Safety Data Sheet according to (EC) No 1907/2006

SDS No. : 367975
V002.4

DAG 6013 BULK

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Replaces version from: 27.05.2014

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

1.1. Product identifier
DAG 6013 BULK

Contains:
4-Methylpentan-2-one

1.2. Relevant identified uses of the substance or mixture and uses advised against
Intended use:
Impregnation

1.3. Details of the supplier of the safety data sheet
Henkel AG & Co. KGaA
Henkelstr. 67
40589 Düsseldorf

Germany

Phone: +49 (211) 797 0
Fax-no.: +49 (211) 798 4008

ua-productsafety.de@henkel.com

1.4. Emergency telephone number
The Henkel information service also provides an around-the-clock telephone service on phone no.+49-(0)211-797-3350 for exceptional cases.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Flammable liquids	Category 2
H225 Highly flammable liquid and vapor.	
Acute toxicity	Category 4
H332 Harmful if inhaled.	
Route of Exposure: Inhalation	
Serious eye irritation	Category 2
H319 Causes serious eye irritation.	
Specific target organ toxicity - single exposure	Category 3
H335 May cause respiratory irritation.	
Target organ: respiratory tract irritation	

2.2. Label elements

Label elements (CLP):

Hazard pictogram:

Signal word: Danger

Hazard statement:
H225 Highly flammable liquid and vapor.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.

Supplemental information EUH066 Repeated exposure may cause skin dryness or cracking.

Precautionary statement: Prevention
P210 Keep away from heat/open flames/hot surfaces. - No smoking.
P261 Avoid breathing mist/vapours.
P280 Wear eye protection/face protection.

Precautionary statement: Response
P370+P378 In case of fire: Use CO2, dry chemical, or foam for extinction.

2.3. Other hazards
None if used properly.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Base substances of preparation:
Pigment
solvent

Declaration of the ingredients according to CLP (EC) No 1272/2008:

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
4-Methylpentan-2-one 108-10-1	203-550-1 01-2119473980-30	> 50 %	Flam. Liq. 2 H225 Acute Tox. 4; Inhalation H332 Eye Irrit. 2 H319 STOT SE 3 H335

For full text of the H - statements and other abbreviations see section 16 "Other information".
Substances without classification may have community workplace exposure limits available.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Move to fresh air, consult doctor if complaint persists.

Skin contact:
Rinse with running water and soap.
In case of adverse health effects seek medical advice.

Eye contact:
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

In case of adverse health effects seek medical advice.

Ingestion:
Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

4.2. Most important symptoms and effects, both acute and delayed
EYE: Irritation, conjunctivitis.

SKIN: Redness, inflammation.

RESPIRATORY: Irritation, coughing, shortness of breath, chest tightness.

4.3. Indication of any immediate medical attention and special treatment needed
See section: Description of first aid measures

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media:
Carbon dioxide, foam, powder
Fine water spray

Extinguishing media which must not be used for safety reasons:
Water jet (solvent-containing product).

5.2. Special hazards arising from the substance or mixture
Formation of toxic gases is possible during heating or in fires.

5.3. Advice for firefighters
Wear protective equipment.
Wear self-contained breathing apparatus.

Additional information:
Cool endangered containers with water spray jet.

SECTION 6: Accidental release measures

General information:
Danger of slipping on spilled product.

6.1. Personal precautions, protective equipment and emergency procedures
Avoid skin and eye contact.
Ensure adequate ventilation.
Keep away from sources of ignition.

6.2. Environmental precautions
Do not empty into drains / surface water / ground water.

6.3. Methods and material for containment and cleaning up
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Dispose of contaminated material as waste according to Section 13.

6.4. Reference to other sections
See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid skin and eye contact.
Ensure good ventilation/suction at the workplace.
See advice in section 8
Ventilate working rooms throughly. Avoid naked flames, sparking and sources of ignition. Switch off electrical devices. Do not smoke, do not weld.
Ground/bond container and receiving equipment.
Use explosion proof electric equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.

Hygiene measures:

Wash hands before work breaks and after finishing work.
Do not eat, drink or smoke while working.

