	
			required.	give 2-4 cupfuls of milk or water.	
			: Ventilate area.	Never give anything by mouth to an	
				unconscious person. Get medical	
				aid.	
				Inhalation: Remove from exposure	
				and move to fresh air immediately.	
				If breathing is difficult, give	
				oxygen. Get medical aid if cough or	
				other symptoms appear. Do NOT	
				use mouth-to-mouth resuscitation.	
				If breathing has ceased apply	
				artificial respiration using oxygen	
				and a suitable mechanical device	
				such as a bag and a mask.	
				Notes to Physician: Treat	
				symptomatically and supportively.	
25.	Bis acrylamide	Toxic if swallowed	General Information: Use proper	Eyes: In case of contact,	Chemical waste
		Harmful in contact with	personal protective equipment.	immediately flush eyes with plenty	generators must
		skin	Spills/Leaks: Vacuum or sweep	of water for a t least 15 minutes.	determine whether a
		May cause genetic defects	up material and place into a	Get medical aid.	discarded chemical is
		May cause cancer	suitable disposal container. Avoid	Skin: In case of contact, flush skin	classified as a
		Suspected of damaging	generating dusty conditions.	with plenty of water. Remove	hazardous waste. US
		fertility or the unborn child	Provide ventilation.	contaminated clothing and shoes.	EPA guidelines for the
		Causes damage to organs		Get medical aid if irritation	classification
		through prolonged or		develops and persists. Wash	determination are listed
		repeated exposure		clothing before reuse.	in 40 CFR Parts 261.3.
				Ingestion: If swallowed, do not	Additionally, waste
				induce vomiting unless directed to	generators must consult
				do so by medical personnel. Never	state and local
				give anything by mouth to an	hazardous waste
				unconscious person. Get medical	regulations to ensure
				aid.	complete and accurate
					classification.

				Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.  Notes to Physician: Treat symptomatically and supportively. Antidote: Pyridoxine (vitamin B6), pyruvate, and N-acetylcysteine have been used to reduce the toxicity of acrylamide in experimental studies, but are unproven.	
26.	Phenol saturated	Causes severe skin burns and eye damage Suspected of causing genetic defects May cause damage to organs through prolonged or repeated exposure May cause respiratory irritation Toxic if swallowed, in contact with skin or if inhaled	Personal Precautions Environmental Precautions Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Do not flush into surface water or sanitary sewer system. Methods for Containment and Clean up: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.	Eye Contact Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Skin Contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required. Inhalation Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial respiration. Get medical attention. Ingestion Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. Most important symptoms and	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.

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				effects Causes burns by all	
				exposure routes. 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	
				Notes to Physician:Treat	
				symptomatically	
27.	Phenol GR	Very hazardous in case of	Small Spill: Use appropriate tools	Eye Contact:	Waste must be disposed
		skin contact (corrosive,	to put the spilled solid in a	Check for and remove any contact	of in accordance with
		irritant), of eye contact	convenient waste disposal	lenses. In case of contact,	federal, state and local
		(irritant), of ingestion, of	container.	immediately flush eyes with plenty	environmental control
		inhalation. Hazardous in	Large Spill:	of water for at least 15	regulations.
		case of skin contact	Corrosive solid. Stop leak if	minutes. Cold water may be used.	
		(sensitizer, permeator).	without risk. Do not get water	Get medical attention immediately.	
		The amount of tissue	inside container. Do not touch	Skin Contact:	
		damage depends on length	spilled material. Use water spray	In case of contact, immediately	
		of contact. Eye contact can	to	flush skin with plenty of water for	
		result in corneal damage or	reduce vapors. Prevent entry into	at least 15 minutes while removing	
		blindness. Skin contact can	sewers, basements or confined	contaminated clothing	
		produce inflammation and	areas; dike if needed. Eliminate	and shoes. Cover the irritated skin	
		blistering. Inhalation of	all ignition sources. Call	with an emollient. Cold water may	
		dust will produce	for assistance on disposal. Be	be used. Wash clothing before	
		irritation to gastro-	careful that the product is not	reuse. Thoroughly clean	
		intestinal or respiratory	present at a concentration level	shoes before reuse. Get medical	
		tract, characterized by	above TLV. Check TLV on the	attention immediately.	
		burning, sneezing and	MSDS and with local authorities.	Serious Skin Contact:	
		coughing. Severe over-	and with local authorities.	Wash with a disinfectant soap and	
		exposure can		cover the contaminated skin with	
		-		an anti-bacterial cream. Seek	
		produce lung damage,			
		choking, unconsciousness		immediate medical	

or death. Inflammation of attention. the eye is characterized by Inhalation: If inhaled, remove to fresh air. If redness, watering, and itching. Skin inflammation not breathing, give artificial is characterized by itching, respiration. If breathing is difficult, scaling, reddening, or, give oxygen. Get medical attention immediately. occasionally, blistering, Serious Inhalation: Carcinogenic effect, mutagenic effect and Evacuate the victim to a safe area developmental toxicity as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-tomouth resuscitation when the inhaled material is toxic, infectious corrosive. Seek immediate medical attention. Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband. Serious Ingestion: Not available.

