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MATERIAL SAFETY DATA SHEET

Chester
Molecular **CH-54**

Product Development Department

January 2004

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This Material Safety Data Sheet conforms to the requirements of the Regulation of the Minister of Health of 3/07/2002 concerning the data sheets of dangerous substances and dangerous formulations (Journal of Acts No. 140 item 1171).

MANUFACTURER

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1. IDENTIFICATION OF THE FORMULATION

Commercial Name: Chester Molecular CH-54

Application: Cyanoacrylic instant glue

2. COMPOSITION AND INFORMATION WITH RESPECT TO THE COMPONENTS

2-cyanoethyl acrylate (CAS 7085-85-0) 65-95% Xi; R36/37/38

3. IDENTIFICATION OF HAZARDS

Product classification according to the rules of the Act on chemical substances and formulations of 11/01/2001 (Journal of Acts No. 11 item 84; No. 100 item 1085; No. 123 item 1350; No. 125 item 1367, as amended on 5/07/2002, Journal of Acts No. 142 item 1187).

Warning Sign:

Xi –Irritating substance

Type of hazard:

R36/37/38 –Irritates eyes, respiratory tracts, and skin.

4. FIRST AID

When inhaled: Take the sufferer out to the fresh air. If symptoms persist, consult a physician.

Skin: Do not part by force the glued skin surfaces. Soak in warm water and soap, and gently prise the glued place with a blunt tool (e. g. a spoon). Cyanoacrylates produce heat at hardening. It may happen that a large drop produces enough heat to cause a burn. Should this be the case, apply typical medicaments after removal of the glue from the skin. Glued lips must be wetted with warm water from outside, and from inside with as much saliva as possible. Then part the glued places without forcing.

Eyes: To cemented eyelids apply a tampon wetted with warm water, and get the eyelashes unglued this way. Cyanoacrylate will bind protein, what will cause weeping, and this will make eyelids unglue. The eye should be covered with a dressing until the eyelids are completely separated (about 1-3 days). Do not use force for ungluing eyelids. If any particles of solidified glue cyanoacrylate got under the eyelid, causing eye damage, consult a doctor.

If swallowed: Make sure that respiratory tracts are patent. The product polymerises instantly inside the mouth, so swallowing it in the non-solidified state is practically impossible. Saliva will slowly cause parting of the solidified product from the mouth (within a few hours).

5. PROCEEDING IN CASE OF FIRE

Fire extinguishing means:

Sand, foam or dry powder extinguisher.

Dangerous decomposition products:

Track quantities of toxic fumes may release during fire.

6. PROCEEDING IN CASE OF UNINTENTIONAL RELEASE TO THE ENVIRONMENT

Personal protection: see item 8

Way of cleaning and collecting: provide appropriate ventilation, do not use rags to collect glue; make it polymerise by applying water, and then scrape the solidified product from the floor, and neutralise it according to the recommendations given in the item 13.

7. FORMULATION HANDLING AND STORING

Formulation handling:

Protect eyes, skin and clothing from the contact with the product. Provide appropriate ventilation when working with the formulation. Wash hands with water and soap after use.

Storing:

Keep in closed containers in vertical position, at the temperature from +2°C to +8°C.

Special anti-explosion and fire protection means are not needed.

8. EXPOSURE CONTROL, AND INDIVIDUAL PROTECTION MEANS

Additional recommendations in the scope of technical environment:

Provide appropriate general ventilation of the work places.

Exposure control parameters:

Regulation of the Minister of Work and Social Policy of 29/11/2002 with regard to the highest allowable concentrations and intensity of factors detrimental to health in the environment of work (Journal of Acts 2002, No. 217 item 1833).

Values of allowable concentration in the environment of work of the formulation components:

not determined

Recommendations concerning monitoring procedures – measurement methods:

Regulation of the Minister of Health of 9/07/1996 concerning tests and measurements of factors detrimental to health in the environment of work (Journal of Acts 1996, No. 86 item 394, as amended by Journal of Acts 2003, No. 21 item 180).

PN-86/Z-01001/06 – Protection of Air Cleanness. Names, definition, units. Terminology concerning air quality tests at work places.

