

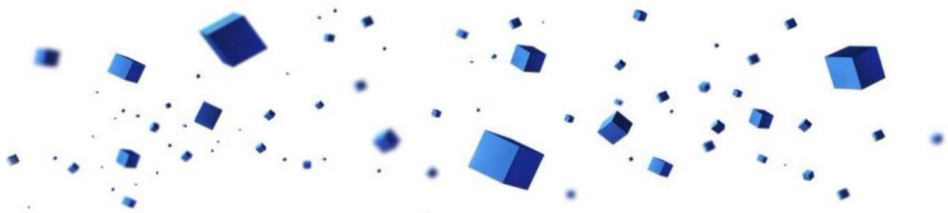
bluesign® CRITERIA for chemical assessment

ANNEX: GHS rating matrix

Version 1.0 | 2022-11

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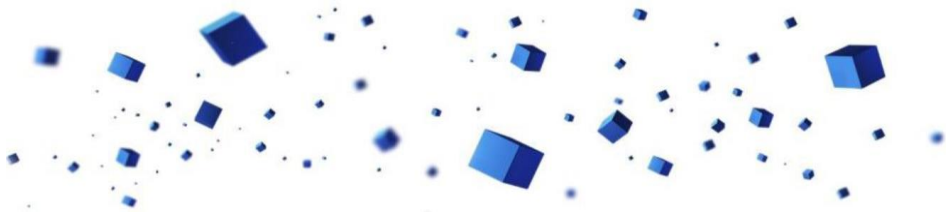


1 Introduction

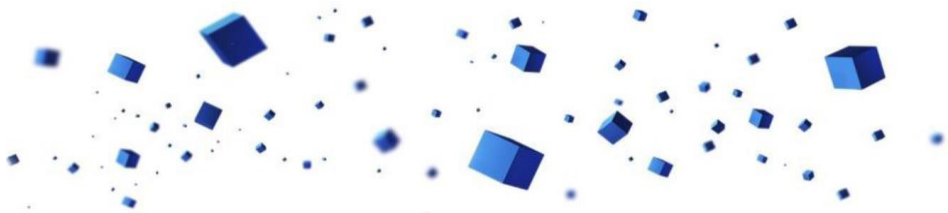
The GHS rating matrix is the backbone of the risk-based assessment part of the GHS module, as described in chapter 5.3 of the bluesign® CRITERIA for chemical assessment. The below tables shows the blue, grey or black rating as a function of H-statements and the likelihood of exposure and release (see chapter 5.3.1.1 in the CRITERIA).

2 GHS rating matrix health hazards

GHS data				Risk/Rating			
H-code	H-Statement	Hazard Class	Exposure Route	Low	Moderate	High	Industrial
H300	Fatal if swallowed	Acute toxicity	oral	N.A.	N.A.	N.A.	black
H301	Toxic if swallowed	Acute toxicity	oral	N.A.	N.A.	N.A.	grey
H302	Harmful if swallowed	Acute toxicity	oral	N.A.	N.A.	N.A.	blue
H303	May be harmful if swallowed	Acute toxicity	oral	N.A.	N.A.	N.A.	blue
H304	May be fatal if swallowed and enters airways	Aspiration hazard	oral	N.A.	N.A.	N.A.	grey
H305	May be harmful if swallowed and enters airways	Aspiration hazard	oral	N.A.	N.A.	N.A.	blue
H310	Fatal in contact with skin	Acute toxicity	dermal	black	black	black	N.A.
H311	Toxic in contact with skin	Acute toxicity	dermal	grey	grey	black	N.A.
H312	Harmful in contact with skin	Acute toxicity	dermal	blue	grey	grey	N.A.
H313	May be harmful in contact with skin	Acute toxicity	dermal	blue	blue	blue	N.A.
H314	Causes severe skin burns and eye damage	Skin corrosion/irritation	dermal	grey	grey	grey	N.A.
H315	Causes skin irritation	Skin corrosion/irritation	dermal	blue	grey	grey	N.A.
H316	Causes mild skin irritation	Skin corrosion/irritation	dermal	blue	blue	blue	N.A.
H317	May cause an allergic skin reaction	Sensitisation	dermal	grey	grey	black	N.A.
H318	Causes serious eye damage	Serious eye damage/eye irritation	dermal/eye	grey	grey	grey	N.A.
H319	Causes serious eye irritation	Serious eye damage/eye irritation	dermal/eye	grey	grey	grey	N.A.
H320	Causes eye irritation	Serious eye damage/eye irritation	dermal/eye	blue	blue	blue	N.A.
H330	Fatal if inhaled	Acute toxicity	inhalative	black	black	black	N.A.
H331	Toxic if inhaled	Acute toxicity	inhalative	grey	grey	black	N.A.
H332	Harmful if inhaled	Acute toxicity	inhalative	blue	grey	grey	N.A.