7.2. Conditions for safe storage, including any incompatibilities

Ensure good ventilation/extraction.
Temperatures between + 5 °C and + 30 °C

7.3. Specific end use(s)

Impregnation

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for
Germany

Ingredient [Regulated substance]	ppm	mg/m³	Value type	Short term exposure limit category / Remarks	Regulatory list
4-Methylpentan-2-one 108-10-1 [4-METHYLPENTAN-2-ONE]	20	83	Time Weighted Average (TWA):	Indicative	ECTLV
4-Methylpentan-2-one 108-10-1 [4-METHYLPENTAN-2-ONE]	50	208	Short Term Exposure Limit (STEL):	Indicative	ECTLV
4-Methylpentan-2-one 108-10-1	20	83	Exposure limit(s):	2 If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
4-Methylpentan-2-one 108-10-1			Skin designation:	Can be absorbed through the skin.	TRGS 900
4-Methylpentan-2-one 108-10-1			Short Term Exposure Classification:	Category I: substances for which the localized effect has an assigned OEL or for substances with a sensitizing effect in respiratory passages.	TRGS 900
Graphite 7782-42-5			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Graphite 7782-42-5		10	Exposure limit(s):	2	TRGS 900
Graphite 7782-42-5		1,25	Exposure limit(s):		TRGS 900

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
4-Methylpentan-2-one 108-10-1	aqua (freshwater)					0,6 mg/L	
4-Methylpentan-2-one 108-10-1	aqua (marine water)					0,06 mg/L	
4-Methylpentan-2-one 108-10-1	sediment (freshwater)				8,27 mg/kg		
4-Methylpentan-2-one 108-10-1	sediment (marine water)				0,83 mg/kg		
4-Methylpentan-2-one 108-10-1	soil				1,3 mg/kg		
4-Methylpentan-2-one 108-10-1	STP					27,5 mg/L	
4-Methylpentan-2-one 108-10-1	aqua (intermittent releases)					1,5 mg/L	

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
4-Methylpentan-2-one 108-10-1	Workers	Inhalation	Acute/short term exposure - systemic effects		208 mg/m3	
4-Methylpentan-2-one 108-10-1	Workers	Inhalation	Acute/short term exposure - local effects		208 mg/m3	
4-Methylpentan-2-one 108-10-1	Workers	Inhalation	Long term exposure - systemic effects		83 mg/m3	
4-Methylpentan-2-one 108-10-1	Workers	Inhalation	Long term exposure - local effects		83 mg/m3	
4-Methylpentan-2-one 108-10-1	Workers	Dermal	Long term exposure - systemic effects		11,8 mg/kg bw/day	
4-Methylpentan-2-one 108-10-1	general population	Inhalation	Acute/short term exposure - systemic effects		155,2 mg/m3	
4-Methylpentan-2-one 108-10-1	general population	Inhalation	Acute/short term exposure - local effects		155,2 mg/m3	
4-Methylpentan-2-one 108-10-1	general population	Inhalation	Long term exposure - systemic effects		14,7 mg/m3	
4-Methylpentan-2-one 108-10-1	general population	Inhalation	Long term exposure - local effects		14,7 mg/m3	
4-Methylpentan-2-one 108-10-1	general population	Dermal	Long term exposure - systemic effects		4,2 mg/kg bw/day	
4-Methylpentan-2-one 108-10-1	general population	oral	Long term exposure - systemic effects		4,2 mg/kg bw/day	

Biological Exposure Indices:

Ingredient [Regulated substance]	Parameters	Biological specimen	Sampling time	Conc.	Basis of biol. exposure index	Remark	Additional Information
4-Methylpentan-2-one 108-10-1	4-methylpentan-2-one	Urine	Sampling time: End of shift.	3,5 mg/l	DE BAT		
4-Methylpentan-2-one 108-10-1	4-methylpentan-2-one	Urine	Sampling time: End of shift.	3,5 mg/l	DE BAT		

8.2. Exposure controls:

Engineering controls:
Ensure good ventilation/extraction.

Respiratory protection:
In case of aerosol formation, we recommend wearing of appropriate respiratory protection equipment with ABEK P2 filter.
This recommendation should be matched to local conditions.

Hand protection:
The use of chemical-resistant protective gloves according to EN 374 made of polyvinyl alcohol (e. g.: PVA; => 1.5 mm thickness, > 300 min permeation time) is recommended. This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:
Tightly fitting safety goggles

Skin protection:
Wear suitable protective clothing.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	liquid liquid black
Odor	Solvent
Odour threshold	No data available / Not applicable
pH	Not applicable
Initial boiling point	116 °C (240.8 °F)
Flash point	14 °C (57.2 °F); no method
Decomposition temperature	No data available / Not applicable
Vapour pressure (20 °C (68 °F))	7 mbar
Vapour pressure (50 °C (122 °F))	124 mbar
Vapour pressure (55 °C (131 °F))	158 mbar
Density (20 °C (68 °F))	0,97 g/cm3
Bulk density	No data available / Not applicable
Viscosity	No data available / Not applicable
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Solubility (qualitative) (Solvent: Water)	Insoluble
Solidification temperature	No data available / Not applicable
Melting point	No data available / Not applicable
Flammability	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable

Explosive limits	
lower	1,2 %(V)
upper	8,0 %(V)
Partition coefficient: n-octanol/water	No data available / Not applicable
Evaporation rate	No data available / Not applicable
Vapor density	No data available / Not applicable
Oxidising properties	No data available / Not applicable

9.2. Other information

No data available / Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity
Reaction with strong oxidants.

