



G.K. Chemical Specialties Co. Ltd.
90 Barbados Blvd.
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Material SAFETY DATA SHEET

PRODUCT NAME: G-1200 Mechanical Dishwashing Detergent

HEALTH HAZARD RATING:	SERIOUS HAZARD - major injury likely unless prompt action is taken and medical treatment is given
FLAMMABILITY HAZARD RATING:	MINIMAL HAZARD – materials which are normally stable and will not burn unless heated
REACTIVITY HAZARD RATING:	MINIMAL HAZARD – materials which are normally stable, even under fire conditions, and which will not react with water
PERSONAL PROTECTION:	Safety glasses + Gloves + Synthetic Aprons
HAZARD ALERT SIGN:	HEALTH HAZARD – Extreme danger FIRE HAZARD – Will not burn REACTIVITY – Stable SPECIFIC HAZARD – Corrosive

SECTION I – MATERIAL IDENTIFICATION AND USE / IDENTIFICATION DE LA MATIÈRE ET USAGE

MATERIAL NAME / IDENTIFIER – NOM / IDENTIFICATION DE LA MATIÈRE

G-1200 Mechanical Dishwashing Detergent

MANUFACTURER'S NAME AND ADDRESS/ NOM DU FABRICANT – ADRESSE EMERGENCY PHONE NO. / N° DE TÉLÉPHONE D'URGENCE	G.K. Chemical Specialties Co. Ltd. 90 Barbados Blvd. Scarborough, Ontario M1J 1K9 (416) 261-7182 / 905 427-7605
SUPPLIER'S NAME AND ADDRESS/ NOM DU FOURNISSEUR - ADRESSE EMERGENCY PHONE NO. / N° DE TELEPHONE DURGENCE	
CHEMICAL NAME / DÉNOMINATION CHIMIQUE	Not Applicable
CHEMICAL FAMILY / FAMILLE CHIMIQUE	Detergent
CHEMICAL FORMULA / FORMULE CHIMIQUE	Not Applicable
TRADE NAME AND SYNONYMS / APPELLATION COMMERCIALE ET SYNONYMES	Not Applicable
MOLECULAR WEIGHT / POIDS MOLÉCULAIRE	Not Applicable
MATERIAL USE / UTILISATION DE LA MATIÈRE	Cleaning

G.K. Chemical Specialties Co. Ltd. has compiled the information and recommendations contained in this Material Safety Data Sheet from sources believed to be reliable and to represent the most reasonable current opinion on the subject when the MSDS was prepared. Although reasonable precautions have been taken in the preparation of the data contained herein, it is offered solely for your information, consideration and investigation.

G.K. Chemical Specialties Co. Ltd. extends no warranty and assumes no responsibility as to the accuracy of the content or sufficiency of the information and expressly disclaims all liability for reliance thereon. This MSDS provides guidelines for the safe handling of this product. It does not and cannot advise on all possible situations, therefore, your specific use of this product should be evaluated to determine if additional precautions are required. Individuals exposed to this product should read and understand this information and be provided pertinent training prior to working with this product.

G.K. Chemical Specialties Co. Ltd. assumes no responsibility for personal injury or property damage to vendors, users or third parties caused by the material. Such vendors or users assume all risks associated with the use of the material.

INGREDIENTS. This MSDS, under section of Ingredients, contains all ingredients listed under INGREDIENT DISCLOSURE LIST P.C. 1987-2719, 20/1/88 CANADA GAZETTE PART II VOL. 122, No 2 of HAZARDOUS PRODUCT ACT.

Percentage range of concentration of ingredients is expressed as percentage by weight of the total weight of the product. Ingredient List does not necessarily list all ingredients in the formulation and does not necessarily list all ingredient range of concentration, other than ingredients under the Disclosure List.

T.L.V. (units) or Threshold Limit Values refer to the limiting concentrations recommended by the Ministry of Labour. These values were adopted by the American Conference of Governmental Industrial Hygienists (A.C.G.I.H.). The figures refer to time-weighted average concentrations as P.P.M. (V/V) or mg/m³ for a normal working day or at any time for some materials.

