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IDENTIFICATION OF SUBSTANCE, PREPARATION AND COMPANY TRADE NAME **SERIE 540** INTENDED USE **UV-SCREEN PRINTING INKS FOR GLAS AND METALS** PRINTCOLOR SCREEN LTD. CH-8965 BERIKON MANUFACTURER TEL ++41-(0)56-648 85 85 FAX ++41-(0)56-648 85 00 INFORMATION E-Mail info@printcolor.ch **HSE-Management** TELEPHONE NUMBER ++41-(0)44-251 51 51 **EMERGENCY INFORMATION** HAZARDS IDENTIFICATION 2. **DANGER SIGN** XI IRRITANT **SPECIAL DANGER** Irritating to eyes and skin; May cause sensitization by skin contact; **ADVICE FOR PERSONS** Harmful to aquatic organisms, may cause long-term adverse effects in the AND ENVIRONMENT aquatic environment **COMPOSITION / INFORMATION ON INGREDIENTS** 3. 3.1 CHEMICAL CHARACTERISTICS OF PRODUCT: SYNTHETIC ACRYLIC-POLYMERES, SOLVENT-FREE 3.2 Substances presenting a health hazard within the meaning of guide-lines No.67/548/EC or ASSIGNED OCCUPATIONAL EXPOSURE LIMITS CAS-No. **DESIGNATION ACCORDING TO** CONCENTRATION **DANGERSYMBOL** R-PHRASES (*) **EC GUIDE-LINES WEIGHT-%** LETTER 1,6-Hexandioldiacrylat 13048-33-4 36/38-43 < 2,5 Χi 868-77-9 2-Hydroxyethylmethacrylat < 20 Χi 36/38-43 Tripropylenglykoldiacrylat 42978-66-5 < 4 Xi, N 36/38-51/53 2-Hydroxy-2-methylpropiophenon < 3 22-43-50 7473-98-5 Xn, N (*) CLEAR TEXT OF R-PHRASES SEE SECTION 15 AND 16 FIRST AID MEASURES 4. **GENERAL** In all cases of doubt or if symptoms persist, take medical advice. Never give anything by mouth to an unconscious person; call a physican. Remove all contaminated clothing. Remove to fresh air, keep the patient warm and at rest. If breathing has stopped, administer INHALATION artificial respiration. Give nothing ba mouth. If unconscious, place in the recovery position and seek medical advice. Remove contaminated clothing. Wash skin thoroughly with soap and water or use a proprietary **SKIN CONTACT** skincleaner. DO NOT USE SOLVENTS OR THINNER. In the case of accidental skin contact avoid concurrent exposure to sunlight or other sources of UV radiation which may increase the sensitivity of the skin. **EYE CONTACT** Contact lenses should be removed. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart, and seek medical advice. In the case of accidental eye contact avoid concurrent exposure to sunlight or other sources of UV radiation which may increase the sensitivity of the eyes. If accidentally swaalowed obtain immediate medical attention. Keep at rest. Do NOT induce INGESTION vomiting. FIRE FIGHTING MEASURES 5. **EXTINGUISHING MEDIA** RECOMMENDED Alcohol resistant foam, CO2, powder, water spray/mist **EXTINGUISHING MEDIA NOT SUITABLE** Waterjet **SPECIAL PROTECTION** Appropiate breathing apparatus may be required Fire will produce dense black smoke containing hazardous products of combustion (see RECOMMENDATIONS Section 10). Decomposition products may be a hazard to health. Appropriate selfcontained breathing apparatus may be required. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighthing to enter drains or water courses.

