

10. ARMOUR/ANTI-TANK EFFECTS. (V 10.02.15)

Various units have armour and anti-tank capabilities as shown on the UNIT IDENTIFICATION CHART. *Note: "AEC" refers to both AECA and AECD.*

10.A. CATEGORIES OF ARMOUR EFFECTS.

There are three categories of armour effects.

10.A.1. AECA: ARMOUR EFFECTS IN THE ATTACK.

AECA expresses the capability of an attacking unit to use armour effects.

10.A.2. AECD: ARMOUR EFFECTS IN THE DEFENCE.

AECD expresses the capability of a defending unit to use armour effects.

10.A.3. ATEC: ANTI-TANK EFFECTS CAPABILITY.

ATEC expresses the capability of a defending unit to use anti-tank effects when the attacker has AECA.

10.B. ARMOUR EFFECTS VALUES.

Armour and anti-tank effects are calculated on a ratio basis by comparing the attacker's AECA to the defender's ATEC or AECD, using regimental equivalents. To calculate the ratio, a player must know the value of each of his involved REs. A unit may have one of five values as shown on the UIC or as described later in the rules.

10.B.1. DOUBLE AEC/ATEC.

Count each RE of the unit as two REs of AEC or ATEC. Soviet AT units (Rule [104.A.5.a](#)), German heavy AA (Rule [101.D.3.c](#)), German assault guns (Rule [101.D.3.a](#)), and certain German panzer units (Rule [101.D.3.a](#)) have this capability after specified dates.

Soviet AT units and German heavy AA must be fortified or entrenched before the start of the reaction phase to count double ATEC; if not, they are only counted as full ATEC.

Note: This means that only German assault guns and qualifying panzer units in reserve can move in the reaction phase into a hex under attack and count double; German motorized heavy AA or Soviet motorized AT cannot. To count as double ATEC, the heavy AA or anti-tank unit must also be stacked with at least three times as many infantry REs.

10.B.2. FULL AEC/ATEC.

Count each RE of the unit as fully capable. *For example, a Soviet tank corps (3 REs) is counted as 3 REs of AECA.*

10.B.3. HALF AEC/ATEC.

Count each RE of the unit as one half capable. *For example, a German assault gun brigade (1 RE) in 1941 is counted as 1/2 RE of AECD; its remaining 1/2 RE is counted as having no AECD but is classed as neutral and may be converted by the 1/2 RE of AECD for a final total of 1 RE of AECD. A panzergrenadier division would be worth 2 REs of AECD (1/2 AEC x 3 REs plus 1/2 of its 1 RE divisional conversion) of its remaining 1 1/2 neutral REs. This will still leave 1 RE neutral to be converted by other units.*

10.B.4. AEC/ATEC NEUTRAL.

The REs of the unit are not counted when determining the initial AECA, AECD, or ATEC. They may be converted to REs of AEC/ATEC by any of the above if stacked with the appropriate unit types. Any neutral types except HQs, non-

motorized artillery, AA, and anti-tank may be converted to AEC. Neutral REs of any unit type except mortars and rockets may be converted to ATEC if they have no ATEC abilities of their own.

10.B.5. NO AEC/ATEC CAPABILITY.

Count all REs of the unit as having no capability. Some divisions have intrinsic ATEC as shown on the AEC/ATEC SUMMARY but this intrinsic ATEC is not usable to convert neutral REs.

10.C. ARMOUR EFFECTS RATIOS.

Calculate REs of AECA to ATEC as shown below. Compare the total attacking armour REs to the defending ATEC REs to get the final armour effects ratios. Combat die modifiers are shown on the ARMOUR EFFECTS TABLE (Rule [11.J](#)).

AECA to ATEC may give a positive combat die modifier. *For example, 5.1:1 AEC:ATEC would give a +3 AEC modifier to the main combat die roll with a 50% chance of a +4.* AECA to AECD may give a negative die modifier. Terrain and weather are then considered to give a final modifier to the combat die roll.

10.C.1. AECA.