PN-Z-04008-07:2002 – Protection of Air Cleanness. Rules of collecting air samples in the work environment, and interpretation of results.

Protection of the respiratory tract:

not necessary in properly ventilated environment

Protection of hands:

protection gloves (made of polyethylene or polypropylene) – when much of the formulation is used

Protection of eyes:

protection goggles – when there is a risk of splashing

Protection of body:

protective suit

Used protection means must satisfy the requirements of the Regulation of the Council of Ministers of 9/11/1999 concerning the list of products made in Poland, and also products imported to Poland for the first time, which can create danger, or serving the purpose of protection or saving life, health or environment, subjected to compulsory certification for the safety mark, and marking with this mark; and products subjected to compulsory issuance of the declaration of conformity by the maker (Journal of Acts 2000, No. 5 item 53).

9. PHYSICOCHEMICAL PROPERTIES

form	thixotropic gel
colour	colourless
smell	sharp, characteristic
vapour pressure	< 0.5 mm Hg (25°C)
solubility	not soluble in water – reacts with water
density	ca. 1.05 g/cm ³
flash point	> 80°C
explosion limits	not determined
boiling point	> 100°C

10. STABILITY AND REACTIVITY

Stability:

The product is stable at the recommended application conditions.

Dangerous products of decomposition:

None, if the product is used and stored according to the recommendations.

Dangerous polymerisation reactions:

Polymerisation occurs in the presence of humidity. Polymerisation may occur under the influence of bases, acids, catalytic agents, peroxides, free radicals, and temperature.

11. TOXICOLOGICAL INFORMATION

cyanoacrylates:

by inhaling	LC ₅₀ : not determined
through the skin	LD ₅₀ : (rabbit) > 2000 mg/kg
through the alimentary tract	LD ₅₀ : (rat) > 5000 mg/kg

Irritates the respiratory tract. Prolonged exposure to high concentration of formulation vapours may lead susceptible persons to chronic irritation of the respiratory tract. Irritates skin. Glues skin within few seconds. Irritates eyes, glues eyelids. In dry environment (humidity < 50%) vapours may cause weeping.

12. ECOLOGICAL INFORMATION

Biodegradable product of low harmfulness to the environment.

Avoid penetration of the formulation to sewers, water reservoirs, rivers, underground water, or soil.

Highest allowable values of pollution indices in industrial wastewater drained to sewage utilities:

Regulation of the Minister of Infrastructure of 20/07/2002 with respect to the methods of fulfilling the duties of industrial wastewater suppliers, and conditions of draining wastewater to sewage utilities (Journal of Acts 2002, No. 129 item 1108).

13. DISPOSAL OF WASTES

Product:

Waste code: 08 04 09

Containers:

Metal

Waste code: 15 01 04

Methods of neutralisation, and classification of wastes:

Act of 27/04/2001 on wastes (Journal of Acts 2001, No. 62, item 628), and Regulation of the Minister of Environment of 27/09/2001 with respect to the catalogue of wastes (Journal of Acts 2001, No. 112, item 1206).

14. TRANSPORTATION INFORMATION

The material does not create any imperilment in transportation, is not subjected to the RID/ADR rules. The product may be transported in any covered transportation means in original, tightly sealed containers.

15. INFORMATION CONCERNING LEGAL REGULATIONS

This Material Safety Data Sheet has been prepared in conformity with:

UE Directives No. 67/548 EEC and 88/379/EEC.

Act on chemical substances and formulations of 11/01/2001 (Journal of Acts No. 11 item 84; No. 100 item 1085; No. 123 item 1350; No. 125 item 1367, as amended on 5/07/2002, Journal of Acts No. 142 item 1187).

Regulation of the Minister of Health of 3/07/2002 with respect to the data sheets of dangerous substances and dangerous formulations (Journal of Acts No. 140 item 1171).

Regulation of the Minister of Health of 3/07/2002 with respect to the list of dangerous substances, including their classification and marking – Annex (Journal of Acts No. 129 item 1110).

Regulation of the Minister of Health of 2/09/2003 with respect to marking of packaging of dangerous substances and dangerous formulations (Journal of Acts No. 173 item 1679).

