



SAFETY DATA SHEET

WSR 3108

Section 1. Identification


- GHS product identifier** : WSR 3108
- Other means of identification** : Scale Remover
Water Soluble
- Product use** : Not available.
- Product type** : Liquid.
- Manufacturer** : Jacam Manufacturing 2013, L.L.C.
P.O.Box 208, 1656 Ave. Q.
Sterling, Kansas 67579
- Validation date** : 5/31/2016.
- For Chemical Emergency
Spill, Leak Fire, Exposure or
Accident:** : **Call CHEMTREC Day or Night**
Within USA and Canada 800-424-9300 CCN# 11754
Or +1 703-527-3887 (Collect calls accepted)
- Direct all other calls to:**
Jacam Chemicals 2013, L.L.C. 620-278-3355
Mon – Fri 8 a.m. to 5 p.m. (Closed on major holidays)
- Supplier's details** : Jacam Chemicals 2013, L.L.C.
P.O. Box 96, 205 S. Broadway
Sterling, Kansas 67579

Section 2. Hazards identification

- Classification of the substance or mixture** : FLAMMABLE LIQUIDS - Category 4
ACUTE TOXICITY (oral) - Category 3
ACUTE TOXICITY (inhalation) - Category 3
SKIN CORROSION/IRRITATION - Category 1
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 73%

Section 2. Hazards identification

GHS label elements

Hazard pictograms	:	
Signal word	:	Danger
Hazard statements	:	H227 - Combustible liquid. H301 + H331 - Toxic if swallowed or if inhaled. H314 - Causes severe skin burns and eye damage.
Precautionary statements		
General	:	P103 - Read label before use. P102 - Keep out of reach of children. P101 - If medical advice is needed, have product container or label at hand.
Prevention	:	P280 - Wear protective gloves: > 8 hours (breakthrough time): nitrile rubber. Wear eye or face protection: Recommended: chemical splash goggles and/or face shield.. Wear protective clothing. P210 - Keep away from flames and hot surfaces. - No smoking. P271 - Use only outdoors or in a well-ventilated area. P261 - Avoid breathing vapor. P270 - Do not eat, drink or smoke when using this product. P264 - Wash hands thoroughly after handling.
Response	:	P304 + P340 + P310 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. P301 + P310 + P330 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 + P363 + P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician. P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.
Storage	:	. - Store in accordance with all local, regional, national and international regulations. P403 - Store in a well-ventilated place. P235 - Keep cool.
Disposal	:	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazards not otherwise classified	:	None known.
Routes of entry	:	Dermal contact. Eye contact. Inhalation. INGESTION: Although not a normal route of entry, ingestion is expected to be harmful. DO NOT TAKE INTERNALLY. FOR INDUSTRIAL USE ONLY.
Target organs	:	Contains material which causes damage to the following organs: upper respiratory tract, central nervous system (CNS), optic nerve. Contains material which may cause damage to the following organs: blood, lungs, liver, gastrointestinal tract, cardiovascular system, skin, eye, lens or cornea, teeth.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture
Other means of identification : Scale Remover
 Water Soluble

CAS number/other identifiers

CAS number : Not applicable.

Ingredient name	%	CAS number
Methanol	10 - 30	67-56-1
Hydrochloric acid	10 - 30	7647-01-0
Acetic Acid	5 - 10	64-19-7
Oxyalkylated Resins	1 - 5	9016-45-9

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : If irritation persists, obtain medical attention. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 15 minutes. Chemical burns must be treated promptly by a physician.
- Inhalation** : If irritation persists, obtain medical attention. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : If irritation persists, obtain medical attention. Call a poison center or physician. Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 15 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : If irritation persists, obtain medical attention. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a

Section 4. First aid measures

collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : Toxic if inhaled. May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.
- Skin contact** : Causes severe burns.
- Ingestion** : Toxic if swallowed. May cause burns to mouth, throat and stomach.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
Central Nervous System depression
optic nerve damage (blindness)
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
- Ingestion** : Adverse symptoms may include the following:
stomach pains
Central Nervous System depression
optic nerve damage (blindness)

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

Specific hazards arising from the chemical

- : Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Section 5. Fire-fighting measures

Additional Vapor Statement : Not available.
Not available.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
hydrogen chloride