Calculate total REs of AECA by adding all the REs of armour together. Units with 1/2 AECA divide their REs by 2 to get their total REs of armour; class the other half of the units REs as neutral. Allowable REs of neutral types (Rule [10.B.4](#)) are then converted to armour REs.

Brigades, regiments, cadres, remnants and battalions convert neutral types on a 1:1 basis. *For example, a tank brigade would convert a motorized infantry regiment to full AECA for a total of 2 REs of armour.* Tank and mechanized divisions (or corps) only count as 1 RE for conversion purposes.

German panzer or panzer grenadier divisions with a combat value of greater than twelve count as 2 REs for conversion purposes. *For example, a 16-10 panzer division (6 REs AECA (3 x 2 for double AEC due to date) plus ability to convert 2 REs of neutral) stacked with a 6-10 motorized division (2 REs of neutral) would be worth 8 REs of AECA.*

10.C.2. AECD.

Total REs of AECD are calculated in the same manner as AECA. The conversion ratios for AECD are the same as for AECA.

AECD is only used in combat if the attacker has less than a 1:1 ratio of AECA to ATEC. *Note: An attacker may never receive a positive modifier due to an AECA:AECD calculation.*

10.C.3. ATEC.

Calculate ATEC by adding up all the REs of ATEC capable units. Qualifying neutral units may then also be converted to ATEC. Conversions are done in the same manner as for AECA or AECD. *Note: This includes the ability of German panzer or panzer grenadier divisions with a combat value of greater than twelve to count as 2 REs for conversion purposes.*

REs of ATEC may convert qualifying neutral types on a 1:1 ratio. *For example, a Soviet anti-tank regiment stacked with a motorized infantry division would convert 1 RE to ATEC. If a tank corp was stacked with the motorized infantry division it would also only convert 1 RE to ATEC.*

Infantry and motorized infantry divisions may have an intrinsic ATEC factor when defending against armour as shown in the AEC/ATEC SUMMARY (Rule [11.J](#)). These REs are in addition to any other REs (up to a maximum of the

units RE size) the unit may receive due to conversions. They may not be used to convert other neutral REs. *For example, if three 3-2-8 tank brigades were stacked with a 4-8 motorized division, the maximum ATEC would be 3 even though it would have three REs of conversions and ½ RE of intrinsic ATEC.*

10.D. TERRAIN MODIFIERS TO AEC.

The TERRAIN EFFECTS CHART lists several terrain types as having negative AEC modifiers. This means that any AECA/AECD die roll modifier is reduced by the number shown. *Note: The positive AECA modifier is subtracted from in this case and the negative AECD modifier is added to.* ATEC is unaffected and is used normally.

When a unit's attack strength would be halved or quartered due to terrain, the AECA/AECD REs are also halved or quartered. If a unit's AECA is modified by a hexside, its ability to convert a unit not modified by the hexside, is also affected by the terrain. *For example, a tank division attacking across a minor river would be worth 3 REs plus 1 conversion if the converted unit was on the same side of the river. The combined total would then be halved to 2 REs of AECA ((3+1)/2). If the unit to be converted was attacking from the same side of the river as the defender, the combined total would be also be 2 (3/2 + ½).*

A hexside affecting only AEC never affects the defender in a combat. Motorized infantry attacking at full strength into terrain that normally halves c/m units is no longer considered neutral for AECA conversions. *For example, if an attack was being made into a forest hex behind a minor river, the attackers REs of AECA would be quartered (½ for the river and ½ for the forest). The defenders REs of AECD would only be halved for the forest. If the defender was using ATEC, it would be unaffected by the terrain.*

10.E. WEATHER MODIFIERS TO AEC.

The TERRAIN EFFECTS CHART lists many weather conditions. The weather conditions increase the terrains' normal AEC modifiers and are shown as increased modifiers.

10.F. REQUIRED LOSSES DUE TO AEC/ATEC.

When AEC/ATEC effects are used during combat, required losses may be called for (Rule 11.O). *Note: The attacker or defender never has to take more strength points of required losses than called for by the combat result.*

Before combat occurs the attacking and defending players may declare that they are not using AEC or ATEC if they so desire. This choice eliminates the need for required losses. The attacker chooses first.