Regulation of the Minister of Health of 2/09/2003 with respect to criteria and classification methods of chemical substances and formulations (Journal of Acts No. 171 item 1666).

Regulation of the Minister of Health of 15/07/2002 with respect to the dangerous substances and dangerous formulations, which packaging must be provided with seal difficult to open for children, and risk warning perceivable by touching (Journal of Acts No. 140 item 1174).

Regulation of the Minister of Health of 14/07/2002 with respect to the obligation of providing data sheet for some formulations not classified as dangerous (Journal of Acts No. 142 item 1194).

PN-ISO 11014-1:1998 Standard: "Chemical Safety – Safety data sheet for chemical products".

Regulation of the Minister of Work and Social Policy of 29/11/2002 with regard to the highest allowable concentrations and intensity of factors detrimental to health in the environment of work (Journal of Acts 2002, No. 217 item 1833).

Regulation of the Minister of Health of 9/07/1996 concerning tests and measurements of factors detrimental to health in the environment of work (Journal of Acts 1996, No. 86 item 394, as amended by Journal of Acts 2003, No. 21 item 180).

Regulation of the Minister of Health and Social Welfare of 11/09/1996 with respect to cancerogenous agents in the environment of work, and supervision of the condition of health of employees professionally exposed to those agents (Journal of Acts 1996, No. 121 item 571).

Regulation of the Council of Ministers of 9/11/1999 concerning the list of products made in Poland, and also products imported to Poland for the first time, which can create danger, or serving the purpose of protection or saving life, health or environment, subjected to compulsory certification for the safety mark, and marking with this mark; and products subjected to compulsory issuance of the declaration of conformity by the maker (Journal of Acts 2000, No. 5 item 53).

Regulation of MOŚZNL of 28/04/1998 with respect to the values of allowable concentration of polluting agents in the air (Journal of Acts 1998, No. 55 item 355).

Regulation of the Minister of Economy of 21/10/1998 (Journal of Acts No. 145 item 942), and the amendment of 5/03/2001 with respect to detailed rules of disposing, utilisation and neutralisation of dangerous wastes (Journal of Acts 2001, No. 22 item 251).

Act of 27/04/2001 on wastes (Journal of Acts No. 62 item 628), and regulation of the Minister of Environment of 27/09/2001 with respect to the catalogue of wastes (Journal of Acts No. 112 item 1206).

Classification of dangerous materials according to the European Agreement concerning International Transportation of Dangerous Materials ADR (effective as from 1/07/2001).

Regulation of the Minister of Infrastructure of 20/07/2002 with respect to the methods of fulfilling the duties of industrial wastewater suppliers, and conditions of draining wastewater to sewage utilities (Journal of Acts 2002, No. 129 item 1108).

This Material Safety Data Sheet of a dangerous material is provided directly to the user of the formulation without assurance or guarantee with respect to the completeness or particularity concerning all information or recommendations contained therein.

This Material Safety Data Sheet does not constitute any grounds obliging the formulation supplier to any responsibility of any kind. The supplier shall not be responsible for any decease, disease, or damage of health of any kind, being the consequence of application or misapplication of the safety data sheet of dangerous material covered by this data sheet.

Information contained in this Material Safety Data Sheet present the up-to-date state of our knowledge and experience concerning safe use of the product.

Marking of unit packages

Classification of the Formulation

Xi – irritating substance



Definition of the type of hazard

R36/37/38 – Irritates eyes, respiratory tract, and skin.

Definition of proper product handling:

S23 – Do not inhale vapours



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S24/25 – Avoid contamination of skin and eyes

S26 – Contaminated eyes immediately rinse with plenty of water, and seek for physician's advice.

Additional inscriptions:

Cyanoacrylates. Danger. Binds skin and eyelids within seconds. Protect from children.

16. OTHER INFORMATION

This is the newest version of the Material Safety Data Sheet for this material. Information contained in this Material Safety Data Sheet are not technical data. They must not be understood as the guarantee of the material properties. The user is obliged to make sure whether the product is appropriate for the given application, and to ensure safety work place, and to obey all legal rules and regulations in force.