“C.A.S REG. No.” means the identification number assigned to a chemical substance by the Chemical Abstracts Service Division of the American Chemical Society.

“LC 50” means the concentration of a substance in air that when administered by means of inhalation over a specified length of time in an animal assay, is expected to cause the death of 50 per cent of a defined animal population.

“LD 50” means the single dose of a substance that, when administered by a defined route in an animal assay, is expected to cause death of 50 per cent of a defined animal population.

FLASH POINT. The minimum temperature at which a substance gives off flammable vapors which in contact with spark or flame will ignite.

SECTION II – HAZARDOUS INGREDIENTS OF MATERIAL / INGRÉDIENTS DANGEREUX DE LA MATIÈRE

HAZARDOUS INGREDIENTS / INGRÉDIENTS DANGEREUX	APPROXIMATE CONCENTRATION % CONCENTRATION APROXIMATIVE %	C.A.S., N.A. OR U.N. NUMBERS / NUMERO CAS NA OU CNU	LD50 {SPECIFY SPECIES & ROUTE} DL50 {PRÉCISER L'ESPECE ET LA VOIE D'ADMINISTRATION}	LC 50 {SPECIFY SPECIES & ROUTE} CL50 {PRÉCISER L'ESPECE ET LA VOIE D'ADMINISTRATION}
Caustic Soda	5 – 10	1310-73-2	LD50 Oral Rat 10 % Solution	500 mg/kgm
Sodium gluconate	1 – 5	Non Hazardous		
Sodium tripolyphosphate	3 – 7	Non Hazardous	LD50 Oral Rat, 6500 mg/kgm	
Potassium polyphosphate	1 – 5	Non Hazardous		
Tetrasodium salt of E.D.T.A. Solution	1 – 5	Non Hazardous	LD50, Oral Mice, 8000 mg/kgm	
Ester type surfactant	1 – 5	Non Hazardous		
Water and other non hazardous ingredients	Balance	Non Hazardous		

SECTION III – PHYSICAL DATA FOR MATERIAL / CARACTÉRISTIQUES PHYSIQUES DE LA MATIÈRE

PHYSICAL STATE / ÉTAT PHYSIQUE	Liquid
ODOUR AND APPEARANCE / ODEUR ET APPARENCE	Clear liquid – no odour
ODOUR THRESHOLD (P.P.M.) / SEUIL DE L'ODEUR (PPM)	Not Applicable
SPECIFIC GRAVITY / DENSITÉ RELATIVE	1.0 ± 0.02 gm/cm ³
VAPOUR PRESSURE [MM] / TENSION DE VAPEUR [MM]	< 25 at 20 °C
VAPOUR DENSITY [AIRE = 1] / DENSITÉ DE VAPEUR [AIR =1]	~ Water
EVAPORATION RATE / TAUX D'ÉVAPORATION	~ Water
BOILING POINT [°C] / POINT D'ÉBULLITION [°C]	100 °C
FREEZING POINT [°C] / POINT DE CONGÉLATION [°C]	0 °C
SOLUBILITY IN WATER [20°C] / SOLUBILITÉ DANS L'EAU [20°C]	Infinite
% VOLATILE [BY VOLUME] / % VOLATILITÉ [PAR VOLUME]	84.5 ± 1
PH	12.50 ± 0.50
COEFFICIENT OF WATER / OIL DISTRIBUTION / COEFFICIENT DE RÉPARTITION EAU / HUILE	Not Applicable

SECTION IV – FIRE AND EXPLOSION HAZARD OF MATERIAL/RISQUES D'INCENDIE ET D'EXPLOSION DU MATÉRIEL

FLAMMABILITY / INFLAMMABILITÉ __ YES / OUI <u>X</u> NO/NON IF YES, UNDER WHICH CONDITIONS? / SI OUI, DANS QUELLES CONDITIONS?	
MEANS OF EXTINCTION / MOYENS D'EXTINCTION	None Required
SPECIAL PROCEDURES / MARCHE A SUIVRE SPÉCIALE	None Required

