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1 Identification of the substance/mixture and of the company/undertaking

- · Product identifier
- · Trade name: MB Grade Formaldehyde 37%
- · Article number: 40-6000-50
- Registration number 01-2119488953-20
- · Relevant identified uses of the substance or mixture and uses advised against

Manufacturing of chemicals / resins / polymers; Production of woodbased materials (panels, bricks, etc); Production of impregnated paper; Production of bonded fibers or fiber mats; Production of bonded particulates (abrasive, casting, moulding); adhesives and coatings; Production of rubber; Impregnation of textiles; Production of paper; Production of leather; Production of fertilizer granules; Production of foams; Production of firelighters; Manufacturing resins; Manufacturing of chemicals / resins / polymers; Professional use of formaldehyde based products; Professional use of resins in wood applications (glues,etc); Application of adhesives and coatings; Cleaning agents; Consumer use of formaldehyde based products.

- Sector of Use
- SU0 Other
- SU2a Mining, (without offshore industries)
- SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
- SU5 Manufacture of textiles, leather, fur
- SU6a Manufacture of wood and wood products
- SU6b Manufacture of pulp, paper and paper products
- SU7 Printing and reproduction of recorded media
- SU8 Manufacture of bulk, large scale chemicals (including petroleum products)
- SU9 Manufacture of fine chemicals
- SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
- SU11 Manufacture of rubber products
- SU12 Manufacture of plastics products, including compounding and conversion
- SU13 Manufacture of other non-metallic mineral products, e.g. plasters, cement
- SU14 Manufacture of basic metals, including alloys
- SU15 Manufacture of fabricated metal products, except machinery and equipment
- SU17 General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment
- SU18 Manufacture of furniture
- SU19 Building and construction work

· Product category

PC0 Other

- PC1 Adhesives, sealants
- PC8 Biocidal products (e.g. Disinfectants, pest control)
- PC9a Coatings and paints, thinners, paint removers
- PC9b Fillers, putties, plasters, modelling clay
- PC9c Finger paints
- PC13 Fuels
- PC15 Non-metal-surface treatment products
- PC18 Ink and toners
- PC21 Laboratory chemicals
- PC23 Leather tanning, dye, finishing, impregnation and care products
- PC26 Paper and board dye, finishing and impregnation products: including bleaches and other processing aids
- PC31 Polishes and wax blends
- PC32 Polymer preparations and compounds
- PC35 Washing and cleaning products (including solvent based products)
- PC37 Water treatment chemicals
- PC39 Cosmetics, personal care products

· Process category

- PROC1 Use in closed process, no likelihood of exposure
- PROC2 Use in closed, continuous process with occasional controlled exposure
- PROC3 Use in closed batch process (synthesis or formulation)
- PROC4 Use in batch and other process (synthesis) where opportunity for exposure arises

PROC5 Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)