10.F.1. AECA/AECD REQUIRED LOSSES.

If the attacker or defender uses REs of AEC (including conversions) during combat and losses result due to the attack, take required losses from the attacking or defending armour. At least one strength point must be taken from units capable of at least ½ AEC (or converted units) per RE of AEC (before terrain modifiers are counted). Conversions may not total more than half the factors eliminated.

The maximum REs of AECA counted for required losses is equal to the opposing players ATEC value. *For example, if the attacker had 12 REs of AECA and the defender had 4 REs of ATEC, the maximum required AECA loss would be 4 strength points. If combat losses totalled 8 strength points, the other four losses could be taken from other units.*

The maximum REs of AECD counted for required losses is equal to the opposing players AECA value.

10.F.2. ATEC REQUIRED LOSSES.

If the defender has REs of non-intrinsic ATEC in the hex and casualties are taken, required losses may result. Defending units take required losses if the defender uses REs of ATEC (after conversions and including intrinsic ATEC of infantry and motorized divisions) to defend against an attack using AECA. At least one strength point must be taken from defending units capable of at least ½ ATEC (or conversions) per RE of ATEC. **Exception: If an entire infantry or motorized division is eliminated, the unit's intrinsic ATEC may be counted as part of the required losses.** Conversions may not total more than half the factors eliminated.

The ATEC value of a defender in a hex which modifies AEC (for any reason), is doubled for the purpose of required losses. *For example, an anti-tank brigade worth 1 RE of ATEC in a forest hex, causes attacking armour units 2 REs of required losses.*

The maximum REs of ATEC counted for required losses is equal to the opposing players AECA value.

10.G. AEC/ATEC EFFECTS ON OVERRUNS.

Calculate all armour and anti-tank effects normally when doing die modifiers for overruns (Rule 12).

10.H. UNIT TYPE NOTES.

Some unit types have their AEC or ATEC values change at certain dates during the game. These are shown on the UNIT IDENTIFICATION CHART and in the country specific rules.

10.I. HEAVY ARMOUR & HEAVY ATEC.

Various units shown on the Unit Identification Chart qualify for heavy armour and/or heavy antitank effects. Heavy armour, heavy assault gun, and heavy engineer units qualify for heavy armour effects. All of these unit types plus all heavy tank destroyer, heavy motorized antiaircraft, and heavy motorized antitank units qualify for heavy antitank effects.

Each unit that qualifies for heavy armour effects, regardless of size, is treated as being a heavy armour unit. *For example, German heavy tank battalions and Soviet heavy tank divisions and brigades, each of which normally had about the same number of heavy tanks, are all treated as having the same capability for heavy armour effects, but use their normal RE size for all other purposes. Note: Heavy armour/antitank effects are in addition to any normal armour/antitank effects.*

- 1) Heavy Armour Effects in the Attack:** Add to the main combat die result if the attacker has more heavy armour units than the defender has heavy ATEC as per the SPECIAL UNIT COMBAT ABILITY TABLE (Rule ???).
- 2) Heavy Armour Effects in the Defence:** Subtract from the main combat die result if the defender has more heavy armour units than the attacker has heavy ATEC as per the SPECIAL UNIT COMBAT ABILITY TABLE.
- 3) Note:** To simplify game play each Axis 2-10 Hv AAX counts as two heavy ATEC units.

Example: A Soviet force consisting of two Hv Tank XX, two Hv Tank X, two Tank Xs, and two Art IIIs attacks a woods hex during clear weather. The defender is an Axis force of one Inf XX and one Hv Mot AA. There are three attacking units that qualify for heavy tank effects (the two Hv Tank XX and the Hv Tank X) and two Axis units (the Hv Mot AA III) qualified for heavy ATEC. The Soviet has twice as many heavy armour than the Axis has heavy ATEC and so the main combat die is modified by +1 for heavy armour. AEC is still calculated normally.

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