POLYETHYLENE GLYCOL 6000

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
POLYETHYLENE GLYCOL 6000

OTHER NAMES

HO((C2H4)n)H, HO(CH2-CH2-O)n-H, "PEG 6000", "polyglycol 6000", "polyglycol #6000", "poly(ethylene glycol) 6000", "Macrogol 6000"

PRODUCT USE
Water soluble lubricants for rubber moulds, textile fibres and metal forming operations. In food and food packaging. In hair preparations, cosmetics, ointments; water paints; paper coatings; polishes; ceramics. Permissible additive to foods and animal feeds. Plasticizers, softeners.

SUPPLIER
Company: S D FINE- CHEM LIMITED
Address:
315- 317, T.V. INDUSTRIAL ESTATE,
248, WORLI,
MUMBAI- 400030.INDIA.
technical@sdfine.com
Telephone: 91- 22- 24959898
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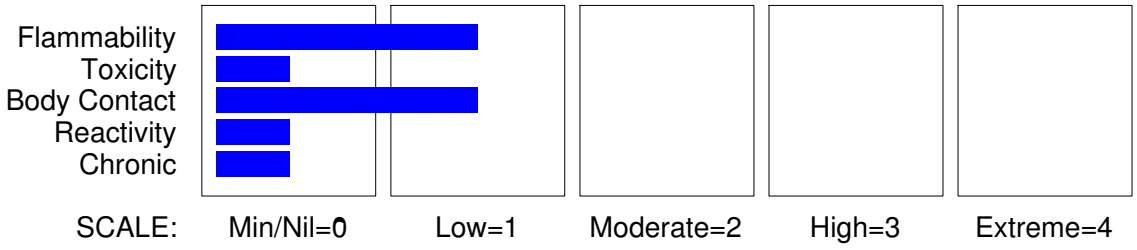
Fax: 91- 22- 24937232

HAZARD RATINGS



Section 2 - HAZARDS IDENTIFICATION

GHS Classification
Acute Toxicity (Oral) Category 4

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EMERGENCY OVERVIEW

HAZARD

WARNING
Determined by using GHS criteria:
H302
Harmful if swallowed

PRECAUTIONARY STATEMENTS

Prevention

Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.

Response

Specific treatment: refer to Label or MSDS.

Storage

Store locked up.

Disposal

Dispose of contents and container in accordance with relevant legislation.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
polyethylene glycol 6000	25322-68-3	>98

Section 4 - FIRST AID MEASURES

SWALLOWED

Rinse mouth out with plenty of water.
· If swallowed do NOT induce vomiting.
· If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
· Observe the patient carefully.
· Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
· Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
· Seek medical advice.

EYE

If this product comes in contact with the eyes:
· Wash out immediately with fresh running water.
· Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and

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moving the eyelids by occasionally lifting the upper and lower lids.
· If pain persists or recurs seek medical attention.
· Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

If skin or hair contact occurs:
· Flush skin and hair with running water (and soap if available).
· Seek medical attention in event of irritation.

INHALED

· If dust is inhaled, remove from contaminated area.
· Encourage patient to blow nose to ensure clear passage of breathing.
· If irritation or discomfort persists seek medical attention.

NOTES TO PHYSICIAN

Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

· Water spray or fog.
· Foam.
· Dry chemical powder.
· BCF (where regulations permit).
· Carbon dioxide.

FIRE FIGHTING

· Alert Fire Brigade and tell them location and nature of hazard.
· Wear breathing apparatus plus protective gloves for fire only.
· Prevent, by any means available, spillage from entering drains or water courses.
· Use fire fighting procedures suitable for surrounding area.
· DO NOT approach containers suspected to be hot.
· Cool fire exposed containers with water spray from a protected location.
· If safe to do so, remove containers from path of fire.
· Equipment should be thoroughly decontaminated after use.

FIRE/EXPLOSION HAZARD

· Combustible.
· Slight fire hazard when exposed to heat or flame.
· Heating may cause expansion or decomposition leading to violent rupture of containers.
· On combustion, may emit toxic fumes of carbon monoxide (CO).
· May emit acrid smoke.
· Mists containing combustible materials may be explosive.

Other combustion products include: carbon dioxide (CO_2).

FIRE INCOMPATIBILITY

Avoid contamination with strong oxidising agents as ignition may result.

Section 6 - ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES

continued...

MINOR SPILLS

· Clean up all spills immediately.
· Avoid contact with skin and eyes.
· Wear impervious gloves and safety glasses.
· Use dry clean up procedures and avoid generating dust.
· Sweep up or
· Vacuum up (consider explosion-proof machines designed to be grounded during storage and use).
· Place spilled material in clean, dry, sealable, labelled container.

MAJOR SPILLS

Avoid all personal contact Wear impervious gloves and safety glasses.
Prevent, by any means available, spillage from entering drains or water courses.
Shut off all possible sources of ignition and increase ventilation.
Recover uncontaminated product in clean, dry, labelled containers.
Collect and seal in labelled drums for disposal.
Wash spill area with large quantities of water.

EMERGENCY RESPONSE PLANNING GUIDELINES (ERPG)

The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour WITHOUT experiencing or developing

life-threatening health effects is:
polyethylene glycol 6000 500 mg/m³

irreversible or other serious effects or symptoms which could impair an individual's ability to take protective action is:
polyethylene glycol 6000 50 mg/m³

other than mild, transient adverse effects without perceiving a clearly defined odour is:
polyethylene glycol 6000 30 mg/m³

The threshold concentration below which most people will experience no appreciable risk of health effects:
polyethylene glycol 6000 10 mg/m³

American Industrial Hygiene Association (AIHA)

Ingredients considered according to the following cutoffs

Very Toxic (T+)	>= 0.1%	Toxic (T)	>= 3.0%
R50	>= 0.25%	Corrosive (C)	>= 5.0%
R51	>= 2.5%		
else	>= 10%		

where percentage is percentage of ingredient found in the mixture

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SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS

+	+	+	+	+	+

+: May be stored together
O: May be stored together with specific preventions
X: Must not be stored together

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

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Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

Avoid generating and breathing dust.
Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.
Avoid contact with eyes.
Avoid physical damage to containers.
When handling, DO NOT eat, drink or smoke.
Keep containers securely sealed when not in use.
Wash hands with soap and water after handling.