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ACCIDENTAL RELEASE MEASURES

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	PERSONAL PRECAUTIONS ENVIRONMENTAL PRECAUTIONS		Exclude non-essential personnel. Avoid breathing vapours. Refer to protective measures listed in Sections 7 and 8.						
			Do not allow to enter drains or water courses. If the product contaminates rivers, lakes and drains or soil, inform the responsible local authorities.						
	METHODS FOR COUP / COLLECTING		Contain and collect spillages with non sand, earth, vermiculite, diatomaceous for disposal in accordance with the was	earth and place in a suitable c	ontainer				
7.	HANDLING AND STORAGE								
	HANDLING								
	SKIN AND EYE CONTACT CONSTITUTES THE PRINCIPAL HAZARD, PERSONS WITH A HISTORY OF SKIN SENSITATION PROBLEMS SHOULD NOT BE EMPLOYED IN ANY PROCESS IN WFICH THIS PRODUCT IS USED.								
	INFORMATION FOR SAFE HANDLING		Prevent airborne concentrations higher than the occupational exposure limits. Avoid any contact with eyes or skin. Smoking, eating and drinking should be prohibited in areas of storage and use. For personal protection see Section 8. Follow legal protective and safety instructions.						
	INFORMATION ABOUT PROTECTION AGAINST EXPLOSIONS AND FIRES		Exclude sources of heat, sparks and open flams						
	STORAGE								
	REQUIREMENTS STORAGE ROOM CONTAINERS		Keep container tightly closed. Never use pressure to empty: Container is not a pressure vessel. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage. No ressurized container.						
	ADVICE FOR COMBINED STORAGE		Store seperately from strong acid and alkaline materials as well as from oxidizing agents.						
	FURTHER ADVIC STORAGE	E FOR	Store at a cool and well ventilated place. Avoid heating and direct sunlight. Keep away from flammable matters and observe instructions on the labels. Always keep in containers of same material as the original one.						
8.	EXPOSURE CONTROL / PERSONEL PROTECTION								
	Engineering Measures								
	Provide adequate ventilation. Where reasonably practicable this should be achieved by use of local exhaust ventilation and good general extration. If these are not sufficient to maintain concentrations of particulates and/or solvent vapours below the relevant occupational exposure limits, suitable respiratory protective equipment should be worn. (See 'Personal protection' below).								
	COMPONENTS WITH CRITICAL VALUES THAT REQUIRE MONITORING AT THE WORKPLACE (EXPOSURE LIMITS)								
			ATION ACCORDING TO EC GUIDE-LINES	OCCUPATIONAL EXPOSURE LIMITS	UNIT				
			dioldiacrylat	n.b.	<u>n.b.</u>				
	_		ethylmethacrylat	n.b.	n.b.				
	42978-66-5		nglykoldiacrylat	n.b.	n.b.				

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The above values have been taken from the valid list (f.e.TRGS 900) of the Federal Republic of Germany

2-Hydroxy-2-methylpropiophenon

or from the Regulations of SUVA/Switzerland regarding occupationalexposure limits.

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PERSONAL PROTECTION

ALL PERSONAL PROTECTIVE EQUIPMENT, INCLUDING RESPIRATORY PROTECTIVE EQUIPMENT, USED TO CONTROL EXPOSURE TO HAZARDOUS SUBSTANCES MUST BE SELECTED TO MEET THE REQUIREMENTS OF THE COSHH REGULATIONS.

RESPIRATORY PROTECTION If exposure to hazardous substances identified above cannot be controlled by the prov

If exposure to hazardous substances identified above cannot be controlledby the provision of local exhaust ventilation and good general extraction, suitable respiratory protective equipment

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should be worn.

SKIN PROTECTION At lasting or repeated contact of the product with the skin, use protecting emulsions. Observe

recommendations of the manufacturer. After washing hands replace lost skin fat by fat

containing skin creams

EYE PROTECTION Safety glasses as protection against splashes of UV-raw materials should be worn, especially

during wash ups.

BODY PROTECTION Cotton or cotton/synthetic overalls are normally suitable. Personal should wear

antistatic clothings made of natural fiber or of high temperature resistant synthetic fiber. All parts

of body should be washed after contact.

9. Physical and Chemical Properties

Form pasty

Colorspecific to color shadeOdourspecific, like acrylates

Value Unit Method

Boiling point> 100 $^{\circ}$ CFlash point> 100 $^{\circ}$ C

 Viscosity
 app.12'000
 mPas
 (23 °C)

 Density
 1,05 -1,55
 g/cm³
 (23 °C)

pH-Value n.a.

Content of solvent 0 Weight-%

Explosion limit Lower n.a. Upper n.a. Vol.-% (solvent)

Solubility in water Not mixable at 23 °C

10. STABILITY AND REACTIVITY

STABILITY Stable under the recommended storage and handling conditions (see Section 7).

CONDITIONS TO AVOID Keep away from oxidizing agents and strongly alkaline and strongly acids to prevent the

possibility of exothermic reaction. The product contains materials which are unstable when exposured to temperatures above 50 °C, sunlight, strong UV light sources, free radical

initiatores.

DANGEROUS PRODUCTS OF

DECOMPOSITION

In a fire, hazardous decomposition products such as smoke, carbon monoxide, carbon dioxide

and oxides of nitrogen may be produce.

11. TOXICOLOGICAL INFORMATION

There is no data available on the product itself. It is formulated within the SBPIM's guidelines on materials for exclusion from printing inks and varnishes. Acrylate components have irritant properties. Prolonged or repeated contact with the skin or mucous membrane may result in irritant symptoms such as redness, blistering or dermatitis. Onset of symptoms may be dalayed. Cases of allergic skin reaction have been observed. Liquid splashes in the eye may cause irritation. Inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract. Ingestion may lead to severe respiratory difficulties, stimulation of the central nervous system and in extreme cases unconsciousness.

12. | ECOLOGICAL INFORMATION

There is no data available on the product itself. The product should not be allowed to enter drains or water courses or be deposited where it can affect ground or surface waters. The Air Pollution Control requirements of regulations made under the Environmental Protection Act may apply to the use of this product.

