

MATERIAL SAFETY DATA SHEET

WSR 3105 SCALE REMOVER/CONVERTOR

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SECTION I - IDENTIFICATION
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COMPANY NAME..... JACAM CHEMICALS, L.L.C.
EMERGENCY PHONE NUMBER... CHEMTREC 800/424-9300
EFFECTIVE DATE..... 10-1988, Original issue
REVISED DATE..... 08-03-1995, Supersedes issue of 09-19-1994
PRODUCT IDENTIFIER..... WSR 3105
TRADE NAME..... WSR 3105 SCALE REMOVER/CONVERTOR
CHEMICAL FAMILY..... ORGANIC ACIDS
CHEMICAL FORMULA..... PROPRIETARY INFORMATION

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SECTION II - HAZARDOUS INGREDIENTS
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HAZARDOUS INGREDIENTS	HAZARDOUS INGREDIENT PERCENT	TLV (Units)	HAZARDOUS INGREDIENT CAS/NA/UN NUMBERS
FORMALDEHYDE*+	**	0.75ppm	50-00-0
HYDROXYACETIC ACID	**	3.00ppm	79-14-1

*SARA TITLE III
Sec. 313 Chemical

**Proprietary Data

+CARCINOGEN listed by
IARC, NTP, OSHA, ACGIH

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SECTION III - PHYSICAL DATA
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BOILING POINT..... Not Determined (N/D)
FREEZING POINT..... N/D
VOLATILITY/VOL(%)..... N/D
MELTING POINT..... Not Applicable (N/A)
VAPOR PRESSURE..... N/D
VAPOR DENSITY (air=1).... N/D
SOLUBILITY IN H2O..... Complete
ODOR AND APPEARANCE..... Slight odor/Clear yellow liquid
SPECIFIC GRAVITY..... Calc. 1.1553
EVAPORATION RATE..... N/D
pH..... 6.5 - 7.0

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SECTION IV - FIRE AND EXPLOSION HAZARD DATA
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FLASHPOINT AND METHOD OF DETERMINATION..... > 158 F (PMCC)

LOWER EXPLOSION LIMIT(% BY VOL)..... N/D
UPPER EXPLOSION LIMIT(% BY VOL)..... N/D

MEANS OF EXTINCTION..... Water spray, dry chemical, "alcohol" foam, or carbon dioxide

FOR FIRE..... Use NIOSH/MSHA-approved self-contained breathing apparatus and full protective clothing. Use a smothering technique to extinguish this type of fire. Heat may build pressure, rupturing closed containers. Use water spray to cool fire-exposed containers and disperse vapors. Avoid spreading burning liquid with water used for cooling purposes. Potential explosion hazard above 175 F. Vapors are heavier than air and may travel along ground to distant ignition source where they may ignite, flash back, or explode.

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SECTION V - HEALTH HAZARD DATA
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ODOR THRESHOLD..... N/D

ACUTE OVER EXPOSURE EFFECTS..... SKIN: Severe irritation, severe erythema, edema, drying, cracking, redness, blistering.
EYES: Severe irritation, redness, burning, stinging, tearing, swelling. Corneal damage possible from direct contact.
INHALATION: Respiratory irritation, bronchitis, pulmonary edema, chemical pneumonitis, coughing, sneezing, chest pain, difficulty breathing.
INGESTION: Gastrointestinal irritation, severe pain, corrosion of mucous membranes, nausea, vomiting, diarrhea, loss of consciousness, blindness, and even death.

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SPECIFIC FIRST AID
PROCEDURES.....

SKIN: Immediately remove contaminated clothing and shoes. Wash affected area with plenty of soap and water. Obtain immediate medical attention. Launder clothing and clean shoes before reuse.
EYES: Immediately flush with plenty of water for at least 15 minutes, retracting lids frequently.... Obtain immediate medical attention, preferably by an ophthalmologist.
INHALATION: Remove to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain immediate medical attention.
INGESTION: If conscious and alert, give water or milk to drink to dilute stomach contents; DO NOT induce vomiting. If spontaneous vomiting occurs, keep head below hips to prevent aspiration and give liquids again. Obtain immediate medical attention. Never attempt to give anything by mouth to an unconscious or convulsing person.

