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SAFETY DATA SHEET
according to 1907/2006/EC, Article 31

1- IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product details

Trade name: 2K Clear Coat

Article number: 11012

Intended use: Car refinishing Product/ Clear coating material, Varnish

Manufacturer/Supplier: Chamäleon GmbH

Rudolf-Diesel-Straße, 8a, 69155 Heidelberg -- Germany

Further information obtainable from: Product Safety Department

Information in case of emergency: + 49 70024112112 (CH)

2 – HAZARDS IDENTIFICATION

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS02 flame

Flam. Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated



GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H336 May cause drowsiness or dizziness.

Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS02 GHS07

Signal word Danger



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Hazard-determining components of labelling:

aliphatic polycyanate

acetone

Hazard statements

H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H336 May cause drowsiness or dizziness.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

P211 Do not spray on an open flame or other ignition source.

P251 Do not pierce or burn, even after use.

P260 Do not breathe spray.

P280 Wear protective gloves.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

P501 Dispose of contents / container in accordance with regional regulations.

Additional information:

EUH066 Repeated exposure may cause skin dryness or cracking.

Contains isocyanates. May produce an allergic reaction.

Buildup of explosive mixtures possible without sufficient ventilation.

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

3- COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization: Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:		
CAS: 115-10-6 EINECS: 204-065-8 Index number: 603-019-00-8 Reg.nr.: 01-2119472128-37	dimethyl ether	25-<50%
	Flam. Gas 1, H220; Press. Gas C, H280	
CAS: 67-64-1 EINECS: 200-662-2 Index number: 606-001-00-8 Reg.nr.: 01-2119471330-49	acetone	12.5-<20%
	Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	

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



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CAS: 123-86-4 EINECS: 204-658-1 Index number: 607-025-00-1 Reg.nr.: 01-2119485493-29	n-butyl acetate	5-<10%
	Flam. Liq. 3, H226; STOT SE 3, H336	
CAS: 1330-20-7 EINECS: 215-535-7 Index number: 601-022-00-9 Reg.nr.: 01-2119488216-32	xylene, mixture of isomers	5-<10%
	Flam. Liq. 3, H226; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	
CAS: 28182-81-2 Reg.nr.: 01-2119485796-17	aliphatic polycyanate	2.5-<5.0%
	Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335	
CAS: 100-41-4 EINECS: 202-849-4 Index number: 601-023-00-4 Reg.nr.: 01-2119489370-35	ethylbenzene	<2.5%
	Flam. Liq. 2, H225; STOT RE 2, H373; Asp. Tox. 1, H304; Acute Tox. 4, H332	
CAS: 110-12-3 EINECS: 203-737-8 Index number: 606-026-00-4	5-methylhexan-2-one	<2.5%
	Flam. Liq. 3, H226; Acute Tox. 4, H332	
CAS: 108-10-1 EINECS: 203-550-1 Index number: 606-004-00-4 Reg.nr.: 01-2119473980-30	4-methylpentan-2-one	<2.5%
	Flam. Liq. 2, H225; Acute Tox. 4, H332; Eye Irrit. 2, H319; STOT SE 3, H335	
CAS: 53880-05-0 NLP: 500-125-5	3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers	<1.0%
	Resp. Sens. 1, H334; Skin Sens. 1, H317	
CAS: 64742-95-6 EINECS: 265-199-0 Index number: 649-356-00-4 Reg.nr.: 01-2119486773-24	Solvent naphtha (petroleum), light arom.	≤0.5%
	Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; STOT SE 3, H335-H336	
CAS: 95-63-6 EINECS: 202-436-9 Index number: 601-043-00-3	1,2,4-trimethylbenzene	≤0.5%
	Flam. Liq. 3, H226; Aquatic Chronic 2, H411; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	
ELINCS: 400-830-7 Index number: 607-176-00-3	Mixture of alpha-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl-omega-hydroxypoly(oxyethylene) and alpha-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl-omega-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyloxypoly(oxyethylene)	≤0.5%
	Aquatic Chronic 2, H411; Skin Sens. 1, H317	



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CAS: 61788-93-0 EINECS: 263-020-0	Amines, coco alkyl dimethyl	≤0.5%
	Skin Corr. 1B, H314; Aquatic Acute 1, H400; Acute Tox. 4, H302	
CAS: 41556-26-7 EINECS: 255-437-1 Reg.nr.: 01-2119491304-40	Bis (1,2,2,6,6-pentamethyl-4-piperidyl) sebacat	≤0.5%
	Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Sens. 1, H317	
CAS: 97-86-9 EINECS: 202-613-0 Index number: 607-113-00-X	isobutyl methacrylate	≤0.5%
	Flam. Liq. 3, H226; Aquatic Acute 1, H400; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	

Additional information:

The content of Benzene (EINECS-Nr. 200-753-7) in the ingredients is less than 0,1% (Note P Annex 1 67/548 EU), so the classification as carcinogen need not to apply.