PROC6 Calendering operations

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(Contd. of page 1) PROC7 Industrial spraying PROC8a Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at nondedicated facilities PROC8b Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9 Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10 Roller application or brushing PROC11 Non industrial spraying PROC13 Treatment of articles by dipping and pouring PROC14 Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC15 Use as laboratory reagent PROC16 Using material as fuel sources, limited exposure to unburned product to be expected PROC19 Hand-mixing with intimate contact and only PPE available PROC21 Low energy manipulation of substances bound in materials and/or articles PROC22 Potentially closed processing operations with minerals/metals at elevated temperature - Industrial setting PROC23 Open processing and transfer operations with minerals/metals at elevated temperature PROC24 High (mechanical) energy work-up of substances bound in materials and/or articles PROC25 Other hot work operations with metals · Environmental release category ERC0 Other ERC1 Manufacture of substances ERC2 Formulation of preparations ERC3 Formulation in materials ERC4 Industrial use of processing aids in processes and products, not becoming part of articles ERC5 Industrial use resulting in inclusion into or onto a matrix ERC6a Industrial use resulting in manufacture of another substance (use of intermediates) ERC6b Industrial use of reactive processing aids ERC6c Industrial use of monomers for manufacture of thermo-plastics ERC6d Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers ERC7 Industrial use of substances in closed systems ERC8a Wide dispersive indoor use of processing aids in open systems ERC8b Wide dispersive indoor use of reactive substances in open systems ERC8c Wide dispersive indoor use resulting in inclusion into or onto a matrix ERC8d Wide dispersive outdoor use of processing aids in open systems ERC8e Wide dispersive outdoor use of reactive substances in open systems ERC8f Wide dispersive outdoor use resulting in inclusion into or onto a matrix ERC10a Wide dispersive outdoor use of long-life articles and materials with low release ERC11a Wide dispersive indoor use of long-life articles and materials with low release · Article category AC11 Wood articles · Application of the substance / the preparation Formaldehyde has many industrial and professional applications. · Details of the supplier of the safety data sheet · Manufacturer/Supplier: Severn Biotech Ltd. Unit 2. Park Lane. Kidderminster, Worcestershire. DY11 6TJ UK Tel: 0044 1562 825286 Fax: 0044 1562 825284 email: info@severnbiotech.com · Further information obtainable from: Product safety department.

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Revision: 27.02.2013 Printing date 27.02.2013 Trade name: MB Grade Formaldehyde 37% (Contd. of page 2) • Emergency telephone number: Tel: 0044 1562 825286 (not 24 hours) **2 Hazards identification** · Classification of the substance or mixture · Classification according to Regulation (EC) No 1272/2008 GHS06 skull and crossbones Acute Tox. 3 H331 Toxic if inhaled. GHS08 health hazard Carc. 2 H351 Suspected of causing cancer. STOT SE 1 H370-H335-H336 Causes damage to organs. May cause respiratory irritation. May cause drowsiness or dizziness. GHS05 corrosion Skin Corr. 1B H314 Causes severe skin burns and eye damage. GHS07 Acute Tox. 4 H302 Harmful if swallowed. Acute Tox. 4 H312 Harmful in contact with skin. Skin Sens. 1 H317 May cause an allergic skin reaction. Classification according to Directive 67/548/EEC or Directive 1999/45/EC T; Toxic R23/24/25-39/23/24/25: Toxic by inhalation, in contact with skin and if swallowed. Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed. C; Corrosive Causes burns. R34 Xn; Harmful Limited evidence of a carcinogenic effect. R40Xi; Irritant R37 Irritating to respiratory system. Xi; Sensitising R43: May cause sensitisation by skin contact.

• Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

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Classification	(Contd. of page
Classification s	on is according to the latest editions of the EU-lists, and extended by company and literation
data.	
Label elements	
	ding to Regulation (EC) No 1272/2008
	lassified and labelled according to the CLP regulation.
	ams GHS05, GHS06, GHS08
Signal word Da	nger
Hazard-determ	ining components of labelling:
Formaldehyde	8 · · · · · · · · · · · · · · · · · · ·
Methanol	
Hazard stateme	ents
H302+H312	Harmful if swallowed or in contact with skin.
H331	Toxic if inhaled.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.
Н370-Н335-Н33	36 Causes damage to organs. May cause respiratory irritation. May cause drowsiness
	dizziness.
Precautionary	statements
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P270	Do no eat, drink or smoke when using this product.
P260	Do not breathe mist/vapours/spray.
P303+P361+P3	53 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse sl with water/shower.
	38 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses.
P305+P351+P3	of it is a several minutes. Remove contact tenses
P305+P351+P33	present and easy to do. Continue rinsing
P305+P351+P33 P304+P340	present and easy to do. Continue rinsing. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

· Chemical characterization: Mixtures

• Description: An aqueous solution of formaldehyde stabilised with methanol.