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28.	Chloroform	Harmful if swallowed	Personal precautions: No action	Eye contact:Check for and remove	The information
		Causes skin irritation	shall be taken involving any	any contact lenses. Immediately	presented only applies
			personal risk or without suitable	flush eyes with plenty of water	to the material as
			training.	for at least 15 minutes, occasionally	supplied. The
			Evacuate surrounding areas. Keep	lifting the upper and lower eyelids.	identification based on
			unnecessary and unprotected	Get medical	characteristic(s) or
			personnel from	attention immediately.	listing
			entering. Do not touch or walk	Skin contact: In case of contact,	may not apply if the
			through spilled material. Do not	immediately flush skin with plenty	material has been used
			breathe vapor or mist.	of water for at least 15 minutes	or otherwise
			Provide adequate ventilation.	while removing contaminated	contaminated. It is the
			Wear appropriate respirator when	clothing and shoes. Wash clothing	responsibility of the
			ventilation is	before reuse. Clean	waste generator to
			inadequate. Put on appropriate	shoes thoroughly before reuse. Get	determine the toxicity
			personal protective equipment	medical attention immediately.	and physical properties
			(see section 8).	Inhalation: Move exposed person to	of the material
			Environmental precautions:	fresh air. If not breathing, if	generated to determine
			Avoid dispersal of spilled material	breathing is irregular or if	the proper waste
			and runoff and contact with soil,	respiratory arrest occurs, provide	identification and
			waterways, drains	artificial respiration or oxygen by	disposal methods in
			and sewers. Inform the relevant	trained personnel.	compliance with
			authorities if the product has	Loosen tight clothing such as a	applicable regulations.
			caused environmental	collar, tie, belt or waistband. Get	Disposal should be in
			pollution (sewers, waterways, soil	medical attention	accordance with
			or air).	immediately.	applicable regional,
			Methods for cleaning up	Ingestion: Wash out mouth with	national and local laws
			Spill	water. Do not induce vomiting	and regulations.
			Continued on next page	unless directed to do so by medical	
			: Stop leak if without risk. Move	personnel. Never give anything by	
			containers from spill area.	mouth to an unconscious person.	
			Approach release from	Get medical	
			upwind. Prevent entry into	attention immediately.	
			sewers, water courses, basements		
			or confined areas.		
	1		or committee areas.		

			Contain and callest smilles =itl		
			Contain and collect spillage with		
			non-combustible, absorbent		
			material e.g. sand, earth,		
			vermiculite or diatomaceous earth		
			and place in container for disposal		
			according to local		
			regulations. Dispose of via a		
			licensed waste disposal		
			contractor.		
			Contaminated absorbent material		
			may pose the same hazard as the		
			spilled product. Dilute with water		
			and mop up if water-soluble or		
			absorb with an inert dry		
			material and place in an		
			appropriate waste disposal		
			container.		
29.	Hydrochloric	May be corrosive to	Personal Precautions: Ventilate	Eyes: In case of contact,	Chemical waste
	acid	metals.	area of leak or spill. Isolate hazard	immediately flush eyes with plenty	generators must
		Causes severe skin burns	area and keep unnecessary and	of water for a t least 15 minutes.	determine whether a
		and eye damage.	unprotected	Get medical aid immediately.	discarded chemical is
		May cause respiratory	personnel away from the area of	Skin: In case of contact,	classified as a
		irritation.	the leak or spill. Keep upwind.	immediately flush skin with plenty	hazardous waste. US
			Keep out of low areas.	of water for at least 15 minutes	EPA guidelines for the
			Wear appropriate personal	while removing contaminated	classification
			protective equipment as specified	clothing and shoes. Get medical aid	determination are listed
			in the Exposure Control and	immediately. Wash clothing before	in 40 CFR Parts 261.3.
			Personal Protection Section 8.	reuse.	Additionally, waste
			Avoid contact with eyes, skin, and	Ingestion: If swallowed, do NOT	generators must consult
			clothing.	induce vomiting. Get medical aid	state and local
			Environmental Precautions:	immediately. If victim is fully	hazardous waste
			Prevent further leakage or spillage	conscious, give a cupful of water.	regulations to ensure
			if safe to do so. Do not	Never give anything by mouth to an	complete and accurate
			contaminate water. Avoid	unconscious person.	classification. 1

			discharge into drains, water courses or onto the ground. In case of large spill, dike if needed.  Methods for Containment: Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements or confined areas. Dike the spilled material, where this is possible.  Methods for Cleaning Up: Absorb spill with an inert material (e.g. vermiculite, dry sand, earth, cloth, fleece), and place in a suitable non-combustible container for reclamation or disposal. Do not use combustible materials, such as sawdust. Clean	Inhalation: POISON material. If inhaled, get medical aid immediately. Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.  Notes to Physician: Do NOT use sodium bicarbonate in an attempt to neutralize the acid.	
			contaminated surface thoroughly. Neutralize spill area and washings with soda ash or lime. Never return spills in original containers for re-use. Clean up in accordance with all		
30.	Sodium cobaltinitrite	May intensify fire; oxidiser.	applicable regulations.  Personal Precautions: Ensure adequate ventilation. Keep people	General Advice: National Capital Poison Center in the United States	Waste from residues / unused products:
	Codumination	Causes skin irritation.	away from and upwind of	can provide assistance if you	Waste must be disposed
		May cause an allergic skin	spill/leak. Use personal	have a poison emergency and need	of in accordance with
		reaction.	protective equipment. Avoid	to talk to a poison specialist. Call	Federal, State and Local
		Causes serious eye	contact with skin, eyes and	1-800-222-1222. Ensure that	regulation.
		irritation.	clothing. Evacuate personnel to	medical personnel are aware of the	Contaminated
		May cause allergy or		material(s)	packaging:
		asthma symptoms or			

breathing difficulties if involved and take precautions to safe areas. Avoid breathing dust. **Empty containers** inhaled. Avoid dust formation. Do not protect themselves. First aider should be taken for H335 - May cause touch damaged containers needs to protect local recycling, respiratory irritation. or spilled material unless wearing himself. recovery or waste Skin Contact: Wash off appropriate protective clothing. disposal. Keep combustibles immediately with soap and plenty (wood, paper, oil, clothing, etc.) of water removing all contaminated away from spilled material. clothing and Remove all sources of ignition. shoes. Get medical attention. If skin Environmental precautions irritation persists, call a physician. Prevent further leakage or spillage Eye Contact: Flush eyes with water if safe to do so. Do not let product for 15 minutes. Get medical enter drains. attention. If symptoms persist, call Prevent entry into waterways, sewers, basements or confined physician. Inhalation: Move to fresh air. If areas. breathing is difficult, give oxygen. Methods and material for If not breathing, give artificial containment and cleaning up Methods for containment Stop respiration. Get medical attention. leak if you can do it without risk. Ingestion: Do not induce vomiting Cover with plastic sheet to without medical advice. Never give anything by mouth to an prevent unconscious person. Obtain spreading. Methods for cleaning up Sweep medical attention. up and shovel into suitable containers for disposal. Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Do not use combustible materials such as paper towels, sawdust, clothing, etc. to clean up spill. Clean contaminated surface thoroughly.