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

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 and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. 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 (see Section 13). The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store in accordance with all local, regional, national and international regulations. Eliminate all ignition sources. Separate from alkalis. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Methanol	<p>ACGIH TLV (United States, 4/2014). Absorbed through skin. TWA: 200 ppm 8 hours. TWA: 262 mg/m³ 8 hours. STEL: 250 ppm 15 minutes. STEL: 328 mg/m³ 15 minutes.</p> <p>OSHA PEL 1989 (United States, 3/1989). Absorbed through skin. TWA: 200 ppm 8 hours. TWA: 260 mg/m³ 8 hours. STEL: 250 ppm 15 minutes. STEL: 325 mg/m³ 15 minutes.</p> <p>NIOSH REL (United States, 10/2013). Absorbed through skin. TWA: 200 ppm 10 hours. TWA: 260 mg/m³ 10 hours. STEL: 250 ppm 15 minutes. STEL: 325 mg/m³ 15 minutes.</p> <p>OSHA PEL (United States, 2/2013). TWA: 200 ppm 8 hours. TWA: 260 mg/m³ 8 hours.</p>
Hydrochloric acid	<p>ACGIH TLV (United States, 4/2014). C: 2 ppm OSHA PEL 1989 (United States, 3/1989).</p>

Section 8. Exposure controls/personal protection

Acetic Acid

CEIL: 5 ppm
 CEIL: 7 mg/m³
NIOSH REL (United States, 10/2013).
 CEIL: 5 ppm
 CEIL: 7 mg/m³
OSHA PEL (United States, 2/2013).
 CEIL: 5 ppm
 CEIL: 7 mg/m³
ACGIH TLV (United States, 4/2014).
 TWA: 10 ppm 8 hours.
 TWA: 25 mg/m³ 8 hours.
 STEL: 15 ppm 15 minutes.
 STEL: 37 mg/m³ 15 minutes.
OSHA PEL 1989 (United States, 3/1989).
 TWA: 10 ppm 8 hours.
 TWA: 25 mg/m³ 8 hours.
NIOSH REL (United States, 10/2013).
 TWA: 10 ppm 10 hours.
 TWA: 25 mg/m³ 10 hours.
 STEL: 15 ppm 15 minutes.
 STEL: 37 mg/m³ 15 minutes.
OSHA PEL (United States, 2/2013).
 TWA: 10 ppm 8 hours.
 TWA: 25 mg/m³ 8 hours.

- Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
- Individual protection measures**
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead. Recommended: chemical splash goggles and/or face shield.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. > 8 hours (breakthrough time): nitrile rubber

Section 8. Exposure controls/personal protection

- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Personal protective equipment (Pictograms) :



Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid. [Clear.]
- Color** : Brown.
- Odor** : Alcohol-like. [Slight]
- Odor threshold** : Not available.
- pH** : 0.5 to 1.5
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Closed cup: 65.556°C (150°F) [Pensky-Martens.]
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : Not available.
- Vapor density** : >1 [Air = 1]
- Relative density** : 1.03 to 1.04
- Density** : 8.34 to 8.68 (lbs/gal)
- Solubility** : Easily soluble in the following materials: cold water.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Not available.

Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
- Incompatible materials** : Oxidizing or reducing agents
alkalis
cyanides
sulfides
combustible materials
Keep away from formaldehyde, amines, vinyl acetates, propylene oxide, betapropiolactone, metal oxides.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Methanol	LC50 Inhalation Gas.	Rat	145000 ppm	1 hours
	LC50 Inhalation Gas.	Rat	64000 ppm	4 hours
	LD50 Dermal	Rabbit	15800 mg/kg	-
Acetic Acid	LD50 Oral	Rat	5600 mg/kg	-
	LC50 Inhalation Vapor	Rat	11000 mg/m ³	4 hours
	LD50 Dermal	Rabbit	1060 mg/kg	-
	LD50 Oral	Rat	3310 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Methanol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	40 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
Hydrochloric acid	Eyes - Mild irritant	Rabbit	-	0.5 minutes 5 milligrams	-
	Skin - Mild irritant	Human	-	24 hours 4 Percent	-
Acetic Acid	Eyes - Mild irritant	Rabbit	-	0.5 minutes 5 milligrams	-
	Skin - Mild irritant	Human	-	24 hours 50 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 50 milligrams	-

Section 11. Toxicological information

Oxyalkylated Resins	Skin - Severe irritant	Rabbit	-	525 milligrams	-
	Eyes - Severe irritant	Guinea pig	-	20 milligrams	-
	Eyes - Severe irritant	Mouse	-	20 milligrams	-
	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
	Skin - Mild irritant	Human	-	72 hours 15 milligrams Intermittent	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-

<u>Sensitization</u>			
Product/ingredient name	Route of exposure	Species	Result
Not available.			

<u>Mutagenicity</u>			
Product/ingredient name	Test	Experiment	Result
Not available.			

<u>Carcinogenicity</u>				
Product/ingredient name	Result	Species	Dose	Exposure
Not available.				