FLASHPOINT [°C] AND METHOD / POINT D'ÉCLAIR [°C] ET MÉTHODE DE DÉTERMINATION	Not Applicable
UPPER EXPLOSION LIMIT [% BY VOLUME]/ SEUIL MAXIMAL D'INFLAMMABILITÉ [% PAR VOLUME]	Not Applicable
LOWER EXPLOSION LIMIT [% BY VOLUME]/ SEUIL MINIMAL D'INFLAMMABILITÉ [% PAR VOLUME]	Not Applicable
AUTOIGNITION TEMPERATURE [°C] / TEMPÉRATURE D'AUTO-INFLAMMATION [°C]	Not Applicable
HAZARDOUS COMBUSTION PRODUCTS / PRODUITS DE COMBUSTION DANGEREUX	None

EXPLOSION DATA / DONNÉES SUR L'EXPLOSIBILITÉ

SENSITIVITY TO MECHANICAL IMPACT / SENSIBILITÉ AUX CHOCS	Not Applicable
SENSITIVITY TO STATIC DISCHARGE / SENSIBILITÉ AUX DÉCHARGES ÉLECTROSTATIQUES	Not Applicable

SECTION V – REACTIVITY DATA / DONNÉES SUR LA RÉACTIVITÉ

CHEMICAL STABILITY / STABILITÉ CHIMIQUE <input checked="" type="checkbox"/> YES / OUI <input type="checkbox"/> NO/NON IF NO, UNDER WHICH CONDITIONS? / SI NON-, DANS QUELLES CONDISIONS?	
INCOMPATIBILITY TO OTHER SUBSTANCES / INCOMPATIBILITÉ AVEC D'AUTRES SUBSTANCES <input checked="" type="checkbox"/> YES / OUI <input type="checkbox"/> NO/NON IF SO, WHICH ONES? / SI OUI, AVEC LESQUELLES?	Acids
REACTIVITY AND UNDER WHAT CONDITIONS / RÉACTIVITÉ – DANS QUELLES CONDITIONS?	Acids – not dangerously reactive
HAZARDOUS DECOMPOSITION PRODUCTS / PRODUITS DE DÉCOMPOSITION DANGEREUX	None

SECTION VI – TOXICOLOGICAL PROPERTIES OF MATERIAL / PROPRIÉTÉS TOXICOLOGIQUES DE LA MATIÈRE

ROUTE OF ENTRY / VOIE D'ADMINISTRATION

SKIN CONTACT / CONTACT AVEC LA PEAU SKIN ABSORPTION / ABSORPTION PAR LA PEAU
 EYE CONTACT / CONTACT OCULAIRE INHALATION ACUTE / INHALATION AIGUE
 INHALATION CHRONIC / INHALATION CHRONIQUE INGESTION

EFFECTS OF ACUTE EXPOSURE TO MATERIAL / EFFETS DE L'EXPOSITION AIGUE A LA MATIERE	EYE: Will cause severe irritation, may cause chemical burns. SKIN CONTACT: Brief contact may cause irritation, seen as local redness. Prolonged contact will cause chemical burns. INHALATION: Vapours or mists are very irritating to the respiratory tract. INGESTION: Will cause chemical buns of the mouth, throat, oesophagus and stomach. Signs and symptoms will include pain or discomfort in the mouth, chest and abdomen, nausea, vomiting, diarrhea, dizziness, weakness, collapse, coma.
EFFECTS OF CHRONIC EXPOSURE TO MATERIAL / EFFETS DE L'EXPOSITION CHRONIQUE A LA MATIERE	Although no long term human studies have been reported, there are no reported chronic effects that warrant control beyond that required for effects of acute exposure.