31.	Tris base cell	May be harmful if inhaled.	Personal precautions, protective		Observe all federal,
31.	culture tested	May cause respiratory tract	equipment and emergency	If inhaled	state and local
		irritation.	procedures	After inhalation: fresh air.	regulations when
		May be harmful if	Advice for non-emergency	Skin contact: Take off immediately	disposing of this
		absorbed through skin.	personnel: Avoid inhalation of	all contaminated clothing. Rinse	substance.
		May cause skin irritation.	dusts. Evacuate the danger area,	skin with	substance.
		May cause eye irritation.	observe emergency procedures,	water/ shower.	
		May be harmful if	consult an expert.	Eye contact: rinse out with plenty	
		swallowed.	Environmental precautions	of water. Remove contact lenses.	
		swanowed.	Do not let product enter drains.	If swallowed	
			Methods and materials for	After swallowing: make victim	
			containment and cleaning up	drink water (two glasses at most).	
			Cover drains. Collect, bind, and	Consult doctor if feeling	
			pump off spills. Take up dry.	unwell.	
			Dispose of properly. Clean up	Most important symptoms and	
			affected area. Avoid generation of	effects, both acute and delayed	
			dusts.	Indication of any immediate	
				medical attention and special	
				treatment needed	
				No data available	
32.	Zinc nitrate	May intensify fire;	Consult a physician. Show this	Eye Contact	Sweep up and shovel.
	hexahydrate	oxidiserMay be harmful if	safety data sheet to the doctor in	Rinse immediately with plenty of	Contain spillage, and
	purified	inhaled. Material is	attendance.Move out of dangerous	water, also under the eyelids, for at	then collect with an
		extremely destructive to	area.	least 15 minutes. Get medical	electrically protected
		the tissue of the mucous	If inhaled	attention.	vacuum cleaner or by
		membranes and upper	If breathed in, move person into	Skin Contact Wash off immediately	wet-
		respiratory tract.Harmful if	fresh air. If not breathing, give	with plenty of water for at least 15	brushing and place in
		absorbed through skin.	artificial respiration. Consult a	minutes. Get medical attention.	container for disposal
		Causes skin burns. Causes	physician.	Inhalation Remove to fresh air. If	according to local
		eye burns.Harmful if	In case of skin contact	breathing is difficult, give oxygen.	regulationsKeep in
		swallowed	Wash off with soap and plenty of	Do not use mouth-to-mouth	suitable, closed
			water. Consult a physician.	method if victim ingested or	containers for disposal.
			In case of eye contact	inhaled the substance; give artificial	
			Rinse thoroughly with plenty of	respiration with the aid of a	
			water for at least 15 minutes and		

			consult a physician.Continue rinsing eyes during transport to hospital. If swallowed Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician	pocket mask equipped with a one- way valve or other proper respiratory medical device. Get medical attention. Ingestion Do NOT induce vomiting. Call a physician or poison control center immediately. Most important symptoms and effects Notes to Physician No information available. Treat symptomatically	
33.	Boric acid	May damage fertility. May damage the unborn child	Personal Precautions:Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation. Do not get in eyes, on skin, or on clothing. Environmental Precautions:Should not be released into the environment.Methods for Containment and Clean up: Sweep up and shovel into suitable containers for disposal. Avoid dust formation.	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. Get medical attention if symptoms occur.  Inhalation Remove to fresh air. 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. Get medical attention immediately if symptoms occur. If not breathing, give artificial respiration.  Ingestion Do NOT induce vomiting. Call a physician or poison control center immediately. Most important symptoms and	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.

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				effects:No information available.	
				Notes to Physician: Treat	
				symptomatically	
34.	Bis acrylamide	Toxic if swallowed	General Information: Use proper	Eyes: In case of contact,	Chemical waste
		Harmful in contact with	personal protective equipment.	immediately flush eyes with plenty	generators must
		skin	Spills/Leaks: Vacuum or sweep	of water for a t least 15 minutes.	determine whether a
		May cause genetic defects	up material and place into a	Get medical aid.	discarded chemical is
		May cause cancer	suitable disposal container. Avoid	Skin: In case of contact, flush skin	classified as a
		Suspected of damaging	generating dusty conditions.	with plenty of water. Remove	hazardous waste. US
		fertility or the unborn child	Provide ventilation.	contaminated clothing and shoes.	EPA guidelines for the
		Causes damage to organs		Get medical aid if irritation	classification
		through prolonged or		develops and persists. Wash	determination are listed
		repeated exposure		clothing before reuse.	in 40 CFR Parts 261.3.
				Ingestion: If swallowed, do not	Additionally, waste
				induce vomiting unless directed to	generators must consult
				do so by medical personnel. Never	state and local
				give anything by mouth to an	hazardous waste
				unconscious person. Get medical	regulations to ensure
				aid.	complete and accurate
				Inhalation: If inhaled, remove to	classification.
				fresh air. If not breathing, give	classification.
				artificial respiration. If breathing is	
				difficult, give oxygen. Get medical	
				aid.	
				Notes to Physician: Treat	
				symptomatically and supportively.	
				Antidote: Pyridoxine (vitamin B6),	
				pyruvate, and N-acetylcysteine	
				have been used to reduce the	
				toxicity of acrylamide in	
				experimental studies, but are	
				unproven.	
35.	Copper (II)	Toxic if swallowed	General Information: Use proper	Eyes: Immediately flush eyes with	Chemical waste
	Sulfate	Very toxic to aquatic life	personal protective equipment.	plenty of water for at least 15	generators must
	pentahydrate			minutes, occasionally lifting the	determine whether a

