

Practical Guidelines for the compilation of Safety Data Sheets

**List of abbreviations of
the plastics processing industry**

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GKV/TecPart practice guidelines for the compilation of safety data sheets

The safety data sheet (in short: SDS), based on the globally harmonized system for the classification and labeling of chemicals, is of importance for occupational safety in plant and transport safety and in the assessment of environmental protection issues.

These safety data sheets are based on the United Nations Globally Harmonized System for Classification and Labeling of Chemicals (in short: GHS) and its transposition into European law by Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16th December 2008 on the classification, labeling and packaging of substances and mixtures [...] (in short: CLP).

The importance of the safety data sheet is strengthened by the obligation to communicate essential information on hazardous substances in the supply chain according to Title IV of Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 on Registration, Evaluation, Authorization and Restriction of Chemicals (in short: REACH).

For the users of chemical products, the safety data sheet is an essential source of information for the derivation of appropriate and practical recommendations for the handling of chemical substances and mixtures at workplaces. Without correct and complete information about the chemical product, an appropriate safety assessment cannot be made and the resulting necessary protective measures at the workplace cannot be completed. Misjudgments and possible misconduct cannot be excluded.

As responsible employer and/or supplier of substances and mixtures, all risks of the product must be identified and assessed, which cannot be reliably excluded on the basis of prior information. This applies to chemical products, but also for products such as slides, grinding wheels, lubricants, etc., if they could release substances during handling. Therefore, on request, a plastic converting company must be notified by its suppliers of dangerous ingredients in the products supplied, the potential hazards of the substances and the necessary safety measures, at least as detailed as they would appear in a safety data sheet. For this reason, even manufacturers of certain products or non-classified substances and mixtures already prepare safety data sheets in advance of inquiries, although the legislator does not require these.

The present “Practical Guidelines for the compilation of Safety Data Sheets” alone is not a substitute for the expertise required for the compilation of safety data sheets in accordance with the CLP-Regulation. For this purpose, in-depth knowledge and prerequisites are required. However, it can be used for education and training.

List of abbreviations of the plastics processing industry

Regulation (EC) No. 1272/2008 of the European Parliament and of the Council on the classification, labeling and packaging of substances and mixtures [...] requires in Chapter 16 of the safety data sheets a fully and detailed list of all abbreviations used in the document.

The following lists of abbreviations corresponds to the current state of knowledge of the GKV/TecPart - Verband Technische Kunststoff-Produkte e.V. of the common abbreviations in the plastics processing industry in Germany and serves as a guide for the preparation of safety data sheets.

Please note:

In the case of safety data sheets are subject to classification, it is mandatory that in Chapter 16 "Other information" all abbreviations and codes used in the safety data sheet are listed and explained.

For safety data sheets that do not require classification according to the REACH and CLP regulations, this practical guide can be referred to with the prior consent of the GKV/TecPart - Verband Technische Kunststoff-Produkte e.V. (please send inquiries in writing to sdb@tecpart.de).

Their cooperation helps the whole industry of the plastics industry:

If you find that certain abbreviations or explanations are missing or incorrect in this guide, or you would like to have additional abbreviations, we would appreciate if you could send us your comments to sdb@tecpart.de.

Abbreviations of widespread types of plastics

according to DIN EN ISO 1043-1:2016-09 (plastics - identification letters and abbreviations), DIN ISO 1629:2015-03 (rubber and latices) and DIN EN ISO 18064:2015-03 (thermoplastic elastomers).

