

## 1 Identification

- **Product identifier**
- **Trade name:** 4CR 2090 Premium Light Filler
- **Application of the substance / the mixture** Knife filler/ Surfacer
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
4CR Vertriebsgesellschaft mbH  
Oberer Sommerfeldweg 2  
D-94469 Deggendorf  
Tel.: +49 (0) 40 69 60 99 315  
Fax: +49 (0) 40 69 60 99 316  
E-Mail: [Info@4CR.com](mailto:Info@4CR.com)  
[www.4CR.com](http://www.4CR.com)
- **Emergency telephone number:** +49(0)700 24112112 (CRM)

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapor.



GHS08 Health hazard

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

STOT RE 1 H372 Causes damage to the hearing organs through prolonged or repeated exposure.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS02



GHS07



GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**

styrene

- **Hazard statements**

H226 Flammable liquid and vapor.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H361 Suspected of damaging fertility or the unborn child.

H372 Causes damage to the hearing organs through prolonged or repeated exposure.

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**Precautionary statements**

- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P260 Do not breathe dust/fume/gas/mist/vapors/spray.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P405 Store locked up.

**Classification system:**

**NFPA ratings (scale 0 - 4)**



**HMIS-ratings (scale 0 - 4)**



**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 the substances listed below with nonhazardous additions.

**Dangerous components:**

100-42-5	styrene	≥10-≤20%
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**4 First-aid measures**

**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. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

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. If symptoms persist, consult a doctor.

**After swallowing:** If symptoms persist consult doctor.

**Information for doctor:**

**Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

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### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **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 measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents
- **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.
- **Protective Action Criteria for Chemicals**

· **PAC-1:**

100-42-5	styrene	20 ppm
13463-67-7	titanium dioxide	30 mg/m <sup>3</sup>
20344-49-4	iron hydroxide oxide	24 mg/m <sup>3</sup>
122-99-6	2-Phenoxyethanol	1.5 ppm
1344-28-1	aluminium oxide	15 mg/m <sup>3</sup>
7631-86-9	silicon dioxide, chemically prepared	18 mg/m <sup>3</sup>
1314-23-4	zirconium dioxide	14 mg/m <sup>3</sup>
108-65-6	2-methoxy-1-methylethyl acetate	50 ppm
7727-43-7	barium sulphate, natural	15 mg/m <sup>3</sup>
123-86-4	butyl acetate	5 ppm
112-07-2	2-butoxyethyl acetate	15 ppm
34590-94-8	(2-methoxymethylethoxy)propanol	150 ppm
112945-52-5	Silicon dioxide	18 mg/m <sup>3</sup>

· **PAC-2:**

100-42-5	styrene	130 ppm
13463-67-7	titanium dioxide	330 mg/m <sup>3</sup>
20344-49-4	iron hydroxide oxide	260 mg/m <sup>3</sup>
122-99-6	2-Phenoxyethanol	16 ppm
1344-28-1	aluminium oxide	170 mg/m <sup>3</sup>
7631-86-9	silicon dioxide, chemically prepared	740 mg/m <sup>3</sup>
1314-23-4	zirconium dioxide	110 mg/m <sup>3</sup>
108-65-6	2-methoxy-1-methylethyl acetate	1,000 ppm

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7727-43-7	barium sulphate, natural	170 mg/m <sup>3</sup>
123-86-4	butyl acetate	200 ppm
112-07-2	2-butoxyethyl acetate	35 ppm
34590-94-8	(2-methoxymethylethoxy)propanol	1700* ppm
112945-52-5	Silicon dioxide	100 mg/m <sup>3</sup>
<b>· PAC-3:</b>		
100-42-5	styrene	1100* ppm
13463-67-7	titanium dioxide	2,000 mg/m <sup>3</sup>
20344-49-4	iron hydroxide oxide	1,600 mg/m <sup>3</sup>
122-99-6	2-Phenoxyethanol	97 ppm
1344-28-1	aluminium oxide	990 mg/m <sup>3</sup>
7631-86-9	silicon dioxide, chemically prepared	4,500 mg/m <sup>3</sup>
1314-23-4	zirconium dioxide	680 mg/m <sup>3</sup>
108-65-6	2-methoxy-1-methylethyl acetate	5000* ppm
7727-43-7	barium sulphate, natural	990 mg/m <sup>3</sup>
123-86-4	butyl acetate	3000* ppm
112-07-2	2-butoxyethyl acetate	210 ppm
34590-94-8	(2-methoxymethylethoxy)propanol	9900** ppm
112945-52-5	Silicon dioxide	630 mg/m <sup>3</sup>