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		Very toxic to aquatic life	Spills/Leaks: Vacuum or sweep	upper and lower eyelids. Get	discarded chemical is
		with long lasting effects	up material and place into a	medical aid.	classified as a
			suitable disposal container. Avoid	Skin: Get medical aid. Flush skin	hazardous waste. US
			runoff into storm sewers and	with plenty of water for at least 15	EPA guidelines for the
			ditches which lead to waterways.	minutes while removing	classification
			Clean up spills immediately,	contaminated clothing and shoes.	determination are listed
			observing precautions in the	Wash clothing before reuse.	in 40 CFR Parts 261.3.
			Protective Equipment section.	Ingestion: Do not induce vomiting.	Additionally, waste
			Avoid generating dusty	If victim is conscious and alert,	generators must consult
			conditions. Provide ventilation.	give 2-4 cupfuls of milk or water.	state and local
			U.S. regulations require reporting	Never give anything by mouth to an	hazardous waste
			spills and releases to soil, water	unconscious person. Get medical	regulations to ensure
			and air in excess of reportable	aid immediately.	complete and accurate
			quantities.	Inhalation: Remove from exposure	classification.
				and move to fresh air immediately.	
				If breathing is difficult, give	
				oxygen. Get medical aid. Do NOT	
				use mouth-to-mouth resuscitation.	
				If breathing has ceased apply	
				artificial respiration using oxygen	
				and a suitable mechanical device	
				such as a bag and a mask.	
				Notes to Physician: Individuals	
				with Wilson's disease are more	
				susceptible to chronic copper	
				poisoning.	
				Antidote: The use of d-	
				Penicillamine as a chelating agent	
				should be determined by qualified	
				medical personnel.	
36.	Millons reagent	May be corrosive to metals	Personal Precautions	General Advice Immediate medical	Chemical waste
50.	willions reagent	Fatal in contact with skin	Environmental Precautions	attention is required. Show this	generators must
		Causes severe skin burns		safety data sheet to the doctor in	determine whether a
			Evacuate personnel to safe areas.	attendance.	discarded chemical is
		and eye damage	Keep people away from and	attendance.	
			upwind of spill/leak. Use		classified as a

personal protective equipment as Eye Contact Rinse immediately hazardous waste. Causes damage to organs required. Ensure adequate through prolonged or with plenty of water, also under the Chemical waste repeated exposure ventilation. eyelids, for at least 15 minutes. generators must also Do not flush into surface water or Toxic if swallowed or if Immediate medical attention is consult local, regional, inhaled sanitary sewer system. Should not required. and Skin Contact Wash off immediately national hazardous be released into the environment. Do not allow with plenty of water for at least 15 waste regulations to material to contaminate ground minutes. Immediate medical ensure complete and attention is required. water system. accurate classification. Methods for Containment and Inhalation Remove to fresh air. Clean up: Soak up with inert Immediate medical attention is absorbent material. Keep in required. Do not use mouth-tosuitable, closed containers for mouth disposal. method if victim ingested or Wear self-contained breathing inhaled the substance; give artificial apparatus and protective suit. respiration with the aid of a pocket mask equipped with a oneway valve or other proper respiratory medical device. Ingestion Do NOT induce vomiting. Call a physician or poison control center immediately. Most important symptoms and effects Causes burns by all exposure routes. . 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 Notes to Physician: Treat symptomatically

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37.	Molischs	Highly flammable liquid	Personal precautions, protective	After inhalation: Move exposed	It is the responsibility
	reagent	and vapour	equipment and emergency	individual to fresh air. Loosen	of the waste generator
		Causes skin irritation	procedures:	clothing as necessary and position	to properly characterize
		Causes serious eye	Provide exhaust ventilation or	individual in a comfortable	all waste materials
		damage	other engineering controls to keep	position.If breathing is difficult	according to
			the airborne concentrations of	give oxygen.Immediately get	applicable regulatory
			vapor and	medical assistance.	entities (US
			mists below the applicable	After skin contact: Wash affected	40CFR262.11). Absorb
			workplace exposure limits	area with soap and water.	with suitable absorbent
			(Occupational Exposure Limits-	Rinse/flush exposed skin gently	material such as sand or
			OELs) indicated	using water for	earth
			above.Ensure adequate	15-20 minutes. Seek medical	and containerize for
			ventilation.Avoid contact with	attention if irritation persists or if	disposal. Ventilate area
			skin, eyes and clothing.	concerned.	of leak or spill.Have
			Environmental precautions:	After eye contact: Protect	fire extinguishing agent
			Prevent from reaching drains,	unexposed eye. Remove contact	available in case of
			sewer or waterway. Ethanol has a	lens(es) if able to do so during	fire. Eliminate all
			slight acute and chronic toxicity to	rinsing. Rinse or	sources of ignition.Use
			aquatic life.	flush exposed eye gently using	spark-proof tools and
			Methods and material for	water for 15-20 minutes.	explosion-proof
			containment and cleaning up:	Immediately get medical assistance.	equipment.Chemical
			If necessary use trained response	After swallowing: Rinse mouth	waste
			staff or contractor. Wear	thoroughly. Do not induce	generators must
			protective eyeware, gloves, and	vomiting. Dilute mouth with water	determine whether a
			clothing. Refer to	or milk after	discarded chemical is
			Section 8.Remove all sources of	rinsing.Immediately get medical	classified as a
			ignition. Contain spill.Absorb	assistance.	hazardous waste.
			with suitable material and place in	Most important symptoms and	Chemical waste
			chemical waste	effects, both acute and delayed:	generators must also
			container. Ventilate area of spill.	Irritation, Nausea, Headache,	consult local, regional,
			Use non-sparking	Shortness of breath.;	and national hazardous
			equipment.Dispose of empty	Indication of any immediate	waste regulations.
			containers as unused product.	medical attention and special	Ensure complete and
				treatment needed:	accurate classification.