SUITABLE CONTAINER

- Lined metal can, lined metal pail/ can.
- Plastic pail.
- Polyliner drum.
- Packing as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY

Avoid storage with oxidisers.
DO NOT USE brass or copper containers / stirrers.
May be corrosive to steel and may soften, dissolve some plastics.

STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.
- No smoking, naked lights or ignition sources.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storing and handling recommendations.

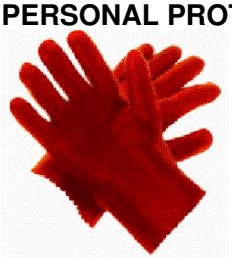
Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

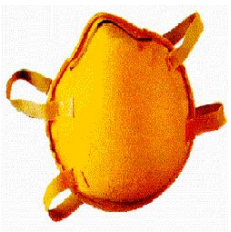
EXPOSURE CONTROLS

The following materials had no OELs on our records

- polyethylene glycol 6000: CAS:25322- 68- 3

PERSONAL PROTECTION





EYE

- Safety glasses with side shields; or as required,
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and

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concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

HANDS/FEET
Wear chemical protective gloves, eg. PVC.
Wear safety footwear.
Safety footwear.

OTHER
· Eyewash unit.
· Impervious apron.
Ensure there is ready access to a safety shower.

RESPIRATOR

Protection Factor	Half- Face Respirator	Full- Face Respirator	Powered Air Respirator
10 x ES	P1 Air- line*	- -	PAPR- P1 -
50 x ES	Air- line**	P2	PAPR- P2
100 x ES	-	P3	-
		Air- line*	-
100+ x ES	-	Air- line**	PAPR- P3

* - Negative pressure demand ** - Continuous flow.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required.
For further information consult your Occupational Health and Safety Advisor.

ENGINEERING CONTROLS
Use in a well-ventilated area.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE
White wax-like solid. Soluble in water, organic solvents. Very soluble in aromatic hydrocarbons. Slightly soluble in aliphatic hydrocarbons. Will soften some plastics. Substantially non volatile. Heat stable. Inert to many chemical agents. Hygroscopic. Will not hydrolyse or deteriorate.

PHYSICAL PROPERTIES
Solid.
Mixes with water.

Molecular Weight: 6000
Melting Range (℃): Not available
Solubility in water (g/L): Miscible
pH (1% solution): Not available
Volatile Component (%vol): Negligible

Boiling Range (℃): Not available
Specific Gravity (water=1): 1.101
pH (as supplied): Not applicable
Vapour Pressure (kPa): < 0.001 @ 20 C
Evaporation Rate: Not applicable

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Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Relative Vapour Density (air=1): >1
Lower Explosive Limit (%): Not available
Autoignition Temp (°C): Not available
State: Divided solid

Flash Point (°C): >176
Upper Explosive Limit (%): Not available
Decomposition Temp (°C): Not available

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED
Although ingestion is not thought to produce harmful effects (as classified under EC Directives), the material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health).
Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.
Considered an unlikely route of entry in commercial/industrial environments.

EYE
Although the material is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).
The material may be irritating to the eye, with prolonged contact causing inflammation.
Repeated or prolonged exposure to irritants may produce conjunctivitis.

SKIN
The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.
Not considered to cause discomfort through normal use.
The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.

INHALED
The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.
Not normally a hazard due to non-volatile nature of product.

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Section 11 - TOXICOLOGICAL INFORMATION

Not normally a risk due to low vapour pressure at ambient temperatures.
Inhalation hazard is increased at higher temperatures.

CHRONIC HEALTH EFFECTS
Primary route of exposure is usually by skin contact with the material.
As with any chemical product, contact with unprotected bare skin; inhalation of vapour, mist or dust in work place atmosphere; or ingestion in any form, should be avoided by observing good occupational work practice.
This material may increase the absorption activity or toxicity of other ingredients in a mixture. (Source: Genium)

TOXICITY AND IRRITATION

TOXICITY	IRRITATION
Oral (rat) LD50: 50000 mg/kg	Skin (rabbit): 500mg (open) mild.
Intraperitoneal (rat) LD50: 6790 mg/kg	Eye (rabbit): 500 mg/24h - Mild

Section 12 - ECOLOGICAL INFORMATION

No data for polyethylene glycol 6000.

Section 13 - DISPOSAL CONSIDERATIONS

- Consult manufacturer for recycling options and recycle where possible .
- Consult State Land Waste Management Authority for disposal.
- Incinerate residue at an approved site.
- Recycle containers if possible, or dispose of in an authorised landfill.

Section 14 - TRANSPORTATION INFORMATION

HAZCHEM: None

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS:UN, IATA, IMDG

Section 15 - REGULATORY INFORMATION

REGULATIONS

polyethylene glycol 6000 (CAS: 25322-68-3) is found on the following regulatory lists;
IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances

Section 16 - OTHER INFORMATION

The above information is believed to be accurate and represent the best information currently available to us, but does not represent any warranty expressed or implied of the properties of the product. User should make their own investigation to determine the suitability of the information for their particular purpose

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Section 16 - OTHER INFORMATION

Issue Date: 27-Mar-2018