<u>Classification</u>			
Product/ingredient name	OSHA	IARC	NTP
Hydrochloric acid	-	3	-

<u>Reproductive toxicity</u>						
Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
Not available.						

<u>Teratogenicity</u>					
Product/ingredient name	Result	Species	Dose	Exposure	
Not available.					

<u>Specific target organ toxicity (single exposure)</u>			
Name	Category	Route of exposure	Target organs
Not available.			

<u>Specific target organ toxicity (repeated exposure)</u>
Not available.

<u>Aspiration hazard</u>	
Name	Result
Not available.	

Section 11. Toxicological information

Information on the likely ToxKinetics - routes of exposure : Routes of entry anticipated: Dermal, Inhalation.

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : Toxic if inhaled. May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.
- Skin contact** : Causes severe burns.
- Ingestion** : Toxic if swallowed. May cause burns to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
Central Nervous System depression
optic nerve damage (blindness)
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
- Ingestion** : Adverse symptoms may include the following:
stomach pains
Central Nervous System depression
optic nerve damage (blindness)

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

Not available.

- General** : No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Section 11. Toxicological information

Route	ATE value
<input checked="" type="checkbox"/> Oral	145.8 mg/kg
<input type="checkbox"/> Dermal	3705.4 mg/kg
<input type="checkbox"/> Inhalation (vapors)	3.972 mg/l

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
<input checked="" type="checkbox"/> Methanol	Acute EC50 16.912 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute LC50 2500000 µg/l Marine water	Crustaceans - Crangon crangon - Adult	48 hours
	Acute LC50 3289 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 100 mg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
Hydrochloric acid	Chronic NOEC 9.96 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute LC50 240000 µg/l Marine water	Crustaceans - Carcinus maenas - Adult	48 hours
Acetic Acid	Acute LC50 282 ppm Fresh water	Fish - Gambusia affinis - Adult	96 hours
	Acute EC50 73400 µg/l Fresh water	Algae - Navicula seminulum	96 hours
	Acute EC50 65000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
Oxyalkylated Resins	Acute LC50 50.1 ul/L Marine water	Crustaceans - Artemia sp.	48 hours
	Acute LC50 75000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
	Acute EC50 12 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute LC50 1.23 mg/l Marine water	Crustaceans - Americamysis bahia	48 hours
	Acute LC50 0.148 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 1300 µg/l Fresh water Chronic NOEC 8 mg/l Fresh water	Fish - Lepomis macrochirus Algae - Pseudokirchneriella subcapitata	96 hours 96 hours
	Chronic NOEC 35 µg/l Fresh water	Fish - Oryzias latipes - Fry	100 days

Conclusion/Summary : Not available.

Persistence and degradability

Not available.

Product/ingredient name

Not available.

Product/ingredient name

Not available.

Section 12. Ecological information

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Methanol	-0.77	<10	low
Acetic Acid	-0.17	3.16	low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

United States - RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Methanol (I); Methyl alcohol (I)	67-56-1	Listed	U154

Section 14. Transport information

Regulatory information	UN/NA Number	Proper shipping name	Hazard Class(es)	PG*
DOT Classification				PG* : Packing group
	UN1760	CORROSIVE LIQUID, N.O.S. (Hydrochloric acid, Acetic Acid) RQ (Methanol, Hydrochloric acid)	8	III

Additional information

Emergency Response Guide (ERG): 154

Section 14. Transport information

Reportable quantity

27324.8 lbs / 12405.5 kg [3212.9 gal / 12162.2 L]

Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

Label



TDG Classification

UN1760	CORROSIVE LIQUID, N.O.S. (Hydrochloric acid, Acetic Acid)	8	III
--------	---	---	-----

Additional information

-

Label



IMDG Class

UN1760	CORROSIVE LIQUID, N.O.S. (Hydrochloric acid, Acetic Acid)	8	III
--------	---	---	-----

Marine pollutant notes: : Not available.

Additional information

-

Label



IATA-DGR Class

UN1760	CORROSIVE LIQUID, N.O.S. (Hydrochloric acid, Acetic Acid)	8	III
--------	---	---	-----

Additional information

-

Section 14. Transport information

Label



Section 15. Regulatory information

- U.S. Federal regulations** : TSCA 8(a) PAIR: Oxyalkylated Resins; Oxyalkylated Resins
 TSCA 8(a) CDR Exempt/Partial exemption: Not determined
 All components are listed or exempted.
 Clean Water Act (CWA) 311: Hydrochloric acid; acetic acid
 Clean Air Act (CAA) 112 regulated flammable substances: Hydrochloric acid
- Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Listed
- Clean Air Act Section 602 Class I Substances** : Not listed
- Clean Air Act Section 602 Class II Substances** : Not listed
- DEA List I Chemicals (Precursor Chemicals)** : Not listed
- DEA List II Chemicals (Essential Chemicals)** : Listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Fire hazard
 Immediate (acute) health hazard
 Delayed (chronic) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Methanol	10 - 30	Yes.	No.	No.	Yes.	Yes.
Hydrochloric acid	10 - 30	No.	No.	No.	Yes.	Yes.
Acetic Acid	5 - 10	Yes.	No.	No.	Yes.	Yes.
Oxyalkylated Resins	1 - 5	No.	No.	No.	Yes.	No.