For the wording of the listed risk phrases refer to section 16.

4- FIRST - AID MEASURE

Description of first aid measures

General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation:

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

After skin contact: Immediately wash with water and soap and rinse thoroughly.

After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing: Drink plenty of water and provide fresh air. Call for a doctor immediately

Most important symptoms and effects, both acute and delayed No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5- FIRE - FIGHTING MEASURE

Extinguishing media

Suitable extinguishing agents: CO₂, sand, extinguishing powder. Fight larger fires with water spray or foam. Cool containers with water.



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For safety reasons unsuitable extinguishing agents: Water with full jet

Special hazards arising from the substance or mixture: No further relevant information available.

Advice for firefighters -

Protective equipment: Mouth respiratory protective device.

6- ACCIDENTAL RELEASE MEASURE

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Environmental precautions:

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

Do not allow product to reach sewage system or any water course.

Methods and material for containment and cleaning up:

Do not flush with water or aqueous cleansing agents

Dispose contaminated material as waste according to item 13.

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

Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke

Protect against electrostatic charges.

Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles:

Store in a cool location.

Observe official regulations on storing packagings with pressurised containers.

Information about storage in one common storage facility: Not required.

Further information about storage conditions:

Do not seal receptacle gas tight.

Store in cool, dry conditions in well sealed receptacles.

Protect from heat and direct sunlight.

Storage class: 2B

Specific end use(s) No further relevant information available.



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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:	
115-10-6 dimethyl ether	
WEL	Short-term value: 958 mg/m ³ , 500 ppm Long-term value: 766 mg/m ³ , 400 ppm
67-64-1 acetone	
WEL	Short-term value: 3620 mg/m ³ , 1500 ppm Long-term value: 1210 mg/m ³ , 500 ppm
123-86-4 n-butyl acetate	
WEL	Short-term value: 966 mg/m ³ , 200 ppm Long-term value: 724 mg/m ³ , 150 ppm
1330-20-7 xylene, mixture of isomers	
WEL	Short-term value: 441 mg/m ³ , 100 ppm Long-term value: 220 mg/m ³ , 50 ppm Sk; BMGV
100-41-4 ethylbenzene	
WEL	Short-term value: 552 mg/m ³ , 125 ppm Long-term value: 441 mg/m ³ , 100 ppm Sk
110-12-3 5-methylhexan-2-one	
WEL	Short-term value: 475 mg/m ³ , 100 ppm Long-term value: 95 mg/m ³ , 20 ppm Sk
108-10-1 4-methylpentan-2-one	
WEL	Short-term value: 416 mg/m ³ , 100 ppm Long-term value: 208 mg/m ³ , 50 ppm Sk, BMGV
Ingredients with biological limit values:	
1330-20-7 xylene, mixture of isomers	
BMGV	650 mmol/mol creatinine Medium: urine Sampling time: post shift Parameter: methyl hippuric acid
108-10-1 4-methylpentan-2-one	
BMGV	20 µmol/L Medium: urine Sampling time: post shift Parameter: 4-methylpentan-2-one



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Additional information: The lists valid during the making were used as basis.

Exposure controls

Personal protective equipment:

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.

Do not inhale gases / fumes / aerosols.

Respiratory protection:

Not necessary if room is well-ventilated.

Otherwise, filter class A / P2 or self contained.

Protection of hands:

Protective glove

Solvent resistant gloves

In case of contact with spray dust protective gloves made of butyl should be used (min. 0.4 mm thick), e.g. KCL Camatril, article no. 898 or similar products.

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

Natural rubber, NR

Butyl rubber, BR.

Penetration time of glove material

Butyl rubber gloves with a thickness of 0.4 mm are resistant to:

Acetone: 480 min

Butyl acetate: 60 min

Ethyl acetate: 170 min

Xylene: 42 min

Eye protection: Safety glasses

9 – PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties	
General Information	
Appearance:	
Form:	<i>Aerosol</i>
Colour:	<i>According to product specification</i>
Odour:	<i>Characteristic</i>
Odour threshold:	<i>Not determined.</i>
pH-value:	<i>Not determined.</i>
Change in condition	
Melting point/Melting range:	<i>Undetermined.</i>
Boiling point/Boiling range:	<i>Not applicable, as aerosol.</i>
Flash point:	<i>Not applicable, as aerosol.</i>