10.2. Chemical stability
Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions
See section reactivity

10.4. Conditions to avoid
No decomposition if used according to specifications.

10.5. Incompatible materials
See section reactivity

10.6. Hazardous decomposition products
None if used for intended purpose.
In case of fire toxic gases can be released.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

General toxicological information:
The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

STOT-single exposure:
May cause respiratory irritation.

Inhalative toxicity:
Harmful if inhaled.

Skin irritation:
Repeated exposure may cause skin dryness or cracking.

Eye irritation:
Causes serious eye irritation.

Acute oral toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
4-Methylpentan-2-one 108-10-1	LD50	2.080 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)

Acute inhalative toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
4-Methylpentan-2-one 108-10-1	Acute toxicity estimate (ATE)	11 mg/l	Vapor.			Expert judgement
4-Methylpentan-2-one 108-10-1	LC50	8,2 - 16,4 mg/l	Vapor.	4 h	rat	OECD Guideline 403 (Acute Inhalation Toxicity)

Acute dermal toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
4-Methylpentan-2-one 108-10-1	LD50	> 2.000 mg/kg	dermal		rat	OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
4-Methylpentan-2-one 108-10-1	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
4-Methylpentan-2-one 108-10-1	slightly irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
4-Methylpentan-2-one 108-10-1	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
4-Methylpentan-2-one 108-10-1	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)

SECTION 12: Ecological information

General ecological information:
Do not empty into drains / surface water / ground water.
The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

Other adverse effects:
The product contains organic solvents which are insoluble in water. According to the requirements of the ATV regulations for the dis charge of wastewater from commercial and industrial plant, organic solvents which are immiscible with water can only be dis charged to an extent which corresponds to their solubility in water. The local discharge regulations take precedence.

12.1. Toxicity

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
4-Methylpentan-2-one 108-10-1	LC50	600 mg/l	Fish	96 h	Salmo gairdneri (new name: Oncorhynchus mykiss)	OECD Guideline 203 (Fish, Acute Toxicity Test)
4-Methylpentan-2-one 108-10-1	EC50	170 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
4-Methylpentan-2-one 108-10-1	EC50	400 mg/l	Algae	96 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)

12.2. Persistence and degradability

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
4-Methylpentan-2-one 108-10-1	readily biodegradable	aerobic	99 %	OECD Guideline 301 E (Ready biodegradability: Modified OECD Screening Test)

12.3. Bioaccumulative potential / 12.4. Mobility in soil

Hazardous components CAS-No.	LogKow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
4-Methylpentan-2-one 108-10-1	1,31				20 °C	

12.5. Results of PBT and vPvB assessment

Hazardous components CAS-No.	PBT/vPvB
4-Methylpentan-2-one 108-10-1	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:
In consultation with the responsible local authority, must be subjected to special treatment.

Waste code

080111

The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.

SECTION 14: Transport information

14.1. UN number

ADR	1263
RID	1263
ADN	1263
IMDG	1263
IATA	1263

14.2. UN proper shipping name

ADR	PAINT
RID	PAINT
ADN	PAINT
IMDG	PAINT
IATA	Paint

14.3. Transport hazard class(es)

ADR	3
RID	3
ADN	3
IMDG	3
IATA	3

14.4. Packaging group

ADR	II
RID	II
ADN	II
IMDG	II
IATA	II

14.5. Environmental hazards

ADR	not applicable
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

14.6. Special precautions for user

ADR	Special provision 640D Tunnelcode: (D/E)
RID	Special provision 640D
ADN	Special provision 640D
IMDG	not applicable
IATA	not applicable

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

not applicable

SECTION 15: Regulatory information

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

VOC content 68,6 %
(1999/13/EC)

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

National regulations/information (Germany):

WGK:	WGK = 1, slightly water endangering product. Classification according to the mixture rules in German VwVwS regulation annex 4 from 27.July 2005
Storage class according to TRGS 510:	3

SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text
of all abbreviations indicated by codes in this safety data sheet are as follows:

H225 Highly flammable liquid and vapor.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.

Further information:
This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

Relevant changes in this safety data sheet are indicated by vertical lines at the left margin in the body of this document. Corresponding text is displayed in a different color on shadowed fields.