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				If seeking medical attention,	
				provide SDS document to	
				physician.Physician should treat	
				symptomatically.	
38.	Sodium nitrate	May intensify fire;	Personal Precautions	General Advice: If symptoms	Chemical waste
		oxidizer	Environmental	persist, call a physician.	generators must
		Causes serious eye	Precautions:Ensure adequate	Eye Contact: Rinse immediately	determine whether a
		irritation	ventilation. Use personal	with plenty of water, also under the	discarded chemical is
		May cause damage to	protective equipment. Avoid dust	eyelids, for at least 15 minutes. Get	classified as a
		organs through prolonged	formation.	medical attention.	hazardous waste.
		or repeated exposure	Avoid release to the environment.	Skin Contact: Wash off	Chemical waste
			Methods for Containment and	immediately with plenty of water	generators must also
			Clean up:Sweep up or vacuum up	for at least 15 minutes. Obtain	consult local, regional,
			spillage and collect in suitable	medical attention.	and
			container for disposal. Avoid dust	Inhalation Move to fresh air. If	national hazardous
			formation.	breathing is difficult, give oxygen.	waste regulations to
				Obtain medical attention.	ensure complete and
				Ingestion Do not induce vomiting.	accurate classification.
				Obtain medical attention.	
				Most important symptoms and	
				effects: None reasonably	
				foreseeable.	
				Notes to Physician:	
				Treat symptomatically	
39.	Iron (II) sulfate	Harmful if swallowed	General Information: Use proper	Eyes: Immediately flush eyes with	Chemical waste
	heptahydrate	Causes skin irritation	personal protective equipment as	plenty of water for at least 15	generators must
		Causes serious eye	indicated in Section 8.	minutes, occasionally lifting the	determine whether a
		irritation	Spills/Leaks: Vacuum or sweep	upper and lower eyelids. Get	discarded chemical is
		May cause drowsiness and	up material and place into a	medical aid.	classified as a
		dizziness	suitable disposal container. Avoid	Skin: Get medical aid. Immediately	hazardous waste. US
			generating dusty conditions.	flush skin with plenty of water for	EPA guidelines for the
			Provide ventilation. Do not let this	at least 15 minutes while removing	classification
			chemical enter the environment.	contaminated clothing and shoes.	determination are listed
					in 40 CFR Parts 261.3.
					Additionally, waste

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					Ingestion: Do not induce vomiting.	generators must consult
					Get medical aid immediately. Call a	state and local
					poison control center.	hazardous waste
					Inhalation: Remove from exposure	regulations to ensure
					and move to fresh air immediately.	complete and accurate
					If breathing is difficult, give	classification.
					oxygen. Get medical aid. Do not	
					use mouth-to-mouth resuscitation if	
					victim ingested or inhaled the	
					substance; induce artificial	
					respiration with the aid of a pocket	
					mask equipped with a one-way	
					valve or other proper respiratory	
					medical device.	
					Notes to Physician: Treat	
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F	40	Malahdia asid	Carrage	Dana and Dragontica at II.a. mana and	symptomatically and supportively.	Chemical waste
	40.	Molybdic acid	Causes serious eye	Personal Precautions:Use personal	General Advice: If symptoms	
			irritation	protective equipment as required.	persist, call a physician.	generators must
			May cause respiratory	Ensure adequate ventilation.	Eye Contact Rinse immediately	determine whether a
			irritation	Avoid dust	with plenty of water, also under the	discarded chemical is
			May cause damage to	formation.	eyelids, for at least 15 minutes. Get	classified as a
			organs through prolonged	Environmental	medical attention.	hazardous waste.
			or repeated exposure	Precautions:Should not be	Skin Contact: Wash off	Chemical waste
				released into the environment.	immediately with plenty of water	generators must also
				Methods for Containment and	for at least 15 minutes. If skin	consult local, regional,
				Clean up: Sweep up and shovel	irritation persists,	and
				into suitable containers for	call a physician.	national hazardous
				disposal. Keep in suitable, closed	Inhalation: Remove to fresh air. If	waste regulations to
				containers for disposal.	not breathing, give artificial	ensure complete and
					respiration. Get medical attention if	accurate classification.
					symptoms occur.	
					Ingestion: Clean mouth with water	
					and drink afterwards plenty of	
					water. Get medical attention if	
					symptoms occur.	

				Most important symptoms and effects: None reasonably foreseeable. Notes to Physician:Treat symptomatically	
41.	Mercury (II)sulfate	May cause damage to organs through prolonged or repeated exposure Fatal if swallowed, in contact with skin or if inhaled	Personal Precautions Environmental Precautions Evacuate personnel to safe areas. Avoid dust formation. Ensure adequate ventilation. Use personal protective equipment as required. Keep people away from and upwind of spill/leak. Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. See Section 12 for additional Ecological Information. Avoid release to the environment. Collect spillage. Methods for Containment and Clean up: Sweep up and shovel into suitable containers for disposal. Avoid dust formation.	General Advice Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.  Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists: Get medical advice/attention.  Skin Contact Immediate medical attention is required. Wash off immediately with plenty of water for at least 15 minutes.  Inhalation Remove to fresh air. If breathing is difficult, give oxygen.  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.  Immediate medical attention is required.  Ingestion Do NOT induce vomiting. Call a physician or poison control center immediately.	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.