• Dangerous components: CAS: 50-00-0 Formaldehyde EINECS: 200-001-8 Image: TR23/24/25; Image: CR34; Image: Xin R40; Image: Xin R43; Carc. Cat. 3 Image: Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; Image: Crac. 2, H351; Image: Skin Corr. 1B, H314; Image: Skin Sens. 1, H317 CAS: 67-56-1 Methanol EINECS: 200-659-6 Image: TR23/24/25; Image: FR11 Image: CAS: 67-56-1 Image: TR23/24/25-39/23/24/25; Image: FR11

♦ Flam. Liq. 2, H225; ♦ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331;
 ♦ STOT SE 1, H370

• Additional information: For the wording of the listed risk phrases refer to section 16.

4 First aid measures

 \cdot Description of first aid measures

· General information:

Immediately remove any clothing soiled by the product.

(Contd. on page 5)

37-41%

10-15%

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	(Contd. of page 4)
In case of irregular breathing or respiratory arrest provide artificial respiration.	(contai of page 1)
May be absorbed through the skin.	
• After inhalation:	
DO NOT DELAY! Supply fresh air or oxygen; call for doctor.	
In case of unconsciousness place patient stably in side position for transportation.	
· After skin contact:	
DO NOT DELAY!	
Immediately wash with water and soap and rinse thoroughly.	
If skin irritation continues, consult a doctor.	
· After eye contact: DO NOT DELAY!	
Check for and remove any contact lenses.	
Rinse opened eye for several minutes under running water. Then consult a doctor.	
· After swallowing:	
DO NOT DELAY!	
Do not induce vomiting; call for medical help immediately. Drink plenty of water and provide fresh air. Call for a doctor immediately.	
· Information for doctor:	
Treatment following ingestion: Stomach wash. Administration of 100 ml of a solution c	containing 2%
ammonium carbonate and 20% urea.	e
Treatment following severe inhalation: Pulmonary odema prophylaxis.	
• Most important symptoms and effects, both acute and delayed No further relevant informati	ion available.
• Indication of any immediate medical attention and special treatment needed No further relevant information available.	
5 Firefighting measures	
· Extinguishing media	
 Extinguishing media Suitable extinguishing agents: CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Special hazards arising from the substance or mixture 	
 • Extinguishing media • Suitable extinguishing agents: CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam. • Special hazards arising from the substance or mixture Vapours can travel to a distant source of ignition and flash back. 	
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Do not allow to penetrate the ground/soil.

• Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Send for recovery or disposal in suitable receptacles.

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(Contd. of page 5) Ensure adequate ventilation. · Reference to other sections See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information. 7 Handling and storage · Handling: · Precautions for safe handling Ensure good ventilation/exhaustion at the workplace. Open and handle receptacle with care. Store in cool, dry place in tightly closed receptacles. Prevent formation of aerosols. Avoid direct contact with the product wherever possible. · Information about fire - and explosion protection: Protect from heat. Keep respiratory protective device available. Protect against electrostatic charges. Keep ignition sources away - Do not smoke. · Conditions for safe storage, including any incompatibilities · Storage: · Requirements to be met by storerooms and receptacles: Store in a cool location. Prevent any seepage into the ground. Suitable materials for containers: Stainless steel 1.4301 (V2), High density polyethylene (HDPE), Low density polyethylene (LDPE), Stainless steel 1.4401, aluminum. Unsuitable materials for containers: paper, board, glass. · Information about storage in one common storage facility: Store away from foodstuffs. Store away from oxidizing agents. · Further information about storage conditions: Store in cool, dry conditions in well sealed receptacles. Store in a bunded area. • Specific end use(s) No further relevant information available. 8 Exposure controls/personal protection

• Additional information about design of technical facilities: No further data; see item 7.