SARA 313

Section 15. Regulatory information

	Product name	CAS number	%
Form R - Reporting requirements	Methanol	67-56-1	10 - 30
	Hydrochloric acid	7647-01-0	10 - 30
Supplier notification	Methanol	67-56-1	10 - 30
	Hydrochloric acid	7647-01-0	10 - 30

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

- Massachusetts** : The following components are listed: HYDROGEN CHLORIDE; METHANOL; ACETIC ACID
- New York** : The following components are listed: Hydrochloric acid; Methanol; Acetic acid
- New Jersey** : The following components are listed: HYDROGEN CHLORIDE; HYDROCHLORIC ACID; METHYL ALCOHOL; METHANOL; ACETIC ACID; ETHANOIC ACID
- Pennsylvania** : The following components are listed: HYDROCHLORIC ACID; METHANOL; ACETIC ACID

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Inform Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Canada

- WHMIS (Canada)** : Class B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F).
 Class D-1A: Material causing immediate and serious toxic effects (Very toxic).
 Class D-2A: Material causing other toxic effects (Very toxic).
 Class D-2B: Material causing other toxic effects (Toxic).
 Class E: Corrosive material

Canadian lists

- Canadian NPRI (Pollution Release)** : The following components are listed: Hydrochloric acid; Methanol; Oxyalkylated Resins
- CEPA Toxic substances** : The following components are listed: Oxyalkylated Resins
- Canada inventory-DSL / NDSL** : All components are listed or exempted.

International lists

National inventory

- Australia** : All components are listed or exempted.
- Canada** : All components are listed or exempted.
- China** : All components are listed or exempted.
- Europe** : All components are listed or exempted.
- Japan** : Not determined.
- Malaysia** : Not determined.
- New Zealand** :

Section 15. Regulatory information

Philippines	: All components are listed or exempted.
Republic of Korea	: Not determined.
Taiwan	: All components are listed or exempted.

Section 16. Other information

National Fire Protection Association (U.S.A.)



Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Normal Package Size(s): Ball: 2" Ball 50/Cooler; 4" Ball 12/Cooler
 Dry Product: 50 Lbs/Box
 Liquid: 5 Gallon/55 Gallon/Bulk
 Pellets: 30 Lbs/Cooler; 24 Lbs/Pail
 Stix: 1 1/4": 50 Each/Cooler

History

Date of issue/Date of revision : 5/31/2016.
Version : 1.03
Date of previous issue : 4/6/2016.
Previous Validation Date : 4/6/2016.
Prepared by : Jacam Regulatory Department
(M)SDS Requests: : SDS@jacam.com

Key to abbreviations : ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 UN = United Nations
References : Not available.

📌 Indicates information that has changed from previously issued version.

Notice to reader

<i>Date of issue/Date of revision</i>	5/31/2016.	People + Products ⇌ Performance™	<i>Version</i> : 1.03
---------------------------------------	------------	---	-----------------------

Section 16. Other information

This Safety Data Sheet (“SDS”) is a mandatory disclosure pursuant to 29 CFR § 1910.1200 and related rules and regulations. Therefore, it is not intended, nor shall it serve to create, any rights, obligations, liabilities, and remedies, of any kind whatsoever, between Jacam Chemicals 2013, LLC and related entities (“Jacam”) and any users of this SDS (“Users”).

To the extent that a court of competent jurisdiction determines that this SDS creates any rights, obligations, liabilities, and remedies, of any kind whatsoever, notwithstanding the foregoing paragraph, Users accept the product AS IS and WITH ALL FAULTS. Further, Jacam DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Users’ sole and exclusive remedies shall be (if any), in Jacam’s sole and absolute discretion, either: (1) return of the product and repayment of the purchase price; or (2) repair/replacement of the product. In no event shall Jacam be liable for any damages of any kind whatsoever, including but not limited to, actual, compensatory, reliance, expectancy, foreseeable, future, statutory, incidental, consequential, and exemplary damages. Users assume any and all risks of any kind whatsoever that in any way relate to the product.

*** END OF SDS ***