13. DISPOSAL CONSIDERATIONS

WASTE KEYS VeVA-Code 080312 Country Switzerland

Waste key (acc.TA-Abfall) 080312 Country EC

PACKAGING The container and packaging materials are recyclable according to the local prescriptions and regulations

DO NOT ALLOW INTO DRAINS OR WATER COURSES OR DISPOSE OF WHERE GROUND OR SURFACE WATERS MAY BE AFFECTED. WASTES, INCLUDING EMPTIED CONTAINERS, ARE CONTROLLED WASTES AND SHOULD BE DISPOSED OF IN ACCORDANCE WITH REGULATIONS MADE UNDER THE CONTROL OF POLLUTION ACT AND THE ENVIRONMENTAL PROTECTION ACT.

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4.	TRANSPORT INFORMATIONS Declarations according to the transport regulations for road (ADR), rail (RID), sea (IMO) and air (ICAO / IATA) transport. NOT RESTRICTED !!								
	LAND TRANSPORT		UN Number : ADR-Class						
	LAND TRANSFORM		Transp. Designations:						
-			Package group :						
	MARITIME TRANSPORT		UN Number :	IMO-Class	EmS-Nr.				
-			Transp. Designations						
-			Package group	Warning					
ŀ			Marine pollutant						
	AIR TRANSPORT		UN Number : IATA/ICAO-Class						
ŀ			Transp.Designations						
			Package group						
•	REGULATORY INFORMATION								
>	CLASSIFICATION ACCORDING TO EEC DIRECTIVES								
	DANGER SYMBOL		Xi	-					
	DANGER DESIGNATION								
	HAZARD DETERMINING								
	COMPONENTS OF LABELLING								
	R-PHRASES	36/38	Irritating to eyes an	d skin					
	TT T TITLAGEG	43	May cause senzitat						
		52/53			term adverse effects in the				
	52/53 Harmful to auatic organisms, may cause long-term adverse el aquatic environment								
	with plenty of water and								
ŀ	S-PHRASES	26	In case of contact with eyes, rinse immediately with plenty of seek medical advice						
ŀ		28		kin, wash immediately with	plenty of water and soap				
		29	Do not empty into d		promy or manor area occup				
	CLASSIFICATION ACCORDING TO BAG (SWITZERLAND) AND GERMAN DIRECTIVES								
	CH-SZID See also label								
	LUFTREINHALTEVERORDNUNG LRV-class 1 - % 2 - % 3 - 9								
	IMMISSIONSSCHUTZ		TA-Luft I	- % II	- % III < 2,5 %				
	BRANDSCHUTZ		VbF-class N.E	. BVD-class N.I	Ξ.				
ŀ	WASSERHAUSHALT		WGK (self-assessment) 1						
ŀ	THE INFORMATION CONTAINED IN THIS SAFETY DATA SHEET DOES NOT CONSTITUTE THE USER'S OWN ASSESSMENT OF WORKPLAC								
	RISKS AS REQUIRED BY OTHER HEALTH AND SAFETY LEGISLATIONS. THE PROVISION OF THE HEALTH AND SAFETY AT WORK ETC.								
	ACT AND THE CONTROL SUBSTANCES HAZARDOUS TO HEALTH REGULATIONS APPLY TO THE USE OF THIS PRODUCT AT WORK.								
) .	OTHER INFORMATIONS								
	See Section 15, R-Phrases								
-	22 Harmful if swallowed								
	43 May cause sensitization by skin contact								
i i	Very toxic to aquatic organsims								
	_								
			yes and skin ic organisms, may cause lon						

THE INFORMATION CONTAINED IN THIS SAFETY DATA SHEET IS PROVIDED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CHIP REGULATIONS. THE PRODUCT SHOULD NOT BE USED FOR PURPOSES OTHER THAN THOSE SHOWN IN SECTION 1 WITHOUT FIRST REFERRING TO THE SUPPLIER AND OBTAINING WRITTEN HANDLING INSTRUCTIONS. AS THE SPECIFIC CONDITIONS OF USE OF THE PRODUCT ARE OUTSIDE THE SUPPLIER'S CONTROL, THE USER IS RESPONSIBLE FOR ENSURING THAT THE REQUIREMENTS OF RELEVANT LEGISLATION ARE COMPLIED WITH. THE INFORMATION CONTAINED IN THIS SAFETY DATA SHEET IS BASED ON THE PRESENT STATE OF KNOWLEDGE AND CURRENT NATIONAL LEGISLATION. IT PROVIDES GUIDANCE ON HEALTH, SAFETY AND ENVIRONMENTAL ASPECTS OF THE PRODUCT AND SHOULD NOT BE CONSTRUED AS ANY GUARANTEE OF TECHNICAL PERFORMANCE OR SUITABILITY FOR PARTICULAR APPLICATIONS.

Information: Printcolor HSE-Department, Richard Gähwiler, richard.gaehwiler@printcolor.ch

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