Abbreviation	Meaning	CAS-Number
AB	Acrylonitrile-butadiene-plastic	9003-18-3
NBR	Acrylonitrile-butadiene-rubber	9003-18-3
ABS	Acrylonitrile butadiene styrene	9003-56-9
ACM	Acrylate	
ACS	Acrylonitrile (chlorinated polyethylene) styrene	
AEPDS	Acrylonitrile (ethylene-propylene-diene) styrene	
AEM	Acrylate-ethylene-polymethylene-rubber	
AMMA	Acrylonitrile-methyl methacrylate	
ASA	Acrylonitrile-styrene-acrylate copolymer	
AU, EU	Polyester urethane rubber	
BR	Polybutadiene	
CA	Cellulose acetate	
CAB	Cellulose acetate butyrate	
CN	Cellulose nitrate	9004-70-0
CNT	Carbon nanotubes	
CO	Epichlorohydrin rubber	
COC	Cycloolefin plastic	26007-43-2
CR	Cycloolefin rubber	
CSF, CS	Casein formaldehyde	
CSM	Chlorosulfonated polyethylene	9002-88-4
EBAK, EBA	Ethylene-butyl acrylate plastic	
ECB	Ethylene copolymer bitumen	
ECTFE	Ethylene-chlorotrifluoroethylene	
EEAK	Ethylene-ethyl acrylate plastic	
EFEP	Ethylene tetrafluoroethylene hexafluoropropylene fluoroter-polymer	
ELO	Linseed oil epoxide	
EMA	Ethylene-methyl acrylate	
EP	Epoxy resin	
EPDM	Ethylene-propylene-diene rubber	
E/P	Ethylene-propylene plastic	9010-79-1
ETFE	Ethylene tetrafluoroethylene	25038-71-5
EVAC, EVA	Ethylene vinyl acetate	24937-78-8
EVAL, EVOH	Ethylene-vinyl alcohol plastic	
FEP, PFEP	Fluorinated ethylene propylene	25067-11-2
FKM (ASTM), FPM (ISO 1629)	Fluoro-polymer rubber	
FFKM, FFPM	Per fluorinated rubber	
FVMQ (ASTM), MFQ (ISO 1629)	Fluoro-silicone rubber	
HNBR	Hydrogenated NBR elastomer	
IIR	Isobutene-isoprene rubber	
IR	Isoprene rubber	
LCP	Liquid crystal plastic	
MABS	Methyl methacrylate acrylonitrile butadiene styrene	
MBS	Methyl methacrylate butadiene styrene	
MF	Melamine formaldehyde	
MFA	Modified fluoroalkoxy poylmer	
MPF	Melamine-phenol-formaldehyde resin	
NR	Natural rubber	9000-01-5

PA	Polyamide	
PAEK	Polyaryletherketone	
PAI	Polyamideimide	
PAK	Polyacrylate	
PAN	Polyacrylonitrile	25014-41-9
PANI	Polyaniline	25233-30-1
PAR	Polyarylates	
PARA, PA MXD6	Polyarylamide	
PB	Polybutene	9003-28-5
PBAT	Polybutyrat Adipat-Terephthalat	
PBI	Polybenzimidazole	
PBT	Polybutylene terephthalate	24968-12-5
PC	Polycarbonate	
PCL	Polycaprolactone	24980-41-4
PCT	Polycyclohexylendimethylene terephthalate	25037-99-4
PCTFE	Polychlorotrifluoroethylene	9002-83-9
PDAP	Polydiallylphthalate	
PDCPD	Polydicyclopentadiene	
PDS, PPDX or PPDO	Poly-p-dioxanone	
PE	Polyethylene	9002-88-4
PEC	Polyester carbonate	
PEDOT, PEDT	Poly-3,4-ethylendioxythiophene	155090-83-8
PEG	Polyethylene glycol	25322-68-3
PEEK	Polyetheretherketone	29658-26-2
PEEST	Polyether ester	
PEI	Polyetherimide	61128-46-9
PEK	Polyetherketone	
PEKEKK	Polyetherketone-etherketoneketone	
PEN	Polyethylene naphthalate	25853-85-4
PESU	Polyethersulfone	25608-63-3
PET	Polyethylene terephthalate	25038-59-9
PF	Phenol formaldehyde	
PFA, TFA	Perfluoroalkoxy polymer	
PFPE	Perfluoropolyether	69991-61-3 (Perfluorpropylenoxide-Polymer) 69991-67-9 (Perfluorethylenoxide-Polymer)
PGA, PGS	Polyglycolic acid	26009-03-0
PHA	Polyhydroxyalkanoate	
PHB	Polyhydroxybutyrate	26063-00-3
PHBV	PHB/PHV-Copolymer	
PHEMA	Polyhydroxyethyl methacrylate	
PI	Polyimide	
PIB	Polyisobutene	9003-27-4
PIPD	Poly(hydroquinone) diimidazopyridin	
PK	Polyketone	
PLA	Polylactic acid	26680-10-4
PLGA	Polylactid-co-Glycolid	
PMCA	Polymethylchloroacrylate	
PMI	Polymethacrylimide	25014-12-4
PMMA	Poly(methyl methacrylate)	9011-14-7
PMMI	Polymethacrylmethylimide	1883603-77-7
PMP	Polymethylpentene	25068-26-2
PNB	Polynorbornene	