				Most important symptoms and effects No information available. Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing: May cause adverse kidney effects:  Symptoms may be delayed Notes to Physician: Treat symptomatically	
42.	Nickel (II)chloride hexahydrate extra pure	Toxic if swallowed or if inhaled Causes skin irritation May cause an allergic skin reaction May cause allergy or asthma symptoms or breathing difficulties if inhaled Suspected of causing genetic defects May cause cancer by inhalation May damage the unborn child Causes damage to organs through prolonged or repeated exposure Very toxic to aquatic life with long lasting effects	Personal precautions, protective equipment and emergency procedures For non-emergency personnel Do not breathe dust. Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. Provide adequate ventilation. Environmental precautions Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. Methods and material for containment and cleaning up Advices on how to contain a spill Covering of drains. Advices on how to clean up a spill	General notes Take off immediately all contaminated clothing. Self- protection of the first aider. Following inhalation Remove person to fresh air and keep comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Call a physician immediately. Following skin contact After contact with skin, wash immediately with plenty of water. In case of skin irritation, consult a physician. Following eye contact Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice. Following ingestion	Waste treatment methods This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations. Sewage disposal-relevant information Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets. Waste treatment of containers/packagings It is a dangerous waste; only packagings which

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		Take up mechanically. Control of	Rinse mouth immediately and drink	are approved (e.g. acc.
		dust.	plenty of water. Call a physician	to ADR) may be used.
		Other information relating to	immediately.	Sewage disposal-
		spills and releases		relevant information
		Place in appropriate containers for		Do not empty into
		disposal.		drains. Avoid release to
				the environment. Refer
				to special
				instructions/safety data
				sheets.
				Waste treatment of
				containers/packagings
				It is a dangerous waste;
				only packagings which
				are approved (e.g. acc.
				to ADR) may be used.
				Relevant provisions
				relating to waste
				The allocation of waste
				identity numbers/waste
				descriptions must be
				carried out according to
				the
				EEC, specific to the
				industry and process.
				Remarks
				Waste shall be
				separated into the
				categories that can be
				handled separately by
				the local or national
				waste management
				facilities. Please
				consider the relevant
				consider the relevant

					national or regional provisions.
43.	Sodium lauryl sulphate AR	Potential Acute Health Effects: Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (sensitizer). Severe over-exposure can result in death. Potential Chronic Health Effects: Slightly hazardous in case of skin contact (sensitizer).	Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements. Large Spill: Poisonous solid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.	Eye Contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention. Skin Contact: In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention. Serious Skin Contact: Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention. Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately. Serious Inhalation: Not available. Ingestion: Do NOT induce vomiting unless directed to do so by medical	Waste must be disposed of in accordance with federal, state and local environmental control regulations.

				personnel. Never give anything by	
				mouth to an unconscious	
				person. If large quantities of this	
				material are swallowed, call a	
				physician immediately. Loosen	
				tight clothing such as a collar,	
				tie, belt or waistband.	
				Serious Ingestion: Not available	
44.	Sodium	Poison, danger, corrosive.	Ventilate area of leak or spill.	Inhalation:	Processing, use or
	hydroxide	May be fatal if swallowed.	Keep unnecessary and	Remove to fresh air. If not	contamination of this
	pellets	Harmful if	unprotected people away from	breathing, give artificial respiration.	product may change the
		inhaled. Causes burns to	area of spill. Wear	If breathing is difficult, give	waste
		any area of contact.Reacts	appropriate personal protective	oxygen.	management options.
		with water,	equipment. Pick up and place in a	Call a physician.	State and local disposal
		acids and other materials.	suitable container for reclamation	Ingestion:	regulations may differ
			or disposal, using a method that	DO NOT INDUCE VOMITING!	from federal disposal
			does not generate dust.	Give large quantities of water or	regulations.
			Do not flush caustic residues to	milk if available. Never give	Dispose of container
			the sewer. Residues from spills	anything by mouth to an	and unused contents in
			can be diluted with water,	unconscious person. Get medical	accordance with
			neutralized	attention immediately.	federal, state and local
			with dilute acid such as acetic,	Skin Contact:	requirements.
			hydrochloric or sulfuric. Absorb	Immediately flush skin with plenty	
			neutralized caustic residue on	of water for at least 15 minutes	
			clay,	while removing contaminated	
			vermiculite or other inert	clothing and shoes. Call a	
			substance and package in a	physician, immediately. Wash	
			suitable container for disposal.	clothing before reuse.	
			_	Eye Contact:	
				Immediately flush eyes with plenty	
				of water for at least 15 minutes,	
				lifting lower and upper eyelids	
				occasionally. Get medical attention	
				immediately.Note to Physician:	

				Perform endoscopy in all cases of suspected sodium hydroxide ingestion. In cases of severe esophageal corrosion, the use of therapeutic doses of steroids should be considered. General supportive	
				measures with continual monitoring of gas exchange, acid-base balance,	
				electrolytes, and fluid intake are also required.	
45.	Potassium	Very hazardous in case of	Small Spill:	Eye Contact:	Waste must be disposed
75.	hydroxide	skin contact (corrosive,	Use appropriate tools to put the	Check for and remove any contact	of in accordance with
	pellets	irritant), of eye contact	spilled solid in a convenient waste	lenses. In case of contact,	federal, state and local
	r	(irritant, corrosive), of	disposal container. If necessary:	immediately flush eyes with plenty	environmental control
		ingestion, of inhalation.	Neutralize the residue with	of water for at least 15	regulations.
		The amount of tissue	a dilute solution of acetic acid.	minutes. Cold water may be used.	
		damage depends on length	Large Spill:	Get medical attention immediately.	
		of contact. Eye contact can	Corrosive solid. Stop leak if	Skin Contact:	
		result in corneal damage or	without risk. Do not get water	In case of contact, immediately	
		blindness. Skin	inside container. Do not touch	flush skin with plenty of water for	
		contact can produce	spilled material. Use water spray	at least 15 minutes while removing	
		inflammation and	to reduce vapors. Prevent entry	contaminated clothing	
		blistering. Inhalation of	into sewers, basements or	and shoes. Cover the irritated skin	
		dust will produce irritation	confined areas; dike if needed.	with an emollient. Cold water may	
		to gastro-intestinal or	Call for assistance on disposal.	be used. Wash clothing before	
		respiratory	Neutralize the residue with a	reuse. Thoroughly clean	
		tract, characterized by	dilute solution of acetic acid. Be	shoes before reuse. Get medical	
		burning, sneezing and	careful that the product is not	attention immediately.	
		coughing. Severe over-	present at a concentration level	Serious Skin Contact:	
		exposure can produce lung	above TLV. Check TLV on the	Wash with a disinfectant soap and	
		damage, choking,	MSDS and with local authorities.	cover the contaminated skin with	