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SECTION VI - REACTIVITY DATA
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CHEMICAL STABILITY..... Stable
CONDITIONS OF REACTIVITY. Heat, sparks, flame, static electricity, all sources of ignition.
INCOMPATIBLE MATERIALS... Oxidizing agents, acids, alkalis, metals, cyanides, sulfides.
HAZARDOUS DECOMPOSITION PRODUCTS..... Carbon monoxide, carbon dioxide, miscellaneous organic compounds, some possibly toxic.
HAZARDOUS POLYMERIZATION. Will not occur
POLYMERIZATION AVOID..... N/A

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SECTION VII - SPILL OR LEAK PROCEDURE
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LEAK AND SPILL PROCEDURES Wearing appropriate personal protection equipment, shut off leak if safe to do so. Eliminate all sources of ignition. Contain by diking with inert material to prevent entering drains, sewers, surface or ground waters, and soil. Using explosion-proof or hand pump, pump large spills into DOT-approved waste containers. Absorb residues and small spills with inert material and sweep into DOT-approved waste containers.

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WASTE DISPOSAL..... Dispose of in accordance with applicable local, state and federal regulations.

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SECTION VIII - SPECIAL PROTECTION
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RESPIRATORY PROTECTION... If exposure exceeds PEL/TLV, use NIOSH/MSHA-approved self-contained breathing apparatus.
VENTILATION..... Special ventilation may be required if operating conditions result in release of vapors exceeding PEL/TLV.
PROTECTIVE GLOVES..... Impervious PVC-coated, rubber, or neoprene.
EYE PROTECTION..... Chemical splash goggles, with full face shield in high exposure situations. DO NOT wear contact lenses.
OTHER PROTECTIVE EQUIPMENT..... Impervious apron or coveralls in high exposure situations, long sleeves, and boots. Safety shower, eye wash fountain, and lavatory should be readily available.
HANDLING PROCEDURES AND EQUIPMENT..... Store in tightly closed, properly vented containers in a cool, dry, well ventilated area away from ignition sources and incompatible materials. "Empty" containers retain hazardous residues and may explode if heated sufficiently. Do not cut, weld, braze, solder, drill, grind, pressurize, or expose such containers to heat, flame, static electricity, sparks, or any source of ignition. Store drums in bung-up position. Protect from physical damage. Carefully vent internal pressure before beginning transfer. Electric equipment should conform to national electric code. Use only non-sparking tools. Avoid inhalation of vapors and personal contact with product.

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SECTION IX - SPECIAL PRECAUTIONS
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HAZARD CLASS..... 8, CORROSIVE
DOT SHIPPING NAME..... CORROSIVE LIQUID, NOS (HYDROXYACETIC ACID, FORMALDEHYDE), PG III.
REPORTABLE QUANTITY (RQ). 3,313 lbs. or 343 gal.
UN NUMBER..... UN #1760
NA #..... N/A
PACKAGING SIZE..... 5 Gallon/55 Gallon/Bulk

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FOOT NOTES

NFPA CLASSIFICATION: HEALTH: 2
FLAMMABILITY: 1
REACTIVITY: 0
SPECIFIC HAZARD: N/A

REFERENCES

----- N O T I C E -----

All information provided in this Material Safety Data Sheet (MSDS) is based upon data obtained from the manufacturer and/or recognized technical sources and is believed to be reliable as of the date hereof. JACAM Chemicals, L.L.C. provides no warranties, either expressed or implied, and assumes no responsibility for the accuracy or completeness. Conditions of use are beyond JACAM's control and therefore users are responsible to verify this data under their own operating conditions to determine whether this product is suitable for their particular circumstances. Users assume all risks of the use, handling, and disposal of this product, or from the publication or use of, or reliance upon, information contained herein. This MSDS relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process. JACAM knows of no medical condition, other than those noted in this MSDS, which are generally recognized as being aggravated by exposure to this product.

* * * END OF MSDS * * *