· Control parameters

· Ingredients with limit values that require monitoring at the workplace:

50-00-0 Formaldehyde

WEL Short-term value: 2.5 mg/m³, 2 ppm Long-term value: 2.5 mg/m³, 2 ppm

· DNELs

WORKERS Acute / short-term exposure - local effects Inhalation DN(M)EL - DNEL (Derived No Effect Level): 1 mg/m³

Long-term exposure - systemic effects Dermal DN(M)EL - DNEL (Derived No Effect Level): 240 mg/kg bw/day

Inhalation DN(M)EL - DNEL (Derived No Effect Level): 9 mg/m³

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(Contd. of page 6) Long-term exposure - local effects Dermal DN(M)EL - DNEL (Derived No Effect Level): 37 µg/cm² Inhalation DN(M)EL - DNEL (Derived No Effect Level): 0.5 mg/m³ GENERAL POPULATION Long-term exposure - systemic effects Dermal DN(M)EL - DNEL (Derived No Effect Level): 102 mg/kg bw/day Inhalation DN(M)EL - DNEL (Derived No Effect Level): 3.2 mg/m³ Oral DN(M)EL - DNEL (Derived No Effect Level): 4.1 mg/kg bw/day Long-term exposure - local effects Dermal DN(M)EL - DNEL (Derived No Effect Level): 12 µg/cm² Inhalation DN(M)EL - DNEL (Derived No Effect Level): 0.1 mg/m³ · PNECs PNEC aqua (freshwater): 0.47 mg/L PNEC aqua (marine water): 0.47 mg/L PNEC aqua (intermittent releases): 4.7 mg/L PNEC STP: 0.19 mg/L PNEC sediment (freshwater): 2.44 mg/kg sediment dw PNEC sediment (marine water): 2.44 mg/kg sediment dw PNEC soil: 0.21 mg/kg soil dw · Additional information: The lists valid during the making were used as basis. · Exposure controls · Personal protective equipment: Select PPE appropriate for the operations taking place taking into account the product properties. · General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing Wash hands before breaks and at the end of work. Store protective clothing separately. Do not inhale gases / fumes / aerosols. Avoid contact with the eyes and skin. Do not eat, drink, smoke or sniff while working. Pregnant women should strictly avoid inhalation or skin contact. A safe system of work must be formulated and followed to ensure that workers who may be pregnant or breastfeeding do not come into direct contact with the product. A safe system of work must be formulated and followed to ensure safe working with this product. Relevant workers must receive suitable and sufficient training and supervision. · Respiratory protection: In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device. Suitable respiratory protection for lower concentrations or short-term effect: Gas filter for gases/vapours of inorganic compounds (e.g. EN 14387 Type B) Suitable respiratory protection for higher concentrations or long-term effect: Self-contained breathing apparatus.

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· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation • Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Chemical resistant protective gloves (EN 374)

Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374):

- butyl rubber (butyl) 0.7 mm coating thickness
- nitrile rubber (NBR) 0.4 mm coating thickness

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection:



Tightly sealed goggles

Tightly fitting safety goggles (splash goggles) (e.g. EN 166).

· Body protection:

Impervious protective clothing

Chemical-protection suit (e.g. according to EN 14605)

9 Physical and chemical properties

 Information on basic 	physical a	and chemical	properties
--	------------	--------------	------------

•	General	Information
---	---------	-------------

· General Information	
· Appearance:	
Form:	Fluid
Colour:	Colourless
· Odour:	Pungent
· pH-value at 20 °C:	3-4
· Change in condition	
Melting point/Melting range:	ca. 0 °C
Boiling point/Boiling range:	ca. 100 °C
· Flash point:	62 °C
· Ignition temperature:	approx. 300 °C
· Self-igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air vapour mixtures are possible.
· Explosion limits:	
Lower:	7.0 Vol %
Upper:	73.0 Vol %
· Vapour pressure at 20 °C:	23.0 hPa
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· Density at 20 °C:

 \cdot Solubility in / Miscibility with

Fully miscible.

1.08 g/cm3

· Partition coefficient (n-octanol/water): 0.35 log POW

• Other information No further relevant information available.

