***1. Identification of the substance/preparation and the company**

Apec standard types

Application:
Production of molded plastic articles

Bayer MaterialScience AG, HSEQ-PRC (Product Safety)
51368 Leverkusen, Germany, Tel.: +49 214 30 25026
Fax: +49 214 30 50035, e-mail: productsafety@bayermaterialscience.com
In case of emergency: +49 214 30 99300 (Sicherheitszentrale Bayer)
+44 1635 563000 (Bayer plc,
Responsible Care Group, Newbury RG14 1JA, UK)

2. Composition/information on ingredients

polycarbonate with elevated heat deformation resistance
based on bisphenol A / bisphenol TMC

***3. Hazards identification**

Not classified as a hazardous product as per Council Directive 67/548/EEC or 1999/45/EC.

***4. First-aid measures**

CONTACT WITH THE HOT MELT:
Cooling immediately with plenty of water. Do not remove product crusts which may have formed neither forcibly nor by applying any solvents to the skin involved.
In order to obtain medical care for possible burns and for a smooth cleansing of the skin, seek medical advice immediately.

***5. Fire-fighting measures**

Extinguishing media: Water spray, extinguishing powder, CO_2, foam, dry powder.

Firemen have to wear self-contained breathing apparatus.

***6. Accidental release measures**

granules: slip hazard! Take up mechanically; avoid dust formation.

***7. Handling and storage**

Under recommended processing conditions small amounts of residues of monomers and residual solvent may be emitted. Provided good ventilation and/or local exhaust systems are available, the limit values cited under pt. 8 should not be exceeded.

Dust must be removed by effective exhaust ventilation.

VCI storage class: 11
(VCI = German Association of the Chemical Industry)

***8. Exposure controls/Personal protection**

The regulations for the substances listed below must be observed when processing this product, particularly if processing takes place at elevated temperatures. In our experience the provision of effective fresh-air and exhaust ventilation equipment at the points where vapors may be generated will ensure compliance with the tolerance limits quoted below.

Substance	CAS-No.	R-phrases 1)	Classification 2)	acc. to
			M3	EU
phenol	108-95-2	R23/24/25-34-48/20/21/22-68		
chlorobenzene	108-90-7	R20	--	--
4-tert-butylphenol	98-54-4	R36/37/38	--	--

1) Health R-Phrases (Text in Chapter 16)
2) M-mutagenic
TRGS: German Technical Regulations on Dangerous Substances

Occupational Exposure Limits (mg/m³), Time Weighted Average:

	EU	U. Kingdom	R. of Ireland	ACGIH
4-tert-butylphenol	-	-	-	-
chlorobenzene	47	4,6	47	46
phenol	7,8	8	7,8	19
fine dust 1)				
respirable	-	5	4	3
inhalable	-	10	10	10

1) in consequence with mechanical treatment, e.g. grinding, occurring.

ACGIH: American Conference of Governmental Industrial Hygienists
EU: Commission Directive 91/322/EEC and amendment 2000/39/EC

Respiratory protection: In case of dust formation use respiratory equipment with filter type particle filter P1 according to DIN EN 143.

Hand protection: Protective gloves of leather, contaminated or damaged gloves should be replaced.

Eye protection: Protective goggles with side shield or tightly fitting protective goggles

Body protection: Skin covering working clothes; wear dust-proof overalls if large quantities of dust are generated.

Protection and hygienic measures:
Avoid inhaling vapours. Avoid inhaling dust.

Grease skin. At the end of work, wash hands and face.
When using do not eat, drink or smoke.

***9. Physical and chemical properties** tested in accordance with

Form:	granules	
Colour:	colourless or according to pigmentation	
Odour:	odourless	
Softening point:	approx. 158–205 °C (depending on type)	
Density:	approx. 1,14–1,18 g/cm³ at 20 °C (depending on type)	DIN 53479
Vapour pressure:	not applicable	
Viscosity:	not applicable	
Solubility in water:	insoluble	
pH value:	not applicable	
Flash–ignition temperature:	> 450 °C	
Self–ignition temperature:	> 450 °C	
Explosive limits:	not applicable	

***10. Stability and reactivity**

Thermal decomposition:
Decomposition begins at 380 °C.

Hazardous decomposition products:
Caused by smouldering and incomplete combustion toxic fumes mainly consisting of CO and CO_2 may be developed. Formation of traces of aliphatic and aromatic hydrocarbons, aldehydes, acids, phenol and phenol–derivatives may occur.

Hazardous reactions:
No hazardous reactions observed.

***11. Toxicological information**

Under recommended processing conditions small amounts of water, carbon dioxide, chlorobenzene, diphenylcarbonate, phenol and substituted phenols may be emitted.

***12. Ecological information**

The product is practically insoluble in water. In view of its consistency and insolubility in water, no ecological problems are to be expected if the product is properly handled. This product is not readily biodegradable.

***13. Disposal considerations**

The product is suitable for mechanical recycling. After appropriate treatment it can be remelted and reprocessed into new moulded articles.
Mechanical recycling is only possible if the material has been selectively retrieved and carefully segregated according to type.
May be discharged or incinerated together with household refuse if local official regulations are observed.

European Waste Catalogue (EWC) code: 070213

***14. Transport information**

GGVSE: -- UN: NODG PG: --
RID/ADR: -- UN: NODG PG: --

ADNR: -- UN: NODG PG: --
GGVSee/IMDG Code: -- UN: NODG PG: -- MPO: --
ICAO-TI/IATA-DGR: -- UN: NRES PG: --
Declaration for land shipment: --
Declaration for sea shipment: --
Declaration for shipment by air: --
Other information:
Not dangerous cargo. Keep dry.

***15. Regulatory information**

No labeling necessary according to EC Directives 67/548/EEC or 1999/45/EC and their valid adaptations and derived national regulations.

Water pollution class (WGK: Not hazardous to water (VwVwS appendix 1)
(VwVwS = German Regulation on Substances Hazardous to Water)

Swiss law of poison: class of poison free; BAG-T-No. 614100.

***16. Other information**

The safety data sheet is also valid for:

Apec 1600	1603	1605		1695 (formerly DP1-9339/5)
Apec 1700	1703	1705	1745	1795 (formerly DP1-9349/5)
Apec 1800	1803	1805		1895 (formerly DP1-9359/5)
Apec 1897 (formerly DP1-9359/7)				
Apec 2000		2005	2050	

Apec 2095 (formerly DP1-9379/5) 2097 (formerly DP1-9379/7)
Apec DP1-9329/5
Apec DP1-9373 -9379
Apec DP1-9389 -9389/5

APEC TP 0276
Apec TP 0277

and corresponding Color types.

The following R-Phrases refer to substances that are either contained in this product or may be generated or released during processing, and do not necessarily correspond to the product labeling. Information on labeling the product put into circulation in accordance with EC Directives is given in Chapter 15.

(to be continued)

***16. Other information** (Continuation)

Text of all R phrases referred to in sections 2, 3, 8 or 15:
R 20: Harmful by inhalation.
R 23/24/25: Also toxic by inhalation, in contact with skin and if swallowed.
R 34: Causes burns.
R 36/37/38: Irritating to eyes, respiratory system and skin.
R 48/20/21/22: Harmful: danger of serious damage to health by prolonged exposure through inhalation in contact with skin and if swallowed.
R 68: Possible risks of irreversible effects.

All chapters in the SDS which have been changed since last edition are marked with an asterisk in front of the Chapter number.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The above details do not imply any guarantee concerning composition, properties or performance.