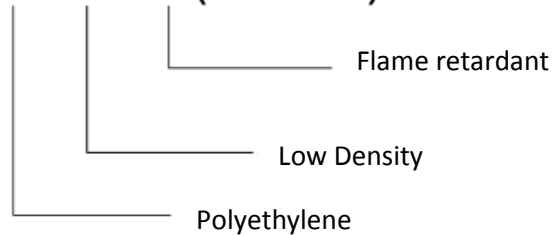
PNR	Polybornene rubber	
POM	Polyoxymethylene	9002-81-7
PP	Polypropylene	9003-07-0
PPA	Polyphthalamide	
PPBO, PBO	Poly(p-phenylen-2,6-benzobisoxazole)	60857-81-0
PPE	Polyphenylene ether	25134-01-4
PPP	Polyparaphenylene	
PPS	Polyphenylene sulfide	26125-40-6
PPSU	Polyphenylene sulphone	
PPTA	Polyaramide	
PPV	Poly(p-phenylen-vinylene)	26009-24-5
PPy	Polypyrrole	
PPX	Polyparaxylylene	
PS	Polystyrene	9003-53-6
PS-S	Polystyrolsulfonate	
PSU	Polysulfone	25135-51-7
PTFE	Polytetrafluoroethylene	9002-84-0
PT	Polythiophene	
PTMC	Poly (trimethylene carbonate)	
PTT	Poly(trimethylene terephthalate)	
PUR	Polyurethane	
PVAL	Polyvinyl alcohol	9002-89-5
PVAC	Polyvinyl acetate	9003-20-7
PVC	Polyvinylchloride	9002-86-2
PVDC	Polyvinylidene chloride	9002-85-1
PVDF	Polyvinylidene fluoride	24937-79-9
PVF	Polyvinyl fluoride	95508-16-0
PVFO	Polyvinyl formal	
PVK	Polyvinyl carbazol	
PVP	Polyvinylpyrrolidone	9003-39-8
SAN	Styrene-acrylonitrile polymer	9003-54-7
SBR, SB	Styrene-acrylonitrile rubber	9003-55-8
SBS	Styrene-butadiene-styrene	
SI	Silicones	
SIR	Styrene-isoprene rubber	
SMMA	Styrene-Methylmethacrylate	
THV, TFB	Tetrafluoroethylene-Hexafluoropropylene-Vinylidene fluoride	
TPE	Thermoplastic elastomers	
TPS	Thermoplastische starch	
UF	Urea-formaldehyde	
UP	Unsaturated polyester resins	
SI	Silicon rubber	

Abbreviations of common plastic modifications

according to DIN EN ISO 1043-1:2016-09 (plastics - identification letters and abbreviations), DIN ISO 1629:2015-03 (rubber and latices) and DIN EN ISO 18064:2015-03 (thermoplastic elastomers).

The labeling of plastics basically consists of a designation for the type of plastic as well as the abbreviation of the modifications. These codes are supplemented by numbers, which stand for the concentration of the modification.

PE-LD FR(30+40)



Abbreviation	Meaning
A	acid-modified; amorph
AS (AST)	antistatic
B	block; brominated; biaxially
C	chlorinated; crystalline; copolymer
CD	electrically dissipative
CF	carbon fiber reinforced
CO	co extruded
CoPo	copolymer
CS	carbon
D	density
E	elastomer; foamed; foamable
EL	electrically conductive
F	flexible; fluid; fluorinated; flame-resistant
FC	food safe
FHF, HFFR	flame retardant halogen free
FL, FR	flame resistant
G	glycol-modified
GF	glass fiber reinforced
GP	general purpose
GS	cast
H	high; homo(gen); homo-polymer
HD	high density
HI	shookproofed; tough
HMW	high molecular; high molecular weight
HoMo	homopolymer
I	shookproof
L	linear; low
LD	low density

LFT	long-fiber-reinforced
LSG	life science grade (medical grade)
M	medium; molecular; mineral; uniaxially
MD	mineral in powder form
MG	medical grade
MOD	modified
MRS	minimum required strength
MT	medical technology (medical grade)
N	normal; Novolack
O	oriented
P	plasticiser
Q	compound
QD	silicate in powder form
R	elevated; resole; random; rigid / resistant
RM	rubber-modified
S	saturated; sulfonated; syndiotactic; (heavy flame retardant)
T	temperature; temperature resistant (duroplastic); thermoplastic; tough; modified
TF	teflon-reinforced
TP	thermoplast
U, UV	UV-stabilized
U	ultra; plasticizer-free; unsaturated
V	very
W	weight
X, XL	crosslinked; crosslinkable
XT	extruded