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**  
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:** No special requirements.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Storage class:** 3
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

### 100-42-5 styrene

PEL	Long-term value: 100 ppm Ceiling limit value: 200; 600* ppm *5-min peak in any 3 hrs
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REL	Short-term value: 425 mg/m <sup>3</sup> , 100 ppm Long-term value: 215 mg/m <sup>3</sup> , 50 ppm
TLV	Short-term value: 170 mg/m <sup>3</sup> , 40 ppm Long-term value: 85 mg/m <sup>3</sup> , 20 ppm
BEI	

**· Ingredients with biological limit values:**

**100-42-5 styrene**

BEI	400 mg/g creatinine Medium: urine Time: end of shift Parameter: Mandelic acid plus phenylglyoxylic acid (nonspecific)
	0.2 mg/L Medium: venous blood Time: end of shift Parameter: Styrene (semi-quantitative)

· **Additional information:** The lists that were valid during the creation 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.
- Avoid contact with the eyes and skin.

· **Breathing equipment:**



In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **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.

· **Breakthrough 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.

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**· Eye protection:**


Tightly sealed goggles

**9 Physical and chemical properties**
**· Information on basic physical and chemical properties**
**· General Information**
**· Appearance:**

**Form:** Fluid  
**Color:** According to product specification

**· Odor:** Characteristic

**· Odor threshold:** Not determined.

**· pH-value:** Not determined.

**· Change in condition**

**Melting point/Melting range:** Undetermined.  
**Boiling point/Boiling range:** 145°C (293 °F)

**· Flash point:** 31°C (88 °F) (DIN EN ISO 1523:2002)

**· Flammability (solid, gaseous):** Not applicable.

**· Ignition temperature:** 480°C (896 °F) (DIN 51794)

**· Decomposition temperature:** Not determined.

**· Auto igniting:** Product is not selfigniting.

**· Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

**· Explosion limits:**

**Lower:** 1.2 Vol %  
**Upper:** 8.9 Vol %

**· Vapor pressure at 20°C (68 °F):** 6 hPa (5 mm Hg)

**· Density at 20°C (68 °F):** 1.102 g/cm<sup>3</sup> (9.196 lbs/gal) (DIN EN ISO 2811-1)

**· Relative density** Not determined.

**· Vapor density** Not determined.

**· Evaporation rate** Not determined.

**· Solubility in / Miscibility with**

**Water:** Not miscible or difficult to mix.

**· Partition coefficient (n-octanol/water):** Not determined.

**· Viscosity:**

**Dynamic at 20°C (68 °F):** 68,000 mPas  
**Kinematic:** Not determined.

**· Solvent content:**

**VOC content:** 0.37 %  
 4 g/l / 0.0 lb/gl

**Solids content (weight-%):** 80.9 %

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· **Other information** *No further relevant information available.*

**10 Stability and reactivity**

- **Reactivity** *No further relevant information available.*
- **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:** *Carbon monoxide*

**11 Toxicological information**

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

**100-42-5 styrene**

Oral	LD50	5,000 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
Inhalative	LC50/4 h	11.8 mg/l (rat)

- **Primary irritant effect:**
- **on the skin:** *Irritant to skin and mucous membranes.*
- **on the eye:** *Irritating effect.*
- **Sensitization:** *No sensitizing effects known.*
- **Additional toxicological information:**  
*The product shows the following dangers according to internally approved calculation methods for preparations:*  
*Harmful*  
*Irritant*