unconsciousness or death. an anti-bacterial cream. Seek immediate medical Inflammation of the eye is characterized by redness, attention. watering, and itching. Skin Inhalation: inflammation is If inhaled, remove to fresh air. If characterized by itching, not breathing, give artificial scaling, reddening, or, respiration. If breathing is difficult, give oxygen. Get medical occasionally, blistering. attention immediately. Serious Inhalation: Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-tomouth resuscitation when the inhaled material is toxic, infectious corrosive. Seek immediate medical attention. Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

				Control Installation No.	1
1.5	D	36		Serious Ingestion: Not available.	
46.	Potassium	May intensify fire;	General Information: Use proper	Eyes: Immediately flush eyes with	Do not discharge into
	nitrate	oxidizer	personal protective equipment as	plenty of water for at least 15	drains or the
		Causes skin irritation	indicated in Section 8.	minutes, occasionally lifting the	environment. Remove
		Causes serious eye	Spills/Leaks: Vacuum or sweep	upper and lower eyelids. If	waste in accordance
		irritation	up material and place into a	irritation develops, get medical aid.	with local and/or
		May cause respiratory	suitable disposal container. Avoid	Skin: Immediately flush skin with	national regulations.
		irritation	generating dusty conditions.	plenty of water for at least 15	Hazardous waste shall
			Provide ventilation. Do not use	minutes while removing	not be mixed together
			combustible materials such as	contaminated clothing and shoes.	with other waste.
			paper towels to clean up spill.	Get medical aid if irritation	Different
			Keep combustibles (wood, paper,	develops or persists.	types of hazardous
			oil, etc.,) away from spilled	Ingestion: Do not induce vomiting.	waste shall not be
			material. Do not let this chemical	Get medical aid if irritation or	mixed together if this
			enter the environment.	symptoms occur.	may entail a risk of
				Inhalation: Remove from exposure	pollution or
				and move to fresh air immediately.	create problems for the
				If not breathing, give artificial	further management of
				respiration. If breathing is difficult,	the waste. Hazardous
				give oxygen. Get medical aid if	waste shall be managed
				cough or other symptoms appear.	responsibly. All entities
				Notes to Physician: Treat	that store, transport or
				symptomatically and supportively.	handle hazardous waste
					shall take the
					necessary measures to
					prevent risks of
					pollution or damage to
					people or animals.
					Remove to
					an authorized dump
					(Class I).
					Precipitate/make
					insoluble.
47.	Sodium nitrate	May intensify fire;	Personal Precautions	General Advice: If symptoms	Chemical waste
		oxidizer		persist, call a physician.	generators must

		Causes serious eye irritation May cause damage to	Environmental Precautions:Ensure adequate ventilation. Use personal	Eye Contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get	determine whether a discarded chemical is classified as a
		organs through prolonged or repeated exposure	protective equipment. Avoid dust formation. Avoid release to the environment. Methods for Containment and Clean up:Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.	medical attention. Skin Contact: Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention. Inhalation Move to fresh air. If breathing is difficult, give oxygen. Obtain medical attention. Ingestion Do not induce vomiting. Obtain medical attention. Most important symptoms and effects: None reasonably foreseeable. Notes to Physician:	hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.
				Treat symptomatically	
48.	Zinc sulfate heptahydrate GR	Harmful if swallowed Causes serious eye damage May cause damage to organs through prolonged or repeated exposure	Personal Precautions Environmental Precautions:Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. Methods for Containment and Clean up: Avoid dust formation. Sweep up or vacuum up spillage	Eye Contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  Immediate medical attention is required.  Skin Contact: Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.  Inhalation: Move to fresh air. If breathing is difficult, give oxygen.  Get medical attention immediately if symptoms occur.	Dispose of in accordance with Federal, State, and local regulations

	1	1	T	T	
			and collect in suitable container	Ingestion Do not induce vomiting.	
			for	Call a physician or Poison Control	
			disposal.	Center immediately.	
				Most important symptoms and	
				effects:	
				Causes eye burns. Notes to	
				Physician: Treat symptomatically	
49.	Phenol	Very hazardous in case of	Small Spill: Use appropriate tools	Eye Contact:	Waste must be disposed
		skin contact (corrosive,	to put the spilled solid in a	Check for and remove any contact	of in accordance with
		irritant), of eye contact	convenient waste disposal	lenses. In case of contact,	federal, state and local
		(irritant), of ingestion, of	container.	immediately flush eyes with plenty	environmental control
		inhalation. Hazardous in	Large Spill:	of water for at least 15	regulations.
		case of skin contact	Corrosive solid. Stop leak if	minutes. Cold water may be used.	
		(sensitizer, permeator).	without risk. Do not get water	Get medical attention immediately.	
		The amount of tissue	inside container. Do not touch	Skin Contact:	
		damage depends on length	spilled material. Use water spray	In case of contact, immediately	
		of contact. Eye contact can	to	flush skin with plenty of water for	
		result in corneal damage or	reduce vapors. Prevent entry into	at least 15 minutes while removing	
		blindness. Skin contact can	sewers, basements or confined	contaminated clothing	
		produce inflammation and	areas; dike if needed. Eliminate	and shoes. Cover the irritated skin	
		blistering. Inhalation of	all ignition sources. Call	with an emollient. Cold water may	
		dust will produce	for assistance on disposal. Be	be used. Wash clothing before	
		irritation to gastro-	careful that the product is not	reuse. Thoroughly clean	
		intestinal or respiratory	present at a concentration level	shoes before reuse. Get medical	
		tract, characterized by	above TLV. Check TLV on the	attention immediately.	
		burning, sneezing and	MSDS and with local authorities.	Serious Skin Contact:	
		coughing. Severe over-		Wash with a disinfectant soap and	
		exposure can		cover the contaminated skin with	
		produce lung damage,		an anti-bacterial cream. Seek	
		choking, unconsciousness		immediate medical	
		or death. Inflammation of		attention.	
		the eye is characterized by		Inhalation:	
		redness, watering, and		If inhaled, remove to fresh air. If	
		itching. Skin inflammation		not breathing, give artificial	
		is characterized by itching,		not oreaumig, give artificial	
		is characterized by itching,			