Abbreviations of the REACH and CLP / GHS regulations

Abkürzung	Erklärung
%	Percent
(Q)SAR	Qualitative structure activity relationship
(STOT) RE	Repeated Exposition
(STOT) SE	Single Exposition
°C	Grad Celcius
a	Year
ABl.	Official Journal (Ger.: Amtsblatt)
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
AG	Joint-stock company
ATE	Acute Toxicity Estimates
C&L	Classification and labelling
CAS-Nr.	Chemical-Abstracts-Service-Number
CBI	Confidential Business Information
cc	Cubic centimetre
Cefic	European Chemical Industry Council
CEN	European Committee for Standardization
Chesar	Tool to help companies to prepare their chemical safety assessments
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
CMR	Carcinogenic, mutagenic, or toxic for reproduction
CSA	Chemical safety assessment
CSR	Chemical safety report
CWG	Commission Working Group
DNEL	Derived no-effect level
DPD	Dangerous Preparations Directive (1999/45/EC)
DSD	Dangerous substances directive (67/548/EEC)
DU	Downstream User
EC	European Communities
ECHA	European Chemicals Agency
EFTA	European Free Trade Association
EG-Nr.	EINECS- and ELINCS-Number (see also EINECS and ELINCS)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EQS	Environmental quality standards
ES	European Standard
ES	Exposure scenarios
EU	European Union
Euphrac	Standard Phrases and Tools
FFP	Filtering Face Piece
g	Grams

GES	Generic Exposure Scenario
Gew.-%	Weight per weight (see also w/w)
GHS	Global Harmonisiertes System
GLP	Good Laboratory Practice
GmbH	Gesellschaft mit beschränkter Haftung (German type of business organization comparatively to limited enterprises)
IATA	International Air Transport Association
IBC-Code	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO	International Civil Aviation Organization
IMDG	International Maritime Code for Dangerous Goods
IMSBC	International Maritime Solid Bulk Cargoes Code
IPCS	International Program for Chemical Safety
ISO	International Organization for Standardization
IT	Information technology
IUCLID	International Uniform Chemical Information Database
IUPAC	International Union for Pure and Applied Chemistry
JRC	Joint Research Center
kg	Kilogram
KMU	Small and medium enterprises
Kow	Octanol-Water-Partition coefficient
LC50	For 50% of a test population lethal concentration
LD50	Fatal dose (median lethal dose) for 50% of a test population
LE	Legal entity
LoW	Waste list (see http://ec.europa.eu/environment/waste/framework/list.htm)
LR	Lead Registrant
M/I	Manufacturer / Importer
m ³	Cubic meter
MARPOL	International Convention for the Prevention of Marine Pollution from Ships
mg	Milligram
MS	Memberstate
MSDB	Material Safety Data Sheet
NGO	Non-governmental organization
NLP	No -Longer Polymer
OC	Conditions of use
OECD	Organization for Economic Cooperation and Development
OEL	Occupational exposure limit
OR	Only representative
OSHA	European Agency for Safety and Health at Work
PBT	Persistent, bioaccumulative and toxic substance
PEC	Predicted effect concentration
PNEC	Predicted non-effect concentration (s)

PPE	Personal protective equipment
ppm	Parts per million
PPORD	Product and Process Orientated Research and Development
REACH	Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, Regulation (EC) No. 1907/2006
RID	Convention concerning International Carriage by Rail
RIP	REACH implementation project
RMM	Risk management measure
SCBA	Self-contained breathing apparatus
SCED	Specific Consumer Exposure Determinants
SDs	Safety Data Sheet
SIEF	Substance information and exchange forum
SIP	Substance identification profile
SPERC	Specific Environmental Release Category
STOT	Specific target organ toxicity
SVHC	Substances of very high concern
SWED	Specific Workers Exposure assessment Description
t	Tons
UN	United Nations
UVCB-Stoffe	Substances of Unknown or Variable Composition, Complex reaction products or Biological materials
v/v	Volume per volume
vPvB	Very persistent and very bioaccumulative
w/v	Weight per volume
w/w	Weight per weight

Abbreviations of country names (Europe)

according to ISO 3166

Member States of the European Community:

Abbreviation	Country
BE	Belgium
BG	Bulgaria
DK	Denmark
DE	Germany
EE	Estonia
FI	Finland
FR	France
GR	Greece
IE	Ireland
IT	Italy
HR	Croatia
LV	Latvia
LT	Lithuania
LU	Luxembourg
MT	Malta
NL	Netherlands
AT	Austria
PL	Poland
PT	Portugal
RO	Romania
SM	San Marino
SE	Sweden
SK	Slovakia
SI	Slovenia
ES	Spain
CZ	Czech Republic
HU	Hungary
GB	United Kingdom
VA	Vatican City
FO	Faroe Islands (Denmark)
CY	Cyprus

Non-EU Member States:

Abbreviation	Country
AL	Albania
AD	Andorra
BA	Bosnia-Herzegovina
LI	Liechtenstein
MC	Monaco
IS	Iceland
YU	Yugoslavia
MK	Macedonia
MD	Moldavia
NO	Norway
CH	Switzerland
UA	Ukraine
BY	Belarus
RU	Russia
TR	Turkey
RS	Serbia

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