MATERIAL SAFETY DATA SHEET

SECTION I - PRODUCT IDENTIFICATION

Product Name : **REGAL 30**

Product Use : Arterial embalming chemical.

Chemical Family : Mixture.

Supplier's name and address:

The Dodge Chemical Company (Canada) Ltd.
1265 Fewster Drive
Mississauga, Ontario, Canada
L4W 1A2
(905) 625 0311

Manufacturer's name and address:

Refer to Supplier

24 Hr. Emergency Tel # : (613) 996-6666 (CANUTEC) **WHMIS CLASS** : B3, D1A, D2A, D2B, E

SECTION II - HAZARDOUS INGREDIENTS

Ingredients	CAS #	Wt.%	LC_{50}(4hr) (Rat, ihl.)	LD_{50} mg/kg (Oral, rat)	LD_{50} mg/kg (Rabbit, dermal)
Formaldehyde	50-00-0	20.00 - 35.00	578 mg/m3 / 2 Hrs	42 (mouse) 100 (rat)	300
Methanol	67-56-1	7.00 - 13.00	64,000 ppm	5628	15,800

SECTION III - PHYSICAL DATA

Physical state : Liquid; Opaque

Odour : Slightly perfumed with a somewhat pungent odour.

Appearance : Orange-pink liquid

Odour threshold : N/Av

pH : 8.0 - 9.0

Boiling point : 83 - 85°C (181 - 185°F)

Specific gravity : 1.08 - 1.09

Melting/Freezing point : N/Av

Coefficient of water/oil distribution : N/Av

Vapour pressure (mmHg @ 20° C / 68° F) : N/Av

Solubility in water : Complete

Vapour density (Air = 1) : > 1

Evaporation rate (n-Butyl acetate = 1) : < 1

Volatiles (% by weight) : 96

SECTION IV - FIRE AND EXPLOSION DATA

Fire hazards/conditions of flammability : Combustible liquid and vapour. This material may be ignited by heat, sparks and direct flame.

Flash point : 53 - 56°C (128 - 132°F)

Flash point Method : TCC

Auto-ignition temperature : N/Av

Lower flammable limit (% by vol.) : 7 (37% Formaldehyde; 7 - 15% Methanol)

Upper flammable limit (% by vol.) : 73 (37% Formaldehyde; 7 - 15% Methanol)

Means Of Extinction : Dry chemical, carbon dioxide, foam, or water.

Explosion data: Sensitivity to mechanical impact / static discharge : N/Av

Special fire-fighting procedures/equipment : Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame. Avoid spreading burning liquid with water spray used for cooling purposes.

Unusual Fire and Explosion Hazards

: Vapours are heavier than air and collect in confined and low-lying areas. Closed containers may build up pressure when exposed to heat and flame.

Hazardous combustion products

: May form formaldehyde gas, carbon oxides, hydrogen, formic acid and various hydrocarbons.

SECTION V - REACTIVITY DATA

Stability and reactivity : Stable under the recommended storage and handling conditions prescribed. At higher temperatures, product may form formic acid and methanol. Hazardous polymerisation does not occur.

Conditions of reactivity : Avoid excessive heat, sparks and open flame. Exposure to cold may cause precipitation of the polymer, will redissolve upon gentle heating.

Incompatible materials : Avoid contact with strong oxidizers, strong alkalies, strong mineral acids, phenol and urea.

Hazardous decomposition products

: Methanol; Formic acid.

SECTION VI - TOXICOLOGICAL PROPERTIES

***** Routes of exposure and acute/chronic effects *****

Exposure Limits

Ingredients	ACGIH TLV		OSHA PEL	
	TWA	STEL	PEL	STEL
Formaldehyde	0.3 ppm (ceiling)	N/Av	0.75 ppm	2 ppm
Methanol	200 ppm (skin)	250 ppm (skin)	200 ppm	N/Av

Routes of exposure : Skin contact; Skin Absorption; Eye contact; Ingestion; Inhalation.

Irritancy : Severely irritating or corrosive.

Potential Acute Health Effects

Inhalation : May cause severe irritation to the nose, throat and respiratory tract. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. Affected person could experience a latent period of no symptoms, followed by blurred vision and possibly blindness. Could result in pulmonary edema (fluid accumulation). Symptoms may be delayed. May result in unconsciousness and possibly death.

Skin : Severely irritating or corrosive. Prolonged contact may produce chemical burns to affected skin areas. Prolonged or repeated contact may cause a hardening or tanning effect. May be absorbed and cause symptoms similar to those for inhalation.

Eyes : Exposure to high vapour concentrations or contact with liquid causes severe irritation, redness, tearing and pain. Prolonged contact may cause corrosive burns and eye damage. Could result in permanent damage and blindness.

Ingestion : Poison, may be fatal or cause blindness if swallowed. May cause severe irritation and corrosive damage in the mouth, throat and stomach. Severe stomach pains, vomiting, diarrhea, and liver and kidney injury may follow. May be absorbed and cause symptoms similar to those for inhalation. Blindness or death may occur.