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

14807-96-6	Talc	3
100-42-5	styrene	2B
13463-67-7	titanium dioxide	2B

· **NTP (National Toxicology Program)**

100-42-5	styrene	R
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· **OSHA-Ca (Occupational Safety & Health Administration)**

*None of the ingredients is listed.*

**12 Ecological information**

- **Toxicity**
- **Aquatic toxicity:** *No further relevant information available.*
- **Persistence and degradability** *No further relevant information available.*
- **Behavior in environmental systems:**
- **Bioaccumulative potential** *No further relevant information available.*
- **Mobility in soil** *No further relevant information available.*

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- **Additional ecological information:**
- **General notes:**  
*Water hazard class 2 (Self-assessment): hazardous for water  
 Do not allow product to reach ground water, water course or sewage system.  
 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:**  
*Must not be disposed of together with household garbage. Do not allow product to reach sewage system.*
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

**14 Transport information**

- **UN-Number**
- **DOT, ADR, IMDG, IATA** UN3269
- **UN proper shipping name**
- **DOT** Polyester resin kit
- **ADR** UN3269 Polyester resin kit
- **IMDG, IATA** POLYESTER RESIN KIT
- **Transport hazard class(es)**
- **DOT**
- 
- **Class** 3 Flammable liquids
- **Label** 3
- **ADR**
- 
- **Class** 3 (F3) Flammable liquids
- **Label** 3
- **IMDG, IATA**
- 
- **Class** 3 Flammable liquids
- **Label** 3

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· <b>Packing group</b>	
· <b>DOT, ADR, IMDG, IATA</b>	III
· <b>Environmental hazards:</b>	Not applicable.
· <b>Special precautions for user</b>	Warning: Flammable liquids
· <b>Danger code (Kemler):</b>	-
· <b>EMS Number:</b>	F-E,S-D
· <b>Stowage Category</b>	A
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	5L
· <b>UN "Model Regulation":</b>	UN 3269 POLYESTER RESIN KIT, 3, III

**15 Regulatory information**

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

· **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**

100-42-5	styrene
122-99-6	2-Phenoxyethanol
1344-28-1	aluminium oxide
7727-43-7	barium sulphate, natural
112-07-2	2-butoxyethyl acetate

· **Proposition 65**

· **Chemicals known to cause cancer:**

100-42-5	styrene
13463-67-7	titanium dioxide

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

7727-43-7	barium sulphate, natural	D, CBD(inh), NL(oral)
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· **TLV (Threshold Limit Value established by ACGIH)**

14807-96-6	Talc	A4	25-50%
100-42-5	styrene	A4	e"10- ≤20%
13463-67-7	titanium dioxide	A4	2.5-<10%

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1344-28-1	aluminium oxide	A4	~0-≤0.1%
1314-23-4	zirconium dioxide	A4	0.1%
112-07-2	2-butoxyethyl acetate	A3	0.1%

**· NIOSH-Ca (National Institute for Occupational Safety and Health)**

13463-67-7	titanium dioxide
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**· GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

**· Hazard pictograms**


GHS02    GHS07    GHS08

**· Signal word Danger**
**· Hazard-determining components of labeling:**

styrene

**· Hazard statements**

H226 Flammable liquid and vapor.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H361 Suspected of damaging fertility or the unborn child.

H372 Causes damage to the hearing organs through prolonged or repeated exposure.

**· Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P405 Store locked up.

**· National regulations:**

Class	Share in %
I	≥0.1-<1
NK	10-25

· **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.

· **Date of preparation / last revision** 09/13/2018 / 1

**· Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

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VOC: Volatile Organic Compounds (USA, EU)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
NIOSH: National Institute for Occupational Safety  
OSHA: Occupational Safety & Health  
TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
REL: Recommended Exposure Limit  
BEI: Biological Exposure Limit  
Flam. Liq. 3: Flammable liquids – Category 3  
Skin Irrit. 2: Skin corrosion/irritation – Category 2  
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A  
Repr. 2: Reproductive toxicity – Category 2  
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1  
· **\* Data compared to the previous version altered.**

USA