10 Stability and reactivity

· Reactivity

water:

- · Chemical stability
- · Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

- Some white solid polymerisation products may be detected in the container if stored for extended periods.
- · Possibility of hazardous reactions Reacts with acids, alkali metals and strong oxidants.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials:

Strong acids and oxidising agents

Carbon steel

Alkali metals

 \cdot Hazardous decomposition products: Carbon monoxide and carbon dioxide

11 Toxicological information

· Information on toxicological effects

· Acute toxicity:

· LD/LC50 values relevant for classification:

50-00-0 Formaldehyde

Oral LD50 640 mg/kg (rat)

Primary irritant effect:

- · on the skin: Caustic effect on skin and mucous membranes.
- · on the eye: Strong caustic effect.
- Sensitization: Sensitization possible through skin contact.
- Subacute to chronic toxicity:

Repeated or prolonged contact may cause skin sensitization. Repeated or prolonged inhalation exposure may cause asthma-like symptoms.

· Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Toxic

- Corrosive
- Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

ROUTES OF EXPOSURE: The substance can be absorbed into the body by inhalation, through the skin and by ingestion.

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12 Ecological information

- · Toxicity
- · Aquatic toxicity:
- 50-00-0 Formaldehyde
- EC50 14.7 mg/kg (daphnia)
- · Persistence and degradability No further relevant information available.
- · Behaviour in environmental systems:
- · Bioaccumulative potential Product is not expected to bioaccumulate.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:
- Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water Do not allow product to reach ground water, water course or sewage system. Must not reach sewage water or drainage ditch undiluted or unneutralized. Danger to drinking water if even small quantities leak into the ground.
- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- **vPvB:** Not applicable.
- Other adverse effects No further relevant information available.

13 Disposal considerations

· Waste treatment methods

· Recommendation

Recommended Hierarchy of Controls:

- Minimise waste;
- Reuse if not contaminated;
- Recycle, if possible; or
- Safe disposal (if all else fails).

Must not be disposed together with household garbage. Do not allow product to reach sewage system. Contact waste processors for recycling information.

Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.

· European waste catalogue

Waste key numbers in accordance with the European Waste catalogue (EWC) are origin-referred defined. Since this product is used in several industries, no waste key can be provided by the supplier. The waste key number should be determined in arrangement with your waste disposal partner or the responsible authority.

- · Uncleaned packaging:
- · Recommendation:

Container remains hazardous when empty. Continue to observe all precuations.

- Disposal must be made according to official regulations.
- Do not mix with other waste streams.
- · Recommended cleansing agents: Water, if necessary together with cleansing agents.

14 Transport information

· UN-Number · ADR, IMDG, IATA	UN2209	
 · UN proper shipping name · ADR · IMDG, IATA 	2209 FORMALDEHYDE SOLUTION FORMALDEHYDE SOLUTION	
,	(Co	ntd. on page 11)

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	(Contd. of page 10
· Transport hazard class(es)	
· ADR, IMDG, IATA	
AND	
· Class	8 Corrosive substances.
· Label	8
· Packing group	
· ADR, IMDG, IATA	III
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Corrosive substances.
· Transport in bulk according to Annex l	II of
MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	5L
· Tunnel restriction code	E
· UN "Model Regulation":	UN2209, FORMALDEHYDE SOLUTION, 8, III

15 Regulatory information

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases

 H225 Highly flammable liquid and vapour. H301 Toxic if swallowed. H311 Toxic in contact with skin. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H331 Toxic if inhaled. H351 Suspected of causing cancer. H370 Causes damage to organs. R11 Highly flammable. R23/24/25 Toxic by inhalation, in contact with skin and if swallowed. R34 Causes burns. R39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed. R40 Limited evidence of a carcinogenic effect. R43 May cause sensitisation by skin contact. 	 Relevant phi 	ases
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 R23/24/25 Toxic by inhalation, in contact with skin and if swallowed. R34 Causes burns. R39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed. R40 Limited evidence of a carcinogenic effect. R43 May cause sensitisation by skin contact. Department issuing MSDS: Product safety department. 	H370	Causes damage to organs.
 R23/24/25 Toxic by inhalation, in contact with skin and if swallowed. R34 Causes burns. R39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed. R40 Limited evidence of a carcinogenic effect. R43 May cause sensitisation by skin contact. Department issuing MSDS: Product safety department. 	D11	11. 11. d
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