Effects of Chronic Exposure : Prolonged or repeated skin contact may cause drying and irritation.

Carcinogenicity : Formaldehyde is classified as carcinogenic by IARC (Group 1), ACGIH (Group A2) and NTP (Group 2).

Reproductive effects : Not expected to have other reproductive effects.

Teratogenicity : Contains methanol, which may cause teratogenic effects at doses which are not maternally toxic.

Mutagenicity : This product contains Formaldehyde, which may cause mutations to non-reproductive cells (somatic cells), based on animal data.

Sensitization to material : May cause severe skin sensitization with allergic contact dermatitis symptoms such as swelling, rash and eczema. No data available to indicate product or components may be respiratory sensitizers.

Synergistic materials : N/Av

Medical Conditions Aggravated By Overexposure

: Pre-exisiting skin, respiratory, renal or nervous system disorders.

SECTION VII - FIRST AID

Inhalation : Immediately remove person to fresh air. If breathing has stopped, give artificial respiration. Keep warm and in a quiet place. Seek immediate medical attention/advice.

Skin contact : Remove contaminated clothing. Flush affected skin with gently flowing lukewarm water for at least 20 minutes. Do not rub area of contact. Seek immediate medical attention/advice. Wash contaminated clothing before re-use.

Eye contact : Immediately flush eyes with running water for at least 15 minutes. Seek immediate medical attention/advice.

Ingestion : Call a physician or Poison Control Centre immediately. Do NOT induce vomiting. This material is corrosive to the digestive tract. Have victim rinse mouth with water, then give one to two glasses of water to drink. Never give anything by mouth to an unconscious person.

SECTION VIII - PREVENTIVE MEASURES

Spill response/cleanup : Individuals involved in the cleanup must wear appropriate personal protective equipment. Remove all sources of ignition. Ventilate area of release. Stop the spill at source if it is safe to do so.
Contain and absorb spilled material with inert, non-combustible absorbent material, such as sand. Neutralize spill with a diluted solution (< 5%) of ammonia or sodium sulfite. Place absorbent material in a suitable, closed and labelled container for later disposal (see below). Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. Notify the appropriate authorities as required.

Methods of Disposal : Handle according to recommendations listed below. Improper disposal can cause damage to the environment. Dispose of in accordance with federal, provincial and local hazardous waste laws.

*** PROTECTIVE EQUIPMENT ***

Ventilation and engineering measures
: Local exhaust ventilation is preferred to prevent contaminant dispersion into work area.

Respiratory protection : Use NIOSH/MSHA approved full-face respirator with an organic vapour cartridge if the recommended exposure limit is exceeded.

Skin protection : Wear impervious gloves, such as butyl rubber. Advice should be sought from glove suppliers.

Eye / face protection : Chemical splash goggles are recommended. A full face shield may also be necessary.

Other protective equipment : An eyewash station and safety shower should be made available in the immediate working area. Depending on conditions of use, an impervious apron should be worn.

*** STORAGE & HANDLING ***

Safe Handling procedures : Wear chemically resistant protective equipment during handling. Use only in well-ventilated areas. Do not breathe vapours or spray mist. Avoid contact with eyes, skin and clothing. Keep away from heat, sparks, and open flames. Keep away from bases and incompatibles. Use caution when opening cap. Keep containers tightly closed when not in use. Wash thoroughly after handling.

Storage requirements : Store in a cool, dry, well-ventilated area. Store away from incompatibles and out of direct sunlight. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. No smoking in the area. Inspect periodically for damage or leaks.

Do not store for long periods of time below 2°C (35°F), or above 43.3°C (110°F).

Special Shipping Information

Regulatory Information	UN Number	Shipping Name	Class	Packing Group	Label
TDG	UN1198	FORMALDEHYDE SOLUTION, FLAMMABLE	3(8)	III	
TDG Additional information	May be shipped as Limited Quantity when transported in containers no larger than 5.0 Litres; in packages not exceeding 30 kg gross mass. Under the TDGR, refer to Section 1.17 for additional exemption information, if shipping under this exemption.				

SECTION IX - PREPARATION INFORMATION

Legend : ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstract Services
IARC: International Agency for Research on Cancer
Inh: Inhalation
LC: Lethal Concentration
LD: Lethal Dose
MSHA: Mine Safety and Health Administration
N/Ap: Not Applicable
N/Av: Not Available
NTP: National Toxicology Program
NIOSH: National Institute of Occupational Safety and Health
OSHA: Occupational Safety and Health Administration
PEL: Permissible exposure limit
STEL: Short Term Exposure Limit
TCC: Tagliabue Closed Cup
TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Identification System

References :
1. ACGIH, Threshold Limit Values and Biological Exposure Indices for 2008.
2. International Agency for Research on Cancer Monographs, searched 2009.
3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases, 2009 (Chempendium and RTECs).
4. Material Safety Data Sheet from manufacturer.

MSDS Preparation Date (mm/dd/yyyy)

: 01/31/2013

Prepared by:

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