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Flammability (solid, gaseous):	<i>Not applicable.</i>
Ignition temperature:	235 °C
Decomposition temperature:	<i>Not determined.</i>
Self-igniting:	<i>Product is not selfigniting.</i>
Danger of explosion:	<i>In use, may form flammable/explosive vapour-air mixture.</i>
Explosion limits:	
Lower:	2.6 Vol %
Upper:	18.6 Vol %
Vapour pressure at 20 °C:	5200 hPa
Density at 20 °C:	0.83 g/cm ³
Relative density	<i>Not determined.</i>
Vapour density	<i>Not determined.</i>
Evaporation rate	<i>Not determined.</i>
Solubility in / Miscibility with water:	<i>Not miscible or difficult to mix.</i>
Partition coefficient (n-octanol/water):	<i>Not determined.</i>
Viscosity:	
Dynamic:	<i>Not determined.</i>
Kinematic:	<i>Not determined.</i>
Solvent content:	
VOC- (EU)	---
	687.6 g/l
VOC-EU%	83.11 %
Solids content:	16.3 %
Other information	<i>No further relevant information available.</i>

10– STABILITY AND REACTIVITY

Reactivity

Chemical stability

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

Possibility of hazardous reactions No dangerous reactions known.

Conditions to avoid No further relevant information available.

Incompatible materials: No further relevant information available.

Hazardous decomposition products: No dangerous decomposition products known.



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11- TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity:

LD/LC50 values relevant for classification:		
67-64-1 acetone		
Oral	LD50	5800 mg/kg (rat)
Dermal	LD50	20000 mg/kg (rabbit)
1330-20-7 xylene, mixture of isomers		
Oral	LD50	8700 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rabbit)
Inhalative	LC50/4 h	6350 mg/l (rat)

Primary irritant effect:

- Skin corrosion/irritation No irritant effect.
- Serious eye damage/irritation No irritating effect.
- Respiratory or skin sensitisation: Sensitisation possible through skin contact

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:

Harmful

Irritant

Vapours have narcotic effect.

12 – ECOLOGICAL INFORMATION

Toxicity

Aquatic toxicity:	
1330-20-7 xylene, mixture of isomers	
EC50 (24h)	>175 mg/l (bacteria)
EC50 / 48h	3.82 mg/l (daphnia magna / Wasserfloh)
EC50/72h	4.7 mg/l (Pseudokirchneriella subcapitata)
LC50/96h	7.6 mg/l (oncorhynchus mykiss / Regenbogenforelle)

Persistence and degradability No further relevant information available.

Bioaccumulative potential No further relevant information available.

Mobility in soil No further relevant information available.

Additional ecological information:

General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects No further relevant information available.



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13- DISPOSAL CONSIDERATION

Waste treatment methods

Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

European waste catalogue	
08 01 11*	waste paint and varnish containing organic solvents or other dangerous substances
15 01 04	metallic packaging
15 01 11*	metallic packaging containing a dangerous solid porous matrix (for example asbestos), including empty pressure containers

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.

14- TRANSPORT INFORMATION

UN-Number

ADR, IMDG, IATA

UN1950

UN proper shipping name

ADR

UN1950 AEROSOLS

IMDG

AEROSOLS

IATA

AEROSOLS, flammable

Transport hazard class(es)

ADR



Class

2 5F Gases.

Label

2.1

IMDG, IATA



Class

2.1

Label

2.1

Packing group

ADR, IMDG, IATA

Void



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Environmental hazards:

Marine pollutant: No

Special precautions for user

Warning: Gases.

Danger code (Kemler): -

EMS Number: F-D,S-U

Transport in bulk according to Annex II of

MARPOL73/78 and the IBC Code Not applicable.

Transport/Additional information:

ADR

Limited quantities (LQ)

1L

Excepted quantities (EQ)

Code: E0

Not permitted as Excepted Quantity

Transport category

2

Tunnel restriction code

D

IMDG

Limited quantities (LQ)

1L

Excepted quantities (EQ)

Code: E0

Not permitted as Excepted Quantity

UN "Model Regulation":

UN1950, AEROSOLS, 2.1

15 – REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture .

Waterhazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

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

16-OTHER INFORMATION

Relevant phrases

H220 Extremely flammable gas.

H225 Highly flammable liquid and vapour.

H226 Flammable liquid and vapour.

H280 Contains gas under pressure; may explode if heated.

H302 Harmful if swallowed.

H304 May be fatal if swallowed and enters airways.

H312 Harmful in contact with skin.

H314 Causes severe skin burns and eye damage.



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H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

H336 May cause drowsiness or dizziness.

H373 May cause damage to the gastro-intestinal tract through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H411 Toxic to aquatic life with long lasting effects.

The information contained in these sheets is based on the present state of knowledge and current national legislation. It provides guidance on health, safety and environmental aspects and should not be construed as any guarantee of technical performance or suitability for particular applications.