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		scaling, reddening, or,		respiration. If breathing is difficult,	
		occasionally, blistering,		give oxygen. Get medical	
		Carcinogenic effect,		attention immediately.	
		mutagenic effect and		Serious Inhalation:	
		developmental toxicity		Evacuate the victim to a safe area	
		de veropinentar texterty		as soon as possible. Loosen tight	
				clothing such as a collar, tie, belt or	
				waistband. If	
				breathing is difficult, administer	
				oxygen. If the victim is not	
				breathing, perform mouth-to-mouth	
				resuscitation. WARNING: It may	
				be hazardous to the person	
				providing aid to give mouth-to-	
				mouth resuscitation when the	
				inhaled material is toxic, infectious	
				or	
				corrosive. Seek immediate medical	
				attention.	
				Ingestion:	
				Do NOT induce vomiting unless	
				directed to do so by medical	
				personnel. Never give anything by	
				mouth to an unconscious	
				person. If large quantities of this	
				material are swallowed, call a	
				physician immediately. Loosen	
				tight clothing such as a collar,	
				tie, belt or waistband.	
				Serious Ingestion: Not available.	
50.	Aceton	Highly flammable liquid	Personal precautions, protective	Eyes: In case of contact,	Dispose of waste and
		and vapour	equipment and emergency	immediately flush eyes with plenty	residues in accordance
		Causes serious eye	procedures	of water for a t least 15 minutes.	with local authority
		irritation	F	Get medical aid.	requirements. This
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		May cause drowsiness or	Wear appropriate protective	Skin: In case of contact, flush skin	container must be
		dizziness	clothing (see Section 8), consider	with plenty of water. Remove	disposed as hazardous
			need for evacuation. Eliminate all	contaminated clothing and shoes.	waste.
			source of ignition.	Get medical aid if irritation	
			Environmental precautions	develops and persists. Wash	
			Prevent material entering drains	clothing before reuse.	
			and watercourses. Advise local	Ingestion: Potential for aspiration if	
			authorities if spillage has entered	swallowed. Get medical aid	
			watercourses and sewer.	immediately. Do not induce	
			Methods and material for	vomiting unless directed to do so	
			containment and cleaning up	by medical personnel. Never give	
			Contain and absorb using inert	anything by mouth to an	
			material and transfer into suitable	unconscious person. If vomiting	
			containers for recovery or	occurs naturally, have victim lean	
			disposal	forward.	
			by a licensed waste contractor.	Inhalation: If inhaled, remove to	
				fresh air. If not breathing, give	
				artificial respiration. If breathing is	
				difficult, give oxygen. Get medical	
				aid.	
				Notes to Physician: Treat	
				symptomatically and supportively.	
51.	Hydrogen	May cause fire or	Personal precautions, protective	After inhalation: Remove to fresh	Product/containers must
	peroxide	explosion; strong oxidizer	equipment and emergency	air. Give artificial respiration if	not be disposed
	1	Harmful if swallowed	procedures:	necessary. If breathing is difficult,	together with household
		Causes severe skin burns	Wear protective equipment. Use	give	garbage. Do not allow
		and eye damage	respiratory protective device	oxygen.Move exposed individual to	product to reach
		Harmful if inhaled	against the effects of	fresh air. Loosen clothing as	sewage system or open
			fumes/dust/aerosol. Keep	necessary and position individual in	water.It is the
			unprotected persons away. Ensure	a	responsibility of the
			adequate ventilation. Keep away	comfortable position. Seek medical	waste generator to
			from ignition sources. Protect	advice if discomfort or irritation	properly characterize all
			from	persists.	waste
			heat.Stop the spill, if possible.	After skin contact: Flush with water	materials according to
			Contain spilled material by diking	for 15 minutes. Get medical	applicable regulatory
			Contain spined material by diking	101 15 minutes. Oct medical	applicable regulatory

or using inert absorbent. Transfer assistance if irritation entities (US to a disposal develops.Wash 40CFR262.11). Consult or recovery container. affected area with soap and water. federal state/ provincial Environmental precautions: Rinse thoroughly. Seek medical and Should not be released into the attention if irritation, discomfort or local regulations regarding the proper environment .Prevent from vomiting reaching drains, sewer or persists. disposal of waste After eye contact: Immediately waterway. Collect material that may flush eyes with water for at least 15 incorporate some contaminated soil for characterization per Section 13 minutes. Immediately get medical amount of this assistance. Protect unexposed eye. product. Methods and material for containment and cleaning up: Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Soak up with an inert absorbent material and containerize for Remove disposal. If in a laboratory setting, contact lens(es) if able to do so follow Chemical during rinsing. Seek medical Hygiene Plan procedures.Collect attention if irritation persists or if liquids using vacuum or by use of concerned. After swallowing: DO NOT induce absorbents. Place into properly labeled vomiting. Dilute with water or containers for recovery or milk. Get medical assistance. Rinse disposal. If necessary, use trained mouth thoroughly. Do not induce response staff/contractor vomiting. Have exposed individual drink sips of water. Seek medical attention if irritation, discomfort or vomiting persists