GHS data				Risk/Rating			
H-code	H-Statement	Hazard Class	Exposure Route	Low	Moderate	High	Industrial
H333	May be harmful if inhaled	Acute toxicity	inhalative	blue	blue	blue	N.A.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled	Sensitisation	inhalative	grey	grey	black	N.A.
H335	May cause respiratory irritation	Specific target organ toxicity - SE	inhalative	blue	grey	grey	N.A.
H336	May cause drowsiness or dizziness	Specific target organ toxicity - SE	valid for all	blue	grey	grey	blue
H340	May cause genetic defects	Germ cell mutagenicity	valid for all	black	black	black	black
H341	Suspected of causing genetic defects	Germ cell mutagenicity	valid for all	grey	grey	black	grey
H350	May cause cancer	Carcinogenicity	valid for all	black	black	black	black
H350i	May cause cancer by inhalation	Carcinogenicity	inhalative	black	black	black	N.A.
H351	Suspected of causing cancer	Carcinogenicity	valid for all	grey	grey	black	grey
H360	May damage fertility or the unborn child	Reproductive toxicity	valid for all	black	black	black	black
H360D	May damage the unborn child	Reproductive toxicity	valid for all	black	black	black	black
H360F	May damage fertility	Reproductive toxicity	valid for all	black	black	black	black
H360Df	May damage the unborn child. Suspected of damaging fertility	Reproductive toxicity	valid for all	black	black	black	black
H360FD	May damage fertility. May damage the unborn child	Reproductive toxicity	valid for all	black	black	black	black
H360Fd	May damage fertility. May damage the unborn child	Reproductive toxicity	valid for all	black	black	black	black
H361	Suspected of damaging fertility or the unborn child	Reproductive toxicity	valid for all	grey	grey	black	grey
H361d	Suspected of damaging the unborn child	Reproductive toxicity	valid for all	grey	grey	black	grey
H361f	Suspected of damaging fertility	Reproductive toxicity	valid for all	grey	grey	black	grey
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child	Reproductive toxicity	valid for all	grey	grey	black	grey
H362	May cause harm to breast-fed children	Reproductive toxicity	valid for all	grey	grey	black	grey
H370	Causes damage to organs	Specific target organ toxicity - SE	valid for all	black	black	black	black
H371	May cause damage to organs	Specific target organ toxicity - SE	valid for all	grey	grey	grey	grey
H372	Causes damage to organs through prolonged or repeated exposure	Specific target organ toxicity - RE	valid for all	grey	black	black	grey
H373	May cause damage to organs through prolonged or repeated exposure	Specific target organ toxicity - RE	valid for all	grey	grey	grey	grey



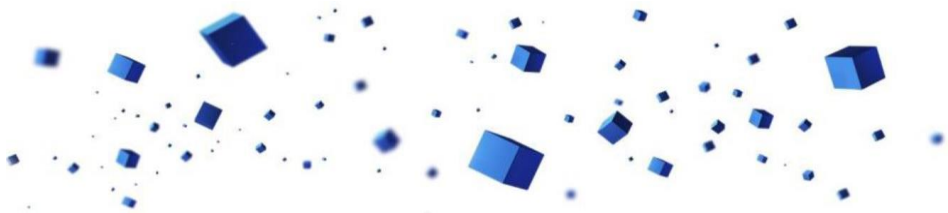
3 GHS rating matrix environmental hazards