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LD 50 OF MATERIAL [SPECIFY SPECIES & ROUTE] / LD50 DE LA MATIÈRE [PRÉCISER L'ESPECE ET LA VOIE D'ADMINISTRATION]	> 7000 mg/kgm Oral Rat
LC50 OF MATERIAL [SPECIFY SPECIES & ROUTE] LC50 DE LA MATIÈRE / [PRÉCISER L'ESPECE ET LA VOIE D'ADMINISTRATION]	Not Established
EXPOSURE [LIMITS] / LIMITS D'EXPOSITION	30 PPM
IRRITANCY OF MATERIAL/PROPRIÉTÉ IRRITANTE DE LA MATIÈRE	Eyes, skin, respiratory tract
SENSITIZATION OF MATERIAL / SENSIBILISATION A LA MATIÈRE	Eyes, skin, respiratory tract
SYNERGISTIC MATERIALS / MATÉRES SYNERGIQUES	None known
CARCINOGENICITY, REPRODUCTIVE EFFECTS, TERATOGENICITY, MUTAGENICITY / CANCÉROGÉNICITÉ, EFFETS NOCIFS SUR LA REPRODUCTION, TÉRATOGÉNÉCITÉ, MUTAGÉNICITÉ	None of the ingredients contained in this product are regulated as carcinogens by OSHA,

SECTION VII – PREVENTIVES MEASURES / MESURES PRÉVENTIVES**PERSONAL PROTECTIVE EQUIPMENT / MATÉRIEL PERSONNEL DE PROTECTION**

GLOVES (SPECIFY) GANTS [PRÉCISER]	Impervious
EYE [SPECIFY] / YEUX [PRÉCISER]	Glasses, splash goggles
RESPIRATORY (SPECIFY) / APPAREIL RESPIRATOIRE (PRÉCISÉR)	For most jobs respiratory protection is not required. However a spray application will create mists. For such an application and in absence of proper environmental control, use NIOSH approved respiratory.
OTHER (SPECIFY) / AUTRES (PRCISER)	Full protective suit is recommended whenever there is a possibility that this product could come in contact with clothing or skin.
ENGINEERING CONTROLS [E.G. VENTILATION, ENCLOSED PROCESS, SPECIFY] / MÉCANISMES TECHNIQUES [EX. VENTILATION, OPÉRATION EN MILIEU FERMÉ, PRÉCISER]	General Ventilation, or local ventilation to maintain TLV
LEAK AND SPILL PROCEDURE / MESURES EN CAS DE FUITE OU DE DÉVERSEMENT	Small quantities may be flushed with copious amounts of water; in case of large amounts contain liquid; use diluted phosphoric or hydrochloric acid to cautiously neutralize.
WASTE DISPOSAL / ÉLIMINATION DES RÉSIDUS	Small amounts – sanitary sewer Large amounts – must neutralize product before allowing into sanitary system
HANDLING PROCEDURES AND EQUIPMENTS / MÉTHODES ET ÉQUIPEMENT POUR LA MANUTENTION	Avoid any contact with skin or eyes. Avoid inhalation of mists.
STORAGE REQUIREMENTS / EXIGENCES D'ENTREPOSAGE	Store in closed containers, away from children. Store in a room where temperature is 1 °C – 40 °C
SPECIAL SHIPPING INFORMATION / RENSEIGNEMENTS SPÉCIAUX POUR L'EXPÉDITION	Sodium hydroxide solution or caustic soda, solution. Class 8(9.2) PIN #1824 Pkg II

SECTION VIII – FIRST AID MEASURES / PREMIERS SOINS

EYE CONTACT: Immediately flush with lots of running water for 15 minutes, lifting the upper and lower eyelids occasionally. Get immediate medical attention.

SKIN CONTACT: Wash skin with lots of water. Remove contaminated clothing and shoes; wash before reuse. Get medical attention if required.

INHALATION: Remove to fresh air. Give artificial respiration if not breathing. Call a physician and/or transport to a medical facility.

IF SWALLOWED: Do not induce vomiting. If conscious, give lots of water or milk, then dilute vinegar, lemon juice or orange juice. Get immediate medical attention. Do not give anything by mouth to an unconscious or convulsing person.

**ADDITIONAL INFORMATION /
RENSEIGNEMENTS SUPPLÉMENTAIRES**

SECTION IX – PREPARATION DATE OF M.S.D.S. / FICHE SIGNALÉTIQUE

PREPARED BY: Gus Kaklamanos - CHEMIST

TELEPHONE NO.: (416) 2617182

DATE: January 01, 2010

ADDITIONAL NOTES OR REFERENCES / NOTES ADDITIONNELLES OU RÉFÉRENCES:

WHMIS CLASSIFICATION: Class E
Class D, 2A & 2B