3.1 GHS rating matrix water

GHS data			Release to Water			
H-Code	H-Statement	Hazard Class	No Release	Low	Moderate	High
H400	Very toxic to aquatic life	Hazardous to the aquatic environment, short-term (Acute)	grey	grey	grey	black
H401	Toxic to aquatic life	Hazardous to the aquatic environment, short-term (Acute)	blue	blue	grey	grey
H402	Harmful to aquatic life	Hazardous to the aquatic environment, short-term (Acute)	blue	blue	blue	grey
H410	Very toxic to aquatic life with long lasting effects	Hazardous to the aquatic environment, long-term (Chronic)	grey	grey	grey	black
H411	Toxic to aquatic life with long lasting effects	Hazardous to the aquatic environment, long-term (Chronic)	blue	grey	grey	black
H412	Harmful to aquatic life with long lasting effects	Hazardous to the aquatic environment, long-term (Chronic)	blue	blue	grey	grey
H413	May cause long lasting harmful effects to aquatic life	Hazardous to the aquatic environment, long-term (Chronic)	blue	blue	blue	grey

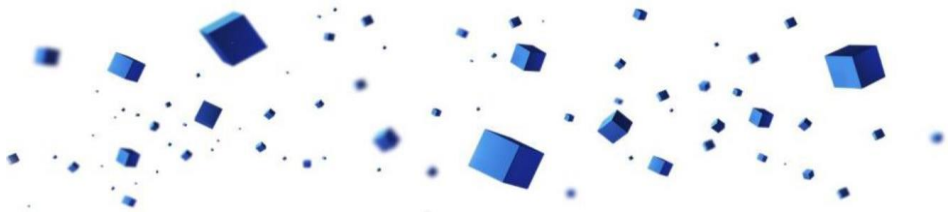
3.2 GHS rating matrix air

GHS data			Release to Air		
H-Code	H-Statement	Hazard Class	No Release	possible, normal case no	Yes
H420	Harms public health and the environment by destroying ozone in the upper atmosphere	no release	grey	grey	grey



4 GHS rating matrix physical hazards

H-code	H-Statement	Risk	Rating
H200	Unstable explosives	Industrial	grey
H201	Explosive; mass explosion hazard	Industrial	grey
H202	Explosive; severe projection hazard	Industrial	grey
H203	Explosive; fire, blast or projection hazard	Industrial	grey
H204	Fire or projection hazard	Industrial	grey
H205	May mass explode in fire	Industrial	grey
H206	Fire, blast or projection hazard; increased risk of explosion if desensitizing agent is reduced	Industrial	grey
H207	Fire or projection hazard; increased risk of explosion if desensitizing agent is reduced	Industrial	grey
H208	Fire or projection hazard; increased risk of explosion if desensitizing agent is reduced	Industrial	grey
H220	Extremely flammable gas	Industrial	grey
H221	Flammable gas	Industrial	grey
H222	Extremely flammable aerosol	Industrial	grey
H223	Flammable aerosol	Industrial	grey
H224	Extremely flammable liquid and vapour	Industrial	grey
H225	Highly flammable liquid and vapour	Industrial	grey
H226	Flammable liquid and vapour	Industrial	grey
H227	Combustible liquid	Industrial	blue
H228	Flammable solid	Industrial	grey
H229	Pressurized container: may burst if heated	Industrial	grey
H230	May react explosively even in the absence of air	Industrial	grey
H231	May react explosively even in the absence of air at elevated pressure and/or temperature	Industrial	grey
H232	May ignite spontaneously if exposed to air	Industrial	grey
H240	Heating may cause an explosion	Industrial	grey
H241	Heating may cause a fire or explosion	Industrial	grey
H242	Heating may cause a fire	Industrial	grey



H-code	H-Statement	Risk	Rating
H250	Catches fire spontaneously if exposed to air	Industrial	grey
H251	Self-heating; may catch fire	Industrial	grey
H252	Self-heating in large quantities; may catch fire	Industrial	grey
H260	In contact with water releases flammable gases which may ignite spontaneously	Industrial	grey
H261	In contact with water releases flammable gases	Industrial	grey
H270	May cause or intensify fire; oxidizer	Industrial	grey
H271	May cause fire or explosion; strong oxidizer	Industrial	grey
H272	May intensify fire; oxidizer	Industrial	grey
H280	Contains gas under pressure; may explode if heated	Industrial	grey
H281	Contains refrigerated gas; may cause cryogenic burns or injury	Industrial	grey
H290	May be corrosive to metals	Industrial	grey